# FORM 10-K

## Celldex Therapeutics, Inc. - CLDX

**Filed: March 12, 2010 (period: December 31, 2009)**

Annual report which provides a comprehensive overview of the company for the past year

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# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

# FORM 10-K

**(Mark one)**

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2009**

**or**

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**
**Commission File Number 0-15006**

# CELLDEX THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

| **Delaware** | **13-3191702** |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |

**119 Fourth Avenue, Needham, Massachusetts 02494**
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(781) 433-0771**

Securities registered pursuant to Section 12(b) of the Act:

| **Title of Class:** | **Name of Each Exchange on Which Registered:** |
|---|---|
| Common Stock, par value $.001 | NASDAQ Global Market |

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this Chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

| Large accelerated filer ☐ | Accelerated filer ☒ | Non-accelerated filer ☐ (Do not check if a smaller reporting company) | Smaller Reporting Company ☐ |
|---|---|---|---|

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock held by non-affiliates as of June 30, 2009 was $100.8 million. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the actions of the management or policies of the registrant, or that such person is controlled by or under common control with the registrant.

The number of shares of common stock outstanding at February 25, 2010 was 31,711,124 shares.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive Proxy Statement for our 2010 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report.

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**CELLDEX THERAPEUTICS, INC.**
**ANNUAL REPORT ON FORM 10-K**
**YEAR ENDED DECEMBER 31, 2009**

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***Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995:*** This report on Form 10-K contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "will," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "potential" and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our ability to successfully complete product research and further development, including animal, preclinical and clinical studies, and commercialization of CDX-110, CDX-011, CDX-1307, CDX-1401, CDX-1135, and other products and the growth of the markets for those product candidates;
- our ability to raise sufficient capital on terms acceptable to us, or at all;
- the cost, timing, scope and results of ongoing safety and efficacy trials of CDX-110, CDX-011, CDX-1307, CDX-1401, CDX-1135, and other preclinical and clinical testing;
- our ability to adapt our APC Targeting Technology™ to develop new, safe and effective vaccines against oncology and infectious disease indications;
- the ability to negotiate strategic partnerships or other disposition transactions for our non-core programs;
- our ability to manage multiple clinical trials for a variety of product candidates at different stages of development;
- the strategies and business plans of our partners, such as Pfizer's plans for CDX-110, GlaxoSmithKline's plans with respect to Rotarix® and Vaccine Technologies' plans concerning the CholeraGarde® (Peru-15) and ETEC E. coli vaccines, which are not within our control, and our ability to maintain strong, mutually beneficial relationships with those partners;
- our ability to successfully integrate our and CuraGen's business without causing delays in the research and development necessary to select drug development candidates and/or delays in clinical trials, and to operate the combined business efficiently;
- our ability to develop technological capabilities and expand our focus to broader markets for vaccines;
- the availability, cost, delivery and quality of clinical and commercial grade materials produced by our own manufacturing facility or supplied by contract manufacturers and partners;
- the timing, cost and uncertainty of obtaining regulatory approvals for product candidates;
- our ability to develop and commercialize products before competitors that are superior to the alternatives developed by such competitors;

- the validity of our patents and our ability to avoid intellectual property litigation, which can be costly and divert management time and attention; and

- the factors listed under "Risk Factors" in this annual report on Form 10-K.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report or the date of the document incorporated by reference into this report. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs and projections in good faith and we believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs or projections will result or be achieved or accomplished.

## PART I

### Item 1. BUSINESS

**General**

As used herein, the terms "we," "us," "our," the "Company", or "Celldex" refer to Celldex Therapeutics, Inc. and its direct and indirect subsidiaries: Celldex Research Corporation ("Celldex Research") and Celldex Therapeutics, Ltd. ("Celldex Ltd."). Our principal activity since our inception has been research and product development conducted on our own behalf, as well as through joint development programs with several pharmaceutical companies and other collaborators.

We are an integrated biopharmaceutical company that applies our comprehensive Precision Targeted Immunotherapy Platform to generate a pipeline of candidates to treat cancer and other difficult-to-treat diseases. Our immunotherapy platform includes a complementary portfolio of monoclonal antibodies, antibody-targeted vaccines, antibody-drug conjugates and immunomodulators to create novel disease-specific drug candidates.

Our strategy is to develop and demonstrate proof-of-concept for our product candidates before leveraging their value through partnerships or, in appropriate situations, continuing late stage development through commercialization ourselves. Demonstrating proof-of-concept for a product candidate generally involves bringing it through Phase 1 clinical trials and one or more Phase 2 clinical trials so that we are able to demonstrate, based on human trials, good safety data for the product candidate and some data indicating its effectiveness. We thus leverage the value of our technology portfolio through corporate, governmental and non-governmental partnerships. This approach allows us to maximize the overall value of our technology and product portfolio while best ensuring the expeditious development of each individual product.

Our current collaborations include the commercialization of an oral human rotavirus vaccine and the development of oncology and infectious disease vaccines. Our product candidates address large market opportunities for which we believe current therapies are inadequate or non-existent.

*AVANT Merger*

On March 7, 2008, AVANT Immunotherapeutics, Inc. ("AVANT") merged with Celldex Research (formerly known as Celldex Therapeutics, Inc.), a privately-held company, (the "AVANT Merger"). Effective October 1, 2008, we changed our name from AVANT Immunotherapeutics, Inc. to Celldex Therapeutics, Inc.

The AVANT Merger was accounted for using the purchase method of accounting and was treated as an acquisition by Celldex Research of AVANT even though AVANT was the issuer of common stock and the surviving legal entity in the transaction. Because Celldex Research was determined to be the acquirer for accounting purposes, the historical financial statements of Celldex Research became our historical financial as of the closing of the AVANT Merger. Accordingly, our financial statements prior to the AVANT Merger reflect the financial position, results of operations and cash flows of Celldex Research, which during the historical periods presented in the accompanying consolidated financial statements, was then majority-owned by Medarex, Inc. ("Medarex"). Following the AVANT Merger, the financial statements reflect the financial position, results of operation and cash flows of the combined companies. The results of operations of AVANT are included in our results of operations beginning March 8, 2008.

*Acquisition of CuraGen Corporation ("CuraGen")*

On October 1, 2009, CuraGen, then a publicly-traded company, merged with a wholly-owned subsidiary of Celldex (the "CuraGen Merger"). In connection with the CuraGen Merger, effective

October 1, 2009, we (i) issued 15,722,713 shares of our common stock, or 0.2739 shares, in exchange for each share of outstanding CuraGen common stock, plus cash in lieu of fractional shares (the "CuraGen Exchange Ratio"), (ii) assumed all of the CuraGen stock options outstanding under the CuraGen 2007 Stock Plan (the "CuraGen 2007 Options"), and (iii) assumed the obligations of the $12.5 million in CuraGen 4% convertible subordinated debt due in February 2011 (the "CuraGen Debt"). The CuraGen 2007 Options are exercisable into 931,315 shares of our common stock after applying the CuraGen Exchange Ratio.

In connection with the consummation of the CuraGen Merger, effective October 1, 2009, Celldex, CuraGen, and The Bank of New York Mellon (formerly the Bank of New York) (the "Trustee") amended the CuraGen Debt to provide that the CuraGen Debt shall be convertible into 353,563 shares of Celldex common stock at the rate of 28.27823 shares of Celldex common stock per $1,000 principal amount of notes, or $35.36 per share.

Based on the closing price of our common stock on October 1, 2009 of $5.43, the fair value of the shares issued in the CuraGen Merger was $85.4 million. We have applied acquisition accounting as of October 1, 2009. Accordingly, the results of operations of CuraGen have been included in our results of operations beginning October 1, 2009.

On December 31, 2009, we completed the merger of our CuraGen subsidiary with and into Celldex pursuant to a short-form merger effected under Delaware law. As a result, the separate corporate existence of CuraGen has ceased and we have succeeded to all rights, privileges, powers and franchises of CuraGen.

We are a Delaware corporation organized in 1983. Our web site is located at *http://www.celldextherapeutics.com.* On our web site, investors can obtain a copy of our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and other reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act of 1934, as amended, as soon as reasonably practicable after we file such material electronically with, or furnishes it to, the Securities and Exchange Commission ("SEC"). None of the information posted on our website is incorporated by reference into this Annual Report.

*Research and Development Activities*

Our goal is to become a leading developer of innovative products that we call Precision Targeted Immunotherapeutics which are designed to address major unmet health care needs. Most of our products are derived from a set of complementary technologies (collectively known as our Precision Targeted Immunotherapy Platform). This platform includes monoclonal antibodies, antibody-targeted vaccines, antibody-drug conjugates and immunomodulators to create novel disease-specific drugs. We are using our Precision Targeted Immunotherapy Platform to develop targeted immunotherapies that prevent or treat specific forms of cancer, autoimmune disorders and disease caused by infectious organisms.

The following table includes the programs that we currently believe are material to our business:

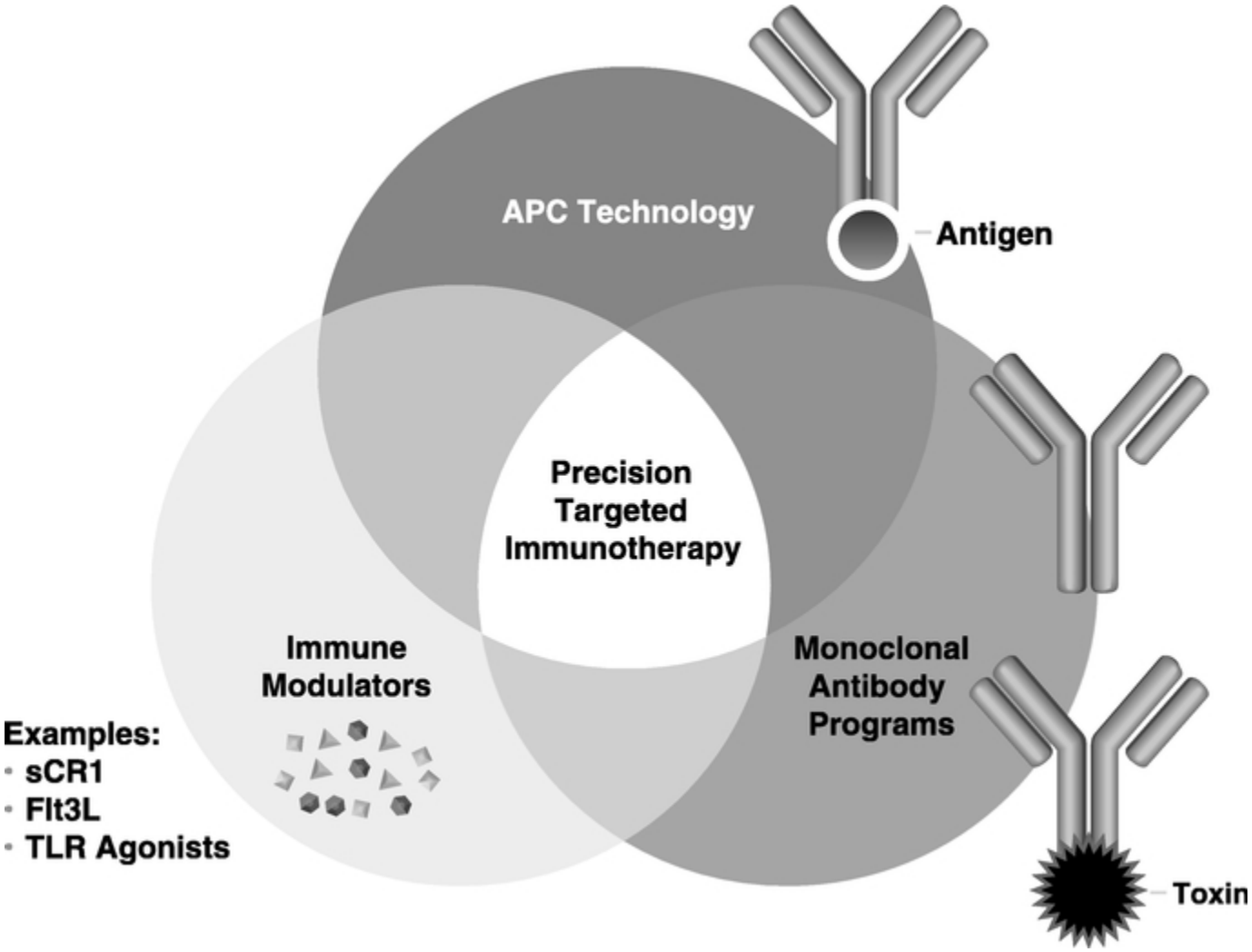
| Product (generic) | Indication/Field | Partner | Status |
|---|---|---|---|
| **CLINICAL** | | | |
| CDX-110 (rindopepimut) | Glioblastoma multiforme | Pfizer (PF-4948568) | Phase 2b |
| CDX-011 (glembatumumab vedotin) | Metastatic melanoma and breast cancer | — | Phase 2 |
| CDX-1307 | Colorectal, bladder, pancreas, ovarian and breast tumors | — | Phase 1 |
| CDX-1401 | Multiple solid tumors | — | Phase 1/2 |
| CDX-1135 | Renal disease | — | Phase 1/2 |
| **PRECLINICAL** | | | |
| CDX-301 | Cancer, autoimmune disease and transplant | — | Preclinical |
| CDX-1127 | Immuno-modulation, multiple tumors | — | Preclinical |
| CDX-014 | Renal and ovarian cancer | — | Preclinical |
| CDX-1189 | Renal disease | — | Preclinical |
| **MARKETED PRODUCTS** | | | |
| Rotarix® | Rotavirus infection | GlaxoSmithKline | Marketed |

Using our expertise in immunology, we are building business franchises in major disease areas: oncology, inflammatory and infectious diseases. Each of our business franchises addresses large market opportunities for which current therapies are inadequate or non-existent. We have pursued some of these opportunities independently in a highly focused manner. In other cases, we have leveraged the financial support and development capabilities of corporate and public sector partners to bring our development projects to fruition. The research we have pursued over the past several years has matured into what we believe is an exciting portfolio of product candidates.

Our success has depended and will continue to depend upon many factors, including our ability, and that of our licensees and collaborators, to successfully develop, obtain regulatory approval for and commercialize our product candidates. Commercial sales are currently only being generated from Rotarix®. We have had no commercial revenues from sales of our human therapeutic or other human vaccine products and we have had a history of operating losses. It is possible that we may not be able to successfully develop, obtain regulatory approval for or commercialize our product candidates, and we are subject to a number of risks that you should be aware of before investing in us. These risks are described more fully in "Item 1A. Risk Factors."

**Development Strategy**

*Precision Targeted Immunotherapy Platform:*




We believe there is tremendous untapped potential in immunotherapy that can be exploited through the right combination of therapeutic agents. Our industry has traditionally taken biologics that mediate effective cancer regression in mice and expected similar results in humans. There are many explanations why this strategy often does not succeed, but the most important is that immunotherapy has difficulties when following standard drug development. The mechanism of action is complex, activity is generally not dependent on highest tolerated dose, and patient response is highly variable. Our new understanding of the immune system, cancer's effect on immune mediated mechanisms, and the impact of conventional therapies on the immune system provides a new rationale for combining therapies that may lead to significant clinical responses. The concept of Precision Targeted Immunotherapy is to exploit this knowledge and the availability of good products that may not be sufficiently effective to be commercialized as a monotherapy, but which we believe may be very effective in combination approaches. Our goal is to develop products that maximize the efficacy of immunotherapy regimens through combinations of therapeutic agents. This includes:

**Therapeutic Antibody Programs:** These programs are based on the well validated approach to using antibodies that target to cancer and other diseases directly, or through interfering with critical interactions between the patient and the disease. Our antibody programs include antibody-drug conjugates (ADCs) that are designed to deliver potent cytotoxic molecules to cancer cells, and

traditional unmodified antibody approaches. Our current programs are based on fully human sequence antibodies to minimize patient reactivity against the drug. In addition, we have access through a Research and Commercialization Agreement with Medarex (now a subsidiary of Bristol-Myers Squibb) to the UltiMAb® Technology for generating fully human monoclonal antibodies. Under this agreement, we can exercise up to ten separate licenses to develop and commercialize therapeutic antibody products, either alone or through collaboration with our licensing partners.

**Our APC Targeting Technology™:** This is a new class of vaccines based on our proprietary antibody-targeted vaccine technology that is used to generate an immune response against cancer or other diseases. Our APC Targeting Technology™ uses human monoclonal antibodies linked to disease associated antigens to efficiently deliver the attached antigens to immune cells known as antigen presenting cells, or APCs. This technology has been designed to allow us to take advantage of many important characteristics of human monoclonal antibodies, including their long circulating half-life, well known safety profile, and standardized manufacturing procedures. We believe that our APC Targeting Technology™ provides significant manufacturing, regulatory and other practical advantages over patient specific and other immune-based treatments and can substantially reduce the dosage and cost currently required in conventional immunotherapies. Preclinical studies have demonstrated that APC Targeting Technology™ is more effective than conventional non-targeted vaccines. We have developed several proprietary monoclonal antibodies that can independently be developed to generate new product opportunities. Our CDX-1307 and CDX-1401 programs are in clinical development with the APC technology.

**Immune System Modulators:** Immune system modulators include drugs that activate or suppress specific parts of the immune system. Currently we are combining our APC technology product candidates with molecules known as Toll-Like Receptor (TLR) agonists that can activate patients' innate and adaptive immunity. We are also developing an immune cell growth factor called FMS-like tyrosine kinase 3 ligand (FLT3-L or CDX-301) designed to expand immune cells and stem cells. In addition, we are investigating the activity of a complement inhibitor (CDX-1135) that suppresses inflammatory reactions. These agents further support our Precision Targeted Immunotherapy Platform.

Our strategy is to utilize our expertise to design and develop targeted immunotherapeutics that have significant and growing market potential; to establish governmental and corporate alliances to fund development; and to commercialize our products either through corporate partners or, in appropriate circumstances, through our own direct selling efforts. Our goal is to demonstrate clinical proof-of-concept for each product, and then seek partners to help see those products which we cannot develop ourselves through to commercialization. This approach allows us to maximize the overall value of our technology and product portfolios while best ensuring the expeditious development of each individual product. Implementation of this strategy is exemplified by our lead programs which are discussed in the following sections.

Factors that may significantly harm our commercial success, and ultimately the market price of our common stock, include but are not limited to, announcements of technological innovations or new commercial products by our competitors, disclosure of unsuccessful results of clinical testing or regulatory proceedings and governmental approvals, adverse developments in patent or other proprietary rights, public concern about the safety of products developed by us and general economic and market conditions. See "Item 1A. Risk Factors."

**Clinical Development Programs**

*CDX-110*

Our lead clinical development program, CDX-110, is a peptide-based immunotherapy that targets the tumor specific molecule called EGFRvIII, a functional variant of the naturally expressed epidermal growth factor receptor ("EGFR"), a protein which has been well validated as a target for cancer

therapy. Unlike EGFR, EGFRvIII is not present in normal tissues, and has been shown to be a transforming oncogene that can directly contribute to the cancer cell growth. EGFRvIII is commonly present in glioblastoma multiforme, or GBM, the most common and aggressive form of brain cancer, and has also been observed in various other cancers such as breast, ovarian, prostate, colorectal, and head & neck cancer.

In April 2008, we and Pfizer Inc. ("Pfizer") entered into a License and Development Agreement (the "Pfizer Agreement") under which Pfizer was granted an exclusive worldwide license to CDX-110. The Pfizer Agreement also gives Pfizer exclusive rights to the use of EGFRvIII vaccines in other potential indications. Pfizer funds all development costs for these programs. We and Pfizer are currently pursuing the development of CDX-110 for GBM therapy and plan to expand the clinical development into other cancers through additional clinical studies. The Food and Drug Administration ("FDA") has granted orphan drug designation for CDX-110 for the treatment of EGFRvIII expressing GBM as well as fast track designation.

Initial clinical development of EGFRvIII immunotherapy was led by collaborating investigators at the Brain Center at Duke Comprehensive Cancer Center in Durham, North Carolina and at M.D. Anderson Cancer Center in Houston, Texas. The results from the Phase 1 (VICTORI) and Phase 2a (ACTIVATE) studies, which enrolled 16 and 21 patients, respectively, have demonstrated a significant increase in the time to disease progression (greater than 113%) in the patients who were vaccinated, and also in overall survival rates (greater than 100%), both relative to appropriately matched historical controls. An extension of the Phase 2a program (ACT II) at the same two institutions has enrolled 23 additional GBM patients treated in combination with temozolomide (the current standard of care). Preliminary results from this study (ACT II) currently estimates median overall survival to be 23.6 months, although the median has not yet been reached, while the survival of a matched historical control group was 15.0 months with a p value = 0.0237. Overall time to progression in the ACT II study was 15.2 months compared with 6.3 months for the historical control group.

We initiated a Phase 2b/3 randomized study (ACT III) of CDX-110 combined with standard of care, temozolomide, versus standard of care alone in patients with GBM in over 30 sites throughout the United States. In December 2008, we announced an amendment to convert the ACT III study to a single-arm Phase 2 clinical trial in which all patients will receive CDX-110 in combination with temozolomide. The decision, which followed the recommendation of the Independent Data Monitoring Committee, was based on the observation that the majority of patients randomized to the control (standard of care) arm withdrew from this open-label study after being randomized to the control arm. Patients participating on the control arm of the study were offered the option to receive treatment with CDX-110. Under this amendment, the ACT III study provided for a multi-center, non-randomized dataset for CDX-110 in patients with newly diagnosed GBM. These data will provide important additional information that can be used to better design the future development of CDX-110. Enrollment in ACT III is complete with a total of over 60 patients enrolled and we expect to present updated results during 2010.

*CDX-011*

CDX-011 (formerly CR011-vcMMAE) is an antibody-drug conjugate (ADC) that consists of a fully-human monoclonal antibody, CR011, linked to a potent cell-killing drug, monomethyl-auristatin E (MMAE). The CR011 antibody specifically targets glycoprotein NMB or (GPNMB) that is expressed in a variety of human cancers including breast cancer and melanoma. The ADC technology, comprised of MMAE and a stable linker system for attaching it to CR011, was licensed from Seattle Genetics, Inc. The ADC is designed to be stable in the bloodstream. Following intravenous administration, CDX-011 targets and binds to GPNMB, and upon internalization into the targeted cell, CDX-011 is designed to release MMAE from CR011 to produce a cell-killing effect. We acquired the rights to CDX-011 in connection with the CuraGen Merger.

**Treatment of Breast Cancer:** In June 2008, an open-label, multi-center Phase 1/2 study was initiated of CDX-011 administered intravenously once every three weeks to patients with locally advanced or metastatic breast cancer who have received prior therapy (median of seven prior regimens). The study began with a bridging phase to confirm the maximum tolerated dose ("MTD") and has expanded into a Phase 2 open-label, multi-center study.

The study confirmed the safety of CDX-011 at the pre-defined maximum dose level (1.88 mg/kg) in 6 patients. An additional 28 patients were enrolled as an expanded Phase 2 cohort (for a total of 34 treated patients at 1.88 mg/kg, the Phase 2 dose) to evaluate the progression-free survival ("PFS") rate at 12 weeks. As previously seen in melanoma patients, the 1.88 mg/kg dose was well tolerated in this patient population with the most common adverse events of rash, alopecia, and fatigue. The primary activity endpoint, which called for at least 5 of 25 (20%) patients in the Phase 2 study portion to be progression-free at twelve weeks, has been met. To date, 9 of 26 (35%) evaluable patients are without progression of disease at twelve weeks.

In addition, at the Phase 2 dose level, 4 of 32 (13%) evaluable patients achieved confirmed or unconfirmed Partial Responses ("PR") while 15 of 25 (60%) evaluable patients with measurable disease experienced some reduction in tumor size. GPNMB expression was identified in 10 of 14 (71%) of analyzed tumor samples and treatment with CDX-011 was associated with improved outcomes in all activity parameters in patients whose tumors expressed GPNMB. Notably, in patients who received the Phase 2 dose and whose tumors expressed GPNMB, 2 of 7 (29%) had confirmed PR, 5 of 7 (71%) had decreases in tumor size, and all 7 achieved at least stable disease with duration from 17.3 to 26.9 weeks. The median PFS in all patients was 9.1 weeks, but in patients whose tumors expressed GPNMB, median PFS was 18.3 weeks, compared to median PFS of 5.9 weeks for patients whose tumors did not express GPNMB. In patients with triple negative disease, 5 of 7 (71%) analyzed samples expressed GPNMB, 7 of 9 (78%) evaluable patients had tumor shrinkage, and the median PFS for these patients was 17.9 weeks.

We expect to initiate a randomized Phase 2b controlled study in patients with advanced breast cancer that express GPNMB in the second half of 2010.

**Treatment of Metastatic Melanoma Cancer:** In June 2006, a Phase 1/2 open-label, multi-center, dose escalation study was initiated to evaluate the safety, tolerability and pharmacokinetics of CDX-011 for patients with un-resectable Stage III or Stage IV melanoma who have failed no more than one prior line of cytotoxic therapy. During the Phase 1 portion of the study, doses of CDX-011 between 0.03 mg/kg to 2.63 mg/kg were evaluated and generally well tolerated, with rash and neutropenia emerging at higher doses. The MTD was determined to be 1.88 mg/kg administered intravenously (IV) once every three weeks.

In June 2009, CuraGen announced results for the 36 patients who were treated in the Phase 2 portion of the study. Of the patients enrolled, 94% had Stage IV disease of which two-thirds were classified as M1c, the poorest risk group. The study successfully met its primary activity endpoint, with 5 objective responses (1 unconfirmed) observed in 34 evaluable patients, and median duration of response of 5.3 months. The median overall PFS was 4.4 months. Tumor shrinkage was observed in 58% of patients, and 20 patients had best response of stable disease. Dermatologic adverse events consisting of rash, alopecia, and pruritus were the most common toxicities in this study. Other adverse events included fatigue, diarrhea, musculoskeletal pain, anorexia and nausea. Grade 3 or 4 neutropenia was observed in 5 patients. The absence of rash in the first cycle of treatment predicted a worse PFS. Additionally, in a subset of patients with tumor biopsies, high levels of tumor expression of GPNMB appeared to correlate with favorable outcome.

Enrollment has been completed in the Phase 1 portion of the melanoma trial to evaluate more frequent dosing schedules of CDX-011, including a weekly and a two out of every three-week regimen, to explore if more frequent administration can provide additional activity in patients with metastatic

melanoma. A dose of 1.0 mg/kg given once every week has been identified as the MTD in a weekly schedule, and a dose of 1.5mg/kg was being explored in the two out of three week schedule. Although median duration of follow-up was only 6 weeks, objective responses have thus far been observed in 3 of 11 evaluable patients treated with weekly CDX011 (1 confirmed) and 1 confirmed response in 8 evaluable patients treated with CDX-011 two out of every three weeks. We expect to present updated results during the first half of 2010.

*CDX-1307*

Our lead APC Targeting Technology™ product candidate, CDX-1307, is in development for the treatment of epithelial tumors such as colorectal, pancreatic, bladder, ovarian and breast cancers. CDX-1307 targets the beta chain of human chorionic gonadotropin, known as hCG-Beta, which is an antigen often found in epithelial tumors. The presence of hCG-Beta in these cancers correlates with a poor clinical outcome, suggesting that this molecule may contribute to tumor growth. Normal adult tissues have minimal expression of hCG-Beta; therefore, targeted immune responses are not expected to generate significant side effects.

Enrollment is complete in our two Phase 1 studies at multiple centers designed to explore safety and dose/effect relationships via two administration routes—intradermal (ID), a traditional vaccine route that allows efficient access to local dermal dendritic cells and intravenous (IV), a novel systemic approach to vaccination that might target a much larger population of dendritic cells. The Phase 1 studies investigated the safety and immunogenicity of CDX-1307 alone and in combination with adjuvants, including GM-CSF (known to increase mannose receptor expression on dendritic cells) and Toll-Like Receptor ("TLR") agonists (poly-ICLC or Hiltonol™ and R848 or resiquimod). Patients with an assortment of different tumor types that are known to express hCG-Beta were enrolled with retrospective analysis for hCG-Beta expression. An escalating four dose regimen was utilized with the possibility of retreatment if patients demonstrate tumor regression or stable disease.

The Phase 1 studies enrolled over 80 patients with heavily pretreated, advanced-stage breast, colon, bladder and pancreatic cancer, with an average of 4.6 prior therapies across the treatment population. All patient cohorts demonstrated a favorable safety profile with no dose limiting toxicity to date. The combination of CDX-1307 with TLR agonists significantly enhanced immune responses against hCG-Beta, providing humoral responses in 88% of patients and cellular immune responses in 57% of patients analyzed to date. Immune responses occurred even in the presence of high circulating levels of hCG-Beta, suggesting that the CDX-1307 can overcome antigen tolerance in advanced and heavily pretreated cancers. Nine patients in the studies experienced disease stabilization from 2.3 months to 11.4 months following the initiation of CDX-1307 vaccination. Two of these patients have received multiple courses of CDX-1307 and continue treatment with stable disease at 6.4 and 11.4 months. These data provide the basis for advancing CDX-1307 into a front-line patient population selected for hCG-Beta expressing cancers.

We expect to initiate a randomized Phase 2b controlled study in patients with newly diagnosed invasive bladder cancer in the second quarter of 2010. Patient's whose bladder cancer expresses hCG-Beta are predicted to have more aggressive disease and shorter survival. In this study we plan to select only patients with confirmed hCG-Beta expression using a specific diagnostic assay.

*CDX-1401*

CDX-1401 is a fusion protein consisting of a fully human monoclonal antibody with specificity for the dendritic cell receptor, DEC-205, linked to the NY-ESO-1 tumor antigen. In humans, NY-ESO-1 has been detected in 20 - 30% of cancers, thus representing a broad opportunity. This product is intended to selectively deliver the NY-ESO-1 antigen to APCs for generating robust immune responses against cancer cells expressing NY-ESO-1. Unlike CDX-1307, which targets the mannose receptor

expressing dendritic cells, CDX-1401 is the first APC product targeting DEC-205 expressing dendritic cells. We are developing CDX-1401 for the treatment of malignant melanoma and a variety of solid tumors which express the proprietary cancer antigen NY-ESO-1, which we licensed from the Ludwig Institute for Cancer Research in 2006. We believe that preclinical studies have shown that CDX-1401 is effective for activation of human T-cell responses against NY-ESO-1.

In September 2009, we initiated enrollment in a dose-escalating Phase 1/2 clinical trial aimed at determining the optimal dose for further development based on the safety, tolerability, and immunogenicity of the CDX-1401 vaccine. The trial will evaluate three different doses of the vaccine in combination with resiquimod, an activator of TLR 7 and 8. We expect to enroll approximately 36 patients with solid tumor cancers at multiple clinical sites in the United States.

*CDX-1135*

CDX-1135 is a molecule that inhibits a part of the immune system called the complement system. The complement system is a series of proteins that are important initiators of the body's acute inflammatory response against disease, infection and injury. Excessive complement activation also plays a role in some persistent inflammatory conditions. CDX-1135 is a soluble form of naturally occurring Complement Receptor 1 that inhibits the activation of the complement cascade in animal models and in human clinical trials. We believe that regulating the complement system could have therapeutic and prophylactic applications in several acute and chronic conditions, including organ transplantation, multiple sclerosis, rheumatoid arthritis, age-related macular degeneration ("AMD"), atypical Hemolytic Uremic Syndrome ("aHUS"), Paroxysmal Nocturnal Hemaglobinuria ("PNH"), Dense Deposit Disease ("DDD") in kidneys, and myasthenia gravis. We are currently defining the most appropriate clinical development path for CDX-1135 and are focusing on rare disease conditions of unregulated complement activation as the fastest route to FDA approval.

**Preclinical Development Programs**

*CDX-301*

CDX-301 is a FMS-like tyrosine kinase 3 ligand (Flt3L) that we licensed from Amgen in March 2009. CDX-301 is a growth factor for stem cells and immune cells called dendritic cells. Based on previous experience with this molecule, we believe that CDX-301 has considerable opportunity in various transplant settings as a stem cell mobilizing agent. In addition, CDX-301 is an immune modulating molecule that increases the numbers and activity of specific types of immune cells. We believe CDX-301 has significant opportunity for synergistic development in combination with proprietary molecules in our portfolio. We expect to file an Investigational New Drug ("IND") application for CDX-301 before the end of 2010.

*CDX-1127*

We have entered into a License Agreement with the University of Southampton, UK, to develop human antibodies to CD27, a potentially important target for immunotherapy of various cancers. In preclinical models, antibodies to CD27 alone have been shown to mediate anti-tumor effects, and may be particularly effective in combination with other immunotherapies. CD27 is a critical molecule in the activation pathway of lymphocytes. It is downstream from CD40, and may provide a novel way to regulate the immune responses. Engaging CD27 with the appropriate monoclonal antibody has proven highly effective at promoting anti-cancer immunity in mouse models. We are evaluating new human monoclonal antibodies in preclinical models.

*CDX-014*

CDX-014 (formerly CR014-vcMMAE) is a fully-human monoclonal ADC that targets TIM-1, an immunomudulatory protein that appears to down regulate immune response to tumors. The antibody, CDX-014, is linked to a potent chemotherapeutic, monomethyl auristatin E (MMAE), using Seattle Genetics' proprietary technology. The ADC is designed to be stable in the bloodstream, but to release MMAE upon internalization into TIM-1-expressing tumor cells, resulting in a targeted cell-killing effect. CDX-014 has shown potent activity in preclinical models of ovarian and renal cancer. We acquired the rights to CDX-014 in connection with the CuraGen Merger.

*CDX-1189*

We are developing therapeutic human antibodies to a signaling molecule known as CD89 or Fcα receptor type I (FcαRI). CD89 is expressed by some white blood cells and leukemic cell lines, and has been shown to be important in controlling inflammation and tumor growth in animal models. We have proprietary, fully human antibodies to CD89 in preclinical development. Depending upon the specific antibody used, anti-CD89 antibodies can either be activating and thus stimulate immune responses, or down-regulating and act as an anti-inflammatory agent.

**Partnerships**

We have entered into collaborative partnership agreements with pharmaceutical and other companies and organizations that provide financial and other resources, including capabilities in research, development, manufacturing, and sales and marketing, to support our research and development programs. We depend on these relationships and may enter into more of them in the future. Some of our partners have substantial responsibility to commercialize a product and to make decisions about the amount and timing of resources that are devoted to developing and commercializing a product. As a result, we do not have complete control over how resources are used toward some of our products.

Some of our partnership agreements relate to products in the early stages of research and development. Others require us and our collaborators to jointly decide on the feasibility of developing a particular product using our technologies. In either case, these agreements may terminate without benefit to us if the underlying products are not fully developed. If we fail to meet our obligations under these agreements, they could terminate and we might need to enter into relationships with other collaborators and to spend additional time, money, and other valuable resources in the process.

We cannot predict whether our collaborators will continue their development efforts or, if they do, whether their efforts will achieve success. Many of our collaborators face the same kinds of risks and uncertainties in their business that we face. A delay or setback to a collaborator will, at a minimum, delay the commercialization of any affected products, and may ultimately prevent it. Moreover, any collaborator could breach its agreement with us or otherwise not use best efforts to promote our products. A collaborator may choose to pursue alternative technologies or products that compete with our technologies or products. In either case, if a collaborator failed to successfully develop one of our products, we would need to find another collaborator. Our ability to do so would depend upon our legal right to do so at the time and whether the product remained commercially viable.

*GlaxoSmithKline plc ("Glaxo") and Paul Royalty Fund II, L.P. ("PRF")*

Rotavirus is a major cause of diarrhea and vomiting in infants and children. In 1997, we licensed our oral rotavirus strain to Glaxo and Glaxo assumed responsibility for all subsequent clinical trials and all other development activities. Glaxo gained approval for its rotavirus vaccine, Rotarix®, in Mexico in July 2004, which represented the first in a series of worldwide approvals and commercial launches for the product leading up to the approval in Europe in 2006 and in the U.S. in 2008. We licensed-in our

rotavirus strain in 1995 and owe a license fee of 30% to Cincinnati Children's Hospital Medical Center ("CCH") on net royalties received from Glaxo. We are obligated to maintain a license with CCH with respect to the Glaxo agreement. The term of the Glaxo agreement is through the expiration of the last of the relevant patents covered by the agreement, although Glaxo may terminate the agreement upon 90 days prior written notice.

In May 2005, we entered into an agreement whereby an affiliate of PRF purchased an interest in the milestone payments and net royalties that we will receive on the development and worldwide sales of Rotarix®. We have received a total of $60 million in milestone payments under the PRF agreement. No additional milestone payments are due from PRF under the agreement.

Royalty rates on Rotarix® escalate from 7% to 10% based on net product sales in countries that have valid patent protection. These royalty rates are discounted by 30% for "non-patent" countries (primarily international markets). In September 2006, we received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® vaccine at the lower of the two royalty rates under their 1997 license agreement. Glaxo's decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo's assertion that Rotarix® is not covered by the patents Glaxo licensed from us in Australia and certain European countries. We are currently evaluating the basis for Glaxo's action and our potential remedies. If Glaxo's position stands, the royalties to which PRF is entitled will no longer be limited by a $27.5 million annual threshold, which we projected may have been reached in later years as sales of Rotarix® increased. Irrespective of Glaxo's position, we will still retain approximately 65% of the royalties on worldwide sales of Rotarix® once PRF receives 2.45 times the aggregate cash payments of $60 million it made to us, though the potential amount of such residual royalties will be lower if Glaxo's position stands.

*Pfizer Inc.*

**Pfizer License and Development Agreement:** In April 2008, we and Pfizer entered into the Pfizer Agreement under which Pfizer was granted an exclusive worldwide license to a therapeutic cancer vaccine candidate, CDX-110, in Phase 2 development for the treatment of glioblastoma multiforme. The Pfizer Agreement also gives Pfizer exclusive rights to the use of EGFRvIII vaccines in other potential indications. Under the Pfizer Agreement, Pfizer made an upfront payment to us of $40 million and made a $10 million equity investment in us. Pfizer will fund all development costs for these programs. We are also eligible to receive potential milestone payments exceeding $390 million for the successful development and commercialization of CDX-110 and additional EGFRvIII vaccine products, as well as royalties on any product sales. The Pfizer Agreement became effective after clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (as amended) on May 19, 2008. In connection with the Pfizer Agreement, we paid a total of $6.9 million in sublicense fees to Duke University and Thomas Jefferson University.

**Pfizer Animal Health Agreement:** We entered into a licensing agreement in December 2000 with Pfizer's Animal Health Division whereby Pfizer has licensed our technology for the development of animal health and food safety vaccines. Under the agreement, we may receive additional milestone payments of up to $3 million based upon attainment of specified milestones. We may receive royalty payments on eventual product sales. The term of this agreement is through the expiration of the last of the patents covered by the agreement. We have no obligation to incur any research and development costs in connection with this agreement.

*Rockefeller University ("Rockefeller")*

We are providing research and development support to Rockefeller on the development of their vaccine, DCVax-001, which we refer to as CDX-2401, aimed at providing protection from infection with HIV, the virus known to cause AIDS. Rockefeller's program is in a Bill & Melinda Gates Foundation

funded partnership called the Grand Challenges initiative. Preclinical studies and manufacturing development are in progress and our collaborators plan to file an IND for Phase 1 clinical studies in the first half of 2010. Rockefeller pays us on a time and materials basis.

*Vaccine Technologies, Inc. ("VTI")*

In January 2009, we entered into a license agreement with VTI under which we granted a worldwide exclusive license to VTI to develop and commercialize our CholeraGarde® and ETEC vaccine programs. We may receive milestones payments and royalties with respect to development and commercialization of the technology licensed to VTI.

*TopoTarget A/S ("TopoTarget")*

In connection with the CuraGen Merger, we assumed the rights under the April 2008 agreement ("TopoTarget Agreement") between CuraGen and TopoTarget whereby we could receive up to $6 million in either potential commercial milestone payments related to future net sales of Belinostat or 10% of any sublicense income received by TopoTarget ("TopoTarget Payments"). Under the TopoTarget Agreement, CuraGen sold back its Belinostat rights to TopoTarget and received $25 million in cash, 5 million shares of TopoTarget common stock (sold by CuraGen in 2008 for net proceeds of $12 million) and the right to receive the TopoTarget Payments. In addition, TopoTarget assumed all financial and operational responsibility for the clinical development of Belinostat under the TopoTarget Agreement. In February 2010, TopoTarget entered into a co-development and commercialization agreement for Belinostat with Spectrum Pharmaceuticals, Inc. resulting in our receipt of $3 million of the TopoTarget Payments.

**Research Collaboration and Licensing Agreements**

We have entered into licensing agreements with several universities and research organizations. Under the terms of these agreements, we have received licenses or options to license technology, specified patents or patent applications. Our licensing and development collaboration agreements generally provide for royalty payments equal to specified percentages of product sales, annual license maintenance fees and continuing patent prosecution costs. In addition, we have committed to make potential future milestone payments to third parties of up to approximately $116 million as part of our various collaborations including licensing and development programs. Payments under these agreements generally become due and payable only upon achievement of certain developmental, regulatory and/or commercial milestones.

*Medarex, Inc., a subsidiary of Bristol-Myers Squibb ("Medarex")*

We and Medarex, a former related party, have entered into the following agreements, each of which was approved by a majority of its independent directors who did not have an interest in the transaction. These agreements include:

- An Assignment and License Agreement, as amended, ("Assignment and License Agreement") that provides for the assignment of certain patent and other intellectual property rights and a license to certain Medarex technology; and
- A Research and Commercialization Agreement, as amended, ("Research and Commercialization Agreement") that provides us with certain rights to obtain exclusive commercial licenses to proprietary monoclonal antibodies raised against certain antigens.

Under the terms of the Assignment and License Agreement and Research and Commercialization Agreement, we may be required to pay milestone and royalty payments to Medarex with respect to the development of any products containing such licensed antibodies.

In October 2007, we and Medarex entered into a settlement and mutual release agreement which settled disputed amounts we owed Medarex. We issued to Medarex 351,692 shares of our common stock equal in value to $3.0 million, based on the per share price of $8.64 set on the second trading day prior to the closing date of the AVANT Merger and exchanged releases. At December 31, 2008, we owed Medarex an additional $3.0 million related to a Master Services Agreement, which we paid Medarex in October 2009.

*Rockefeller University ("Rockefeller")*

In November 2005, we and Rockefeller entered into a license agreement for the exclusive worldwide rights to human DEC-205 receptor, with the right to sublicense the technology. The license grant is exclusive except that Rockefeller may use and permit other nonprofit organizations to use the human DEC-205 receptor patent rights for educational and research purposes. We may be required to pay milestone and royalty payments to Rockefeller with respect to development and commercialization of the human DEC-205 receptor. We may also be required to pay royalties on any product sales.

*Duke University Brain Tumor Cancer Center ("Duke")*

In September 2006, we and Duke entered into a license agreement that gave us access and reference to the clinical data generated by Duke and its collaborators in order for us to generate our own filing with the FDA relating to the CDX-110 product. We may be required to pay milestone and royalty payments to Duke with respect to development and commercialization of the CDX-110 product. In connection with the Pfizer Agreement, we determined that $2.4 million was payable to Duke as a sublicense fee. As provided for under the Duke license, we paid 50% of this amount to Duke in the form of 81,512 shares of our common stock in October 2008.

*Ludwig Institute for Cancer Research ("Ludwig")*

In October 2006, we and Ludwig entered into an agreement for the nonexclusive rights to six cancer tumor targets for use in combination with our APC Targeting Technology. The term of the agreement is for ten years. We may be required to pay milestone and royalty payments to Ludwig with respect to development and commercialization of the technology licensed from Ludwig.

*Alteris Therapeutics, Inc. ("Alteris")*

In October 2005, we completed the acquisition of the assets of Alteris, including the EGFRvIII molecule that we licensed to Pfizer under the Pfizer Agreement. We may be required to pay Alteris up to $5.0 million upon obtaining the first approval for commercial sale of a product containing EGFRvIII, including CDX-110.

*Thomas Jefferson University ("TJU")*

In February 2003, we entered into three exclusive license agreements with TJU. Under these licenses, we may be required to pay milestone and royalty payments to TJU with respect to development and commercialization of the technology licensed from TJU. In connection with the Pfizer Agreement, we amended our licenses with TJU to add additional sublicensing rights and paid $4.5 million in sublicense fees to TJU in 2008.

*3M Company*

In June 2008, we and 3M Company entered into a license agreement for the exclusive worldwide rights to access 3M Company's proprietary Immune Response Modifier, Resiquimod™, (and additional Toll-Like Receptor 7/8 agonists ("TLR")) for clinical study with our proprietary APC Targeting Technology, for use as vaccine adjuvants, with the right to sublicense the technology. We may be

required to pay milestone and royalty payments to 3M Company with respect to development and commercialization of the technology licensed from 3M Company.

*University of Southampton, UK ("Southampton")*

In November 2008, we entered into a license agreement with Southampton to develop human antibodies towards CD27, a potentially important target for immunotherapy of various cancers. CD27 is a critical molecule in the activation pathway of lymphocytes, is downstream from CD40, and may provide a novel way to regulate the immune responses. In preclinical models, antibodies to CD27 have been shown to mediate anti-tumor effects alone, and may be particularly effective in combination with our other immunotherapies. We may be required to pay milestone and royalty payments to Southampton with respect to development and commercialization of the technology licensed from Southampton.

*Amgen Inc. ("Amgen")*

In March 2009, we entered into a license agreement with Amgen to expand our Precision Targeted Immunotherapy Platform by acquiring exclusive rights to CDX-301 and CD40 ligand (CD40L). CDX-301 and CD40L are immune modulating molecules that increase the numbers and activity of immune cells that control immune responses. We may be required to pay milestone and royalty payments to Amgen with respect to development and commercialization of this technology licensed from Amgen.

*Amgen Fremont (formerly Abgenix)*

In connection with the CuraGen Merger, we assumed the license agreement between CuraGen and Amgen Fremont (successor in-interest to Abgenix) to develop fully-human monoclonal antibody therapeutics. In May 2009, an amendment to the license agreement ("Amgen Amendment") was entered into related to CuraGen's exclusive rights to develop and commercialize CDX-011 and 11 other licensed antigens. Under the Amgen Amendment, CuraGen and Amgen Fremont agreed to modify the terms of their existing cross-license of antigens whereby the amended license would be fully paid-up and royalty-free (except for any potentially required payments by CuraGen to the original licensor of CDX-011).

*Seattle Genetics, Inc. ("Seattle Genetics")*

In connection with the CuraGen Merger, we assumed the license agreement between CuraGen and Seattle Genetics whereby CuraGen acquired the rights to proprietary antibody-drug conjugate ("ADC") technology for use with its their proprietary antibodies for the potential treatment of cancer. We may be required to pay milestone and royalty payments to Seattle Genetics with respect to development and commercialization of the ADC technology.

**Competition**

The biotechnology and pharmaceutical industries are intensely competitive and subject to rapid and significant technological change. Many of the products that we are attempting to develop and commercialize will be competing with existing therapies. In addition, a number of companies are pursuing the development of pharmaceuticals that target the same diseases and conditions that we are targeting. We face competition from pharmaceutical and biotechnology companies both in the United States and abroad. Our competitors may utilize discovery technologies and techniques or partner with collaborators in order to develop products more rapidly or successfully than us or our collaborators are able to do. Many of our competitors, particularly large pharmaceutical companies, have substantially greater financial, technical and human resources than we do. In addition, academic institutions,

government agencies and other public and private organizations conducting research may seek patent protection with respect to potentially competitive products or technologies and may establish exclusive collaborative or licensing relationships with our competitors.

We face intense competition in our development activities. We face competition from many companies in the United States and abroad, including a number of large pharmaceutical companies, firms specialized in the development and production of vaccines, adjuvants and vaccine and immunotherapeutic delivery systems and major universities and research institutions. These competitors include Alexion, Anadys, Antigenics, Baxter, BioSante, Crucell, Dendreon, Eli Lilly, Emergent, Genitope, GlaxoSmithKline, Idera, Intercell, Immunogen, Maxygen, Merck, NeoPharm, Northwest Biotherapeutics, Novavax, Pfizer, Roche, Sanofi-Aventis, Seattle Genetics, and Vical. We are aware that Dendreon is in late stage clinical trials for therapeutic vaccines for the treatment of prostate cancer which may compete with CDX-1307 and CDX-1401. In addition, companies such as Eli Lilly with its approved product Erbitux™ for the treatment of colorectal cancer, and Roche with its product Herceptin® for the treatment of metastatic breast cancer, have already commercialized antibody-based products that may compete with CDX-1307, CDX-1401 and CDX-110. Various other companies are developing or commercializing products in areas that we have targeted for product development. Some of these products use therapeutic approaches that may compete directly with our product candidates. Many of these companies and institutions, either alone or together with their partners, have substantially greater financial resources and larger research and development staffs than we do. These companies may succeed in obtaining approvals from the FDA and foreign regulatory authorities for their products sooner than we do for our products.

We are aware of a number of competitive products currently available in the marketplace or under development that are used for the prevention and treatment of the diseases that we have targeted for product development. Various companies are currently marketing or developing biopharmaceutical products that may compete with our product candidates that target colorectal cancer. Product candidates we may develop are also subject to competition in the treatment of colorectal cancer from a number of products already approved and on the market, including the following chemotherapy products: AstraZeneca PLC's Tomudex®, Hoffman-LaRoche's Xeloda® (capecitabine), Immunex Corporation's Leucovorin® calcium, ImClone Systems' Erbitux™, Pfizer, Inc.'s Camptosar® (irinotecan) and Aduracil® (5-FU), Sanofi-Synthelabo Group's Eloxatin™ (oxaliplatin), Genentech's anti-VEGF antibody, Avastin™, GlaxoSmithKline's Eniluracil™, and Titan Pharmaceuticals' CeaVac™, in the treatment of patients with advanced-stage colorectal cancer. In addition, we are aware that other companies such as Cell Genesys and Dendreon may be developing additional cancer vaccines that could potentially compete with other of our product candidates. We may also face competition from Medarex and Bristol-Myers Squibb, which are developing a therapeutic vaccine for the treatment of melanoma using Medarex's MDX-010 product candidate. We also face competition from a number of companies working in the fields of anti-angiogenesis and specific active immunotherapy for the treatment of solid tumor cancers. We expect that competition among specific active immunotherapy and anti-angiogenesis products approved for sale will be based on various factors, including product efficacy, safety, reliability, availability, price and patent position.

We are aware of specific companies that are developing antibody drug conjugates (ADCs) for use in the treatment of cancer. Trastuzumab-DM1 (T-DM1) is a first-in-class HER2 antibody drug conjugate comprised of Genentech's (a Member of the Roche Group) trastuzumab antibody linked to ImmunoGen's cell-killing agent, DM1. T-DM1 combines anti-HER2 activity and targeted intracellular delivery of the potent anti-microtubule agent, DM1 (a maytansine derivative). A Phase 3 clinical trial evaluating T-DM1 for second-line HER2-positive metastatic breast cancer is planned and may be competitive with our developmental program in the breast cancer indication. Other ADCs are in development by our collaborator of the MMAE technology, Seattle Genetics, using monomethylaurastatin derivatives as the cell-killing agent in hematologic cancers and other cancers.

Marketed products that are used in the treatment of melanoma include dacarbazine, temozolamide, and interleukin-2. In addition, several other pharmaceutical and biotechnology companies are engaged in research and development for the treatment of melanoma. Many more products are on the market or in development for the treatment of metastatic breast cancer. How CDX-011 will compete with these other commercial and development stage products in metastatic melanoma and breast cancer is not clear at this time.

We also face competition from pharmaceutical and biotechnology companies, academic institutions, government agencies and private research organizations in recruiting and retaining highly qualified scientific personnel and consultants and in the development and acquisition of technologies. Moreover, technology controlled by third parties that may be advantageous to our business may be acquired or licensed by our competitors, thereby preventing us from obtaining technology on commercially reasonable terms, if at all. We will also compete for the services of third parties that may have already developed or acquired internal biotechnology capabilities or made commercial arrangements with other biopharmaceutical companies to target the diseases on which we have focused both in the U.S. and outside of the U.S.

Our competitive position will also depend upon our ability to attract and retain qualified personnel, obtain patent protection or otherwise develop proprietary products or processes and secure sufficient capital resources for the often lengthy period between technological conception and commercial sales. We will require substantial capital resources to complete development of some or all of our products, obtain the necessary regulatory approvals and successfully manufacture and market our products. In order to secure capital resources, we anticipate having to sell additional capital stock, which would dilute existing stockholders. We may also attempt to obtain funds through research grants and agreements with commercial collaborators. However, these types of fundings are uncertain because they are at the discretion of the organizations and companies that control the funds. As a result, we may not receive any funds from grants or collaborations. Alternatively, we may borrow funds from commercial lenders, likely at high interest rates, which would increase the risk of any investment in us.

**Manufacturing**

We have no experience in large scale manufacturing and we have relied upon collaborators or contractors to manufacture some of our proposed products for both clinical and commercial purposes to date. We have established our own manufacturing facility in Fall River, Massachusetts, to produce antibodies, vaccines and other products that we may develop at scale for clinical trials. In order for us to establish a commercial manufacturing facility, we will require substantial additional funds and will be required to hire and retain significant additional personnel and comply with the extensive cGMP regulations of the FDA applicable to such facility. The commercial manufacturing facility would also need to be licensed for the production of antibodies, vaccines and other products by the FDA. We intend to establish manufacturing arrangements with manufacturers that comply with the FDA's requirements and other regulatory standards, although there can be no assurance that we will be able to do so.

While we believe that there is currently sufficient capacity worldwide for the production of our potential products by our collaborators or through contract manufacturers, establishing long-term relationships with contract manufacturers and securing multiple sources for the necessary quantities of clinical and commercial materials required can be a challenge. Qualifying the initial source of clinical and ultimately commercial material is a time consuming and expensive process due to the highly regulated nature of the pharmaceutical/biotech industry. These costs are hopefully mitigated in the economies of scale realized in commercial manufacture and product sale. The key difficulty in qualifying more than one source for each product is the duplicated time and expense in doing so without the potential to mitigate these costs if the secondary source is never utilized.

In connection with the Pfizer Agreement, the manufacture of CDX-110 is the responsibility of Pfizer. To date, we have utilized contract manufacturers for the manufacture of clinical trial supplies of CDX-011 and CDX-1135. Manufacture of the rotavirus vaccine is the responsibility of Glaxo, which has received from us a world-wide exclusive license to commercialize this vaccine. The two clinical lots of CDX-1307 used in our completed Phase 1 clinical trials of CDX-1307 were manufactured by contract manufacturers. In 2009, we completed the manufacture of additional quantities of CDX-1307 in our Fall River facility to meet planned Phase 2 clinical material requirements. We have also manufactured in our Fall River facility CDX-1401 clinical materials for our Phase 1/2 clinical trial currently enrolling and CDX-2401 clinical materials for a Rockefeller-sponsored Phase 1 clinical trial expected to begin in the first half of 2010.

The manufacturing processes for our other vaccine and immunotherapeutic delivery systems and vaccines utilize known technologies. We believe that the products we currently have under development can be scaled up to permit manufacture in commercial quantities. However, there can be no assurance that we will not encounter difficulties in scaling up the manufacturing processes.

Use of third party manufacturers limits our control over and ability to monitor the manufacturing process. As a result, we may not be able to detect a variety of problems that may arise and may face additional costs in the process of interfacing with and monitoring the progress of our contract manufacturers. If third party manufacturers fail to meet our manufacturing needs in an acceptable manner, we would face delays and additional costs while we develop internal manufacturing capabilities or find alternative third party manufacturers. It may not be possible to have multiple third party manufacturers ready to supply us with needed material at all or without incurring significant costs.

**Marketing**

Under the terms of existing and future partnership agreements, we rely and expect to continue to rely on the efforts of our collaborators, including Glaxo, Pfizer, VTI, and TopoTarget/Spectrum for the sale and marketing of our products. There can be no assurance that our collaborators will develop and market vaccine products incorporating our technologies, or, if marketed, that such efforts will be successful. The failure of our collaborators to successfully market products would harm our business.

We have retained, and in the future intend to retain, marketing rights to some of our product candidates, including vaccine and immunotherapeutic delivery systems and vaccine candidates, in selected geographic areas and for specified indications. We intend to seek marketing and distribution agreements and/or co-promotion agreements for the distribution of our products in these geographic areas and for these indications. We believe that these arrangements could enable us to generate greater financial return than might be obtained from early stage licensing and collaboration agreements. We have no marketing and sales staff and limited experience relating to marketing and distribution of commercial products, including vaccines. If we determine in the future to engage in direct marketing of our products, we will be required to recruit an experienced marketing group, develop a supporting distribution capability and incur significant additional expenditures. There can be no assurance that we will be able to establish a successful marketing force. We may choose or find it necessary to enter into strategic partnerships on uncertain, but potentially unfavorable, terms to sell, market and distribute our products. Any delay in the marketing or distribution of our products, whether it results from problems with internal capabilities or with a collaborative relationship, could harm the value of an investment in us.

**Patents, Licenses and Proprietary Rights**

In general, our intellectual property strategy is to protect our technology by filing patent applications and obtaining patent rights covering our own technology, both in the United States and in foreign countries that we consider important to our business. In addition, we have acquired and will seek to acquire as needed or desired, exclusive rights of others through assignment or license to complement our portfolio of patent rights. We also rely on trade secrets, unpatented know-how and technological expertise and innovation to develop and maintain our competitive position.

*Patents*

The successful development and marketing of products by us will depend in part on our ability to create and maintain intellectual property, including patent rights. We are the owner or exclusive licensee to proprietary patent positions in the areas of vaccine technologies, antibody technologies and complement inhibitor technology. Although we continue to pursue patent protection for our products, no assurance can be given that any pending application will issue as a patent, that any issued patent will have a scope that will be of commercial benefit, or that we will be able to successfully enforce our patent position against infringers. We routinely review our patent portfolio and adjusts its strategies for prosecution and maintenance of individual cases according to a number of factors including program priorities, stage of development, and patent term.

We own or license rights under more than 400 granted patents and national and regional patent applications around the world covering inventions relating to our business. The key patents owned by us or licensed to us that we consider important to our business include the following (the indicated and estimated patent expiry dates do not include any possible Patent Term Extensions or Supplementary Protection Certificates, if these may be secured in due course):

- Patents for the technology used in CDX-110 have expiration dates through 2014 in the United States and from 2010 to 2015 in the United Kingdom, Germany and France. A pending patent application in Japan is currently under appeal. We also have rights under patent applications around the world relating to uses of CDX-110 which are currently pending. If issued and maintained to full term in a form which covers commercial use of CDX-110, the latter filings could potentially provide additional patent protection for the relevant use in the relevant territories to 2026.

- Our patent portfolio for CDX-011 includes pending patent applications in the US, Europe and Japan. If issued and maintained to full term in due course, these would have estimated patent expiry dates in 2025. In addition, patent rights relating to the toxin and conjugation technology used in CDX-011 have been licensed from Seattle Genetics.

- US patents and worldwide pending patent applications for the technology used in CDX-1307 have current or estimated expiration dates (subject to issue in the case of pending applications) that range from 2021 to 2024.

- We have a pending international patent application relating to the technology used in CDX-1401 which, if issued in the main designated territories and maintained to full term in due course, would have estimated patent expiry dates in 2028.

- Patents for the technology used in CDX-301 have current expiration dates that range from 2016 in the major European territories to 2020 in the US.

- We have licensed pending patent applications in the US, Europe and Japan relating to the technology used in CDX-1127. If issued and maintained to full term in due course, these would have estimated patent expiry dates in 2027. Further filings are also under preparation.

- Our patent portfolio for CDX-014 includes pending patent applications in the US, Europe and Japan. If issued and maintained to full term in due course, these would have estimated patent expiry dates in 2024.

- Patents for the technology used in CDX-1135 have expiration dates that range from 2013 to 2016.

- Our US patent and worldwide pending patent applications for the technology used in CDX-1189 have current or estimated expiration dates (subject to issue in the case of pending applications) in 2022.

- Patents for the technology used in the cholera and typhoid vaccines expire between 2013 and 2016. Our patent portfolio for ETEC includes pending patent applications around the world which, if issued and maintained to full term in due course, would have estimated patent expiry dates in 2028.

- Licensed patents for our rotavirus strain that we licensed to Glaxo have expiration dates in 2011 and 2012.

There can be no assurance that patent applications owned by or licensed to us will result in granted patents or that, if granted, the resultant patents will afford protection against competitors with similar technology. It is also possible that third parties may obtain patents or other proprietary rights that may be necessary or useful to us. In cases where third parties are first to invent a particular product or technology, it is possible that those parties will obtain patents that will be sufficiently broad to prevent us from using important technology or from further developing or commercializing important vaccine and immunotherapeutic systems and vaccine candidates. If licenses from third parties are necessary but cannot be obtained, commercialization of the covered products might be delayed or prevented. Even if these licenses can be obtained, they would probably require us to pay ongoing royalties and other costs, which could be substantial.

Although a patent has a statutory presumption of validity in the United States, the issuance of a patent is not conclusive as to validity or as to the enforceable scope of the patent claims. The validity or enforceability of a patent after its issuance by the Patent and Trademark Office can be challenged in litigation. As a business that uses a substantial amount of intellectual property, we face a heightened risk of intellectual property litigation. If the outcome of the litigation is adverse to the owner of the patent, third parties may then be able to use the invention covered by the patent without authorization or payment. There can be no assurance that our issued patents or any patents subsequently issued to or licensed by us will not be successfully challenged in the future. In addition, there can be no assurance that our patents will not be infringed or that the coverage of our patents will not be successfully avoided by competitors through design innovation.

We are aware that others, including universities and companies, have filed patent applications and have been granted patents in the United States and other countries which claim subject matter potentially useful or necessary to the commercialization of our products. The ultimate scope and validity of existing or future patents which have been or may be granted to third parties, and the availability and cost of acquiring rights in those patents necessary to the manufacture, use or sale of our products presently cannot be determined by us.

Third parties may have or may obtain valid and enforceable patents or proprietary rights that could block us from developing products using our technology, including:

- certain patents and applications in the United States and Europe owned by Sanofi-Aventis, which relate to antibody-antigen conjugates and methods of their use for eliciting an immune response against the antigen;

- certain patents and applications in the United States and foreign countries covering particular antigens and antigenic fragments targeted by our current vaccine product candidates, including CDX-1307 and CDX-1401;
- certain patents and pending applications related to particular receptors and other molecules on dendritic cells and macrophages that may be useful for generating monoclonal antibodies and can be employed in our APC Targeting Technology;
- two United States patents and related foreign patents and applications covering methods of diagnosing gliomas by detecting the presence of the EGFRvIII (tumor specific splice variant) protein;
- a United States patent relating to certain uses of GM-CSF;
- a European patent relating to certain tumor antigen splice variants;
- a United States patent owned by Genentech, Inc., relating to the production of recombinant antibodies in host cells;
- a United States patent owned by GlaxoSmithKline plc related to methods of culturing cells under certain conditions; and
- certain patents held by third parties relating to antibody expression in particular types of host cells.

The CholeraGarde® vaccine candidate and our VibrioVec® vaccine delivery system utilize mutated *Vibrio cholerae* strains. We are aware of an issued U.S. patent which claims a culture of mutated *Vibrio cholerae*. We believe that only one claim (the "Claim") of the patent may be pertinent to our CholeraGarde® and VibrioVec® products. The remaining claims of the patent cover other cultures, which we believe are not pertinent to the CholeraGarde® or VibrioVec® products. We have received an opinion of counsel from Fish & Richardson, P.C. that, based on the analysis set forth in their opinion and the facts known to them, the Claim is invalid. While a party challenging the validity of a patent has the burden of proving invalidity, the outcome of any litigation cannot be predicted with certainty. Accordingly, there can be no assurance that, if litigated, a court would conclude that the Claim is invalid.

In addition to the patents referred to in the previous paragraphs, there may be other patent applications and issued patents belonging to competitors that may require us to alter our vaccine candidates and vaccine and immunotherapeutic delivery systems, pay licensing fees or cease some of our activities. If our product candidates conflict with patents that have been or may be granted to competitors, universities or others, the patent owners could bring legal action against us claiming damages and seeking to enjoin manufacturing and marketing of the patented products. If any of these actions is successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to manufacture or market the affected products. There can be no assurance that we would prevail in any such action or that any license required under any such third party patent would be made available on acceptable terms or at all. We believe that there may be significant litigation in the biotechnology and vaccine industries regarding patent and other intellectual property rights. If we become involved in that litigation, we could consume substantial resources.

*Licenses*

We have entered into several significant license agreements relating to technology that is being developed by us and/or our collaborators. In general, these institutions have granted us an exclusive worldwide license (with right to sublicense) to make, use and sell products embodying the licensed technology, subject to the reservation by the licensor of a non-exclusive right to use the technologies for non-commercial research purposes. Generally, the term of each license is through the expiration of

the last of the patents issued with respect to the technologies covered by the license. We have generally agreed to use reasonable efforts to develop and commercialize licensed products and to achieve specified milestones and pay license fees, milestone payments and royalties based on the net sales of the licensed products or to pay a percentage of sublicense income. If we breach our obligations, the licensor has the right to terminate the license, and, in some cases, convert the license to a non-exclusive license. Generally, we control and are responsible for the cost of defending the patent rights of the technologies that we license.

*Proprietary Rights*

We also rely on unpatented technology, trade secrets and confidential information, and no assurance can be given that others will not independently develop substantially equivalent information and techniques or otherwise gain access to our know-how and information, or that we can meaningfully protect our rights in such unpatented technology, trade secrets and information. We require each of our employees, consultants and advisors to execute a confidentiality agreement at the commencement of an employment or consulting relationship with us. The agreements generally provide that all inventions conceived by the individual in the course of employment or in providing services to us and all confidential information developed by, or made known to, the individual during the term of the relationship shall be the exclusive property of us and shall be kept confidential and not disclosed to third parties except in limited specified circumstances. There can be no assurance, however, that these agreements will provide meaningful protection for our information in the event of unauthorized use or disclosure of such confidential information.

**Government Regulation**

Our activities and products are significantly regulated by a number of governmental entities, including the FDA in the United States and by comparable authorities in other countries. These entities regulate, among other things, the manufacture, testing, safety, effectiveness, labeling, documentation, advertising and sale of our products. We must obtain regulatory approval for a product in all of these areas before we can commercialize the product. Product development within this regulatory framework takes a number of years and involves the expenditure of substantial resources. Many products that initially appear promising ultimately do not reach the market because they are found to be unsafe or ineffective when tested. Our inability to commercialize a product would impair our ability to earn future revenues.

*FDA Approval Process*

In the United States, vaccines and immunotherapeutics for human use are subject to FDA approval as "biologics" under the Public Health Service Act and "drugs" under the Federal Food, Drug and Cosmetic Act. The steps required before a new product can be commercialized include: preclinical studies in animals, clinical trials in humans to determine safety and efficacy and FDA approval of the product for commercial sale.

Data obtained at any stage of testing is susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. Moreover, during the regulatory process, new or changed drug approval policies may cause unanticipated delays or rejection of our product. We may not obtain necessary regulatory approvals within a reasonable period of time, if at all, or avoid delays or other problems in testing our products. Moreover, even if we received regulatory approval for a product, the approval may require limitations on use, which could restrict the size of the potential market for the product.

The FDA provides that human clinical trials may begin thirty (30) days after receipt and review of an IND application, unless the FDA requests additional information or changes to the study protocol

within that period. An IND must be sponsored and filed by us for each of our proposed products. Authorization to conduct a clinical trial in no way assures that the FDA will ultimately approve the product. Clinical trials are usually conducted in three sequential phases. In a Phase 1 trial, the product is given to a small number of healthy volunteers to test for safety (adverse effects). Phase 2 trials are conducted on a limited group of the target patient population; safety, optimal dosage and efficacy are studied. A Phase 3 trial is performed in a large patient population over a wide geographic area to provide evidence for the safety of the product and to prove and confirm efficacy. The FDA has ongoing oversight over all these trials and can order a temporary or permanent discontinuation if warranted. Such an action could materially harm us. Clinical tests are critical to the success of our products but are subject to unforeseen and uncontrollable delay, including delay in enrollment of patients. Any delay in clinical trials could delay our commercialization of a product.

A product's safety and effectiveness in one test is not necessarily indicative of its safety and effectiveness in another test. Moreover, we may not discover all potential problems with a product even after completing testing on it. Some of our products and technologies have undergone only preclinical testing. As a result, we do not know whether they are safe or effective for humans. Also, regulatory authorities may decide, contrary to our findings, that a product is unsafe or not as effective in actual use as its test results indicated. This could prevent the product's widespread use, require its withdrawal from the market or expose us to liability.

The results of the clinical trials and all supporting data are submitted to the FDA for approval. A Biologics License Application ("BLA") is submitted for a biologic product; a New Drug Application ("NDA") for a drug product. The interval between IND filing and BLA/NDA filing is usually at least several years due to the length of the clinical trials, and the BLA/NDA review process can take over a year. During this time the FDA may request further testing or additional trials or may turn down the application. Even with approval, the FDA frequently requires post-marketing safety studies (known as Phase 4 trials) to be performed.

The FDA requires that the manufacturing facility that produces a licensed product meet specified standards, undergo an inspection and obtain an establishment license prior to commercial marketing. Subsequent discovery of previously unknown problems with a product or its manufacturing process may result in restrictions on the product or the manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution.

*Expedited Review and Approval*

The FDA has various programs, including fast track, priority review, and accelerated approval, that are intended to expedite or simplify the process for reviewing drugs, and/or provide for approval on the basis of surrogate endpoints. Generally, drugs that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments, however, these programs do not affect the standards for approval. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform post-marketing clinical trials.

*Orphan Drug*

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug for this type of disease or condition will be recovered from sales in the United

States for that drug. If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication, except in very limited circumstances, for seven years.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory standards is not maintained or if problems occur after the product reaches the market. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products that have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs.

*Foreign Regulation*

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. Approval by the FDA does not ensure approval by the regulatory bodies of other countries.

Under European Union regulatory systems, we may submit marketing authorization applications either under a centralized or decentralized procedure. The centralized procedure, which is compulsory for medicines produced by biotechnology and optional for those which are highly innovative, provides for the grant of a single marketing authorization that is valid for all European Union member states. The decentralized procedure provides for mutual recognition of national approval decisions. Under the decentralized procedure, the holder of a national marketing authorization may submit an application to the remaining member states. Within 90 days of receiving the applications and assessments report each member state must decide whether to recognize approval. If a member state does not recognize the marketing authorization, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states. As in the United States, we may apply for designation of our products as orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made. Orphan drugs in Europe enjoy economic and marketing benefits, including a 10-year market exclusivity period for the approved indication, but not for the same drug, unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan-designated product.

Our collaborators are also subject to all of the above-described regulations in connection with the commercialization of products utilizing our technology.

*Other Regulatory Processes*

We are subject to a variety of financial disclosure and securities trading regulations as a public company in the U.S., including laws relating to the oversight activities of the SEC and the regulations of the NASDAQ Global Market, on which our shares are traded. We are also subject to regulation under other federal laws and regulation under state and local laws, including laws relating to occupational safety, laboratory practices, environmental regulations, and hazardous substance control.

**Product Liability**

The risk of product liability claims, product recalls and associated adverse publicity is inherent in the testing, manufacturing, marketing and sale of medical products. If and when we manufacture vaccines that are recommended for routine administration to children, we will be required to participate in the National Vaccine Injury Compensation Program. This program compensates children having adverse reactions to certain routine childhood immunizations with funds collected through an excise tax from the manufacturers of these vaccines.

Under our license agreements, we are required to maintain clinical trial liability insurance coverage up to $14 million. However, there can be no assurance that such insurance coverage is or will continue to be adequate or available. We may choose or find it necessary under our collaborative agreements to increase our insurance coverage in the future. We may not be able to secure greater or broader product liability insurance coverage on acceptable terms or at reasonable costs when needed. Any liability for mandatory damages could exceed the amount of our coverage. A successful product liability claim against us could require us to pay a substantial monetary award. Moreover, a product recall could generate substantial negative publicity about our products and business and inhibit or prevent commercialization of other product candidates.

**Employees**

As of December 31, 2009, we employed 90 full time persons and 3 part time or temporary persons, 14 of whom have doctoral degrees. Of these employees, 77 were engaged in or directly support research and development activities. We believe that our employee relations are good. We believe that our future success will depend in large part on our ability to attract and retain experienced and skilled employees.

## Item 1A. RISK FACTORS

You should consider carefully these risk factors together with all of the information included or incorporated by reference in this Annual Report in addition to our financial statements and the notes to our financial statements. This section includes forward-looking statements.

The following is a discussion of the risk factors that we believe are material to us at this time. These risks and uncertainties are not the only ones facing us and there may be additional matters that we are unaware of or that we currently consider immaterial. All of these could adversely affect our business, results of operations, financial condition and cash flows.

***Risks Related to Our Business***

**Our products and product candidates are subject to extensive regulatory scrutiny.**

All of our products and product candidates are at various stages of development and commercialization and our activities, products and product candidates are significantly regulated by a number of governmental entities, including the FDA in the United States and by comparable authorities in other countries. These entities regulate, among other things, the manufacture, testing, safety, effectiveness, labeling, documentation, advertising and sale of our products and product candidates. We or our partners must obtain regulatory approval for a product candidate in all of these areas before we can commercialize the product candidate. Product development within this regulatory framework takes a number of years and involves the expenditure of substantial resources. This process typically requires extensive preclinical and clinical testing, which may take longer or cost more than we anticipate, and may prove unsuccessful due to numerous factors. Many product candidates that initially appear promising ultimately do not reach the market because they are found to be unsafe or ineffective when tested. Companies in the pharmaceutical, biotechnology and vaccines industries have suffered

significant setbacks in advanced clinical trials, even after obtaining promising results in earlier trials. Our inability to commercialize a product or product candidate would impair our ability to earn future revenues.

**If our products do not pass required tests for safety and effectiveness, we will not be able to derive commercial revenue from them.**

In order to succeed, we will need to derive commercial revenue from the products we have under development. The FDA has not approved our CDX-110 or CDX-011 product candidates or any of our other lead products for sale to date. Products in our vaccine programs are in various stages of preclinical and clinical testing. Preclinical tests are performed at an early stage of a product's development and provide information about a product's safety and effectiveness on laboratory animals. Preclinical tests can last years. If a product passes its preclinical tests satisfactorily, and we determine that further development is warranted, we would file an IND application for the product with the FDA, and if the FDA gives its approval we would begin Phase 1 clinical tests. Phase 1 testing generally lasts between 6 and 24 months. If Phase 1 test results are satisfactory and the FDA gives its approval, we can begin Phase 2 clinical tests. Phase 2 testing generally lasts between 6 and 36 months. If Phase 2 test results are satisfactory and the FDA gives its approval, we can begin Phase 3 pivotal studies. Phase 3 studies generally last between 12 and 48 months. Once clinical testing is completed and a new drug application is filed with the FDA, it may take more than a year to receive FDA approval.

In all cases we must show that a pharmaceutical product is both safe and effective before the FDA, or drug approval agencies of other countries where we intend to sell the product, will approve it for sale. Our research and testing programs must comply with drug approval requirements both in the United States and in other countries, since we are developing our lead products with companies, including Glaxo and Pfizer, which intend to or could later decide to commercialize them both in the U.S. and abroad. A product may fail for safety or effectiveness at any stage of the testing process. A major risk we face is the possibility that none of our products under development will come through the testing process to final approval for sale, with the result that we cannot derive any commercial revenue from them after investing significant amounts of capital in multiple stages of preclinical and clinical testing.

**Product testing is critical to the success of our products but subject to delay or cancellation if we have difficulty enrolling patients.**

As our portfolio of potential products moves from preclinical testing to clinical testing, and then through progressively larger and more complex clinical trials, we will need to enroll an increasing number of patients with the appropriate characteristics. At times we have experienced difficulty enrolling patients and we may experience more difficulty as the scale of our clinical testing program increases. The factors that affect our ability to enroll patients are largely uncontrollable and include principally the following:

- the nature of the clinical test;
- the size of the patient population;
- patients' willingness to receive a placebo or less effective treatment on the control arm of a clinical study;
- the distance between patients and clinical test sites; and
- the eligibility criteria for the trial.

If we cannot enroll patients as needed, our costs may increase or it could force us to delay or terminate testing for a product.

**Any delay in obtaining regulatory approval would have an adverse impact on our ability to earn future revenues.**

It is possible that none of the products or product candidates that we develop will obtain the regulatory approvals necessary for us to begin commercializing them. The time required to obtain FDA and other approvals is unpredictable but often can take years following the commencement of clinical trials, depending upon the nature of the product candidate. Any analysis we perform of data from clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. Any delay or failure in obtaining required approvals could have a material adverse effect on our ability to generate revenues from the particular product candidate. Furthermore, if we, or our partners, do not reach the market with our products before our competitors offer products for the same or similar uses, or if we, or our partners, are not effective in marketing our products, our revenues from product sales, if any, will be reduced.

We face intense competition in our development activities. We face competition from many companies in the United States and abroad, including a number of large pharmaceutical companies, firms specialized in the development and production of vaccines, adjuvants and vaccine and immunotherapeutic delivery systems and major universities and research institutions. These competitors include Alexion, Anadys, Antigenics, Baxter, BioSante, Crucell, Dendreon, Eli Lilly, Emergent, Genitope, GlaxoSmithKline, Idera, Intercell, Immunogen, Maxygen, Merck, NeoPharm, Northwest Biotherapeutics, Novavax, Pfizer, Roche, Sanofi-Aventis, Seattle Genetics, and Vical. Most of our competitors have substantially greater resources, more extensive experience in conducting preclinical studies and clinical testing and obtaining regulatory approvals for their products, greater operating experience, greater research and development and marketing capabilities and greater production capabilities than those of ours. These companies might succeed in obtaining regulatory approval for competitive products more rapidly than we can for our products, especially if we experience any delay in obtaining required regulatory approvals.

**Failure to comply with applicable regulatory requirements would adversely impact our operations.**

Even after receiving regulatory approval, our products would be subject to extensive regulatory requirements, and our failure to comply with applicable regulatory requirements will adversely impact our operations. In the United States, the FDA requires that the manufacturing facility that produces a product meet specified standards, undergo an inspection and obtain an establishment license prior to commercial marketing. Subsequent discovery of previously unknown problems with a product or its manufacturing process may result in restrictions on the product or the manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution.

**We depend greatly on the intellectual capabilities and experience of our key executives and scientists and the loss of any of them could affect our ability to develop our products.**

The loss of Anthony S. Marucci, our President and Chief Executive Officer, or other key members of our staff, including Avery W. Catlin, our Chief Financial Officer, Dr. Thomas Davis, our Chief Medical Officer, or Dr. Tibor Keler, our Chief Scientific Officer, could harm us. We entered into employment agreements with Messrs. Marucci, Catlin, Davis and Keler. We also depend on our scientific and clinical collaborators and advisors, all of whom have outside commitments that may limit their availability to us. In addition, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled scientific, managerial and marketing personnel, particularly as we expand our activities in clinical trials, the regulatory approval process and sales and manufacturing. We routinely enter into consulting agreements with our scientific and clinical collaborators and advisors, opinion leaders and heads of academic departments in the ordinary course

of our business. We also enter into contractual agreements with physicians and institutions who recruit patients into our clinical trials on our behalf in the ordinary course of our business. Notwithstanding these arrangements, we face significant competition for this type of personnel from other companies, research and academic institutions, government entities and other organizations. We cannot predict our success in hiring or retaining the personnel we require for continued growth.

**We rely on contract manufacturers. Should the cost, delivery and quality of clinical and commercial grade materials supplied by contract manufacturers vary to our disadvantage, our business operations could suffer significant harm.**

Although we have small-lot manufacturing capability at our Fall River facility, we rely on sourcing from third-party manufacturers for suitable quantities of some of our clinical and commercial grade materials essential to preclinical and clinical studies currently underway and to planned clinical trials in addition to those currently being conducted by third parties or us. The inability to have suitable quality and quantities of these essential materials produced in a timely manner would result in significant delays in the clinical development and commercialization of products, which could adversely affect our business, financial condition and results of operations. We also rely on collaborators and contract manufacturers to manufacture proposed products in both clinical and commercial quantities in the future. Our leading vaccine candidates require specialized manufacturing capabilities and processes.

We may face difficulty in securing commitments from U.S. and foreign contract manufacturers as these manufacturers could be unwilling or unable to accommodate our needs. Relying on foreign manufacturers involves peculiar and increased risks, including the risk relating to the difficulty foreign manufacturers may face in complying with the FDA's Good Manufacturing Practices ("GMP") as a result of language barriers, lack of familiarity with GMP or the FDA regulatory process or other causes, economic or political instability in or affecting the home countries of our foreign manufacturers, shipping delays, potential changes in foreign regulatory laws governing the sales of our product supplies, fluctuations in foreign currency exchange rates and the imposition or application of trade restrictions.

There can be no assurances that we will be able to enter into long-term arrangements with third party manufacturers on acceptable terms, or at all. Further, contract manufacturers must also be able to meet our timetable and requirements, and must operate in compliance with GMP; failure to do so could result in, among other things, the disruption of product supplies. As noted above, non-U.S. contract manufacturers may face special challenges in complying with the FDA's GMP requirements, and although we are not currently dependent on non-U.S. collaborators or contract manufacturers, we may choose or be required to rely on non-U.S. sources in the future as we seek to develop stable supplies of increasing quantities of materials for ongoing clinical trials of larger scale. Our dependence upon third parties for the manufacture of our products may adversely affect our profit margins and our ability to develop and deliver products on a timely and competitive basis.

The significant third-parties who we currently rely on for sourcing of suitable quantities of some of our clinical and commercial grade materials include:

- Pfizer, Bayer, and Genzyme for the CDX-110 drug product;
- Dalton for Hiltonol which is an integral part of several of our drug products;
- 3M for Resiquimod which is an integral part of several of our drug products; and
- Piramal for the CDX-011 drug product.

If we or our third-party manufacturers are unable to produce drug material in suitable quantities of appropriate quality, in a timely manner, and at a feasible cost, our clinical tests will face delays.

**We rely on third parties to plan, conduct and monitor our clinical tests, and their failure to perform as required would interfere with our product development.**

We rely on third parties to conduct a significant portion of our clinical development activities. These activities include clinical patient recruitment and observation, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management. We conduct project management and medical and safety monitoring in-house for some of our programs and rely on third parties for the remainder of our clinical development activities. Our significant third-party clinical development providers include Pfizer for the development of our CDX-110 drug product.

If any of these third parties fails to perform as we expect or if their work fails to meet regulatory standards, our testing could be delayed, cancelled or rendered ineffective.

**We depend greatly on third party collaborators to license, develop and commercialize some of our products, and they may not meet our expectations.**

We have agreements with companies, including Glaxo, Pfizer and VTI for the licensing, development and ultimate commercialization of some of our products. Some of those agreements give substantial responsibility over the products to the collaborator. Some collaborators may be unable or unwilling to devote sufficient resources to develop our products as their agreements require. They often face business risks similar to ours, and this could interfere with their efforts. Also, collaborators may choose to devote their resources to products that compete with ours. If a collaborator does not successfully develop any one of our products, we will need to find another collaborator to do so. The success of our search for a new collaborator will depend on our legal right to do so at the time and whether the product remains commercially viable.

The success of our products depends in great part upon our and our collaborators' success in promoting them as superior to other treatment alternatives. We believe that our products can be proven to offer disease prevention and treatment with notable advantages over drugs in terms of patient compliance and effectiveness. However, there can be no assurance that we will be able to prove these advantages or that the advantages will be sufficient to support the successful commercialization of our products.

**We may face delays, difficulties or unanticipated costs in establishing sales, distribution and manufacturing capabilities for our commercially ready products.**

To date, we have chosen to retain, rather than license, all rights to some of our lead products, such as CDX-011 and our APC Targeting Technology programs. If we proceed with this strategy, we will have full responsibility for commercialization of these products if and when they are approved for sale. We currently lack the marketing, sales and distribution capabilities that we will need to carry out this strategy. To market any of our products directly, we must develop a substantial marketing and sales force with technical expertise and a supporting distribution capability. We have little expertise in this area, and we may not succeed. We may find it necessary to enter into strategic partnerships on uncertain but potentially unfavorable terms to sell, market and distribute our products when they are approved for sale.

Some of our products are difficult to manufacture, especially in large quantities, and we have not yet developed commercial scale manufacturing processes for any of our products. We do not currently plan to develop internal manufacturing capabilities to produce any of our products at commercial scale if they are approved for sale. To the extent that we choose to market and distribute these products ourselves, this strategy will make us dependent on other companies to produce our products in adequate quantities, in compliance with regulatory requirements, and at a competitive cost. We may not find third parties capable of meeting those manufacturing needs.

**Certain factors could negatively affect the demand for and sales and profitability of Rotarix®, which would have a material adverse affect on our revenues.**

Both the demand and ultimately the profitability of Rotarix® are components to our success. We have licensed a rotavirus strain to Glaxo for the purposes of Glaxo developing and commercializing their Rotarix® vaccine worldwide. Glaxo gained approval for Rotarix® in Mexico in July 2004, in the European Union in February 2006 and in the United States in April 2008. In May 2005, we entered into an agreement whereby an affiliate of PRF purchased an interest in the net royalties we will receive on worldwide sales of Rotarix®. In addition, we retain upside participation in the worldwide net royalties from Rotarix® once, and if, PRF receives an agreed upon return on capital invested (2.45 times PRF's aggregate cash payments to us of $60 million). The following are potential factors, among others, that may negatively affect the demand for Rotarix®:

- Competitors in the pharmaceuticals, biotechnology and vaccines market have greater financial and management resources, and significantly more experience in bringing products to market, and may develop, manufacture and market products that are more effective or less expensive than Rotarix®;
- Rotarix® could be replaced by a novel product and may become obsolete;
- Glaxo may be unable to prevent third parties from infringing upon their proprietary rights related to Rotarix®;
- Users may not accept such a recently approved product without years of proven history; and
- We are dependent on Glaxo for the manufacturing, testing, acquisition of regulatory approvals, marketing, distribution and commercialization of Rotarix®.

Any of these factors could have a material adverse effect on the sales of Rotarix® and our results of operations.

**Other factors could affect the demand for and sales and profitability of Rotarix® and any other of our current or future products.**

In general, other factors that could affect the demand for and sales and profitability of our products include, but are not limited to:

- The timing of regulatory approval, if any, of competitive products;
- Our, Glaxo's, Pfizer's or any other of our partners' pricing decisions, as applicable, including a decision to increase or decrease the price of a product, and the pricing decisions of our competitors;
- Government and third-party payer reimbursement and coverage decisions that affect the utilization of our products and competing products;
- Negative safety or efficacy data from new clinical studies conducted either in the U.S. or internationally by any party could cause the sales of our products to decrease or a product to be recalled;
- The degree of patent protection afforded our products by patents granted to or licensed by us and by the outcome of litigation involving our or any of our licensor's patents;
- The outcome of litigation involving patents of other companies concerning our products or processes related to production and formulation of those products or uses of those products;
- The increasing use and development of alternate therapies;
- The rate of market penetration by competing products; and
- The termination of, or change in, existing arrangements with our partners.

Any of these factors could have a material adverse effect on Glaxo's sales of Rotarix® and on any other of our current or future products and results of operations.

**We may be unable to manage multiple late stage clinical trials for a variety of product candidates simultaneously.**

As our current clinical trials progress, we may need to manage multiple late stage clinical trials simultaneously in order to continue developing all of our current products. The management of late stage clinical trials is more complex and time consuming than early stage trials. Typically early stage trials involve several hundred patients in no more than 10-30 clinical sites. Late stage (Phase 3) trials may involve up to several thousand patients in up to several hundred clinical sites and may require facilities in several countries. Therefore, the project management required to supervise and control such an extensive program is substantially larger than early stage programs. As the need for these resources is not known until some months before the trials begin it is necessary to recruit large numbers of experienced and talented individuals very quickly. If the labor market does not allow this team to be recruited quickly the sponsor is faced with a decision to delay the program or to initiate it with inadequate management resources. This may result in recruitment of inappropriate patients, inadequate monitoring of clinical investigators and inappropriate handling of data or data analysis. Consequently it is possible that conclusions of efficacy or safety may not be acceptable to permit filing of a BLA or NDA for any one of the above reasons or a combination of several.

**We face the risk of product liability claims, which could exceed our insurance coverage, and produce recalls, each of which could deplete our cash resources.**

As a participant in the pharmaceutical, biotechnology and vaccines industries, we are exposed to the risk of product liability claims alleging that use of our products or product candidates caused an injury or harm. These claims can arise at any point in the development, testing, manufacture, marketing or sale of our products or product candidates and may be made directly by patients involved in clinical trials of our products, by consumers or healthcare providers or by individuals, organizations or companies selling our products. Product liability claims can be expensive to defend, even if the product or product candidate did not actually cause the alleged injury or harm.

Insurance covering product liability claims becomes increasingly expensive as a product candidate moves through the development pipeline to commercialization. Under our license agreements, we are required to maintain clinical trial liability insurance coverage up to $14 million. However, there can be no assurance that such insurance coverage is or will continue to be adequate or available to us at a cost acceptable to us or at all. We may choose or find it necessary under our collaborative agreements to increase our insurance coverage in the future. We may not be able to secure greater or broader product liability insurance coverage on acceptable terms or at reasonable costs when needed. Any liability for damages resulting from a product liability claim could exceed the amount of our coverage, require us to pay a substantial monetary award from our own cash resources and have a material adverse effect on our business, financial condition and results of operations. Moreover, a product recall, if required, could generate substantial negative publicity about our products and business and inhibit or prevent commercialization of other products and product candidates.

In addition, some of our licensing and other agreements with third parties require or might require us to maintain product liability insurance. If we cannot maintain acceptable amounts of coverage on commercially reasonable terms in accordance with the terms set forth in these agreements, the corresponding agreements would be subject to termination, which could have a material adverse impact on our operations.

**Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them.**

Because we rely on third parties to develop our products, we must share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements will typically restrict the ability of our collaborators, advisors, employees and consultants to publish data potentially relating to our trade secrets. Our academic collaborators typically have rights to publish data, provided that we are notified in advance and may delay publication for a specified time in order to secure our intellectual property rights arising from the collaboration. In other cases, publication rights are typically controlled exclusively by us, although in some cases we may share these rights with other parties. We also conduct joint research and development programs which may require us to share trade secrets under the terms of research and development partnership or similar agreements. Despite our efforts to protect our trade secrets, our competitors may discover our trade secrets, either through breach of these agreements, independent development or publication of information including our trade secrets in cases where we do not have proprietary or otherwise protected rights at the time of publication. A competitor's discovery of our trade secrets would impair our competitive position.

**We may not be able to successfully integrate newly-acquired technology with our existing technology or to modify our technologies to create new vaccines.**

As part of our acquisition of technology assets from entities such as 3M Company and Amgen, we have acquired access to Resiquimod™ (a TLR 7/8 agonist) and Flt3L, which may improve the immunogenicity of our vaccines. If we are able to integrate these licensed assets with our vaccine technologies, we believe these assets will give our vaccines a competitive advantage. However, if we are unable to successfully integrate licensed assets, or other technologies which we have acquired or may acquire in the future, with our existing technologies and potential products currently under development, we may be unable to realize any benefit from our acquisition of these assets, or other technologies which we have acquired or may acquire in the future and may face the loss of our investment of financial resources and time in the integration process.

We believe that our vaccine technology portfolio may offer opportunities to develop vaccines that treat a variety of oncology, inflammatory and infectious diseases by stimulating a patient's immune system against those disease organisms. If our vaccine technology portfolio cannot be used to create effective vaccines against a variety of disease organisms, we may lose all or portions of our investment in development efforts for new vaccine candidates.

**We license technology from other companies to develop products, and those companies could influence research and development or restrict our use of it.**

Companies that license technologies to us that we use in our research and development programs may require us to achieve milestones or devote minimum amounts of resources to develop products using those technologies. They may also require us to make significant royalty and milestone payments, including a percentage of any sublicensing income, as well as payments to reimburse them for patent costs. The number and variety of our research and development programs require us to establish priorities and to allocate available resources among competing programs. From time to time we may choose to slow down or cease our efforts on particular products. If in doing so we fail to fully perform our obligations under a license, the licensor can terminate the licenses or permit our competitors to use the technology. Moreover, we may lose our right to market and sell any products based on the licensed technology.

**We have many competitors in our field and they may develop technologies that make ours obsolete.**

Biotechnology, pharmaceuticals and therapeutics are rapidly evolving fields in which scientific and technological developments are expected to continue at a rapid pace. We have many competitors in the U.S. and abroad. These competitors include Alexion, Anadys, Antigenics, Baxter, BioSante, Crucell, Dendreon, Eli Lilly, Emergent, Genitope, GlaxoSmithKline, Idera, Intercell, Immunogen, Maxygen, Merck, NeoPharm, Northwest Biotherapeutics, Novavax, Pfizer, Roche, Sanofi-Aventis, Seattle Genetics, and Vical. Our success depends upon our ability to develop and maintain a competitive position in the product categories and technologies on which we focus. Many of our competitors have greater capabilities, experience and financial resources than we do. Competition is intense and is expected to increase as new products enter the market and new technologies become available. Our competitors may:

- develop technologies and products that are more effective than ours, making ours obsolete or otherwise noncompetitive;
- obtain regulatory approval for products more rapidly or effectively than us; and
- obtain patent protection or other intellectual property rights that would block our ability to develop competitive products.

**We rely on patents, patent applications and other intellectual property protections to protect our technology and trade secrets; which are expensive and may not provide sufficient protection.**

Our success depends in part on our ability to obtain and maintain patent protection for technologies that we use. Biotechnology patents involve complex legal, scientific and factual questions and are highly uncertain. To date, there is no consistent policy regarding the breadth of claims allowed in biotechnology patents, particularly in regard to patents for technologies for human uses like those we use in our business. We cannot predict whether the patents we seek will issue. If they do issue, a competitor may challenge them and limit their scope. Moreover, our patents may not afford effective protection against competitors with similar technology. A successful challenge to any one of our patents could result in a third party's ability to use the technology covered by the patent. We also face the risk that others will infringe, avoid or circumvent our patents. Technology that we license from others is subject to similar risks and this could harm our ability to use that technology. If we, or a company that licenses technology to us, were not the first creator of an invention that we use, our use of the underlying product or technology will face restrictions, including elimination.

If we must defend against suits brought against us or prosecute suits against others involving intellectual property rights, we will incur substantial costs. In addition to any potential liability for significant monetary damages, a decision against us may require us to obtain licenses to patents or other intellectual property rights of others on potentially unfavorable terms. If those licenses from third parties are necessary but we cannot acquire them, we would attempt to design around the relevant technology, which would cause higher development costs and delays, and may ultimately prove impracticable.

**Our business requires us to use hazardous materials, which increases our exposure to dangerous and costly accidents.**

Our research and development activities involve the use of hazardous chemicals, biological materials and radioactive compounds. Although we believe that our safety procedures for handling and disposing of hazardous materials comply with the standards prescribed by applicable laws and regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In the event of an accident, an injured party will likely sue us for any resulting damages with

potentially significant liability. The ongoing cost of complying with environmental laws and regulations is significant and may increase in the future.

**Health care reform and restrictions on reimbursement may limit our returns on potential products.**

Because our strategy ultimately depends on the commercial success of our products, we assume, among other things, that end users of our products will be able to pay for them. In the United States and other countries, in most cases, the volume of sales of products like those we are developing depends on the availability of reimbursement from third-party payors, including national health care agencies, private health insurance plans and health maintenance organizations. Third-party payors increasingly challenge the prices charged for medical products and services. Accordingly, if we succeed in bringing products to market, and reimbursement is not available or is insufficient, we could be prevented from successfully commercializing our potential products.

The health care industry in the United States and in Europe is undergoing fundamental changes as a result of political, economic and regulatory influences. Reforms proposed from time to time include mandated basic health care benefits, controls on health care spending, the establishment of governmental controls over the cost of therapies, creation of large medical services and products purchasing groups and fundamental changes to the health care delivery system. We anticipate ongoing review and assessment of health care delivery systems and methods of payment in the United States and other countries. We cannot predict whether any particular reform initiatives will result or, if adopted, what their impact on us will be. However, we expect that adoption of any reform proposed will impair our ability to market products at acceptable prices.

**Changes in laws affecting the health care industry could adversely affect our business.**

In the U.S., there have been numerous proposals considered at the federal and state levels for comprehensive reforms of health care and its cost, and it is likely that federal and state legislatures and health agencies will continue to focus on health care reform in the future. Congress has considered legislation to reform the U.S. health care system by expanding health insurance coverage, reducing health care costs and making other changes. While health care reform may increase the number of patients who have insurance coverage for our products, it may also include cost containment measures that adversely affect reimbursement for our products. Congress has also considered legislation to change the Medicare reimbursement system for outpatient drugs, increase the amount of rebates that manufacturers pay for coverage of their drugs by Medicaid programs and facilitate the importation of lower-cost prescription drugs that are marketed outside the U.S. Some states are also considering legislation that would control the prices of drugs, and state Medicaid programs are increasingly requesting manufacturers to pay supplemental rebates and requiring prior authorization by the state program for use of any drug for which supplemental rebates are not being paid. Managed care organizations continue to seek price discounts and, in some cases, to impose restrictions on the coverage of particular drugs. Government efforts to reduce Medicaid expenses may lead to increased use of managed care organizations by Medicaid programs. This may result in managed care organizations influencing prescription decisions for a larger segment of the population and a corresponding constraint on prices and reimbursement for our products.

We and our collaborators and partners operate in a highly regulated industry. As a result, governmental actions may adversely affect our business, operations or financial condition, including:

- new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to health care availability, method of delivery and payment for health care products and services;
- changes in the FDA and foreign regulatory approval processes that may delay or prevent the approval of new products and result in lost market opportunity;

- changes in FDA and foreign regulations that may require additional safety monitoring, labeling changes, restrictions on product distribution or use, or other measures after the introduction of our products to market, which could increase our costs of doing business, adversely affect the future permitted uses of approved products, or otherwise adversely affect the market for our products;
- new laws, regulations and judicial decisions affecting pricing or marketing practices; and
- changes in the tax laws relating to our operations.

The enactment in the U.S. of health care reform, possible legislation which could ease the entry of competing follow-on biologics in the marketplace, new legislation or implementation of existing statutory provisions on importation of lower-cost competing drugs from other jurisdictions, and legislation on comparative effectiveness research are examples of previously enacted and possible future changes in laws that could adversely affect our business. In addition, the Food and Drug Administration Amendments Act of 2007 included new authorization for the FDA to require post-market safety monitoring, along with an expanded clinical trials registry and clinical trials results database, and expanded authority for the FDA to impose civil monetary penalties on companies that fail to meet certain commitments.

**If physicians, patients and third-party payors do not accept any future drugs that we may develop, we may be unable to generate significant revenue, if any.**

Even if our drug candidates as well as any drug candidates that we may develop or acquire in the future obtain regulatory approval, they may not gain market acceptance among physicians, patients and health care payors. Physicians may elect not to recommend these drugs for a variety of reasons including:

- timing of market introduction of competitive drugs;
- lower demonstrated clinical safety and efficacy compared to other drugs;
- lack of cost-effectiveness;
- lack of availability of reimbursement from third-party payors;
- convenience and ease of administration;
- prevalence and severity of adverse side effects;
- other potential advantages of alternative treatment methods; and
- ineffective marketing and distribution support.

If our approved drugs fail to achieve market acceptance, we would not be able to generate sufficient revenue from product sales to maintain or grow our business.

**If we are not successful in integrating CuraGen's organization, we may not be able to operate efficiently after the CuraGen Merger, which may harm the value of our common stock.**

Achieving the benefits of the CuraGen Merger will depend in part on the successful integration of CuraGen's clinical and preclinical programs and personnel in a timely and efficient manner. The integration process requires coordination of different development, regulatory, and manufacturing teams, and involves the integration of systems, applications, policies, procedures, business processes and operations. This may be difficult and unpredictable because of possible cultural conflicts and different opinions on scientific and regulatory matters. If we cannot successfully integrate CuraGen's programs and personnel, we may not realize the expected benefits of the CuraGen Merger.

**Integrating CuraGen's programs may divert management's attention away from our operations.**

The successful integration of CuraGen's programs and personnel may place a significant burden on our management and internal resources, including time that will be spent on winding down CuraGen's facility in Connecticut and transitioning certain CuraGen employees to our facilities. The diversion of management's attention and any difficulties encountered in the transition and integration process could result in delays in our clinical trial programs and could otherwise harm our business, financial condition and operating results.

***Risks Related to Our Capital Stock***

**Our history of losses and uncertainty of future profitability make our common stock a highly speculative investment.**

We have had no commercial revenues to date from sales of our human therapeutic or vaccine products and cannot predict when we will. We have an accumulated deficit of $157.7 million as of December 31, 2009. We expect to spend substantial funds to continue the research and development testing of our products that we have in the preclinical and clinical testing stages of development that have not been partnered.

In anticipation of FDA approval of these products, we will need to make substantial investments to establish sales, marketing, quality control, and regulatory compliance capabilities. These investments will increase if and when any of these products receive FDA approval. We cannot predict how quickly our lead products will progress through the regulatory approval process. As a result, we may continue to lose money for several years.

We cannot be certain that we will achieve or sustain profitability in the future. Failure to achieve profitability could diminish our ability to sustain operations, pay dividends on our common stock, obtain additional required funds and make required payments on our present or future indebtedness.

**If we cannot sell capital stock to raise necessary funds, we may be forced to limit our research, development and testing programs.**

We will need to raise more capital from investors to advance our clinical and preclinical products and to fund our operations until we receive final FDA approval and our products begin to generate revenues for us. However, based on our history of losses and the on-going uncertainty of the U.S. capital markets, we may have difficulty raising sufficient capital on terms that are acceptable to us, or at all. As of December 31, 2009, we had cash, cash equivalents and marketable securities of $82.5 million, which, at that time, we believed would support expected operations for more than 12 months.

We continue to seek partnerships with pharmaceutical and biotech companies and with other organizations to support the clinical development of our programs, in addition to funded research grants. This kind of funding is at the discretion of other organizations and companies which have limited funds and many companies compete with us for those funds. As a result, we may not receive any research grants or funds from collaborators. If we are unable to raise the necessary funds, we may have to delay or discontinue the clinical development of programs, license out programs earlier than expected, raise funds at significant discount or on other unfavorable terms, if at all, or evaluate a sale of all or part of our business.

Until we begin generating revenue, we may seek funding through the sale of equity, or securities convertible into equity, and further dilution to the then existing stockholders may result. If we raise additional capital through the incurrence of debt, our business may be affected by the amount of leverage it incurs, and its borrowings may subject it to restrictive covenants.

**Our share price has been and could remain volatile.**

The market price of our common stock has historically experienced and may continue to experience significant volatility. From January 2009 through December 2009, the market price of our common stock has fluctuated from a high of $14.19 per share in the second quarter of 2009, to a low of $4.16 per share in the fourth quarter of 2009. Our progress in developing and commercializing our products, the impact of government regulations on our products and industry, the potential sale of a large volume of our common stock by stockholders, our quarterly operating results, changes in general conditions in the economy or the financial markets and other developments affecting us or our competitors could cause the market price of our common stock to fluctuate substantially with significant market losses. If our stockholders sell a substantial number of shares of common stock, especially if those sales are made during a short period of time, those sales could adversely affect the market price of our common stock and could impair our ability to raise capital. In addition, in recent years, the stock market has experienced significant price and volume fluctuations. This volatility has affected the market prices of securities issued by many companies for reasons unrelated to their operating performance and may adversely affect the price of our common stock. In addition, we could be subject to a securities class action litigation as a result of volatility in the price of our stock, which could result in substantial costs and diversion of management's attention and resources and could harm our stock price, business, prospects, results of operations and financial condition.

**Our ability to use our net operating loss carryforwards will be subject to limitation and, under certain circumstances, may be eliminated.**

Utilization of the net operating loss ("NOL") and R&D credit carryforwards may be subject to substantial annual limitation due to ownership change limitations that have occurred previously or that could occur in the future provided by Section 382 of the Internal Revenue Code of 1986 ("Section 382"), as well as similar state provisions. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50 percentage points over a three-year period.

In October 2007, June 2009 and in December 2009, Celldex Research experienced a change in ownership as defined by Section 382 of the Internal Revenue Code. Celldex Research, since its formation, has raised capital through the issuance of capital stock on several occasions which, combined with shareholders' subsequent disposition of those shares, has resulted in three changes of control, as defined by Section 382. As a result of the ownership change in October 2007, utilization of its Federal NOLs is subject to an annual limitation. Any unused annual limitation may be carried over to later years, and the amount of the limitation may, under certain circumstances, be subject to adjustment if the fair value of the our net assets are determined to be below or in excess of the tax basis of such assets at the time of the ownership change, and such unrealized loss or gain is recognized during the five-year period after the ownership change. Subsequent ownership changes, as defined in Section 382, could further limit the amount of net operating loss carryforwards and research and development credits that can be utilized annually to offset future taxable income.

We have not undertaken a study to assess whether an ownership change or multiple ownership changes has occurred for (i) AVANT, (ii) CuraGen, (iii) Celldex Research on the state level, or (iv) R&D credits. If there has been an ownership change at any time since its formation, utilization of NOL or tax credit carryforwards would be subject to an annual limitation under Section 382.

Refer to Note 9, "Income Taxes," in the accompanying notes to the consolidated financial statements for additional discussion on income taxes.

**Item 1B. UNRESOLVED STAFF COMMENTS**

None.

**Item 2. PROPERTIES**

We lease approximately 81,600 square feet of office, manufacturing and laboratory space. Our major leased properties are described below:

| Property Location | Approximate Square Feet | Use | Lease Expiration Date |
|---|---|---|---|
| Needham, Massachusetts | 35,200 | Office Headquarters and Laboratory | April 2017 |
| Fall River, Massachusetts | 23,400 | Manufacturing Facility | December 2010(1) |
| Phillipsburg, New Jersey | 20,000 | Office and Laboratory | August 2011 |
| New Haven, Connecticut | 3,000 | Office | January 2013 |

*(1)* Lease includes two renewal options of five years each.

**Item 3. LEGAL PROCEEDINGS**

Following the announcement of the proposed acquisition by Celldex of CuraGen, a putative class action complaint, *Margaret Capps v. Timothy Shannon, et al.*, was filed in the Connecticut Superior Court, Judicial District of New Haven, on June 9, 2009. A second putative class action complaint, *Cheryl Smith v. CuraGen Corporation, et al.*, was filed in the Court of Chancery of the State of Delaware on June 15, 2009. Both lawsuits purported to have been brought on behalf of all public stockholders of CuraGen, and named CuraGen, all of its former directors, Celldex, and Celldex's merger subsidiary as defendants. On July 21, 2009, the attorneys for the parties in the two actions executed a memorandum of understanding (the "MOU") pursuant to which such actions were subsequently dismissed with prejudice. CuraGen agreed to make certain revisions to the joint proxy statement/prospectus (which was prepared in connection with the approval by CuraGen's stockholders of the merger and by Celldex's stockholders of the stock issued to the former stockholders of CuraGen in the merger) as part of the agreement among the parties to settle the actions and agreed to pay attorneys' fees and expenses as awarded by the court, which had been expected to be $0.3 million but ultimately were reduced to $0.2 million. On August 27, 2009, a stipulation of settlement was submitted to the court for the action captioned *Cheryl Smith v. CuraGen Corporation, et al*, pending in the Court of Chancery of the State of Delaware, and thereafter a fairness hearing was held on November 9, 2009, at which the court approved the settlement of the Delaware action and thereafter both the Delaware and Connecticut actions were dismissed.

CuraGen Corporation's former landlord filed a complaint in the Connecticut Superior Court, Judicial District of New Haven, on September 9, 2009, in case captioned *T.K.J. Associates LLC v. CuraGen Corporation*. The plaintiff alleges that CuraGen failed to pay rent and additional charges, and, upon vacating previously leased space, failed to restore the vacated space to the condition of initial occupancy, failed to pay utility charges, failed to remove personal property, and failed to comply with applicable environmental laws and regulations. In January 2010, CuraGen and its former landlord entered into a settlement and release agreement pursuant to which the complaint was dismissed with prejudice. In connection with the settlement, CuraGen paid disputed rent and utility charges totaling $0.1 million, restored previously vacated space to the condition of initial occupancy and made certain notices to comply with local environmental law and regulations.

**Item 4. RESERVED**

## PART II

### Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

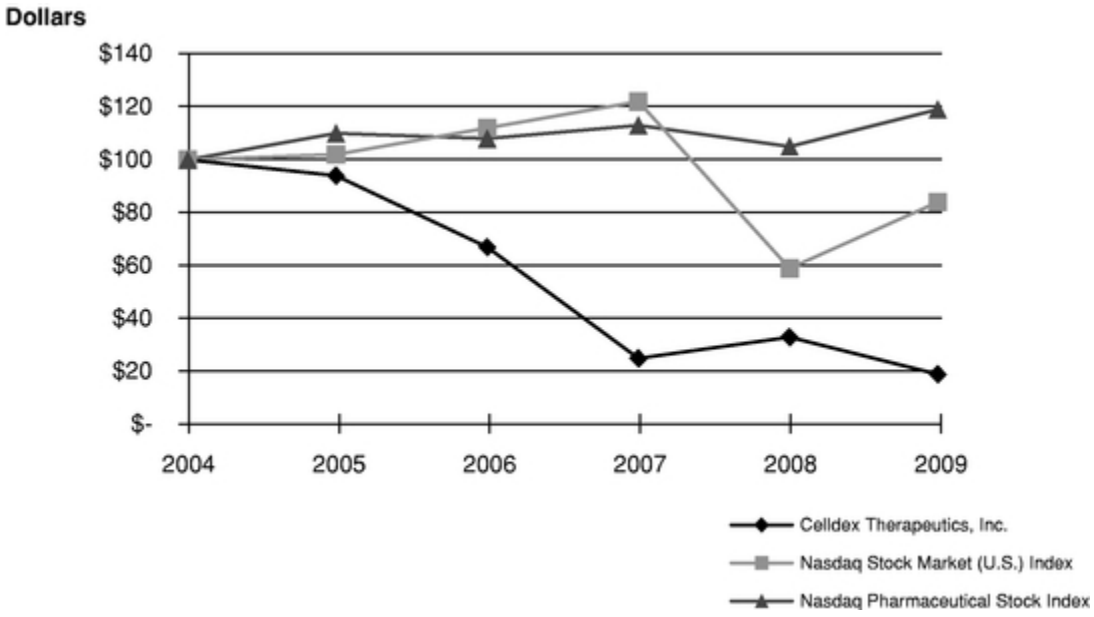
Our common stock currently trades on The Nasdaq Global Market (the "NASDAQ") under the symbol "CLDX". Effective October 1, 2008, we changed our name from AVANT Immunotherapeutics, Inc. to Celldex Therapeutics, Inc. Prior to October 1, 2008, our common stock traded on NASDAQ under the symbol "AVAN". The following table sets forth for the periods indicated the high and low sale prices per share for our common stock, as reported by NASDAQ. The numbers below reflect the 1-for-12 reverse stock split effected on March 7, 2008.

| Fiscal Period | High | Low |
|---|---|---|
| **Year Ended December 31, 2009** | | |
| First Quarter | $ 11.75 | $ 5.13 |
| Second Quarter | 14.19 | 6.28 |
| Third Quarter | 8.10 | 4.80 |
| Fourth Quarter | 5.75 | 4.16 |
| **Year Ended December 31, 2008** | | |
| First Quarter | $ 9.91 | $ 5.64 |
| Second Quarter | 19.79 | 9.55 |
| Third Quarter | 16.98 | 9.67 |
| Fourth Quarter | 12.69 | 4.24 |

As of February 25, 2010, there were approximately 792 shareholders of record of our common stock. On February 25, 2010 the closing price of our common stock, as reported by NASDAQ, was $5.13 per share. We have not paid any dividends on our common stock since our inception and do not intend to pay any dividends in the foreseeable future.

**CELLDEX THEAPEUTICS, INC., NASDAQ MARKET INDEX—U.S. AND PEER GROUP INDICES**

The graph below compares the cumulative total stockholder return on the common stock for the period from December 31, 2004 through December 31, 2009, with the cumulative return on (i) NASDAQ Market Index—U.S. Companies and (ii) NASDAQ Pharmaceutical Index. The comparison assumes investment of $100 on December 31, 2004 in our common stock and in each of the indices and, in each case, assumes reinvestment of all dividends. The points on the graph are as of December 31 of the year indicated.




| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| Celldex Therapeutics, Inc. | $ 100 | $ 94 | $ 67 | $ 25 | $ 33 | $ 19 |
| NASDAQ Stock Market (U.S.) Index | $ 100 | $ 102 | $ 112 | $ 122 | $ 59 | $ 84 |
| NASDAQ Pharmaceutical Stock Index | $ 100 | $ 110 | $ 108 | $ 113 | $ 105 | $ 119 |

**Item 6. SELECTED CONSOLIDATED FINANCIAL DATA**

The following selected consolidated financial data are derived from our financial statements. The consolidated statement of operations data for the years ended December 31, 2009, 2008 and 2007 and the consolidated balance sheet data as of December 31, 2009 and 2008 have been derived from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. This data should be read in conjunction with our audited consolidated financial statements and related notes which are included elsewhere in this Annual Report on Form 10-K, and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 below.

On October 1, 2009, the CuraGen Merger became effective. The CuraGen Merger was accounted for using the acquisition method of accounting and was treated as our acquisition of CuraGen. Accordingly, the financial information presented below for periods prior to October 1, 2009 reflects the financial position and the results of operations of us alone, and for periods from October 1, 2009 forward the combined financial position and combined results of operations of us and CuraGen.

On March 7, 2008, the AVANT Merger became effective. The AVANT Merger was accounted for using the purchase method of accounting and was treated as our acquisition of AVANT. Accordingly, the financial information presented below for periods prior to March 8, 2008 reflects the financial position and the results of operations of us alone, and for periods from March 8, 2008 forward the

combined financial position and combined results of operations of us and AVANT. All amounts are in thousands except per share data.

**CONSOLIDATED STATEMENTS OF OPERATIONS DATA**

| | 2009 | 2008 | 2007 | 2006(2) | 2005 |
|---|---|---|---|---|---|
| REVENUE: | | | | | |
| Product Development and Licensing Agreements | $ 5,662 | $ 3,716 | $ 466 | $ 466 | $ 14 |
| Contracts and Grants | 1,802 | 533 | 940 | 433 | 57 |
| Product Royalties | 7,716 | 3,207 | — | — | — |
| Total Revenue | 15,180 | 7,456 | 1,406 | 899 | 71 |
| OPERATING EXPENSE: | | | | | |
| Research and Development | 26,169 | 22,636 | 9,892 | 10,013 | 4,826 |
| Royalty Expense | 8,397 | 3,711 | — | — | — |
| Charge for In-Process Research and Development(3) | — | 14,756 | — | — | 8,447 |
| Other Operating Expense | 17,464 | 15,109 | 7,022 | 9,681 | 4,167 |
| Total Operating Expense | 52,030 | 56,212 | 16,914 | 19,694 | 17,440 |
| Operating Loss | (36,850) | (48,756) | (15,508) | (18,795) | (17,369) |
| Investment and Other Income, Net | 248 | 1,411 | 435 | 960 | 290 |
| Interest Expense | (452) | (156) | — | — | — |
| Net Loss Before Income Taxes | (37,054) | (47,501) | (15,073) | (17,835) | (17,079) |
| Income Tax Benefit | 529 | — | — | — | — |
| Net Loss | $ (36,525) | $ (47,501) | $ (15,073) | $ (17,835) | $ (17,079) |
| Basic and Diluted Net Loss Per Common Share | $ (1.84) | $ (3.34) | $ (1.81) | $ (2.15) | $ (3.00) |
| Shares Used in Calculating Basic and Diluted Net Loss Per Common Share(1) | 19,823 | 14,217 | 8,309 | 8,279 | 5,699 |

*(1)* Weighted average common shares outstanding for the years 2005 to 2007 have been adjusted to reflect the AVANT Merger and a reverse stock split of 1-for-12 effective March 7, 2008.

*(2)* In 2006, we changed the manner in which we account for stock-based compensation.

*(3)* The 2008 amount arose as a result of the merger between AVANT and Celldex Research. The 2005 amount arose from the acquisition of Lorantis Limited.

**CONSOLIDATED BALANCE SHEET DATA**

| | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|
| Working Capital | $ 69,569 | $ 32,975 | $ (4,438) | $ 12,178 | $ 24,852 |
| Total Assets | 140,364 | 69,793 | 9,375 | 22,163 | 33,133 |
| Long Term Liabilities | 52,190 | 37,558 | 370 | 914 | 1,152 |
| Accumulated Deficit | (157,674) | (121,149) | (73,648) | (58,575) | (40,739) |

| | | | | | |
|---|---|---|---|---|---|
| Total Stockholders' Equity (Deficit) | 73,767 | 18,134 | (1,132) | 15,144 | 28,007 |

## Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### OVERVIEW

We are an integrated biopharmaceutical company that applies our comprehensive Precision Targeted Immunotherapy Platform to generate a pipeline of candidates to treat cancer and other difficult-to-treat diseases. Our immunotherapy platform includes a complementary portfolio of monoclonal antibodies, antibody-targeted vaccines, antibody-drug conjugates and immunomodulators to create novel disease-specific drug candidates.

Our strategy is to develop and demonstrate proof-of-concept for our product candidates before leveraging their value through partnerships or, in appropriate situations, continuing late stage development through commercialization ourselves. Demonstrating proof-of-concept for a product candidate generally involves bringing it through Phase 1 clinical trials and one or more Phase 2 clinical trials so that we are able to demonstrate, based on human trials, good safety data for the product candidate and some data indicating its effectiveness. We thus leverage the value of our technology portfolio through corporate, governmental and non-governmental partnerships. This approach allows us to maximize the overall value of our technology and product portfolio while best ensuring the expeditious development of each individual product.

Our current collaborations include the commercialization of an oral human rotavirus vaccine and the development of oncology and infectious disease vaccines. Our product candidates address large market opportunities for which we believe current therapies are inadequate or non-existent.

### Acquisition of CuraGen

In connection with the CuraGen Merger, effective October 1, 2009, we (i) issued 15,722,713 shares of our common stock, or 0.2739 shares, in exchange for each share of outstanding CuraGen common stock, plus cash in lieu of fractional shares (the "CuraGen Exchange Ratio"), (ii) assumed all of the CuraGen Stock Options and (iii) assumed the CuraGen Debt. We acquired CuraGen to gain access to a pipeline of oncology-focused antibodies, including CDX-011 (formerly CR011) currently in Phase 2 clinical development for the treatment of breast and melanoma cancer, and cash, cash equivalents and marketable securities of $70.3 million.

The transaction is being accounted for under the acquisition method of accounting. All of the assets acquired and liabilities assumed in the transaction are recognized at their acquisition-date fair values, while transaction costs associated with the transaction are expensed as incurred.

*Purchase Price*

The purchase price for CuraGen is based on the acquisition-date fair value of the consideration transferred, which was calculated based on the closing price of our common stock of $5.43 per share on October 1, 2009. The acquisition-date fair value of the consideration transferred consisted of the following (in thousands):

| | | |
|---|---|---|
| Fair value of common stock issued | $ | 85,374 |
| Fair value of CuraGen Stock Options | | 2,868 |
| Total consideration transferred | $ | 88,242 |

U.S. GAAP requires that the fair value of replacement awards attributable to precombination service be included in the consideration transferred. Of the CuraGen Stock Options assumed, all but 1%, were immediately vested upon closing in accordance with the terms of the stock option agreements

and employment agreements. The fair value of the CuraGen Stock Options that has been attributed to precombination service is included in the consideration transferred.

*Allocations of Assets and Liabilities*

We have allocated the consideration transferred for CuraGen to net tangible assets, intangible assets, goodwill and a severance obligation. The difference between the aggregate consideration transferred and the fair value of assets acquired and liabilities assumed was allocated to goodwill. This goodwill relates to the potential synergies from the CuraGen Merger and a deferred tax liability related to acquired IPR&D intangible assets. None of the goodwill is expected to be deductible for income tax purposes. The following table summarizes the fair values of the assets acquired and liabilities assumed at the acquisition date (in thousands):

| | | |
|---|---|---|
| Cash and cash equivalents | $ | 51,654 |
| Marketable securities | | 18,638 |
| Identifiable intangible assets: | | |
| IPR&D | | 11,800 |
| Amgen Amendment | | 14,500 |
| TopoTarget Agreement | | 2,400 |
| Other current and long-term assets | | 756 |
| Goodwill | | 8,965 |
| CuraGen Debt | | (11,503) |
| Deferred tax liabilities, net | | (5,190) |
| Other assumed liabilities | | (3,778) |
| Total | $ | 88,242 |

The purchase price allocation has been prepared on a preliminary basis and is subject to change as additional information becomes available concerning the fair value and tax basis of the acquired assets and liabilities. Any adjustments to the purchase price allocation will be made as soon as practicable but no later than one year from the acquisition date.

The estimated fair value attributed to IPR&D intangible assets represents an estimate of the fair value of purchased in-process technology for CuraGen's research programs that, as of October 1, 2009, had not reached technological feasibility and have no alternative future use. Only those research programs that had advanced to a stage of development where we believed reasonable net future cash flow forecasts could be prepared and a reasonable likelihood of technical success existed were included in the estimated fair value. Accordingly, the IPR&D programs primarily represent the estimated fair value of CDX-011. The estimated fair value of the IPR&D programs was determined based on estimates of expected future net cash flows. These expected future net cash flows included estimates for revenue and associated costs for the IPR&D programs based on (i) relevant industry factors, (ii) current and expected trends in the product development life cycle, (iii) the ability to engage a strategic partner, (iv) the ability to obtain regulatory approval, and (v) the ability to manufacture and commercialize the products. The probability-adjusted future net cash flows which reflect the different stages of development of each program are then present valued utilizing an estimate of the appropriate discount rate which is consistent with the uncertainties of the cash flows utilized. Finally, the expected future net cash flows were calculated assuming the Amgen Amendment (defined below) was not entered into because the fair value attributable to the Amgen Amendment is separated from the fair value of the IPR&D programs.

The expected future net cash flows for CDX-011 were based on the expectation that a BLA for CDX-011 will be filed with the FDA by the end of 2015. We expect the commercial launch as promptly as commercially practicable after necessary regulatory approvals are received. Assuming a traditional

timeline for the regulatory review process, we expect CDX-011 will be commercially launched in 2016. These assumptions require various levels of in-house and external testing, clinical trials and approvals from the FDA or comparable foreign regulatory authorities before CDX-011 could be commercialized in the U.S. or other territories. Drug development involves a high degree of risk and most products that make it into clinical development do not receive marketing approval. Numerous risks and uncertainties can delay or stop clinical development of a pharmaceutical product prior to the receipt of marketing approval, including, but not limited to, results from clinical trials that do not support continuing development, issues related to manufacturing or intellectual property protection, and other events or circumstances that cause unanticipated delays, technical problems or other difficulties. Given these risks and uncertainties, there can be no assurance that the development of CDX-011 will be successfully completed. If the development of CDX-011 is not successful, in whole or in part, or completed in a timely manner, we may not realize the expected financial benefits from the development of CDX-011 or the transaction as a whole.

The estimated fair value attributed to the May 2009 amendment to the CuraGen and Amgen Fremont (successor in-interest to Abgenix) license agreement relates to CuraGen's exclusive rights to develop and commercialize CDX-011 and 11 other licensed antigens ("Amgen Amendment"). Under the Amgen Amendment, CuraGen and Amgen Fremont agreed to modify the terms of their existing cross-license of antigens whereby the amended license would be fully paid-up and royalty-free (except for any potentially required payments by CuraGen to the original licensor of CDX-011). The estimated fair value of the Amgen Amendment was based on the increase in expected future net cash flows for the IPR&D programs related to CDX-011 after the Amgen Amendment was entered into as compared to the expected future net cash flows if the Amgen Amendment was not entered into. The estimated fair value attributed to the Amgen Amendment is being amortized through the date of the last expiring patent covering CDX-011.

The estimated fair value attributed to TopoTarget Agreement between CuraGen and TopoTarget relates to CuraGen's rights under the TopoTarget Agreement to receive up to $6 million in either potential commercial milestone payments related to future net sales of Belinostat or 10% of any sublicense income received by TopoTarget ("TopoTarget Payments"). The estimated fair value of the TopoTarget Agreement was based on estimates of the probability-adjusted expected future net cash flows of the TopoTarget Payments. The estimated fair value attributed to the TopoTarget Agrement is being amortized through the date of the estimated receipt of the last payment under the TopoTarget Payments. In February 2010, TopoTarget entered into a co-development and commercialization agreement for Belinostat with Spectrum Pharmaceuticals, Inc. resulting in our receipt of $3 million of the TopoTarget Payments.

The deferred tax liability, net of $5.2 million primarily relates to the temporary differences associated with the IPR&D intangible assets, which are not deductible for tax purposes.

**CURRENT PROGRAMS AND PARTNERSHIPS**

Our products are derived from a broad set of complementary technologies which have the ability to utilize the human immune system and enable the creation of preventative and therapeutic agents. We are using these technologies to develop vaccines and targeted immunotherapeutics that prevent or treat cancer and disease caused by infectious organisms, and treatment vaccines that modify undesirable activity by the body's own proteins or cells. A number of our immunotherapeutic and vaccine product candidates are in various stages of clinical trials. We expect that a large percentage of our research and development expenses will be incurred in support of our current and future clinical trial programs.

The following table includes the programs that we currently believe are material to our business:

| Product (generic) | Indication/Field | Partner | Status |
|---|---|---|---|
| **CLINICAL** | | | |
| CDX-110 (rindopepimut) | Glioblastoma multiforme | Pfizer (PF-4948568) | Phase 2b |
| CDX-011 (glembatumumab vedotin) | Metastatic melanoma and breast cancer | — | Phase 2 |
| CDX-1307 | Colorectal, bladder, pancreas, ovarian and breast tumors | — | Phase 1 |
| CDX-1401 | Multiple solid tumors | — | Phase 1/2 |
| CDX-1135 | Renal disease | — | Phase 1/2 |
| **PRECLINICAL** | | | |
| CDX-301 | Cancer, autoimmune disease and transplant | — | Preclinical |
| CDX-1127 | Immuno-modulation, multiple tumors | — | Preclinical |
| CDX-014 | Renal and ovarian cancer | — | Preclinical |
| CDX-1189 | Renal disease | — | Preclinical |
| **MARKETED PRODUCTS** | | | |
| Rotarix® | Rotavirus infection | GlaxoSmithKline | Marketed |

The expenditures that will be necessary to execute our business plan are subject to numerous uncertainties. Completion of clinical trials may take several years or more, and the length of time generally varies substantially according to the type, complexity, novelty and intended use of a product candidate. It is not unusual for the clinical development of these types of product candidates to each take five years or more, and for total development costs to exceed $100 million for each product candidate. Our estimates that clinical trials of the type we generally conduct are typically completed over the following timelines:

| Clinical Phase | Estimated Completion Period |
|---|---|
| Phase 1 | 1 - 2 Years |
| Phase 2 | 1 - 5 Years |
| Phase 3 | 1 - 5 Years |

The duration and the cost of clinical trials may vary significantly over the life of a project as a result of differences arising during the clinical trial protocol, including, among others, the following:

- the number of patients that ultimately participate in the trial;
- the duration of patient follow-up that seems appropriate in view of results;
- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patient subjects; and
- the efficacy and safety profile of the product candidate.

We test potential product candidates in numerous preclinical studies for safety, toxicology and immunogenicity. We may then conduct multiple clinical trials for each product candidate. As we obtain results from trials, we may elect to discontinue or delay clinical trials for certain product candidates in order to focus our resources on more promising product candidates.

An element of our business strategy is to pursue the research and development of a broad portfolio of product candidates. This is intended to allow us to diversify the risks associated with our research and development expenditures. As a result, we believe our future capital requirements and our future financial success are not substantially dependent on any one product candidate. To the extent we are unable to maintain a broad range of product candidates, our dependence on the success of one or a few product candidates increases.

Regulatory approval is required before we can market our product candidates as therapeutic or vaccine products. In order to proceed to subsequent clinical trial stages and to ultimately achieve regulatory approval, the regulatory agency must conclude that our clinical data is safe and effective. Historically, the results from preclinical testing and early clinical trials (through Phase 2) have often not been predictive of results obtained in later clinical trials. A number of new drugs, biologics and vaccines have shown promising results in early clinical trials, but subsequently failed to establish sufficient safety and efficacy data to obtain necessary regulatory approvals.

Furthermore, our business strategy includes the option of entering into collaborative arrangements with third parties to complete the development and commercialization of our product candidates. In the event that third parties take over the clinical trial process for one of our product candidates, the estimated completion date would largely be under control of that third party rather than us. We cannot forecast with any degree of certainty which proprietary products, if any, will be subject to future collaborative arrangements, in whole or in part, and how such arrangements would affect our development plan or capital requirements. Our programs may also benefit from subsidies, grants, contracts or government or agency-sponsored studies that could reduce our development costs.

As a result of the uncertainties discussed above, among others, we are unable to estimate the duration and completion costs of our research and development projects or when, if ever, and to what extent it will receive cash inflows from the commercialization and sale of a product. Our inability to complete our research and development projects in a timely manner or our failure to enter into collaborative agreements, when appropriate, could significantly increase our capital requirements and could adversely impact our liquidity. These uncertainties could force us to seek additional, external sources of financing from time to time in order to continue with our business strategy. Our inability to raise additional capital, or to do so on terms reasonably acceptable to us, would jeopardize the future success of our business.

During the past five years through December 31, 2009, we incurred an aggregate of $73.5 million in research and development expenses. The following table indicates the amount incurred for each of our significant research programs and for other identified research and development activities during the years ended December 31, 2009 and 2008. The amounts disclosed in the following table reflect direct research and development costs, license fees associated with the underlying technology and an allocation of indirect research and development costs to each program. Prior to 2008, the privately-held

Celldex Research did not maintain records that allowed for quantification of research and development expenses by project.

| | Year Ended December 31, 2009 | Year Ended December 31, 2008 |
|---|---|---|
| | (In thousands) | |
| **CLINICAL** | | |
| CDX-110 | $ 3,249 | $ 7,621 |
| CDX-011 | 1,098 | — |
| CDX-1307 | 6,510 | 3,446 |
| CDX-1401 | 4,293 | 5,562 |
| CDX-1135 | 473 | 159 |
| **PRECLINICAL** | | |
| CDX-301 | 2,424 | — |
| CDX-1127 | 1,308 | 1,040 |
| CDX-014 | 8 | — |
| CDX-1189 | 386 | 104 |
| **OTHER** | | |
| Bacterial Vaccines (CholeraGarde®/ETEC/Ty800) | 124 | 1,481 |
| CDX-2401 | 3,574 | 830 |
| Other Programs | 2,722 | 2,393 |
| Total R&D Expense | $ 26,169 | $ 22,636 |

**Clinical Development Programs**

*CDX-110*

Our lead clinical development program, CDX-110, is a peptide-based immunotherapy that targets the tumor specific molecule called EGFRvIII, a functional variant of the naturally expressed epidermal growth factor receptor ("EGFR"), a protein which has been well validated as a target for cancer therapy. Unlike EGFR, EGFRvIII is not present in normal tissues, and has been shown to be a transforming oncogene that can directly contribute to the cancer cell growth. EGFRvIII is commonly present in glioblastoma multiforme, or GBM, the most common and aggressive form of brain cancer, and has also been observed in various other cancers such as breast, ovarian, prostate, colorectal, and head & neck cancer.

In April 2008, we and Pfizer Inc. ("Pfizer") entered into a License and Development Agreement (the "Pfizer Agreement") under which Pfizer was granted an exclusive worldwide license to CDX-110. The Pfizer Agreement also gives Pfizer exclusive rights to the use of EGFRvIII vaccines in other potential indications. Pfizer funds all development costs for these programs. We and Pfizer are currently pursuing the development of CDX-110 for GBM therapy and plan to expand the clinical development into other cancers through additional clinical studies. The FDA has granted orphan drug designation for CDX-110 for the treatment of EGFRvIII expressing GBM as well as fast track designation.

Initial clinical development of EGFRvIII immunotherapy was led by collaborating investigators at the Brain Center at Duke Comprehensive Cancer Center in Durham, North Carolina and at M.D. Anderson Cancer Center in Houston, Texas. The results from the Phase 1 (VICTORI) and Phase 2a (ACTIVATE) studies, which enrolled 16 and 21 patients, respectively, have demonstrated a significant increase in the time to disease progression (greater than 113%) in the patients who were vaccinated, and also in overall survival rates (greater than 100%), both relative to appropriately matched historical controls. An extension of the Phase 2a program (ACT II) at the same two institutions has enrolled 23

additional GBM patients treated in combination with temozolomide (the current standard of care). Preliminary results from this study (ACT II) currently estimates median overall survival to be 23.6 months, although the median has not yet been reached, while the survival of a matched historical control group was 15.0 months with a p value = 0.0237. Overall time to progression in the ACT II study was 15.2 months compared with 6.3 months for the historical control group.

We initiated a Phase 2b/3 randomized study (ACT III) of CDX-110 combined with standard of care, temozolomide, versus standard of care alone in patients with GBM in over 30 sites throughout the United States. In December 2008, we announced an amendment to convert the ACT III study to a single-arm Phase 2 clinical trial in which all patients will receive CDX-110 in combination with temozolomide. The decision, which followed the recommendation of the Independent Data Monitoring Committee, was based on the observation that the majority of patients randomized to the control (standard of care) arm withdrew from this open-label study after being randomized to the control arm. Patients participating on the control arm of the study were offered the option to receive treatment with CDX-110. Under this amendment, the ACT III study provided for a multi-center, non-randomized dataset for CDX-110 in patients with newly diagnosed GBM. These data will provide important additional information that can be used to better design the future development of CDX-110. Enrollment in ACT III is complete with a total of over 60 patients enrolled and we expect to present updated results during 2010.

*CDX-011*

CDX-011 (formerly CR011-vcMMAE) is an antibody-drug conjugate (ADC) that consists of a fully-human monoclonal antibody, CR011, linked to a potent cell-killing drug, monomethyl-auristatin E (MMAE). The CR011 antibody specifically targets glycoprotein NMB or (GPNMB) that is expressed in a variety of human cancers including breast cancer and melanoma. The ADC technology, comprised of MMAE and a stable linker system for attaching it to CR011, was licensed from Seattle Genetics, Inc. The ADC is designed to be stable in the bloodstream. Following intravenous administration, CDX-011 targets and binds to GPNMB and upon internalization into the targeted cell, CDX-011 is designed to release MMAE from CR011 to produce a cell-killing effect. We acquired the rights to CDX-011 in connection with the CuraGen Merger.

**Treatment of Breast Cancer:** In June 2008, an open-label, multi-center Phase 1/2 study was initiated of CDX-011 administered intravenously once every three weeks to patients with locally advanced or metastatic breast cancer who have received prior therapy (median of seven prior regimens). The study began with a bridging phase to confirm the maximum tolerated dose ("MTD") and has expanded into a Phase 2 open-label, multi-center study.

The study confirmed the safety of CDX-011 at the pre-defined maximum dose level (1.88 mg/kg) in 6 patients. An additional 28 patients were enrolled as an expanded Phase 2 cohort (for a total of 34 treated patients at 1.88 mg/kg, the Phase 2 dose) to evaluate the progression-free survival ("PFS") rate at 12 weeks. As previously seen in melanoma patients, the 1.88 mg/kg dose was well tolerated in this patient population with the most common adverse events of rash, alopecia, and fatigue. The primary activity endpoint, which called for at least 5 of 25 (20%) patients in the Phase 2 study portion to be progression-free at twelve weeks, has been met. To date, 9 of 26 (35%) evaluable patients are without progression of disease at twelve weeks.

In addition, at the Phase 2 dose level, 4 of 32 (13%) evaluable patients achieved confirmed or unconfirmed Partial Responses ("PR") while 15 of 25 (60%) evaluable patients with measurable disease experienced some reduction in tumor size. GPNMB expression was identified in 10 of 14 (71%) of analyzed tumor samples and treatment with CDX-011 was associated with improved outcomes in all activity parameters in patients whose tumors expressed GPNMB. Notably, in patients who received the Phase 2 dose and whose tumors expressed GPNMB, 2 of 7 (29%) had confirmed PR, 5 of 7 (71%) had

decreases in tumor size, and all 7 achieved at least stable disease with duration from 17.3 to 26.9 weeks. The median PFS in all patients was 9.1 weeks, but in patients whose tumors expressed GPNMB, median PFS was 18.3 weeks, compared to median PFS of 5.9 weeks for patients whose tumors did not express GPNMB. In patients with triple negative disease, 5 of 7 (71%) analyzed samples expressed GPNMB, 7 of 9 (78%) evaluable patients had tumor shrinkage, and the median PFS for these patients was 17.9 weeks.

We expect to initiate a randomized Phase 2b controlled study in patients with advanced breast cancer that express GPNMB in the second half of 2010.

**Treatment of Metastatic Melanoma Cancer:** In June 2006, a Phase 1/2 open-label, multi-center, dose escalation study was initiated to evaluate the safety, tolerability and pharmacokinetics of CDX-011 for patients with un-resectable Stage III or Stage IV melanoma who have failed no more than one prior line of cytotoxic therapy. During the Phase 1 portion of the study, doses of CDX-011 between 0.03 mg/kg to 2.63 mg/kg were evaluated and generally well tolerated, with rash and neutropenia emerging at higher doses. The MTD was determined to be 1.88 mg/kg administered intravenously (IV) once every three weeks.

In June 2009, results were announced for the 36 patients who were treated in the Phase 2 portion of the study. Of the patients enrolled, 94% had Stage IV disease of which two-thirds were classified as M1c, the poorest risk group. The study successfully met its primary activity endpoint, with 5 objective responses (1 unconfirmed) observed in 34 evaluable patients, and median duration of response of 5.3 months. The median overall PFS was 4.4 months. Tumor shrinkage was observed in 58% of patients, and 20 patients had best response of stable disease. Dermatologic adverse events consisting of rash, alopecia, and pruritus were the most common toxicities in this study. Other adverse events included fatigue, diarrhea, musculoskeletal pain, anorexia and nausea. Grade 3 or 4 neutropenia was observed in 5 patients. The absence of rash in the first cycle of treatment predicted a worse PFS. Additionally, in a subset of patients with tumor biopsies, high levels of tumor expression of GPNMB appeared to correlate with favorable outcome.

Enrollment has been completed in the Phase 1 portion of the melanoma trial to evaluate more frequent dosing schedules of CDX-011, including a weekly and a two out of every three-week regimen, to explore if more frequent administration can provide additional activity in patients with metastatic melanoma. A dose of 1.0 mg/kg given once every week has been identified as the MTD in a weekly schedule, and a dose of 1.5mg/kg was being explored in the two out of three week schedule. Although median duration of follow-up was only 6 weeks, objective responses have thus far been observed in 3 of 11 evaluable patients treated with weekly CDX011 (1 confirmed) and 1 confirmed response in 8 evaluable patients treated with CDX-011 two out of every three weeks. We expect to present updated results during the first half of 2010.

*CDX-1307*

Our lead APC Targeting Technology™ product candidate, CDX-1307, is in development for the treatment of epithelial tumors such as colorectal, pancreatic, bladder, ovarian and breast cancers. CDX-1307 targets the beta chain of human chorionic gonadotropin, known as hCG-Beta, which is an antigen often found in epithelial tumors. The presence of hCG-Beta in these cancers correlates with a poor clinical outcome, suggesting that this molecule may contribute to tumor growth. Normal adult tissues have minimal expression of hCG-Beta; therefore, targeted immune responses are not expected to generate significant side effects.

Enrollment is complete in our two Phase 1 studies at multiple centers designed to explore safety and dose/effect relationships via two administration routes—intradermal (ID), a traditional vaccine route that allows efficient access to local dermal dendritic cells and intravenous (IV), a novel systemic approach to vaccination that might target a much larger population of dendritic cells. The Phase 1

studies investigated the safety and immunogenicity of CDX-1307 alone and in combination with adjuvants, including GM-CSF (known to increase mannose receptor expression on dendritic cells) and Toll-Like Receptor ("TLR") agonists (poly-ICLC or Hiltonol™ and R848 or resiquimod). Patients with an assortment of different tumor types that are known to express hCG-Beta were enrolled with retrospective analysis for hCG-Beta expression. An escalating four dose regimen was utilized with the possibility of retreatment if patients demonstrate tumor regression or stable disease.

The Phase 1 studies enrolled over 80 patients with heavily pretreated, advanced-stage breast, colon, bladder and pancreatic cancer, with an average of 4.6 prior therapies across the treatment population. All patient cohorts demonstrated a favorable safety profile with no dose limiting toxicity to date. The combination of CDX-1307 with TLR agonists significantly enhanced immune responses against hCG-Beta, providing strong humoral responses in 88% of patients and cellular immune responses in 57% of patients analyzed to date. Immune responses occurred even in the presence of high circulating levels of hCG-Beta, suggesting that the CDX-1307 can overcome antigen tolerance in advanced and heavily pretreated cancers. Nine patients in the studies experienced disease stabilization from 2.3 months to 11.4 months following the initiation of CDX-1307 vaccination. Two of these patients have received multiple courses of CDX-1307 and continue treatment with stable disease at 6.4 and 11.4 months. These data provide the basis for advancing CDX-1307 into a front-line patient population selected for hCG-Beta expressing cancers.

We expect to initiate a randomized Phase 2b controlled study in patients with newly diagnosed invasive bladder cancer in the second quarter of 2010. Patient's whose bladder cancer expresses hCG-Beta are predicted to have more aggressive disease and shorter survival. In this study we plan to select only patients with confirmed hCG-Beta expression using a specific diagnostic assay.

*CDX-1401*

CDX-1401 is a fusion protein consisting of a fully human monoclonal antibody with specificity for the dendritic cell receptor, DEC-205, linked to the NY-ESO-1 tumor antigen. In humans, NY-ESO-1 is one of the most immunogenic tumor antigens and has been detected in 20 - 30% of cancers, thus representing a broad opportunity. This product is intended to selectively deliver the NY-ESO-1 antigen to APCs for generating robust immune responses against cancer cells expressing NY-ESO-1. Unlike CDX-1307, which targets the mannose receptor expressing dendritic cells, CDX-1401 is the first APC product targeting DEC-205 expressing dendritic cells. We are developing CDX-1401 for the treatment of malignant melanoma and a variety of solid tumors which express the proprietary cancer antigen NY-ESO-1, which we licensed from the Ludwig Institute for Cancer Research in 2006. We believe that preclinical studies have shown that CDX-1401 is effective for activation of human T-cell responses against NY-ESO-1.

In September 2009, we initiated enrollment in a dose-escalating Phase 1/2 clinical trial aimed at determining the optimal dose for further development based on the safety, tolerability, and immunogenicity of the CDX-1401 vaccine. The trial will evaluate three different doses of the vaccine in combination with resiquimod, an activator of TLR 7 and 8. We expect to enroll approximately 36 patients with solid tumor cancers at multiple clinical sites in the United States.

*CDX-1135*

CDX-1135 is a molecule that inhibits a part of the immune system called the complement system. The complement system is a series of proteins that are important initiators of the body's acute inflammatory response against disease, infection and injury. Excessive complement activation also plays a role in some persistent inflammatory conditions. CDX-1135 is a soluble form of naturally occurring Complement Receptor 1 that inhibits the activation of the complement cascade in animal models and in human clinical trials. We believe that regulating the complement system could have therapeutic and

prophylactic applications in several acute and chronic conditions, including organ transplantation, multiple sclerosis, rheumatoid arthritis, age-related macular degeneration ("AMD"), atypical Hemolytic Uremic Syndrome ("aHUS"), Paroxysmal Nocturnal Hemaglobinuria ("PNH"), Dense Deposit Disease ("DDD") in kidneys, and myasthenia gravis. We are currently defining the most appropriate clinical development path for CDX-1135 and are focusing on rare disease conditions of unregulated complement activation as the fastest route to FDA approval.

**Preclinical Development Programs**

*CDX-301*

CDX-301 is a FMS-like tyrosine kinase 3 ligand (Flt3L) that we licensed from Amgen in March 2009. CDX-301 is a growth factor for stem cells and immune cells called dendritic cells. Based on previous experience with this molecule, we believe that CDX-301 has considerable opportunity in various transplant settings as a stem cell mobilizing agent. In addition, CDX-301 is an immune modulating molecule that increases the numbers and activity of specific types of immune cells. We believe CDX-301 has significant opportunity for synergistic development in combination with proprietary molecules in our portfolio. We expect to file an IND application for CDX-301 before the end of 2010.

*CDX-1127*

We have entered into a License Agreement with the University of Southampton, UK, to develop human antibodies to CD27, a potentially important target for immunotherapy of various cancers. In preclinical models, antibodies to CD27 alone have been shown to mediate anti-tumor effects, and may be particularly effective in combination with other immunotherapies. CD27 is a critical molecule in the activation pathway of lymphocytes. It is downstream from CD40, and may provide a novel way to regulate the immune responses. Engaging CD27 with the appropriate monoclonal antibody has proven highly effective at promoting anti-cancer immunity in mouse models. We are evaluating new human monoclonal antibodies in preclinical models.

*CDX-014*

CDX-014 (formerly CR014-vcMMAE) is a fully-human monoclonal ADC that targets TIM-1, an immunomudulatory protein that appears to down regulate immune response to tumors. The antibody, CDX-014, is linked to a potent chemotherapeutic, monomethyl auristatin E (MMAE), using Seattle Genetics' proprietary technology. The ADC is designed to be stable in the bloodstream, but to release MMAE upon internalization into TIM-1-expressing tumor cells, resulting in a targeted cell-killing effect. CDX-014 has shown potent activity in preclinical models of ovarian and renal cancer. We acquired the rights to CDX-014 in connection with the CuraGen Merger.

*CDX-1189*

We are developing therapeutic human antibodies to a signaling molecule known as CD89 or Fcα receptor type I (FcαRI). CD89 is expressed by some white blood cells and leukemic cell lines, and has been shown to be important in controlling inflammation and tumor growth in animal models. We have proprietary, fully human antibodies to CD89 in preclinical development. Depending upon the specific antibody used, anti-CD89 antibodies can either be activating and thus stimulate immune responses, or down-regulating and act as an anti-inflammatory agent.

**Marketed Products**

*Rotavirus Vaccine*

Rotavirus is a major cause of diarrhea and vomiting in infants and children. In 1997, we licensed our oral rotavirus strain to Glaxo and Glaxo assumed responsibility for all subsequent clinical trials and all other development activities. Glaxo gained approval for its rotavirus vaccine, Rotarix®, in Mexico in July 2004, which represented the first in a series of worldwide approvals and commercial launches for the product leading up to the approval in Europe in 2006 and in the U.S. in 2008. We licensed-in our rotavirus strain in 1995 and owe a license fee of 30% to Cincinnati Children's Hospital Medical Center ("CCH") on net royalties received from Glaxo. We are obligated to maintain a license with CCH with respect to the Glaxo agreement. The term of the Glaxo agreement is through the expiration of the last of the relevant patents covered by the agreement, although Glaxo may terminate the agreement upon 90 days prior written notice.

In May 2005, we entered into an agreement whereby an affiliate of PRF purchased an interest in the milestone payments and net royalties that we will receive on the development and worldwide sales of Rotarix®. We have received a total of $60 million in milestone payments under the PRF agreement. No additional milestone payments are due from PRF under the agreement.

Royalty rates on Rotarix® escalate from 7% to 10% based on net product sales in countries that have valid patent protection. These royalty rates are discounted by 30% for "non-patent" countries (primarily international markets). In September 2006, we received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® vaccine at the lower of the two royalty rates under their 1997 license agreement. Glaxo's decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo's assertion that Rotarix® is not covered by the patents Glaxo licensed from us in Australia and certain European countries. We are currently evaluating the basis for Glaxo's action and our potential remedies. If Glaxo's position stands, the royalties to which PRF is entitled will no longer be limited by a $27.5 million annual threshold, which we projected may have been reached in later years as sales of Rotarix® increased. Irrespective of Glaxo's position, we will still retain approximately 65% of the royalties on worldwide sales of Rotarix® once PRF receives 2.45 times the aggregate cash payments of $60 million it made to us, though the potential amount of such residual royalties will be lower if Glaxo's position stands.

**CRITICAL ACCOUNTING POLICIES**

Our significant accounting policies are described in Note 2 to the consolidated financial statements included in Item 8 of this Form 10-K. We believe our most critical accounting policies include accounting for business combinations, revenue recognition, property and equipment, impairment of long-lived assets, marketable securities, research and development expenses and stock-based compensation expense.

The methods, estimates and judgments we use in applying our most critical accounting policies have a significant impact on the results we report in our consolidated financial statements. We evaluate our estimates and judgments on an on-going basis. We base our estimates on historical experience and on assumptions that we believe to be reasonable under the circumstances. Our experience and assumptions form the basis for our judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may vary from what we anticipate and different assumptions or estimates about the future could materially change our reported results. We believe the following accounting policies are the most critical to us in that they are important to the portrayal of

our financial statements and they require our most difficult, subjective or complex judgments in the preparation of our consolidated financial statements:

*Business Combinations*

We account for business combinations that were completed after January 1, 2009 or will be completed in the future, including the CuraGen Merger, under the acquisition method of accounting. We assign the value of the consideration transferred to acquire a business to the tangible assets and identifiable intangible assets acquired and liabilities assumed on the basis of their fair values at the date of acquisition. We assess the fair value of assets, including intangible assets such as IPR&D, using a variety of methods including present-value models. Each asset is measured at fair value from the perspective of a market participant. The method used to estimate the fair values of IPR&D assets incorporates significant assumptions regarding the estimates a market participant would make in order to evaluate an asset, including a market participant's assumptions regarding the probability of completing IPR&D projects, which would require obtaining regulatory approval for marketing of the associated drug candidate; a market participant's estimates regarding the timing of and the expected costs to complete IPR&D projects; a market participant's estimates of future cash flows from potential product sales; and the appropriate discount rates for a market participant. Transaction costs and restructuring costs associated with the transaction are expensed as incurred.

IPR&D assets acquired in a business combination initially are recorded at fair value and accounted for as indefinite-lived intangible assets. These assets are maintained on our consolidated balance sheets until either the project underlying them is completed or the assets become impaired. If a project is completed, the carrying value of the related intangible asset is amortized over the remaining estimated life of the asset beginning in the period in which the project is completed. If a project becomes impaired or is abandoned, the carrying value of the related intangible asset is written down to its fair value and an impairment charge is taken in the period in which the impairment occurs. IPR&D assets will be tested for impairment on an annual basis during the third quarter, or earlier if impairment indicators are present.

Intangible assets acquired in a business combination with a finite life are recorded at fair value and amortized over the greater of economic consumption or on a straight-line basis over their estimated useful life.

The difference between the purchase price and the fair value of assets acquired and liabilities assumed in a business combination is allocated to goodwill. Goodwill will be evaluated for impairment on an annual basis during the third quarter, or earlier if impairment indicators are present.

For acquisitions completed prior to January 1, 2009, including the AVANT Merger, we expensed the fair value of IPR&D to research and development expense as of the acquisition date and included transaction costs associated with the business combination as part of the cost of the acquired company.

*Revenue Recognition*

We account for revenue arrangements that include multiple deliverables as separate units of accounting if (i) the delivered item has value to the customer on a standalone basis, (ii) there is objective and reliable evidence of the fair value of the undelivered items and (iii) if the right of return exists, delivery of the undelivered items is considered probable and substantially in the control of the vendor. If these criteria are not met, the revenue elements are considered a single unit of accounting for purposes of revenue recognition.

We have entered into various license and development agreements with pharmaceutical and biotechnology companies. The terms of the agreements typically include non-refundable license fees, funding of research and development, payments based upon achievement of certain milestones and

royalties on net product sales. Non-refundable license fees are recognized as revenue when we have a contractual right to receive such payments, provided that (i) a contractual arrangement exists, (ii) the contract price is fixed or determinable, (iii) the collection of the resulting receivable is reasonably assured and (iv) we have no further performance obligations under the license agreement. Upfront non-refundable fees associated with license and development agreements where we have continuing performance obligations under the terms of the agreement are recorded as deferred revenue and recognized as revenue over the estimated service period as we complete our obligations. Where our level of effort is relatively constant over the performance period or no other pattern is estimable, the revenue is recognized on a straight-line basis. Revenue is limited to the lesser of the cumulative amount of payments due or the cumulative amount of revenue earned, as determined using the straight-line basis, as of the period ending date. If the estimated service period is subsequently modified, the period over which the upfront fee is recognized is modified accordingly on a prospective basis. The determination of the performance period involves judgment on management's part. Funding of research and development is recognized as revenue over the term of the applicable contract as costs are incurred related to that contract.

Milestone payments are recognized as revenue upon the achievement of mutually agreed milestones, provided that there is no continuing performance obligations associated with the milestone payment. Revenues from milestone payments related to arrangements under which we have continuing performance obligations are recognized as revenue upon achievement of the milestone only if all of the following conditions are met: (i) the milestone payments are non-refundable; (ii) achievement of the milestone was not reasonably assured at the inception of the arrangement; (iii) substantive effort is involved in achieving the milestone; and, (iv) the amount of the milestone is reasonable in relation to the effort expended or the risk associated with achievement of the milestone. If any of these conditions are not met, the milestone payments are deferred and recognized as revenue over the term of the arrangement as we complete our performance obligations.

We have capitalized and deferred costs incurred in connection with the one-time signing and upfront payment (the initial deliverable) received with respect to a multiple deliverable arrangement. If there is deemed a single unit of accounting for such an arrangement, the capitalized deferred costs are amortized over the expected performance period of the arrangement.

Payments received to fund certain research activities are recognized as revenue in the period in which the research activities are performed. Revenue from contracts and grants is recognized as the services are performed and recorded as effort is expended on the contracted work and billed to the government or our contractual partner. Payments received in advance that are related to future performance are deferred and recognized as revenue when the research projects are performed.

Product royalty revenue consists of payments received from licensees for a portion of sales proceeds from products that utilize our licensed technologies and are recognized when the amount of and basis for such royalty payments are reported to us in accurate and appropriate form and in accordance with the related license agreement.

*Property and Equipment*

The treatment of costs to construct property and equipment depends on the nature of the costs and the stage of construction. Costs incurred in the project planning, design, construction and installation phases are capitalized as part of the cost of the asset. We stop capitalizing these costs when the asset is substantially complete and ready for its intended use. For manufacturing property and equipment, we also capitalizes the cost of validating these assets for the underlying manufacturing process. We complete the capitalization of validation costs when the asset is substantially complete and ready for its intended use. Costs capitalized include incremental labor and fringe benefits, and direct

consultancy services. We capitalize interest cost as part of the historical cost of acquiring certain assets during the period of time required to get the asset ready for its intended use.

Property and equipment is stated at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Laboratory equipment and office furniture and equipment are depreciated over five years and computer equipment is depreciated over three years. Manufacturing equipment is amortized over seven to ten years. Leasehold improvements are amortized over the shorter of the estimated useful life or the non-cancelable term of the related lease, including any renewals that are reasonably assured of occurring. Property and equipment under construction is classified as construction in progress and is depreciated or amortized only after the asset is placed in service. Expenditures for maintenance and repairs are charged to expense whereas the costs of significant improvements which extend the life of the underlying asset are capitalized. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are eliminated and any resulting gain or loss is reflected in our consolidated statements of operations.

*Impairment of Long-Lived Assets*

We evaluate the recoverability of our long-lived assets, including property and equipment, and intangible assets when circumstances indicate that an event of impairment may have occurred. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written-down to their estimated fair values.

*Marketable Securities*

We invest our excess cash balances in marketable securities including municipal bond securities, U.S. government agency securities, and high-grade corporate bonds. We classify all of our marketable securities as current assets on the consolidated balance sheets because they are available-for-sale and available to fund current operations. Marketable securities are stated at fair value with their unrealized gains and losses included as a component of accumulated other comprehensive income (loss), which is a separate component of stockholders' equity, until such gains and losses are realized. The fair value of these securities is based on quoted prices for identical or similar assets. If a decline in the fair value is considered other-than-temporary, based on available evidence, the unrealized loss is transferred from other comprehensive income (loss) to the consolidated statements of operations. Realized gains and losses are determined on the specific identification method and are included in investment and other income, net.

*Research and Development Expenses*

Research and development costs, including internal and contract research costs, are expensed as incurred. Research and development expenses consist mainly of clinical trial costs, manufacturing of clinical material, toxicology and other studies, personnel costs, depreciation, license fees and funding of outside research.

*Stock-Based Compensation Expense*

We record stock-based compensation expense for all stock-based awards made to employees and directors based on the estimated fair values of the stock-based awards expected to vest at the grant date and is adjusted, if necessary, to reflect actual forfeitures. Compensation expense for all stock-based awards to employees and directors is recognized using the straight-line method over the term of vesting or performance.

We record stock-based compensation expense for stock options granted to non-employees based on the fair value of the stock options which is re-measured over the vesting term resulting in periodic adjustments to stock-based compensation expense.

**RESULTS OF OPERATIONS**

Our financial statements prior to the AVANT Merger reflect the financial position, results of operations and cash flows of Celldex Research. Following the AVANT Merger but prior to the CuraGen Merger, our financial statements reflect the financial position, results of operation and cash flows of the combined AVANT and Celldex Research. Following the CuraGen Merger, our financial statements reflect the financial position, results of operation and cash flows of the combined companies (AVANT, Celldex Research and CuraGen).

***Year Ended December 31, 2009 compared with Year Ended December 31, 2008***

| | Year Ended December 31, | | Increase/ (Decrease) $ | Increase/ (Decrease) % |
|---|---|---|---|---|
| | 2009 | 2008 | | |
| | (In thousands) | | | |
| Revenue: | | | | |
| Product Development and Licensing Agreements | $ 5,662 | $ 3,716 | $ 1,946 | 52% |
| Contracts and Grants | 1,802 | 533 | 1,269 | 238% |
| Product Royalties | 7,716 | 3,207 | 4,509 | 141% |
| Total Revenue | $ 15,180 | $ 7,456 | $ 7,724 | 104% |
| Operating Expense: | | | | |
| Research and Development | 26,169 | 22,636 | 3,533 | 16% |
| Royalty | 8,397 | 3,711 | 4,686 | 126% |
| Gain on Sale of Assets | (604) | — | (604) | n/a |
| Charge for In-Process Research and Development | — | 14,756 | (14,756) | (100)% |
| General and Administrative | 17,119 | 14,748 | 2,371 | 16% |
| Amortization of Acquired Intangible Assets | 949 | 361 | 588 | 163% |
| Total Operating Expense | 52,030 | 56,212 | (4,182) | (7)% |
| Operating Loss | (36,850) | (48,756) | (11,906) | (24)% |
| Investment and Other Income, Net | 248 | 1,411 | (1,163) | (82)% |
| Interest Expense | (452) | (156) | 296 | 190% |
| Net Loss Before Income Taxes | (37,054) | (47,501) | (10,447) | (22)% |
| Income Tax Benefit | 529 | — | 529 | n/a |
| Net Loss | $ (36,525) | $ (47,501) | $ (10,976) | (23)% |

*Net Loss*

The $11.0 million decrease in net loss for the year ended December 31, 2009 compared to the year ended December 31, 2008 was primarily the result of a decrease in charges for acquired in-process research and development combined with increased revenues, partially offset by increased research and development, royalty and general and administrative expenses.

*Revenue*

The $1.9 million increase in product development and licensing agreement revenue for the year ended December 31, 2009 was primarily due to an increase of $2.3 million in Pfizer related revenue. The $1.3 million increase in contract and grant revenue for the year ended December 31, 2009 was primarily due to an increase of $1.4 million in revenue related to our vaccine development work on Rockefeller's CDX-2401 program. The $4.5 million increase in product royalty revenue for the year ended December 31, 2009 was primarily related to our retained interests in Rotarix® net royalties which were not sold to PRF and which is equal to the amount payable to CCH and recognized in royalty expense by us.

*Research and Development Expense*

Research and development expenses consist primarily of (i) personnel expenses, (ii) laboratory supply expenses relating to the development of our technology, (iii) facility expenses, and (iv) product development expenses associated with our product candidates as follows:

| | Year Ended December 31, | | Increase/ (Decrease) $ | Increase/ (Decrease) % |
|---|---|---|---|---|
| | 2009 | 2008 | | |
| | (In thousands) | | | |
| Personnel | $ 11,108 | $ 8,785 | $ 2,323 | 26% |
| Laboratory Supplies | 2,517 | 2,179 | 338 | 16% |
| Facility | 4,782 | 4,180 | 602 | 14% |
| Product Development | 5,758 | 5,192 | 566 | 11% |

Personnel expenses primarily include salary, benefits, stock-based compensation, payroll taxes and recruiting costs. The $2.3 million increase in personnel expenses for the year ended December 31, 2009 was primarily due to higher headcount and $0.9 million in severance expense related to the CuraGen Merger. We expect personnel expenses to remain relatively consistent over the next twelve months as the effect of our higher headcount will be offset by the reduction in severance expense.

Laboratory supply expenses include laboratory materials and supplies, services, and other related expenses incurred in the development of our technology. The $0.3 million increase in laboratory supply expenses for the year ended December 31, 2009 was primarily due to increased research, preclinical and manufacturing activities. We expect supply expenses to increase over the next twelve months as a result of increased research and development activities, although there may be fluctuations on a quarterly basis.

Facility expenses include depreciation, amortization, utilities, rent, maintenance, and other related expenses incurred at our facilities. The $0.6 million increase in facility expenses for the year ended December 31, 2009 was primarily due to higher depreciation and amortization expenses. We expect facility expenses to increase over the next twelve months as a result of continued capital expansion, although there may be fluctuations on a quarterly basis.

Product development expenses include clinical investigator site fees, external trial monitoring costs, data accumulation costs, contracted research and outside clinical drug product manufacturing. The $0.6 million increase in product development expenses for the year ended December 31, 2009 was primarily due to an increase in preclinical work related to the CDX-1401 and CDX-2401 programs. The decrease in clinical expenses for CDX-110 for the year ended December 31, 2009 due to the transfer of clinical management of our CDX-110 program to Pfizer was primarily offset by the increase in clinical expenses related to our CDX-011 program acquired from CuraGen. We expect product development expenses to increase over the next twelve months due to the increase in clinical trial expenses related

to our CDX-011, CDX-1307, and CDX-1401 programs, although there may be fluctuations on a quarterly basis.

*Royalty Expense*

Royalty expenses include product royalty and sublicense royalty fees on our out-licensed programs. The $4.7 million increase in royalty expenses for the year ended December 31, 2009 was primarily due to an increase in Rotarix® related royalty fees. Our retained interests in Rotarix® net royalties which were not sold to PRF are recorded as product royalty revenue and a corresponding amount that is payable to CCH is recorded as royalty expense. We expect royalty expenses to increase over the next twelve months, although there may be fluctuations on a quarterly basis.

*General and Administrative Expense*

The $2.4 million increase in general and administrative expenses for the year ended December 31, 2009 was primarily due to (i) $3.3 million in severance expense related to the CuraGen Merger, (ii) an increase in consultant and legal expense of $0.6 million during the year ended December 31, 2009 primarily related to the CuraGen Merger and (iii) $0.7 million in severance expense, including related non-cash stock-based compensation expense, incurred during the year ended December 31, 2009 related to our former SVP, Business Development. The effect of these increases was partially offset by $1.4 million in severance expense and $1.3 million in stock-based compensation expense incurred during the year ended December 31, 2008 related to our former President and Chief Executive Officer. We expect general and administrative expense to decrease over the next twelve months primarily due to the lack of CuraGen Merger related expenses.

*Amortization Expense*

The $0.6 million increase in amortization expenses for the year ended December 31, 2009 was primarily due to intangible assets acquired in connection with the CuraGen Merger. We expect amortization expense of acquired intangible assets to increase over the next twelve months primarily due to the CuraGen Merger.

*Investment and Other Income, Net*

The $1.2 million decrease in investment and other income, net for the year ended December 31, 2009 was primarily due to other income of $0.9 million recorded for the year ended December 31, 2008 related to the $10 million milestone payment we received from PRF in connection with the U.S. launch of Rotarix®. We anticipate investment income to increase over the next twelve months due to the CuraGen Merger.

*Interest Expense*

The $0.3 million increase in interest expense for the year ended December 31, 2009 was primarily due to the CuraGen Debt we assumed in connection with the CuraGen Merger. We anticipate interest expense to increase over the next twelve months due to the CuraGen Debt.

*Income Tax Benefit*

The $0.5 million increase in income tax benefit for the year ended December 31, 2009 was due to non-cash tax consequences as a result of the CuraGen Merger.

***Year Ended December 31, 2008 compared with Year Ended December 31, 2007***

| | Year Ended December 31, | | Increase/ (Decrease) $ | Increase/ (Decrease) % |
|---|---|---|---|---|
| | 2008 | 2007 | | |
| | (In thousands) | | | |
| Revenue: | | | | |
| Product Development and Licensing Agreements | $ 3,716 | $ 466 | $ 3,250 | 697% |
| Contracts and Grants | 533 | 940 | (407) | (43)% |
| Product Royalties | 3,207 | — | 3,207 | n/a |
| Total Revenue | $ 7,456 | $ 1,406 | $ 6,050 | 430% |
| Operating Expense: | | | | |
| Research and Development | 22,636 | 9,892 | 12,744 | 129% |
| Royalty | 3,711 | — | 3,711 | n/a |
| Charge for In-Process Research and Development | 14,756 | — | 14,756 | n/a |
| General and Administrative | 14,748 | 6,905 | 7,843 | 114% |
| Amortization of Acquired Intangible Assets | 361 | 117 | 244 | 209% |
| Total Operating Expense | 56,212 | 16,914 | 39,298 | 232% |
| Operating Loss | (48,756) | (15,508) | 33,248 | 214% |
| Investment and Other Income, Net | 1,411 | 435 | 976 | 224% |
| Interest Expense | (156) | — | (156) | n/a |
| Net Loss | $ (47,501) | $ (15,073) | $ 32,428 | 215% |

*Net Loss*

The $32.4 million increase in net loss for the year ended December 31, 2008 compared to the year ended December 31, 2007 was primarily the result of increased operating expenses as a result of the AVANT Merger including a one-time non-cash charge of $14.8 million for purchased in-process research and development. The effect of this increase was offset by higher revenue.

*Revenue*

The $3.3 million increase in product development and licensing agreement revenue for the year ended December 31, 2008 was primarily due to an increase of $2.9 million in Pfizer related revenue. The $0.4 million decrease in contract and grant revenue for the year ended December 31, 2008 was primarily due to lower levels of vaccine development work billable to Rockefeller and Harvard in 2008. The $3.2 million increase in product royalty revenue for the year ended December 31, 2008 was related to our retained interests in Rotarix® net royalties which were not sold to PRF and which is equal to the amount payable to CCH and recognized in research and development expense by us.

*Research and Development Expense*

| | Year Ended December 31, | | Increase/ (Decrease) $ | Increase/ (Decrease) % |
|---|---|---|---|---|
| | 2008 | 2007 | | |
| | (In thousands) | | | |
| Personnel | $ 8,785 | $ 3,250 | $ 5,535 | 170% |
| Laboratory Supplies | 2,179 | 446 | 1,733 | 389% |
| Facility | 4,180 | 995 | 3,185 | 320% |
| Product Development | 5,192 | 2,455 | 2,737 | 111% |

The $5.5 million increase in personnel expenses for the year ended December 31, 2008 was primarily due to higher headcount as a result of the AVANT Merger. The $1.7 million increase in laboratory supply expenses for the year ended December 31, 2008 was primarily due to the AVANT Merger. The $3.2 million increase in facility expenses for the year ended December 31, 2008 was primarily due to the combination of expenses for three facilities (Phillipsburg, NJ and Needham, MA and Fall River, MA) as a result of the AVANT Merger. The $2.7 million increase in product development expenses for the year ended December 31, 2008 was primarily due to the expansion of the clinical trials for the CDX-110 and CDX-1307 programs.

*Royalty Expense*

The $3.7 million increase in royalty expenses primarily related to Rotarix® for the year ended December 31, 2008 was due to the AVANT Merger.

*General and Administrative Expense*

The $7.8 million increase in our general and administrative expenses for the year ended December 31, 2008 was primarily due to (i) $1.4 million in severance expense and $1.3 million in stock-based compensation expense incurred during the year ended December 31, 2008 related to our former President and Chief Executive Officer and (ii) increases in legal and patent expense of $2.0 million, facility-related expenses of $1.1 million, insurance expenses of $0.6 million and professional services of $0.6 million, primarily due to the AVANT Merger.

*Amortization Expense*

The $0.2 million increase in amortization expenses for the year ended December 31, 2008 was primarily due to intangible assets acquired in connection with the AVANT Merger.

*Investment and Other Income, Net*

The $1.0 million increase in our investment and other income, net for the year ended December 31, 2008 was primarily due to other income of $0.9 million recorded for the year ended December 31, 2008 related to the $10 million milestone payment we received from PRF in connection with the U.S. launch of Rotarix®.

**LIQUIDITY AND CAPITAL RESOURCES**

At December 31, 2009, our principal sources of liquidity consisted of cash, cash equivalents and marketable securities of $82.5 million. Our working capital at December 31, 2009 was $69.6 million. At December 31, 2009, we had 4% convertible subordinated debt due in February 2011 of $12.5 million. We incurred a loss of $36.5 million for the year ended December 31, 2009. Net cash used in operations for the year ended December 31, 2009 was $29.9 million. We believe that the cash inflows from existing grants and collaborations, interest income on invested funds and our current cash, cash equivalents and marketable securities at December 31, 2009 are sufficient to meet estimated working capital requirements and fund planned operations for at least the next twelve months.

Our cash equivalents are highly liquid investments with a maturity of three months or less at the date of purchase and consist primarily of investments in money market mutual funds with commercial banks and financial institutions. We maintain cash balances with financial institutions in excess of insured limits. We do not anticipate any losses with respect to such cash balances. We invest our excess cash balances in marketable securities including municipal bond securities, U.S. government agency securities, and high-grade corporate bonds that meet high credit quality standards, as specified in our investment policy. Our investment policy seeks to manage these assets to achieve our goals of preserving principal and maintaining adequate liquidity.

The use of our cash flows for operations has primarily consisted of salaries and wages for our employees, facility and facility-related costs for our offices, laboratories and manufacturing facility, fees paid in connection with preclinical studies, clinical studies, contract manufacturing, laboratory supplies and services, consulting, legal and other professional fees. To date, and for the foreseeable future, the primary sources of cash flows from operations have been payments received from our collaborative partners and from government entities. The timing of any new collaboration agreements, government contracts or grants and any payments under these agreements, contracts or grants cannot be easily predicted and may vary significantly from quarter to quarter.

During the next twelve to twenty-four months, we may take further steps to raise additional capital to meet our long-term liquidity needs including, but not limited to, the licensing of technology programs with existing or new collaborative partners, possible business combinations, or the issuance of common stock or other securities via private placements or public offerings. While we may continue to seek capital through a number of means, there can be no assurance that additional financing will be available on acceptable terms, if at all, particularly in light of the recent disruptions in the financial markets and our negotiating position in capital-raising efforts may worsen as existing resources are used. There is also no assurance that we will be able to enter into further collaborative relationships. Additional equity financing may be dilutive to our stockholders; debt financing, if available, may involve significant cash payment obligations and covenants that restrict our ability to operate as a business; and licensing or strategic collaborations may result in royalties or other terms which reduce our economic potential from products under development. If we are unable to raise the funds necessary to meet our long-term liquidity needs, we may have to delay or discontinue the development of programs, license out programs earlier than expected, raise funds at significant discount or on other unfavorable terms, or sell all or part of us.

*Operating Activities*

Net cash used in operating activities was $29.9 million for the year ended December 31, 2009 compared to net cash provided by operating activities of $18.3 million for the year ended December 31, 2008. The increase in net cash used in operating activities was primarily due to Pfizer's up-front payment of $40 million received during the year ended December 31, 2008. We expect that cash used in operations will continue to increase in 2010 primarily related to the continued development of our therapeutic product pipeline, including bringing forward new product candidates into clinical development.

We have incurred and will continue to incur significant costs in the area of research and development, including preclinical and clinical trials, as our product candidates are developed. We plan to spend significant amounts to progress our current product candidates through the clinical trial and commercialization process as well as to develop additional product candidates. As our product candidates progress through the clinical trial process, we may be obligated to make significant milestone payments.

*Investing Activities*

Net cash provided by investing activities was $45.1 million for the year ended December 31, 2009 compared to $10.2 million for the year ended December 31, 2008. The increase in net cash provided by investing activities was primarily due to the $51.7 million in cash acquired in the CuraGen Merger in 2009 offset by higher purchases of marketable securities in 2009 and the cash acquired in the AVANT Merger in 2008. We expect to incur future facility cost as a result of continued capital expansion, renovation and replacements. Our investment in capital equipment is discretionary and there may be significant fluctuations on a quarterly basis.

*Financing Activities*

Net cash used in financing activities was $2.5 million for the year ended December 31, 2009 compared to net cash provided by financing activities of $10.9 million for the year ended December 31, 2008. The increase in net cash used in financing activities was primarily due the $3.0 million payment to Medarex in 2009 and Pfizer's one-time $10 million equity investment during the year ended December 31, 2008.

*Other Liquidity Matters*

Under the Pfizer Agreement, Pfizer made an upfront payment $40 million, an equity investment of $10.0 million and will fund all development costs for the licensed programs. We are also eligible to receive potential milestone payments exceeding $390.0 million for the successful development and commercialization of CDX-110 and additional EGFRvIII vaccine products, as well as royalties on any product sales.

**AGGREGATE CONTRACTUAL OBLIGATIONS**

We have entered into licensing agreements with several universities, research organizations and other corporations. Under the terms of these agreements, we have received licenses or options to license technology, specified patents or patent applications. Our licensing and development collaboration agreements generally provide for royalty payments equal to specified percentages of product sales, annual license maintenance fees and continuing patent prosecution costs. In addition, we have committed to make potential future milestone payments to third parties of up to approximately $116 million as part of our various collaborations including licensing and development programs. Payments under these agreements generally become due and payable only upon achievement of certain developmental, regulatory and/or commercial milestones. Because the achievement of these milestones had not occurred as of December 31, 2009, such contingencies have not been recorded in our financial statements. We expect to incur approximately $0.9 million of milestone payments in 2010.

The following table summarizes our contractual obligations (not including contingent royalty and milestone payments as described above) at December 31, 2009 and the effect such obligations and commercial commitments are expected to have on its liquidity and cash flow in future years. These obligations, commitments and supporting arrangements represent expected payments based on current operating forecasts, which are subject to change:

| | Total | 2010 | 2011 - 2012 | 2013 - 2014 | Thereafter |
|---|---|---|---|---|---|
| | | | (In thousands) | | |
| Contractual obligations: | | | | | |
| Operating lease obligations(1) | $ 17,963 | $ 2,465 | $ 5,063 | $ 5,047 | $ 5,388 |
| Other contractual obligations(2) | 2,607 | 2,607 | — | — | — |
| Other long-term liabilities(3) | 810 | 180 | 154 | 118 | 358 |
| Convertible subordinated debt(4) | 12,503 | — | 12,503 | — | — |
| CuraGen Severance obligations | 2,623 | 1,918 | 705 | — | — |
| Total contractual obligations | $ 36,506 | $ 7,170 | $ 18,425 | $ 5,165 | $ 5,746 |

*(1)* Such amounts primarily consist of payments for our facility leases and assumes the exercise of one five year renewal for our Fall River, MA facility.

*(2)* Such amounts primarily consist of research and development commitments with third parties. Our obligation to pay certain of these amounts may increase or be reduced based on certain future events.

*(3)* Such amounts include the outstanding balance on a loan and note payable which accrue interest at 5.5% and is payable monthly.

*(4)* Such amounts includes the outstanding balance on convertible subordinated debt due February 15, 2011 which accrues interest at 4% and is payable on February 15 and August 15.

**RECENT ACCOUNTING PRONOUNCEMENTS**

Refer to Note 2, "Summary of Significant Accounting Policies," in the accompanying notes to the consolidated financial statements for a discussion of recent accounting pronouncements.

**OFF-BALANCE SHEET ARRANGEMENTS.**

None.

**Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We own financial instruments that are sensitive to market risk as part of our investment portfolio. Our investment portfolio is used to preserve our capital until it is used to fund operations, including our research and development activities. None of these market-risk sensitive instruments are held for trading purposes. We invest our cash primarily in money market mutual funds. These investments are evaluated quarterly to determine the fair value of the portfolio. From time to time, we invest our excess cash balances in marketable securities including municipal bond securities, U.S. government agency securities, and high-grade corporate bonds that meet high credit quality standards, as specified in our investment policy. Our investment policy seeks to manage these assets to achieve our goals of preserving principal and maintaining adequate liquidity. Because of the short-term nature of these investments, we do not believe we have material exposure due to market risk. The impact to our financial position and results of operations from likely changes in interest rates is not material.

We do not utilize derivative financial instruments. The carrying amounts reflected in the consolidated balance sheet of cash and cash equivalents, accounts receivables and accounts payable approximates fair value at December 31, 2009 due to the short-term maturities of these instruments.

**Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of
Celldex Therapeutics, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity (deficit) and comprehensive loss, and of cash flows, present fairly, in all material respects, the financial position of Celldex Therapeutics, Inc. and its subsidiaries at December 31, 2009 and December 31, 2008, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2009 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for business combinations in 2009.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 12, 2010

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Celldex Therapeutics, Inc.

We have audited the accompanying consolidated statement of operations, stockholders' equity (deficit) and comprehensive loss, and cash flow of Celldex Therapeutics, Inc. and subsidiary for the year ended December 31, 2007. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purposes of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated results of their operations and their cash flow for the year ended December 31, 2007 of Celldex Therapeutics, Inc. in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

MetroPark, New Jersey
May 7, 2008

**CELLDEX THERAPEUTICS, INC.**

**CONSOLIDATED BALANCE SHEETS**

**(In thousands, except share and per share amounts)**

| | December 31, 2009 | December 31, 2008 |
|---|---|---|
| **ASSETS** | | |
| Current Assets: | | |
| Cash and Cash Equivalents | $ 57,002 | $ 44,257 |
| Marketable Securities | 25,451 | — |
| Accounts and Other Receivables | 544 | 1,827 |
| Prepaid and Other Current Assets | 979 | 992 |
| Total Current Assets | 83,976 | 47,076 |
| Property and Equipment, Net | 11,489 | 13,567 |
| Intangible Assets, Net | 29,979 | 2,473 |
| Goodwill | 8,965 | — |
| Other Assets | 5,955 | 6,677 |
| Total Assets | $ 140,364 | $ 69,793 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current Liabilities: | | |
| Accounts Payable | $ 1,445 | $ 2,154 |
| Accrued Expenses | 5,615 | 3,841 |
| Payable Due Medarex | — | 2,957 |
| Current Portion of Deferred Revenue | 5,191 | 4,931 |
| Current Portion of Long-Term Liabilities | 2,156 | 218 |
| Total Current Liabilities | 14,407 | 14,101 |
| Deferred Revenue | 34,191 | 36,489 |
| Convertible Subordinated Debt | 11,684 | — |
| Other Long-Term Liabilities | 6,315 | 1,069 |
| Total Liabilities | 66,597 | 51,659 |
| Commitments and Contingent Liabilities (Notes 12 and 15) | | |
| Stockholders' Equity: | | |
| Convertible Preferred Stock, $.01 Par Value; 3,000,000 Shares Authorized; No Shares Issued and Outstanding at December 31, 2009 and 2008 | — | — |
| Common Stock, $.001 Par Value; 297,000,000 Shares Authorized; 31,685,061 and 15,789,756 Shares Issued and Outstanding at December 31, 2009 and 2008, respectively | 32 | 16 |
| Additional Paid-In Capital | 228,863 | 136,661 |
| Accumulated Other Comprehensive Income | 2,546 | 2,606 |
| Accumulated Deficit | (157,674) | (121,149) |
| Total Stockholders' Equity | 73,767 | 18,134 |
| Total Liabilities and Stockholders' | $ 140,364 | $ 69,793 |

Equity

The accompanying notes are an integral part of the consolidated financial statements.

**CELLDEX THERAPEUTICS, INC.**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

**(In thousands, except per share amounts)**

| | Year Ended December 31, 2009 | Year Ended December 31, 2008 | Year Ended December 31, 2007 |
|---|---|---|---|
| **REVENUE:** | | | |
| Product Development and Licensing Agreements | $ 5,662 | $ 3,716 | $ 466 |
| Contracts and Grants | 1,802 | 533 | 940 |
| Product Royalties | 7,716 | 3,207 | — |
| Total Revenue | 15,180 | 7,456 | 1,406 |
| **OPERATING EXPENSE:** | | | |
| Research and Development | 26,169 | 22,636 | 9,892 |
| Royalty | 8,397 | 3,711 | — |
| Gain on Sale of Assets | (604) | — | — |
| Charge for In-Process Research and Development | — | 14,756 | — |
| General and Administrative | 17,119 | 14,748 | 6,905 |
| Amortization of Acquired Intangible Assets | 949 | 361 | 117 |
| Total Operating Expense | 52,030 | 56,212 | 16,914 |
| Operating Loss | (36,850) | (48,756) | (15,508) |
| Investment and Other Income, Net | 248 | 1,411 | 435 |
| Interest Expense | (452) | (156) | — |
| Net Loss Before Income Taxes | (37,054) | (47,501) | (15,073) |
| Income Tax Benefit | 529 | — | — |
| Net Loss | $ (36,525) | $ (47,501) | $ (15,073) |
| Basic and Diluted Net Loss Per Common Share (See Note 2) | $ (1.84) | $ (3.34) | $ (1.81) |
| Shares Used in Calculating Basic and Diluted Net Loss per Share (See Note 2) | 19,823 | 14,217 | 8,309 |

The accompanying notes are an integral part of the consolidated financial statements.

**CELLDEX THERAPEUTICS, INC.**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE LOSS**

**(In thousands, except share amounts)**

| | Common Stock Shares | Common Stock Par Value | Class A Common Stock Shares | Class A Common Stock Par Value | Additional Paid-In Capital | Accumulated Other Comprehensive Income | Accumulated Deficit | Total Stockholders' Equity (Deficit) |
|---|---|---|---|---|---|---|---|---|
| **Balance at December 31, 2006** | **5,498,273** | **$ 5** | **2,811,147** | **$ 3** | **$ 71,323** | **$ 2,388** | **$ (58,575)** | **$ 15,144** |
| Share-Based Compensation | — | — | — | — | 1,605 | — | — | 1,605 |
| Medarex Return of Capital | — | — | — | — | (3,039) | — | — | (3,039) |
| Comprehensive Income (Loss): | | | | | | | | |
| Net Loss | — | — | — | — | — | — | (15,073) | (15,073) |
| Translation Adjustments | — | — | — | — | — | 231 | — | 231 |
| Total Comprehensive Loss | | | | | | | | (14,842) |
| **Balance at December 31, 2007** | **5,498,273** | **$ 5** | **2,811,147** | **$ 3** | **$ 69,889** | **$ 2,619** | **$ (73,648)** | **$ (1,132)** |
| Exchange of Class A for Common Stock | 2,811,147 | 3 | (2,811,147) | (3) | — | — | — | — |
| Shares Issued to Medarex in Settlement of a Payable | 351,692 | 1 | — | — | 3,038 | — | — | 3,039 |
| Shares Received in Connection with the AVANT Merger | 6,265,882 | 6 | — | — | 46,869 | — | — | 46,875 |
| Shares Issued to Pfizer in connection with the CDX-110 Licensing Agreement | 781,250 | 1 | | | 10,866 | | | 10,867 |
| Shares Issued to Duke University in Settlement of a Payable | 81,512 | — | | | 1,183 | | | 1,183 |
| Share-Based Compensation | — | — | — | — | 4,816 | — | — | 4,816 |
| Comprehensive Loss: | | | | | | | | |
| Net Loss | — | — | — | — | — | — | (47,501) | (47,501) |
| Translation Adjustments | — | — | — | — | — | (13) | — | (13) |
| Total Comprehensive Loss | | | | | | | | (47,514) |
| **Balance at December 31, 2008** | 15,789,756 | $ 16 | — | $ — | $ 136,661 | $ 2,606 | $ (121,149) | $ 18,134 |
| Shares Issued in Connection with the CuraGen Merger | 15,722,713 | 16 | — | — | 88,227 | — | — | 88,243 |
| Shares Issued under Stock Option and Employee Stock Purchase Plans | 172,592 | — | — | — | 917 | — | — | 917 |
| Share-Based Compensation | — | — | — | — | 3,058 | — | — | 3,058 |
| Comprehensive Loss: | | | | | | | | |
| Net Loss | — | — | — | — | — | — | (36,525) | (36,525) |
| Translation Adjustments | — | — | — | — | — | (12) | — | (12) |
| Net Change in Unrealized Loss on Marketable Securities | — | — | — | — | — | (48) | — | (48) |
| Total Comprehensive Loss | | | | | | | | (36,585) |
| **Balance at December 31, 2009** | **31,685,061** | **$ 32** | **—** | **$ —** | **$ 228,863** | **$ 2,546** | **$ (157,674)** | **$ 73,767** |

The accompanying notes are an integral part of the consolidated financial statements.

**CELLDEX THERAPEUTICS, INC.**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

**(In thousands)**

| | Year Ended December 31, 2009 | Year Ended December 31, 2008 | Year Ended December 31, 2007 |
|---|---|---|---|
| **Cash Flows From Operating Activities:** | | | |
| Net Loss | $ (36,525) | $ (47,501) | $ (15,073) |
| Adjustments to Reconcile Net Loss to Cash Provided by (Used in) Operating Activities: | | | |
| Depreciation and Amortization | 2,583 | 2,176 | 710 |
| Amortization of Intangible Assets | 949 | 361 | 117 |
| Realized Loss on Sales and Maturities of Marketable Securities | 24 | — | — |
| (Gain) Loss on Sale or Disposal of Assets | (556) | 331 | — |
| Stock-Based Compensation Expense | 3,058 | 4,816 | 1,605 |
| Non-Cash Interest Expense | 181 | — | — |
| Non-Cash Tax Benefit | (529) | — | — |
| In-Process Research and Development | — | 14,756 | — |
| Changes in Operating Assets and Liabilities, Net of Acquisitions | | | |
| Accounts and Other Receivables | 1,283 | (1,656) | 4,167 |
| Prepaid and Other Current Assets | 743 | 9,980 | (587) |
| Other Assets | 722 | (6,414) | — |
| Accounts Payable and Accrued Expenses | (2,463) | 1,221 | (28) |
| Deferred Revenue | (2,038) | 40,116 | 42 |
| Other Long-Term Liabilities | 2,699 | 94 | (79) |
| Net Cash (Used in) Provided by Operating Activities | (29,869) | 18,280 | (9,126) |
| **Cash Flows From Investing Activities:** | | | |
| Cash Acquired in AVANT Merger, Net of Transaction Costs | — | 10,750 | — |
| Cash Acquired in CuraGen Merger | 51,654 | — | — |
| Sales and Maturities of Marketable Securities | 2,674 | — | — |
| Purchases of Marketable Securities | (9,559) | — | — |
| Other Non Current Assets | — | — | (335) |

| | | | |
|---|---|---|---|
| Restricted Cash Deposits | — | (2) | (3) |
| Acquisition of Property and Equipment | (528) | (1,305) | (75) |
| Proceeds from Sale or Disposal of Assets | 850 | 712 | — |
| Net Cash Provided by (Used in) Investing Activities | 45,091 | 10,155 | (413) |
| **Cash Flows From Financing Activities:** | | | |
| Net Proceeds from Stock Issuances | 668 | 10,867 | — |
| Related Party Loan Due to Medarex | (2,957) | 160 | 265 |
| Payment of Other Long-Term Liabilities | (176) | (102) | — |
| Net Cash (Used in) Provided by Financing Activities | (2,465) | 10,925 | 265 |
| Effect of Exchange Rate Changes on Cash and Cash Equivalents | (12) | (13) | 184 |
| Net Increase (Decrease) in Cash and Cash Equivalents | 12,745 | 39,347 | (9,090) |
| Cash and Cash Equivalents at Beginning of Period | 44,257 | 4,910 | 14,000 |
| Cash and Cash Equivalents at End of Period | $ 57,002 | $ 44,257 | $ 4,910 |
| *Supplemental Disclosure of Non-Cash Flow Information* | | | |
| Shares Received in Exchange in the Merger | $ — | $ 46,252 | $ — |
| Shares Issued to Medarex in Settlement of a Payable | $ — | $ 3,039 | $ — |
| Shares Issued to Duke University in Settlement of a Payable | $ — | $ 1,183 | $ — |
| Shares Issued to Executive Officers | $ 250 | $ — | $ — |
| *Supplemental Disclosure of Cash Flow Information* | | | |
| Cash Paid for Interest | $ 157 | $ 142 | $ — |

The accompanying notes are an integral part of the consolidated financial statements.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) NATURE OF BUSINESS AND OVERVIEW**

Celldex Therapeutics, Inc. (the "Company" or "Celldex") is an integrated biopharmaceutical company that applies its comprehensive Precision Targeted Immunotherapy Platform to generate a pipeline of candidates to treat cancer and other difficult-to-treat diseases. The Company's immunotherapy platform includes a complementary portfolio of monoclonal antibodies, antibody-targeted vaccines and immunomodulators to create novel disease-specific drug candidates. The Company's collaboration with GlaxoSmithKline ("Glaxo") resulted in the commercialization of Rotarix®, an oral human rotavirus vaccine. In April 2008, the Company and Pfizer Inc. ("Pfizer") entered into a License and Development Agreement (the "Pfizer Agreement") under which Pfizer was granted an exclusive worldwide license to a therapeutic cancer vaccine candidate, CDX-110, in Phase 2 development for the treatment of glioblastoma multiforme ("GBM"). The Pfizer Agreement also gives Pfizer exclusive rights to the use of EGFRvIII vaccines in other potential indications. Under the Pfizer Agreement, Pfizer made an upfront payment to the Company of $40 million and made a $10 million equity investment in the Company. Pfizer will fund all development costs for these programs. The Company is also eligible to receive potential milestone payments exceeding $390 million for the successful development and commercialization of CDX-110 and additional EGFRvIII vaccine products, as well as royalties on any product sales. The Company's other clinical and preclinical product candidates address large market opportunities for which the Company believes current therapies are inadequate or non-existent.

*AVANT Merger*

On March 7, 2008, the Company (formerly known as AVANT Immunotherapeutics, Inc.) ("AVANT") merged with Celldex Research Corporation (formerly known as Celldex Therapeutics, Inc.) ("Celldex Research"), a privately-held company, (the "AVANT Merger"). Effective October 1, 2008, the Company changed its name from AVANT Immunotherapeutics, Inc. to Celldex Therapeutics, Inc.

The AVANT Merger was accounted for using the former purchase method of accounting and was treated as an acquisition by Celldex Research of AVANT, with Celldex Research being considered the accounting acquirer even though AVANT was the issuer of common stock and the surviving legal entity in the transaction. Under the former purchase method of accounting, the deemed purchase price was allocated to AVANT's underlying tangible and identifiable intangible assets acquired and liabilities assumed based upon the respective fair value of each with any excess deemed purchase price allocated to goodwill. The valuation analysis conducted by the Company determined that the fair value of assets acquired and the fair value of liabilities assumed by Celldex Research exceeded the purchase price for AVANT, resulting in negative goodwill of approximately $6.0 million. The negative goodwill was allocated to all of the acquired assets that were non-financial and non-current assets, including property and equipment, identifiable intangible assets, and in-process research and development ("IPR&D").

Because Celldex Research was determined to be the acquirer for accounting purposes, the historical financial statements of Celldex Research became the historical financial statements of the Company as of the closing of the AVANT Merger. Accordingly, the financial statements of the Company prior to the AVANT Merger reflect the financial position, results of operations and cash flows of Celldex Research, which during the historical periods presented in the accompanying consolidated financial statements, was then majority-owned by Medarex, Inc. ("Medarex"). Following the AVANT Merger, the financial statements reflect the financial position, results of operation and cash flows of the combined companies. Accordingly, this report reflects the financial condition, results of operations and liquidity of the combined companies at December 31, 2009 and 2008 and for the period from the AVANT Merger through December 31, 2009.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(1) NATURE OF BUSINESS AND OVERVIEW (Continued)**

*Acquisition of CuraGen Corporation ("CuraGen")*

As more fully discussed in Note 19, on October 1, 2009, CuraGen, a former publicly-traded company, merged with a wholly-owned subsidiary ("Merger Sub") of the Company (the "CuraGen Merger") in accordance with a definitive merger agreement dated May 28, 2009 (the "CuraGen Merger Agreement"). Following the CuraGen Merger, the financial statements reflect the financial position, results of operation and cash flows of the combined companies. Accordingly, this report reflects the financial condition, results of operations and liquidity of the combined companies at December 31, 2009 and for the period from the CuraGen Merger through December 31, 2009.

On December 31, 2009, the Company completed the merger of the Merger Sub with and into Celldex pursuant to a short-form merger effected under Delaware law. As a result, the separate corporate existence of CuraGen has ceased and the Company has succeeded to all rights, privileges, powers and franchises of CuraGen.

*Capital Requirements*

At December 31, 2009, the Company had cash, cash equivalents and marketable securities of $82.5 million; working capital of $69.6 million; and 4% convertible subordinated debt ("CuraGen Debt") due in February 2011 of $12.5 million. The Company incurred a loss of $36.5 million for the year ended December 31, 2009. Net cash used in operations for the year ended December 31, 2009 was $29.9 million. The Company believes that the cash, cash equivalents and marketable securities at December 31, 2009 in addition to the cash inflows from existing grants and collaborations and interest income on invested funds will be sufficient to meet estimated working capital requirements and fund planned operations for at least the next twelve months. The working capital requirements of the Company are dependent on several factors including, but not limited to, the costs associated with research and development programs, preclinical and clinical studies, manufacture of clinical materials, the scope of collaborative arrangements.

During the next twelve to twenty-four months, the Company may take steps to raise additional capital to meet its long-term liquidity needs including, but not limited to, the licensing of technology programs with existing or new collaborative partners, possible business combinations, or the issuance of common stock via private placements or public offerings. While the Company continues to seek capital through a number of means, there can be no assurance that additional financing will be available on acceptable terms, if at all, particularly in light of the recent disruptions in the financial markets. The Company's negotiating position in capital-raising efforts may worsen as existing resources are used. There is also no assurance that the Company will be able to enter into further collaborative relationships. Additional equity financing may be dilutive to the Company's stockholders; debt financing, if available, may involve significant cash payment obligations and covenants that restrict the Company's ability to operate as a business; and licensing or strategic collaborations may result in royalties or other terms that reduce the Company's economic potential from products under development. If the Company is unable to raise the funds necessary to meet its long-term liquidity needs, it may have to (i) delay or discontinue the development of programs, (ii) license out programs earlier than expected, (iii) raise funds at significant discount or on other unfavorable terms, or (iv) sell all or a part of the Company.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*Basis of Presentation*

The consolidated financial statements reflect the operations of the Company and its wholly-owned subsidiaries. All intercompany transactions have been eliminated. The Company operates in one segment, which is the business of development, manufacturing and commercialization of novel therapeutics for human health care.

*Use of Estimates*

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make estimates and use assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

*Cash and Cash Equivalents*

The Company considers all highly liquid investments purchased with a maturity date of 90 days or less at the date of purchase to be cash equivalents. Cash equivalents consist principally of money market funds and debt securities.

*Marketable Securities*

The Company invests its excess cash balances in marketable securities including municipal bond securities, U.S. government agency securities, and high-grade corporate bonds. The Company classifies all of its marketable securities as current assets on the consolidated balance sheets because they are available-for-sale and available to fund current operations. Marketable securities are stated at fair value with their unrealized gains and losses included as a component of accumulated other comprehensive income (loss), which is a separate component of stockholders' equity, until such gains and losses are realized. The fair value of these securities is based on quoted prices for identical or similar assets. If a decline in the fair value is considered other-than-temporary, based on available evidence, the unrealized loss is transferred from other comprehensive income (loss) to the consolidated statements of operations. Realized gains and losses are determined on the specific identification method and are included in investment and other income, net.

*Concentration of Credit Risk*

Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash, cash equivalents, marketable securities and accounts receivable. The Company invests its cash, cash equivalents and marketable securities in debt instruments and interest bearing accounts at major financial institutions in excess of insured limits. The Company mitigates credit risk by limiting the investment type and maturity to securities that preserve capital, maintain liquidity and have a high credit quality.

The Company has not historically experienced credit losses from its accounts receivable and therefore has not established an allowance for doubtful accounts. Receivables of $0.2 million and $1.4 million were due from Pfizer at December 31, 2009 and 2008, respectively.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

Revenue from Glaxo and Pfizer represented 52% and 34% for the year ended December 31, 2009 and 50% and 38% for the year ended December 31, 2008, of total Company revenue, respectively. For the year ended December 31, 2007, certain other customers represented more than 10% of total Company revenue and these customers are not expected to represent 10% or more of total Company revenue in the future.

*Fair Value of Financial Instruments*

The Company enters into various types of financial instruments in the normal course of business. The carrying amounts of the Company's cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate their fair values due to the short-term nature of these items. See Note 3 for additional information.

*Property and Equipment*

The treatment of costs to construct property and equipment depends on the nature of the costs and the stage of construction. Costs incurred in the project planning, design, construction and installation phases are capitalized as part of the cost of the asset. The Company stops capitalizing these costs when the asset is substantially complete and ready for its intended use. For manufacturing property and equipment, the Company also capitalizes the cost of validating these assets for the underlying manufacturing process. The Company completes the capitalization of validation costs when the asset is substantially complete and ready for its intended use. Costs capitalized include incremental labor and fringe benefits, and direct consultancy services. The Company capitalizes interest cost as part of the historical cost of acquiring certain assets during the period of time required to get the asset ready for its intended use.

Property and equipment is stated at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Laboratory equipment and office furniture and equipment are depreciated over five years and computer equipment is depreciated over three years. Manufacturing equipment is amortized over seven to ten years. Leasehold improvements are amortized over the shorter of the estimated useful life or the non-cancelable term of the related lease, including any renewals that are reasonably assured of occurring. Property and equipment under construction is classified as construction in progress and is depreciated or amortized only after the asset is placed in service. Expenditures for maintenance and repairs are charged to expense whereas the costs of significant improvements which extend the life of the underlying asset are capitalized. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are eliminated and any resulting gain or loss is reflected in the Company's consolidated statements of operations.

*Business Combinations*

On January 1, 2009, the Company adopted the new acquisition method of accounting for business combinations that are completed after January 1, 2009, including the CuraGen Merger. The Company assigns the value of the consideration transferred to acquire a business to the tangible assets and identifiable intangible assets acquired and liabilities assumed on the basis of their fair values at the date of acquisition. The Company assesses the fair value of assets, including intangible assets such as IPR&D, using a variety of methods including present-value models. Each asset is measured at fair value from the perspective of a market participant. The method used to estimate the fair values of

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

IPR&D assets incorporates significant assumptions regarding the estimates a market participant would make in order to evaluate an asset, including a market participant's assumptions regarding the probability of completing IPR&D projects, which would require obtaining regulatory approval for marketing of the associated drug candidate; a market participant's estimates regarding the timing of and the expected costs to complete IPR&D projects; a market participant's estimates of future cash flows from potential product sales; and the appropriate discount rates for a market participant. Transaction costs and restructuring costs associated with the transaction are expensed as incurred.

For acquisitions completed prior to January 1, 2009, including the AVANT Merger, the Company expensed the fair value of IPR&D of $14.8 million to research and development expense as of the acquisition date and included transaction costs associated with the business combination as part of the cost of the acquired company. See Notes 18 and 19 for discussion of the AVANT and CuraGen Merger, respectively.

*Intangible Assets*

IPR&D assets acquired in a business combination initially are recorded at fair value and accounted for as indefinite-lived intangible assets. These assets are maintained on the Company's consolidated balance sheets until either the project underlying them is completed or the assets become impaired. If a project is completed, the carrying value of the related intangible asset is amortized over the remaining estimated life of the asset beginning in the period in which the project is completed. If a project becomes impaired or is abandoned, the carrying value of the related intangible asset is written down to its fair value and an impairment charge is taken in the period in which the impairment occurs. IPR&D assets will be tested for impairment on an annual basis during the third quarter, or earlier if impairment indicators are present.

Intangible assets acquired in a business combination with a finite life are recorded at fair value and amortized over the greater of economic consumption or on a straight-line basis over their estimated useful life.

*Goodwill*

The difference between the purchase price and the fair value of assets acquired and liabilities assumed in a business combination is allocated to goodwill. Goodwill will be evaluated for impairment on an annual basis during the third quarter, or earlier if impairment indicators are present.

*Impairment of Long-Lived Assets*

The Company evaluates the recoverability of its long-lived assets, including property and equipment, and intangible assets when circumstances indicate that an event of impairment may have occurred. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written-down to their estimated fair values.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

*Revenue Recognition*

The Company accounts for revenue arrangements that include multiple deliverables as separate units of accounting if (i) the delivered item has value to the customer on a standalone basis, (ii) there is objective and reliable evidence of the fair value of the undelivered items and (iii) if the right of return exists, delivery of the undelivered items is considered probable and substantially in the control of the vendor. If these criteria are not met, the revenue elements are considered a single unit of accounting for purposes of revenue recognition.

The Company has entered into various license and development agreements with pharmaceutical and biotechnology companies. The terms of the agreements typically include non-refundable license fees, funding of research and development, payments based upon achievement of certain milestones and royalties on net product sales. Non-refundable license fees are recognized as revenue when the Company has a contractual right to receive such payments, provided that (i) a contractual arrangement exists, (ii) the contract price is fixed or determinable, (iii) the collection of the resulting receivable is reasonably assured and (iv) the Company has no further performance obligations under the license agreement. Upfront non-refundable fees associated with license and development agreements where the Company has continuing performance obligations under the terms of the agreement are recorded as deferred revenue and recognized as revenue over the estimated service period as the Company completes its obligations. Where the Company's level of effort is relatively constant over the performance period or no other pattern is estimable, the revenue is recognized on a straight-line basis. Revenue is limited to the lesser of the cumulative amount of payments due or the cumulative amount of revenue earned, as determined using the straight-line basis, as of the period ending date. If the estimated service period is subsequently modified, the period over which the upfront fee is recognized is modified accordingly on a prospective basis. The determination of the performance period involves judgment on management's part. Funding of research and development is recognized as revenue over the term of the applicable contract as costs are incurred related to that contract.

Milestone payments are recognized as revenue upon the achievement of mutually agreed milestones, provided that there is no continuing performance obligations associated with the milestone payment. Revenues from milestone payments related to arrangements under which the Company has continuing performance obligations are recognized as revenue upon achievement of the milestone only if all of the following conditions are met: (i) the milestone payments are non-refundable; (ii) achievement of the milestone was not reasonably assured at the inception of the arrangement; (iii) substantive effort is involved in achieving the milestone; and, (iv) the amount of the milestone is reasonable in relation to the effort expended or the risk associated with achievement of the milestone. If any of these conditions are not met, the milestone payments are deferred and recognized as revenue over the term of the arrangement as the Company completes its performance obligations.

The Company has capitalized and deferred costs incurred in connection with the one-time signing and upfront payment (the initial deliverable) received with respect to a multiple deliverable arrangement. If there is deemed a single unit of accounting for such an arrangement, the capitalized deferred costs are amortized over the expected performance period of the arrangement.

Payments received to fund certain research activities are recognized as revenue in the period in which the research activities are performed. Revenue from contracts and grants is recognized as the services are performed and recorded as effort is expended on the contracted work and billed to the

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

government or the Company's contractual partner. Payments received in advance that are related to future performance are deferred and recognized as revenue when the research projects are performed.

Product royalty revenue consists of payments received from licensees for a portion of sales proceeds from products that utilize the Company's licensed technologies and are recognized when the amount of and basis for such royalty payments are reported to us in accurate and appropriate form and in accordance with the related license agreement.

*Research and Development Expenses*

Research and development costs, including internal and contract research costs, are expensed as incurred. Research and development expenses consist mainly of clinical trial costs, manufacturing of clinical material, toxicology and other studies, personnel costs, depreciation, license fees and funding of outside research.

*Patent Costs*

Patent costs are expensed as incurred. Certain patent costs are reimbursed by the Company's product development and licensing partners. Any reimbursed patent costs are recorded as product development and licensing agreement revenues in the Company's financial statements.

*Stock-Based Compensation*

The Company records stock-based compensation expense for all stock-based awards made to employees and directors based on the estimated fair values of the stock-based awards expected to vest at the grant date and is adjusted, if necessary, to reflect actual forfeitures. Compensation expense for all stock-based awards to employees and directors is recognized using the straight-line method over the term of vesting or performance.

The Company records stock-based compensation expense for stock options granted to non-employees based on the fair value of the stock options which is re-measured over the vesting term resulting in periodic adjustments to stock-based compensation expense.

*Foreign Currency Translation*

The functional currency of the Company's foreign subsidiary is the local currency. All assets and liabilities of the foreign subsidiary are re-measured into U.S. dollars at rates of exchange in effect at the end of the year. Revenue and expense amounts are re-measured using the average exchange rates for the period. Net unrealized gains and losses resulting from foreign currency translation are included in other comprehensive income (loss). At December 31, 2009 and December 31, 2008, accumulated other comprehensive income includes a net unrealized gain related to foreign currency translation of $2.6 million.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

*Income Taxes*

The Company uses the asset and liability method to account for income taxes, including the recognition of deferred tax assets and deferred tax liabilities for the anticipated future tax consequences attributable to differences between financial statement amounts and their respective tax basis. Quarterly, the Company reviews its deferred tax assets for recovery. A valuation allowance is established when the Company believes that it is more likely than not that its deferred tax assets will not be realized. Changes in valuation allowances from period to period are included in the Company's tax provision in the period of change.

The Company records uncertain tax positions in the financial statements only if it is more likely than not that the uncertain tax position will be sustained upon examination by the taxing authorities. The Company records interest and penalties related to uncertain tax positions in income tax expense.

*Comprehensive Loss*

Comprehensive loss is comprised of net loss and certain changes in stockholders' equity that are excluded from net loss. The Company includes foreign currency translation adjustments for subsidiaries in which the functional currency is not the U.S. dollar and unrealized gains and losses on marketable securities in other comprehensive loss. The consolidated statements of stockholders' equity (deficit) and comprehensive loss reflect total comprehensive loss for the years ended December 31, 2009, 2008 and 2007.

*Net Loss Per Share*

Basic net loss per common share is based upon the weighted-average number of common shares outstanding during the period, excluding restricted stock that has been issued but is not yet vested. Diluted net loss per common share is based upon the weighted-average number of common shares outstanding during the period plus additional weighted-average potentially dilutive common shares outstanding during the period when the effect is dilutive. The potentially dilutive common shares that have not been included in the net loss per common share calculations because the effect would have been anti-dilutive are as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2009 | 2008 | 2007 |
| Stock options | 3,576,159 | 2,070,993 | 787,440 |
| Convertible debt | 353,563 | — | — |
| Restricted stock | 16,000 | — | — |
| | 3,945,722 | 2,070,993 | 787,440 |

*Recent Accounting Pronouncements*

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on the Company's financial position or results of operations upon adoption.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

In October 2009, the FASB issued a new U.S. GAAP accounting standard which amends existing revenue recognition accounting guidance to provide accounting principles and application guidance on whether multiple deliverables exist, how the arrangement should be separated, and the consideration allocated. This guidance eliminates the requirement to establish objective evidence of fair value of undelivered products and services and instead provides for separate revenue recognition based upon management's estimate of the selling price for an undelivered item when there is no other means to determine the fair value of that undelivered item. The existing guidance previously required that the fair value of the undelivered item be the price of the item either sold in a separate transaction between unrelated third parties or the price charged for each item when the item is sold separately by the vendor. This was difficult to determine when the product was not individually sold because of its unique features. Under the existing guidance if the fair value of all of the elements in the arrangement was not determinable, then revenue was deferred until all of the items were delivered or fair value was determined. The Company expects to adopt the standard on January 1, 2010 on a prospective basis. While the Company does not expect the adoption of this standard to have a material impact on its financial position and results of operations, this standard may impact the Company in the event it completes future transactions or modifies existing collaborative relationships.

In January 2010, the FASB issued updated guidance to amend the disclosure requirements related to recurring and nonrecurring fair value measurements. This update requires new disclosures on significant transfers of assets and liabilities between Level 1 and Level 2 of the fair value hierarchy (including the reasons for these transfers) and the reasons for any transfers in or out of Level 3. This update also requires a reconciliation of recurring Level 3 measurements about purchases, sales, issuances and settlements on a gross basis. In addition to these new disclosure requirements, this update clarifies certain existing disclosure requirements. For example, this update clarifies that reporting entities are required to provide fair value measurement disclosures for each class of assets and liabilities rather than each major category of assets and liabilities. This update also clarifies the requirement for entities to disclose information about both the valuation techniques and inputs used in estimating Level 2 and Level 3 fair value measurements. This update will become effective for the Company with the interim and annual reporting period beginning January 1, 2010, except for the requirement to provide the Level 3 activity of purchases, sales, issuances, and settlements on a gross basis, which will become effective for the Company with the interim and annual reporting period beginning January 1, 2011. The Company will not be required to provide the amended disclosures for any previous periods presented for comparative purposes. Other than requiring additional disclosures, adoption of this update will not have a material effect on the Company's consolidated financial statements.

**(3) FAIR VALUE MEASUREMENTS**

The fair value of the Company's assets and liabilities reflects the Company's estimate of the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants on the measurement date. Market participants are buyers and sellers in the principal market that are (i) independent, (ii) knowledgeable, (iii) able to transact, and (iv) willing to transact.

In connection with measuring the fair value of its assets and liabilities, the Company seeks to maximize the use of observable inputs (market data obtained from sources independent from the Company) and to minimize the use of unobservable inputs (the Company's assumptions about how

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(3) FAIR VALUE MEASUREMENTS (Continued)**

market participants would price assets and liabilities). The following fair value hierarchy is used to classify assets and liabilities based on the observable inputs and unobservable inputs used in order to value the assets and liabilities:

| | |
|---|---|
| Level 1: | Observable inputs such as quoted prices in active markets for identical assets or liabilities. An active market for an asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. |
| Level 2: | Observable inputs other than Level 1 prices, such as quoted prices in active markets for similar assets or liabilities and quoted prices for identical assets or liabilities in markets that are not active. |
| Level 3: | Unobservable inputs based on the Company's assessment of the assumptions that market participants would use in pricing the asset or liability. |

The following tables set forth the Company's financial assets subject to fair value measurements:

| | As of December 31, 2009 | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| | | (In thousands) | | |
| Cash equivalents | $ 53,780 | $ 53,780 | — | — |
| Marketable securities | $ 25,451 | — | $ 25,451 | — |
| | $ 79,231 | $ 53,780 | $ 25,451 | — |

| | As of December 31, 2008 | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| | | (In thousands) | | |
| Cash equivalents | $ 43,457 | $ 43,457 | — | — |
| | $ 43,457 | $ 43,457 | — | — |

Intangible assets acquired in connection with the CuraGen Merger were accounted for as described in Note 19. The estimated fair value of these nonfinancial assets was based on Level 3 inputs.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(4) MARKETABLE SECURITIES**

A summary of cash, cash equivalents and marketable securities as of December 31, 2009 is shown below:

| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| | | (In thousands) | | |
| Cash and cash equivalents | | | | |
| Cash and money market funds | $ 57,002 | $ — | $ — | $ 57,002 |
| Total cash and cash equivalents | $ 57,002 | $ — | $ — | $ 57,002 |
| Marketable securities | | | | |
| U.S. government obligations | | | | |
| Maturing in one year or less | $ 9,698 | $ 5 | $ — | $ 9,703 |
| Maturing after one year through two years | 7,129 | 6 | 22 | 7,113 |
| Total U.S. government obligations | $ 16,827 | $ 11 | $ 22 | $ 16,816 |
| Corporate debt securities | | | | |
| Maturing in one year or less | $ — | $ — | $ — | $ — |
| Maturing after one year through two years | 8,672 | — | 37 | 8,635 |
| Total corporate debt securities | $ 8,672 | $ — | $ 37 | $ 8,635 |
| Total marketable securities | $ 25,499 | $ 11 | $ 59 | $ 25,451 |
| Total cash, cash equivalents and marketable securities | $ 82,501 | $ 11 | $ 59 | $ 82,453 |

As of December 31, 2009, unrealized losses in the portfolio were primarily due to increases in interest rates. The marketable securities held by the Company were high investment grade and there were no marketable securities that have been in a continuous unrealized loss position for more than 12 months at December 31, 2009. The Company did not consider these investments to be other-than-temporarily impaired as of December 31, 2009.

**(5) STOCK-BASED COMPENSATION**

At December 31, 2009, the Company had two stock-based compensation plans: the 2004 Employee Stock Purchase Plan (the "2004 ESPP Plan") and the 2008 Stock Option and Incentive Plan (the "2008 Plan").

*Employee Stock Purchase Plan*

At December 31, 2009, a total of 62,500 shares of common stock are reserved for issuance under the 2004 ESPP Plan. Under the 2004 ESPP Plan, each participating employee may purchase up to 250 shares of common stock per year, through payroll deductions, at a purchase price equal to 85% of the lower of the fair market value of the common stock at either the beginning of the offering period or the applicable exercise date. During the year ended December 31, 2009, the Company issued 2,979 shares under the 2004 ESPP Plan. During the year ended December 31, 2008, the Company issued no shares under the 2004 ESPP Plan. At December 31, 2009, 56,906 shares were available for issuance under the 2004 ESPP Plan.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(5) STOCK-BASED COMPENSATION (Continued)**

*Employee Stock Option and Incentive Plan*

The 2008 Plan permits the granting of incentive stock options (intended to qualify as such under Section 422A of the Internal Revenue Code of 1986, as amended), non-qualified stock options, stock appreciation rights, performance share units, restricted stock and other awards of restricted stock in lieu of cash bonuses to employees, consultants and outside directors.

At December 31, 2009, the 2008 Plan allowed for a maximum of 3,900,000 shares of common stock to be issued prior to October 19, 2017. The Company's board of directors determines the term of each option, option price, and number of shares for which each option is granted and the rate at which each option vests. Options generally vest over a period not to exceed four years. The term of each option cannot exceed ten years (five years for options granted to holders of more than 10% of the voting stock of the Company) and the exercise price of stock options cannot be less than the fair market value of the common stock at the date of grant (110% of fair market value for incentive stock options granted to holders of more than 10% of the voting stock of the Company). The 2008 Plan also provides for discretionary grants of non-qualified stock options to non-employee directors. Vesting of all employee and non-employee director stock option awards is accelerated upon a change in control as defined in the 2008 Plan.

In connection with the AVANT Merger, the Company assumed the obligations of Celldex Research under Celldex Research's 2005 Equity Incentive Plan (the "Celldex Research 2005 Plan") and each outstanding option to purchase Celldex Research common stock (a "Celldex Research Stock Option") granted under the Celldex Research 2005 Plan. Each Celldex Research Stock Option assumed by the Company is deemed to constitute an option to acquire, on the same terms and conditions as were applicable under the Celldex Research 2005 Plan, shares of the Company's common stock that have been adjusted consistent with the ratio at which the Company's common stock was issued in exchange for Celldex Research's common stock in the AVANT Merger. As of March 7, 2008, the Company assumed options to acquire 1,446,913 shares of its common stock at a weighted average exercise price of $8.35. The Celldex Research Stock Options generally vest over a two-to four-year period and the term of each option cannot exceed ten years from the date of grant. No additional awards will be issued under the Celldex Research 2005 Plan.

In connection with the CuraGen Merger, the Company assumed the obligations of CuraGen under CuraGen's 2007 Stock Plan (the "CuraGen 2007 Plan") and each outstanding option to purchase CuraGen common stock (a "CuraGen Stock Option") granted under the CuraGen 2007 Plan. Each CuraGen Stock Option assumed by the Company is deemed to constitute an option to acquire, on the same terms and conditions as were applicable under the CuraGen 2007 Plan, shares of the Company's common stock that have been adjusted consistent with the ratio at which the Company's common stock was issued in exchange for CuraGen's common stock in the CuraGen Merger. As of October 1, 2009, the Company assumed options to acquire 931,315 shares of its common stock with a weighted average exercise price of $3.17. As of October 1, 2009, all of the CuraGen Stock Options were fully vested except for 8,993 shares which generally vest over a two year period. No additional awards will be issued under the CuraGen 2007 Plan. The fair value of the CuraGen Stock Options that were attributed to precombination service was included in the CuraGen Merger consideration.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(5) STOCK-BASED COMPENSATION (Continued)**

A summary of stock option activity under the 2008 Plan, CuraGen 2007 Plan and Celldex Research 2005 Plan for the year ended December 31, 2009 is as follows:

| | Shares | Weighted Average Exercise Price Per Share | Weighted Average Remaining Contractual Term (In Years) |
|---|---|---|---|
| Options Outstanding at January 1, 2009 | 2,070,993 | $ 8.39 | 8.7 |
| Granted | 757,579 | 8.27 | |
| CuraGen Stock Options assumed | 931,315 | 3.17 | |
| Exercised | (124,273) | 5.21 | |
| Canceled/forfeited | (34,519) | 8.73 | |
| Expired | (24,936) | 9.79 | |
| Options Outstanding at December 31, 2009 | 3,576,159 | $ 7.10 | 6.6 |
| Options Vested and Expected to Vest at December 31, 2009 | 3,362,775 | $ 7.03 | 6.5 |
| Options Exercisable at December 31, 2009 | 2,506,684 | $ 6.63 | 5.9 |
| Shares Available for Grant under the 2008 Plan | 2,494,595 | | |

The total intrinsic value of stock options exercised during the year ended December 31, 2009 was $0.3 million. No stock options were exercised during the year ended December 31, 2008. The weighted average grant-date fair value of stock options granted during the years ended December 31, 2009 and 2008 was $5.29 and $4.37, respectively. The total fair value of stock options vested during the year ended December 31, 2009 and 2008 was $2.6 million and $2.8 million, respectively.

The aggregate intrinsic value of stock options outstanding at December 31, 2009 was $1.5 million. The aggregate intrinsic value of stock options vested and expected to vest at December 31, 2009 was $1.5 million. As of December 31, 2009, total compensation cost related to non-vested employee and non-employee director stock options not yet recognized was approximately $3.5 million, net of estimated forfeitures, which is expected to be recognized as expense over a weighted average period of 2.6 years.

*Shares Issued to Executive Officers*

In January 2009, the Company granted 29,340 shares of common stock from the 2008 Plan to its executive officers. The value of these shares of $0.3 million was expensed during the year ended December 31, 2008.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(5) STOCK-BASED COMPENSATION (Continued)**

*Restricted Stock*

In December 2009, the Company granted 2,000 shares of restricted stock to each of its non-employee directors. A summary of restricted stock activity under the 2008 Plan for the year ended December 31, 2009 is as follows:

| | Shares | Weighted Average Grant Date Fair Value (per share) |
|---|---|---|
| Outstanding and unvested at December 31, 2008 | — | — |
| Granted | 16,000 | $ 4.48 |
| Vested | — | — |
| Canceled | — | — |
| Outstanding and unvested at December 31, 2009 | 16,000 | $ 4.48 |

*Valuation and Expenses Information*

Stock-based compensation expense related to employee and non-employee stock options, restricted stock and employee stock purchases for the years ended December 31, 2009, 2008 and 2007 was recorded as follows:

| | 2009 | 2008 | 2007 |
|---|---|---|---|
| | | (In thousands) | |
| Research and development | $ 1,383 | $ 2,035 | $ 424 |
| General and administrative | 1,675 | 2,781 | 1,181 |
| Total stock-based compensation expense | $ 3,058 | $ 4,816 | $ 1,605 |

In connection with the AVANT Merger, the Company accounted for the exchange of Celldex Research Stock Options into options to acquire shares of the Company's common stock as a modification. The modification affected a total of 15 employees, including members of the Celldex Research board of directors. The total incremental compensation cost resulting from the modifications was $2.6 million, of which $0.9 million was related to vested awards and was recognized immediately as stock-based compensation during the three months ended March 31, 2008.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(5) STOCK-BASED COMPENSATION (Continued)**

The fair values of employee and non-employee director stock options and employee stock purchases granted during the years ended December 31, 2009, 2008 and 2007 were valued using the Black-Scholes option-pricing model with the following assumptions:

| | Year Ended December 31, 2009 | Year Ended December 31, 2008 | Year Ended December 31, 2007(1) |
|---|---|---|---|
| Expected stock price volatility (employees) | 65 - 68% | 55 - 67% | 80% |
| Expected stock price volatility (non-employee directors) | 67% | 57 - 67% | 80% |
| Expected stock price volatility (2004 ESPP) | 90 - 98% | 98% | n/a |
| Expected option term (employees) | 6.1 - 6.3 Years | 3 - 6.3 Years | 5 Years |
| Expected option term (non-employee directors) | 5.5 Years | 4 - 6 Years | 5 Years |
| Expected option term (2004 ESPP) | .5 Years | .5 Years | n/a |
| Risk-free interest rate (options) | 1.8 - 3.4% | 1.8 - 3.3% | 3.9% |
| Risk-free interest rate (2004 ESPP) | 0.3% | 0.3% | n/a |
| Expected dividend yield | None | None | None |

*(1)* The assumptions for 2007 were used by Celldex Research to calculate fair values of stock option grants. The expected volatility was based on the average volatility of a group of companies that Celldex Research believed would be considered a peer group had it been a publicly-held company.

U.S. GAAP allows companies to continue to utilize the simplified method in developing an estimate of the expected term of "plain vanilla" stock options when there have been structural changes in a Company's business such that historical exercise data does not provide a reasonable basis upon which to estimate expected term. Due to the AVANT Merger and the CuraGen Merger, historical exercise patterns do not provide a reasonable basis to estimate expected term of current option grants. Accordingly, the Company utilized the simplified method to estimate expected term of stock options granted during the years ended December 31, 2009 and 2008. The simplified method estimates the expected term as the mid-point between the vesting date and the expiration date. In 2008 and 2009, the Company used its daily historical stock price volatility consistent with the expected term of grant as the basis for its expected volatility assumption. The risk-free interest rate is based upon the yield of U.S. Treasury securities consistent with the expected term of the option. The dividend yield assumption is based on the Company's history of zero dividend payouts and expectation that no dividends will be paid in the foreseeable future. For the years ended December 31, 2009 and 2008, forfeitures were estimated based on historical experience by applying an eleven and zero percent forfeiture rate to employee and non-employee director stock option awards, respectively.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

## (6) PROPERTY AND EQUIPMENT

Property and equipment include the following:

| | December 31, 2009 | December 31, 2008 |
|---|---|---|
| | (In thousands) | |
| Laboratory Equipment | $ 2,643 | $ 2,449 |
| Manufacturing Equipment | 1,622 | 1,508 |
| Office Furniture and Equipment | 1,165 | 1,085 |
| Leasehold Improvements | 12,601 | 12,564 |
| Construction in Progress | 180 | 71 |
| Total Property and Equipment | 18,211 | 17,677 |
| Less Accumulated Depreciation and Amortization | (6,722) | (4,110) |
| | $ 11,489 | $ 13,567 |

Depreciation and amortization expense related to property and equipment was $2.6 million, $2.2 million and $0.7 million for the years ended December 31, 2009, 2008 and 2007, respectively.

## (7) INTANGIBLE ASSETS AND GOODWILL

Intangible assets, net of accumulated amortization, and goodwill are as follows:

| | | December 31, 2009 | | | December 31, 2008 | | |
|---|---|---|---|---|---|---|---|
| | Estimated Life | Cost | Accumulated Amortization | Net | Cost | Accumulated Amortization | Net |
| | | | | (In thousands) | | | |
| Intangible Assets: | | | | | | | |
| IPR&D | Indefinite | $ 11,800 | — | $ 11,800 | — | — | — |
| Amgen Amendment | 16 years | 14,500 | $ (224) | 14,276 | — | — | — |
| TopoTarget Agreement | 1.75 years | 2,400 | (343) | 2,057 | — | — | — |
| Core Technology | 4.5 - 11 years | 2,193 | (832) | 1,361 | $ 2,193 | $ (531) | $ 1,662 |
| Strategic Partner Agreement | 8 years | 630 | (145) | 485 | 630 | (65) | 565 |
| Asset Held for Sale | — | — | — | — | 274 | (28) | 246 |
| Total Intangible Assets | | $ 31,523 | $ (1,544) | $ 29,979 | $ 3,097 | $ (624) | $ 2,473 |
| Goodwill | Indefinite | $ 8,965 | — | $ 8,965 | — | — | — |

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(7) INTANGIBLE ASSETS AND GOODWILL (Continued)**

At December 31, 2008, the Company had recorded $0.2 million in intangible assets related to its poultry vaccines as a long-lived asset to be disposed of by sale due to the Company's negotiations with Lohmann Animal Health International ("LAHI"). In January 2009, the Company entered into a purchase agreement ("LAHI Agreement") to sell its poultry vaccines assets to LAHI. Under the LAHI Agreement, LAHI paid an upfront fee of $0.8 million and agreed to pay potential milestone payments. The Company recorded a gain of $0.6 million related to the LAHI Agreement based on the upfront fee less the net book value of the related asset.

Amortization expense for intangible assets was $0.9 million, $0.4 million and $0.1 million for the years ended December 31, 2009, 2008 and 2007, respectively.

The estimated future amortization expense of intangible assets for the next five years is as follows:

| Year ending December 31, | Estimated Amortization Expense |
|---|---|
| | (In thousands) |
| 2010 | $ 2,650 |
| 2011 | 1,964 |
| 2012 | 1,203 |
| 2013 | 1,127 |
| 2014 | 1,127 |

**(8) ACCRUED EXPENSES**

Accrued expenses include the following:

| | December 31, 2009 | December 31, 2008 |
|---|---|---|
| | (In thousands) | |
| Accrued Royalty and License Fees | $ 1,323 | $ 672 |
| Accrued Payroll and Employee Benefits | 1,915 | 1,953 |
| Accrued Research and Development Contract Costs | 918 | 120 |
| Accrued Professional Fees | 512 | 432 |
| Other Accrued Expenses | 947 | 664 |
| | $ 5,615 | $ 3,841 |

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

## (9) INCOME TAXES

The components of income tax expense attributable to continuing operations consist of the following:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2009 | 2008 | 2007 |
| | (In thousands) | | |
| Income tax benefit (provision): | | | |
| Federal | $ 12,750 | $ 10,198 | $ 4,545 |
| State | (1,757) | 6,958 | 711 |
| Foreign | 126 | 193 | 844 |
| Expiration of Net Operating Losses and Research & Development Tax Credits | (3,992) | (1,306) | — |
| | 7,127 | 16,043 | 6,100 |
| Deferred tax valuation allowance | (6,598) | (16,043) | (6,100) |
| | $ 529 | $ — | $ — |

Included in the state tax provision above for the year ended December 31, 2009 is the effect of a rate decrease on the deferred tax asset and liabilities offset by a $0.5 million tax benefit due to non-cash tax consequences of the CuraGen Merger.

A reconciliation between the amount of reported income tax and the amount computed using the U.S. Statutory rate of 34% follows:

| | 2009 | 2008 | 2007 |
|---|---|---|---|
| | (In thousands) | | |
| Pre-tax book income (loss) | $ (37,054) | $ (47,501) | $ (15,073) |
| Loss at Statutory Rates | (12,571) | (16,109) | (4,944) |
| Research and Development Credits | (1,456) | (1,325) | (306) |
| State Taxes | 1,757 | (6,958) | (711) |
| Other | 1,151 | 85 | (139) |
| IPR&D | — | 6,958 | — |
| Expiration of Net Operating Losses and Research & Development Tax Credits | 3,992 | 1,306 | — |
| Change in Valuation Allowance | 6,598 | 16,043 | 6,100 |
| Income tax (benefit) provision | $ (529) | $ — | $ — |

Deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and tax basis of assets and liabilities using future expected enacted rates. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(9) INCOME TAXES (Continued)**

The principal components of the deferred tax assets and liabilities at December 31, 2009 and 2008, respectively, are as follows:

| | December 31, 2009 | December 31, 2008 |
|---|---|---|
| | (In thousands) | |
| Gross Deferred Tax Assets | | |
| Net Operating Loss Carryforwards | $ 55,715 | $ 94,406 |
| Tax Credit Carryforwards | 16,735 | 15,026 |
| Deferred Expenses | 17,300 | 19,600 |
| Stock-based Compensation | 3,795 | 2,049 |
| Fixed Assets | 2,088 | 1,458 |
| Accrued Expenses and Other | 1,122 | 474 |
| Deferred Revenue | 15,535 | 2,094 |
| | 112,290 | 135,107 |
| Gross Deferred Tax Liabilities | | |
| Other Acquired Intangibles | (6,500) | (101) |
| IPR&D Intangibles | (4,661) | — |
| Deferred License Costs and Other | (2,651) | (2,765) |
| | (13,812) | (2,866) |
| Total Deferred Tax Assets and Liabilities | 98,478 | 132,241 |
| Deferred Tax Assets Valuation Allowance | (103,139) | (132,241) |
| Net Deferred Tax Asset (Liability) | $ (4,661) | $ — |

As of December 31, 2009, the Company had the following federal net operating loss ("NOL") carryforwards:

- Prior to the merger of Celldex and AVANT, $33.0 million was generated by Celldex Research which expire at various dates starting in 2023 and going through 2028;
- Prior to the merger of Celldex and AVANT, $145.2 million was generated by AVANT which expire at various dates starting in 2010 and going through 2028;
- Following the merger of Celldex and AVANT, $32.1 million was generated by the combined company which expire at various dates starting in 2028 and going through 2029; and
- Prior to its acquisition by Celldex, $521.3 million was generated by CuraGen.

In general, an ownership change, as defined by Section 382 of the Internal Revenue Code, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50 percentage points over a three-year period. Such ownership changes can significantly limit the amount of NOL carryforwards that may be utilized in future periods. The Company currently expects that it is remote that the CuraGen loss carryforwards may be utilized and, as such, no related asset has been recorded for such losses. The Company has not completed an analysis of losses generated by AVANT, however, the Company believes it is remote that $105 million of the AVANT loss carryforwards may be utilized in future periods and there may be substantial limitations on the Company's ability to use the remaining losses of $40.2 million. Following the merger of Celldex and AVANT, the Company experienced changes in ownership as defined by Section 382 in

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(9) INCOME TAXES (Continued)**

June 2009 and December 2009. Further, prior to the merger of AVANT and Celldex, Celldex Research as a stand alone company experienced a change in ownership in October 2007. As a result of the ownership change in October 2007, utilization of the Celldex Research Federal NOLs is subject to an annual limitation of $4.5 million on $28.3 million of NOLs generated before that date. As a result of the company ownership changes in June 2009 and December 2009, there is an annual limitation amount of $6.0 million on $65.1 million NOLs. Any unused annual limitation may be carried over to later years, and the amount of the limitation may, under certain circumstances, be subject to adjustment if the fair value of the Company's net assets are determined to be below or in excess of the tax basis of such assets at the time of the ownership change, and such unrealized loss or gain is recognized during the five-year period after the ownership change.

Similar to the AVANT and CuraGen NOL carryforwards above, the Company believes that it is remote that federal and state research and development ("R&D") credits of $20.6 million and $14.4 million, respectively, will be utilized in the future periods. Further, the Company's ability to use the state NOL carryforwards of approximately $76.2 million and the remaining federal and state R&D credit carryforwards of approximately $11.3 million and $7.7 million, respectively, may be substantially limited. These state NOLs and federal and state credits expire at various dates starting in 2010 going through 2029. The Company has not yet completed a study of these credits to substantiate the amounts. Until a study is completed, no amounts are being presented as an uncertain tax position.

Subsequent ownership changes, as defined in Section 382, could further limit the amount of net operating loss carryforwards and research and development credits that can be utilized annually to offset future taxable income.

As of December 31, 2009, the Company also has foreign NOL carryforwards of approximately $34.9 million in the UK which expire over various periods. These NOLs may be limited in the foreign jurisdiction and the Company has not yet undertaken any study to assess the usability of these NOLs.

Massachusetts, New Jersey and Connecticut are the three states in which the Company primarily operates or has operated and has income tax nexus. The Company is currently under examination for sales and use taxes by the State of Connecticut for the period from July 1, 2006 through June 30, 2009. The Company is not currently under examination by any other jurisdictions for any tax year.

The Company has evaluated the positive and negative evidence bearing upon the realizability of its net deferred tax assets, which are comprised principally of net operating loss carryforwards, capitalized R&D expenditures and R&D tax credit carryforwards. The Company has determined that it is more likely than not that it will not recognize the benefits of federal and state deferred tax assets and, as a result, a full valuation allowance was maintained at December 31, 2009 against the Company's net deferred tax assets.

**(10) STOCKHOLDERS' EQUITY**

*Common Stock*

The Company implemented a 1-for-12 reverse stock split of the Company's common stock on March 7, 2008, as approved by the Company's stockholders. The Company has retroactively applied the reverse stock split to all the share and per share amounts for all periods presented in these consolidated financial statements.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(10) STOCKHOLDERS' EQUITY (Continued)**

*Convertible Preferred Stock*

At December 31, 2009, the Company had authorized 3,000,000 shares of preferred stock all of which have been designated Class C Preferred Stock including 350,000 shares which have been designated Series C-1 Junior Participating Cumulative Preferred Stock (the "Series C-1 Preferred Stock")."

*Shareholder Rights Plan*

The Company's Board has adopted a Shareholder Rights Plan, as set forth in the Shareholder Rights Agreement, as amended, between the Company and Computershare Trust Company, N.A., as Rights Agent (the "Rights Agreement"). Pursuant to the terms of the Rights Agreement, the Board declared a dividend distribution of one Preferred Stock Purchase Right ("Right") for each outstanding share of the Company's common stock. Each Right, which expires in November 2014, entitles their holder to purchase from the Company one ten-thousandth of a share (a "Unit") of Series C-1 Preferred Stock at a cash exercise price of $35.00 per Unit, subject to adjustment. The Rights will trade separately from the common stock and will become exercisable only when a person or group has acquired 15% or more of the outstanding common stock or upon the commencement by a person or group of a tender offer that would result in such person or group acquiring 15% or more of the outstanding common stock other than as a result of repurchases of stock by the Company or certain inadvertent actions by a shareholder. In the event a person or group acquires 15% or more of the outstanding common stock each holder of a Right (except for any such person or group) would be entitled to receive upon exercise sufficient Units of Series C-1 Preferred Stock to equal a value of two times the exercise price of the Right. In the event the Company is acquired in a merger or other business combination transaction or if 50% or more of the Company's assets or earning power is sold, each holder of a Right (except for any such person or group described above) would receive upon exercise common stock of the acquiring company with a value equal to two times the exercise price of the Right.

**(11) SIGNIFICANT REVENUE ARRANGEMENTS**

A summary of the Company's significant revenue contracts and arrangements follows:

*GlaxoSmithKline plc ("Glaxo") and Paul Royalty Fund II, L.P. ("PRF")*

In 1997, the Company entered into an agreement with Glaxo to collaborate on the development and commercialization of the Company's oral rotavirus strain and Glaxo assumed responsibility for all subsequent clinical trials and all other development activities. The Company's licensed-in the rotavirus strain that was used to develop Glaxo's Rotarix® rotavirus vaccine in 1995 and owes a license fee of 30% to Cincinnati Children's Hospital Medical Center ("CCH") on net royalties received from Glaxo. The Company is obligated to maintain a license with CCH with respect to the Glaxo agreement. The term of the Glaxo agreement is through the expiration of the last of the relevant patents covered by the agreement, although Glaxo may terminate the agreement upon 90 days prior written notice.

In May 2005, the Company entered into an agreement whereby an affiliate of PRF purchased an interest in the net royalties the Company will receive on worldwide sales of Rotarix®. The Company's retained interests in Rotarix® net royalties which were not sold to PRF are recorded as product royalty revenue and a corresponding amount that is payable to CCH is recorded as royalty expense. Product royalty revenue and royalty expense related to the Company's retained interest in Rotarix® was

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(11) SIGNIFICANT REVENUE ARRANGEMENTS (Continued)**

7.7 million and $3.0 million for the years ended December 31, 2009 and 2008, respectively. Under the PRF agreement, the Company also retained 50% of Glaxo milestone payments beginning on the effective date of the agreement with PRF, with 70% and 30% of the remaining balance payable to PRF and CCH, respectively. In April 2008, Rotarix® received Food and Drug Administration ("FDA") market approval for the prevention of rotavirus gastroenteritis in infants, which triggered a milestone from Glaxo. During the three months ended June 30, 2008, the Company recorded $0.2 million in product development and licensing agreement revenue and a corresponding amount payable to CCH as royalty expense related to the Glaxo milestone.

On October 1, 2008, the Company received a $10 million milestone payment from PRF related to the market launch of Rotarix® in the U.S. As of March 31, 2008, the Company recorded the estimated fair value of the $10 million milestone payment due from PRF of $9.1 million in connection with the purchase accounting for the AVANT Merger. During the three months ended September 30, 2008, the Company recognized the balance of $0.9 million as other income in the consolidated statement of operations. The Company has received $60 million in total milestone payments under the PRF agreement. No additional milestone payments are due from PRF under the agreement.

Royalty rates on Rotarix® escalate from 7% to 10% based on net product sales in countries that have valid patent protection. These royalty rates are discounted by 30% for "non-patent" countries (primarily international markets). In September 2006, the Company received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® at the lower of the two royalty rates under their 1997 license agreement. Glaxo's decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo's assertion that Rotarix® is not covered by the patents Glaxo licensed from the Company in Australia and certain European countries. If Glaxo's position stands, the royalties to which PRF is entitled will no longer be limited by a $27.5 million annual threshold, which the Company projected may have been reached in later years as sales of Rotarix® increased. Irrespective of Glaxo's position, the Company will still retain approximately 65% of the royalties on worldwide sales of Rotarix® once PRF receives 2.45 times the aggregate cash payments of $60 million it made to the Company, though the potential amount of such residual royalties will be lower if Glaxo's position stands.

*Glaxo and Corixa Corporation ("Corixa")*

In December 2005, the Company and Corixa, a wholly-owned subsidiary of Glaxo, entered into a termination agreement of their collaboration of CDX-2101, or HepVax, for the development of a therapeutic vaccine for Hepatitis B (the "Termination Agreement"). Under the terms of the Termination Agreement, Glaxo paid the Company $1.6 million for which the Company recorded product development and licensing agreement revenue of $0.2 million, $0.5 million and $0.5 million during the years ended December 31, 2009, 2008 and 2007, respectively.

*Pfizer Inc ("Pfizer")*

On April 16, 2008, the Company and Pfizer entered into a License and Development Agreement (the "Pfizer Agreement") under which Pfizer was granted an exclusive worldwide license to a therapeutic cancer vaccine candidate, CDX-110, in Phase 2 development for the treatment of glioblastoma multiforme. The Pfizer Agreement also gives Pfizer exclusive rights to the use of EGFRvIII vaccines in other potential indications. Under the Pfizer Agreement, Pfizer made an upfront payment to the Company of $40 million and made a $10 million equity investment in the Company.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(11) SIGNIFICANT REVENUE ARRANGEMENTS (Continued)**

Pfizer will fund all development costs for these programs. The Company is also eligible to receive potential milestone payments exceeding $390 million for the successful development and commercialization of CDX-110 and additional EGFRvIII vaccine products, as well as royalties on any product sales. The Pfizer Agreement became effective after clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (as amended) on May 19, 2008.

On May 27, 2008, the Company received $10 million from Pfizer in exchange for 781,250 shares of the Company's common stock having a fair value of $10.9 million, or $13.91 per share, on that date. The $0.9 million over the amount received from Pfizer was recorded as a reduction to deferred revenue of the $40 million upfront payment received from Pfizer on June 18, 2008.

The Company has determined that its performance obligations under this collaboration should be accounted for as a single unit of accounting. The Company's deliverables under this collaboration primarily include an exclusive license to its CDX-110 product candidate and its EGFRvIII technologies, research and development services as required under the collaboration and participation in the joint clinical development committee. The Company has estimated that its performance period under the collaboration will be 9.5 years based on an assessment of the period over which the Company will have met its performance obligations under the collaboration. Revenue, including research and development reimbursements, is being recognized on a straight-line basis over this period using the Contingency Adjusted Performance Model ("CAPM"). The $40 million up-front payment, less the $0.9 million in excess fair value for the Company's common stock discussed above, was recorded as deferred revenue and is being amortized over the 9.5-year performance period at a rate of $1.0 million per quarter.

The agreement also provides for reimbursement by Pfizer of all costs incurred by the Company in connection with the collaboration since the effective date. The Company invoices Pfizer monthly for its reimbursable costs and records the invoiced amount as deferred revenue. These deferred revenue amounts are amortized to revenue over the estimated 9.5-year performance period on a straight-line basis using the CAPM model. The Company incurred and invoiced Pfizer $3.2 million and $4.9 million in reimbursable costs related to the Pfizer collaboration for the years ended December 31, 2009 and 2008, respectively.

The Company recorded product development and licensing agreement revenue under the Pfizer Agreement as follows:

| | Year Ended December 31, | |
|---|---|---|
| | 2009 | 2008 |
| | (In thousands) | |
| Up-front portion | $ 4,119 | $ 2,551 |
| Reimbursable costs portion | 1,063 | 319 |
| | $ 5,182 | $ 2,870 |

In connection with the Pfizer Agreement, the Company paid a total of $6.9 million in sublicense fees to Duke University and Thomas Jefferson University. The Company recorded these deferred sublicense fees to other assets in the consolidated balance sheets and is amortizing them to royalty expense over the 9.5-year performance period. The Company recorded $0.7 million and $0.5 million in royalty expense related to these deferred sublicense fees during the years ended December 31, 2009

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(11) SIGNIFICANT REVENUE ARRANGEMENTS (Continued)**

and 2008, respectively. At December 31, 2009 and 2008, the unamortized balance of deferred costs was $5.7 million and $6.4 million, respectively.

*Rockefeller University ("Rockefeller")*

The Company is providing research and development support to Rockefeller on the development of their vaccine, DCVax-001, which the Company refers to as CDX-2401, aimed at providing protection from infection with HIV, the virus known to cause AIDS. This program is in a Bill & Melinda Gates Foundation funded partnership called the Grand Challenges initiative. Preclinical studies and manufacturing development are in progress and payments to the Company are made on a time and materials basis. The Company recorded grant revenue from Rockefeller of $1.8 million, $0.4 million and $0.8 million for the years ended December 31, 2009, 2008 and 2007, respectively.

**(12) COLLABORATION AGREEMENTS**

The Company has entered into licensing agreements with several universities and research organizations. Under the terms of these agreements, the Company has received licenses or options to license technology, specified patents or patent applications. The Company's licensing and development collaboration agreements generally provide for royalty payments equal to specified percentages of product sales, annual license maintenance fees and continuing patent prosecution costs. In addition, the Company has committed to make potential future milestone payments to third parties of up to approximately $116 million as part of the Company's various collaborations including licensing and development programs. Payments under these agreements generally become due and payable only upon achievement of certain developmental, regulatory and/or commercial milestones. Nonrefundable license fee expense was $0.7 million, $0.8 million and $0.2 million for the years ended December 31, 2009, 2008 and 2007, respectively.

*Medarex, Inc., a subsidiary of Bristol-Myers Squibb ("Medarex")*

Medarex, a former related party, and the Company have entered into the following agreements, each of which was approved by a majority of its independent directors who did not have an interest in the transaction. These agreements include:

- An Assignment and License Agreement, as amended, ("Assignment and License Agreement") that provides for the assignment of certain patent and other intellectual property rights and a license to certain Medarex technology; and
- A Research and Commercialization Agreement, as amended, ("Research and Commercialization Agreement") that provides the Company with certain rights to obtain exclusive commercial licenses to proprietary monoclonal antibodies raised against certain antigens.

Under the terms of the Assignment and License Agreement and Research and Commercialization Agreement, the Company may be required to pay milestone and royalty payments to Medarex with respect to the development of any products containing such licensed antibodies.

In October 2007, the Company and Medarex entered into a settlement and mutual release agreement with settled disputed amounts the Company owed Medarex. The Company issued to Medarex 351,692 shares of the Company's common stock equal in value to $3.0 million, based on the per share price of $8.64 set on the second trading day prior to the closing date of the AVANT Merger and exchanged releases. At December 31, 2008, the Company owed Medarex an additional $3.0 million related to a Master Services Agreement which the Company paid Medarex in October 2009.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(12) COLLABORATION AGREEMENTS (Continued)**

*Rockefeller University ("Rockefeller")*

In November 2005, the Company and Rockefeller entered into a license agreement for the exclusive worldwide rights to human DEC-205 receptor, with the right to sublicense the technology. The license grant is exclusive except that Rockefeller may use and permit other nonprofit organizations to use the human DEC-205 receptor patent rights for educational and research purposes. The Company may be required to pay milestone and royalty payments to Rockefeller with respect to development and commercialization of the human DEC-205 receptor. The Company may also be required to pay royalties on any product sales.

*Duke University Brain Tumor Cancer Center ("Duke")*

In September 2006, the Company and Duke entered into a license agreement that gave the Company access and reference to the clinical data generated by Duke and its collaborators in order for the Company to generate its own filing with the FDA relating to its CDX-110 product. The Company may be required to pay milestone and royalty payments to Duke with respect to development and commercialization of the CDX-110 product. In connection with the Pfizer Agreement, the Company determined that $2.4 million was payable to Duke as a sublicense fee. As provided for under the Duke license, the Company paid 50% of this amount to Duke in the form of 81,512 shares of the Company's common stock in October 2008.

*Ludwig Institute for Cancer Research ("Ludwig")*

In October 2006, the Company and Ludwig entered into an agreement for the nonexclusive rights to six cancer tumor targets for use in combination with the Company's APC Targeting Technology. The term of the agreement is for ten years. The Company may be required to pay milestone and royalty payments to Ludwig with respect to development and commercialization of the technology licensed from Ludwig.

*Alteris Therapeutics, Inc. ("Alteris")*

In October 2005, the Company completed the acquisition of the assets of Alteris, including the EGFRvIII molecule that the Company licensed to Pfizer under the Pfizer Agreement. The Company may be required to pay Alteris up to $5.0 million upon obtaining the first approval for commercial sale of a product containing EGFRvIII, including CDX-110.

*Thomas Jefferson University ("TJU")*

In February 2003, the Company entered into three exclusive license agreements with TJU. Under these licenses, the Company may be required to pay milestone and royalty payments to TJU with respect to development and commercialization of the technology licensed from TJU. In connection with the Pfizer Agreement, the Company amended its licenses with TJU to add additional sublicensing rights and paid $4.5 million in sublicense fees to TJU in 2008.

*3M Company*

In June 2008, the Company and 3M Company entered into a license agreement for the exclusive worldwide rights to access 3M Company's proprietary Immune Response Modifier, Resiquimod™, (and

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(12) COLLABORATION AGREEMENTS (Continued)**

additional Toll-Like Receptor 7/8 agonists ("TLR")) for clinical study with the Company's proprietary APC Targeting Technology, for use as vaccine adjuvants, with the right to sublicense the technology. The Company may be required to pay milestone and royalty payments to 3M Company with respect to development and commercialization of the technology licensed from 3M Company.

*University of Southampton, UK ("Southampton")*

In November 2008, the Company entered into a license agreement with Southampton to develop human antibodies towards CD27, a potentially important target for immunotherapy of various cancers. CD27 is a critical molecule in the activation pathway of lymphocytes, is downstream from CD40, and may provide a novel way to regulate the immune responses. In preclinical models, antibodies to CD27 have been shown to mediate anti-tumor effects alone, and may be particularly effective in combination with the Company's other immunotherapies. The Company may be required to pay milestone and royalty payments to Southampton with respect to development and commercialization of the technology licensed from Southampton.

*Amgen Inc. ("Amgen")*

In March 2009, the Company entered into a license agreement with Amgen to expand its Precision Targeted Immunotherapy Platform by acquiring exclusive rights to FMS-like tyrosine kinase 3 ligand (Flt3L) and CD40 ligand (CD40L). Flt3L and CD40L are immune modulating molecules that increase the numbers and activity of immune cells that control immune responses. The Company may be required to pay milestone and royalty payments to Amgen with respect to development and commercialization of technology licensed from Amgen.

*Seattle Genetics, Inc. ("Seattle Genetics")*

In connection with the CuraGen Merger, the Company assumed the license agreement between CuraGen and Seattle Genetics whereby CuraGen acquired the rights to proprietary antibody-drug conjugate ("ADC") technology for use with the Company's proprietary antibodies for the potential treatment of cancer. The Company may be required to pay milestone and royalty payments to Seattle Genetics with respect to development and commercialization of the ADC technology.

**(13) 4% CONVERTIBLE DEBT DUE 2011**

In connection with the CuraGen Merger, the Company assumed $12.5 million in 4% convertible subordinated debt due February 15, 2011 (the "CuraGen Debt"). In addition, effective October 1, 2009, Celldex, CuraGen, and The Bank of New York Mellon (the "Trustee") amended the CuraGen Debt to provide that the CuraGen Debt shall be convertible into 353,563 shares of Celldex common stock at the rate of 28.27823 shares of Celldex common stock per $1,000 principal amount of notes, or $35.36 per share. The Company has the right to redeem the notes at a redemption price equal to 100.571% of the principal amount of the notes plus accrued and unpaid interest, if any. The CuraGen Debt is convertible by the holders of the CuraGen Debt at any time prior to maturity.

As of October 1, 2009, the Company recorded the CuraGen Debt at its estimated fair value of $11.5 million as part of the acquisition accounting related to the CuraGen Merger. The initial carrying value of the CuraGen Debt is being accreted ratably, over the term of the CuraGen Debt, to $12.5 million due at maturity. Interest expense on the CuraGen Debt was $0.3 million for the three

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(13) 4% CONVERTIBLE DEBT DUE 2011 (Continued)**

months ended December 31, 2009 and included $0.2 million in discount accretion. At December 31, 2009, the carrying value and the accrued interest on the CuraGen Debt were $11.7 million and $0.2 million, respectively. At December 31, 2009, the estimated fair value of the Company's outstanding $12.5 million in CuraGen Debt was approximately $11.9 million, based on quoted market prices.

**(14) OTHER LONG-TERM LIABILITIES**

Other long-term liabilities include the following:

| | December 31, 2009 | December 31, 2008 |
|---|---|---|
| | (In thousands) | |
| Deferred Rent | $ 377 | $ 301 |
| CuraGen Severance (See Note 16) | 2,623 | — |
| Deferred Tax Liabilities (See Note 19) | 4,661 | — |
| Loan Payable | 632 | 686 |
| Note Payable | 178 | 300 |
| Total | 8,471 | 1,287 |
| Less Current Portion | (2,156) | (218) |
| Long-Term Portion | $ 6,315 | $ 1,069 |

In December 2003, the Company entered into a Lease Agreement (the "Lease Agreement"), a Secured Promissory Note: Equipment Loan (the "Secured Promissory Note") and a Security Agreement with the Massachusetts Development Finance Agency ("MassDevelopment"), an economic development entity for the Commonwealth of Massachusetts, for the Company to occupy and build-out a manufacturing facility in Fall River, Massachusetts.

Under the Lease Agreement, the Company received a loan ("Loan Payable") that accrues interest at a rate of 5.5% per annum to finance the build-out of its Fall River facility. Principal and interest payments on the Loan Payable are due monthly using an amortization period of 15 years.

Under the Secured Promissory Note, the Company issued a note payable to MassDevelopment ("Note Payable") that accrues interest at a rate of 5.5% per annum to finance the purchases of manufacturing and laboratory equipment to be placed in its Fall River facility. The Note Payable has a term of 84 months and is collateralized by equipment with a net book value at December 31, 2009 of $0.3 million.

Based on current market interest rates available to the Company for long-term liabilities with similar terms and maturities, the Company believes the fair value of the Loan Payable and Note Payable approximates their carrying value at December 31, 2009.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(14) OTHER LONG-TERM LIABILITIES (Continued)**

The Company is obligated to repay the following principal amounts for the Loan Payable and Note Payable over the next five years and thereafter:

| | Loan Payable | Note Payable |
|---|---|---|
| | (In thousands) | |
| 2010 | $ 47 | $ 133 |
| 2011 | 54 | 45 |
| 2012 | 55 | — |
| 2013 | 58 | — |
| 2014 | 60 | — |
| Thereafter | 358 | — |
| Total | $ 632 | $ 178 |

**(15) COMMITMENTS AND CONTINGENCIES**

In November 2005, the Company entered into a lease amendment that extended its lease of laboratory and office space in Needham, Massachusetts through April, 2017. Under this lease amendment, the Company is obligated to pay an escalating base annual rent and common area maintenance costs ("CAM") during the remaining lease term.

In December 2003, the Company entered into a lease, as amended, with MassDevelopment to occupy and build-out a manufacturing facility in Fall River, Massachusetts. The lease has an initial seven-year term that expires in December 2010 and two renewal options of five years each. Management has determined that it is reasonably assured that the Company will exercise one five-year renewal option.

The Company leases office and laboratory space in Phillipsburg, New Jersey. The lease has an initial five-year term which expires in August 2011. As an incentive to enter into the lease agreement, the Company received four months of free rent which the Company is amortizing this over the original five-year term of the lease. In addition, the landlord provided the Company with an allowance on future rent payments towards tenant improvements that the Company made to the facility and that credit is included in deferred rent and is being amortized over the lease term.

The Company entered into a letter of credit facility with a national U.S. financial institution which is collateralized by a security deposit for the leased facility in Phillipsburg, New Jersey. The Company recorded restricted cash related to this security deposit of $0.2 million to other assets in the consolidated balance sheets at December 31, 2009 and December 31, 2008.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(15) COMMITMENTS AND CONTINGENCIES (Continued)**

Obligations for base rent and CAM costs under facility and other non-cancelable operating leases as of December 31, 2009, assuming the exercise of one five year renewal option for the Company's Fall River, MA facility, are approximately as follows:

| Year ending December 31, (In thousands) | | |
|---|---|---|
| 2010 | $ | 2,465 |
| 2011 | | 2,613 |
| 2012 | | 2,450 |
| 2013 | | 2,495 |
| 2014 | | 2,552 |
| 2015 and thereafter | | 5,388 |
| Total minimum lease payments | $ | 17,963 |

The Company's total rent and CAM expense for all facility leases was $2.5 million, $2.2 million and $0.3 million for the years ended December 31, 2009, 2008 and 2007, respectively.

**(16) SEVERANCE ARRANGEMENTS**

Dr. Ronald C. Newbold, former Senior Vice President, Business Development, resigned from his position effective March 1, 2009 pursuant to the provision of his employment agreement that deems a resignation within the year following a change of control (in this case, the AVANT Merger) as a termination resulting from a change of control. In accordance with Dr. Newbold's employment agreement, the Company recorded severance expense during the three months ended March 31, 2009 of $0.7 million including non-cash stock-based compensation expense related to the acceleration of vesting of options to purchase 107,485 shares of Company common stock as provided for under Dr. Newbold's employment agreement.

The Company and Dr. Una S. Ryan, former President and Chief Executive Officer of the Company, executed a separation agreement effective July 16, 2008 (the "Separation Agreement") setting forth such terms regarding Dr. Ryan's separation from the Company. Pursuant to the Separation Agreement, the Company recorded severance expense during the three months ended June 30, 2008 of $1.4 million. The Separation Agreement also provided for the vesting of options to purchase 153,125 shares of Company common stock (of the options to purchase 612,500 shares of Company common stock which had been granted to Dr. Ryan on March 7, 2008). The remainder of Dr. Ryan's options terminated as of July 16, 2008. The Company recorded stock-based compensation expense of $1.3 million related to the acceleration of vesting of options in July 2008, when the criteria for establishing a grant date were met.

The Company and Dr. Robert F. Burns, former President and Chief Executive Officer of Celldex Research, entered into a separation and mutual release agreement dated as of October 19, 2007, under which (i) Dr. Burns' employment was terminated effective February 15, 2008, (ii) the Company agreed to nine months of severance payments and continuation of benefits through February 15, 2010, (iii) all of Dr. Burns' stock options became fully vested and exercisable through February 15, 2011, and (iv) Dr. Burns and the Company provided one another with mutual releases. The Company recorded

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(16) SEVERANCE ARRANGEMENTS (Continued)**

$1.0 million in severance expense related to the separation and mutual release agreement during the three months ended December 31, 2007.

CuraGen employees who did not receive offers of employment were terminated upon the consummation of the CuraGen Merger. These employees were eligible for severance payments ("CuraGen Severance") upon termination of employment under certain circumstances, including following the CuraGen Merger. U.S. GAAP requires severance obligations that are incurred by the acquiree for the benefit of the acquirer to be recognized as an expense in the post-combination period. Because the offer of employment was at the option of the Company, the Company has deemed the CuraGen Severance to be at its benefit. On October 1, 2009, the Company recorded severance expense of $3.3 million and $0.9 million to general and administrative and research and development, respectively, related to the CuraGen Severance

The following table sets forth an analysis of the CuraGen Severance costs included in long-term liabilities at December 31, 2009:

| | Balance at December 31, 2008 | Charges | Paid Cash | Balance at December 31, 2009 |
|---|---|---|---|---|
| | | (In thousands) | | |
| CuraGen Severance | — | $ 4,246 | $ (1,623) | $ 2,623 |

**(17) RETIREMENT SAVINGS PLAN**

The Company's 401(k) Plan (the "401(k) Plan") is intended to be a tax-qualified plan covering substantially all employees. Under the terms of the 401(k) Plan, employees may elect to contribute up to 15% of their compensation, or the statutory prescribed limits. The Company may make 50% matching contributions on up to 4% of a participant's annual salary. Benefit expense for the 401(k) Plan was $0.1 million for the years ended December 31, 2009 and 2008.

**(18) AVANT MERGER**

In connection with the AVANT Merger, effective March 7, 2008, the Company issued 8,309,420 shares of its common stock in exchange for all of the outstanding capital stock of Celldex Research, such that Celldex Research shareholders owned 58% of the Company's common stock on a fully diluted basis and AVANT shareholders retained 42%. The purchase price of $47.6 million represents the shares attributable to former AVANT shareholders and consisted of (i) the 6,265,882 shares outstanding of AVANT common stock on the effective date of the Merger valued at $46.9 million and (ii) estimated transaction costs totaling $0.7 million.

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(18) AVANT MERGER (Continued)**

The purchase price was allocated to the acquired tangible and identifiable intangible assets and assumed liabilities, based upon their fair value at the date of acquisition, as follows (in thousands):

| | | |
|---|---|---|
| Tangible assets acquired | $ | 34,960 |
| Less: Liabilities assumed | | (3,945) |
| Net tangible assets acquired | | 31,015 |
| Intangible assets acquired: | | |
| Core Technology | | 897 |
| Developed Technology | | 274 |
| Strategic Partner Agreement | | 629 |
| In-Process Research and Development ("IPR&D") | | 14,756 |
| Total | $ | 47,571 |

The values assigned to the intangible assets acquired, including the IPR&D, were determined based on fair market value using a risk adjusted discounted cash flow approach. Fair values for long-term tangible and intangible assets and for IPR&D were then reduced by $6.0 million of negative goodwill.

The values assigned to IPR&D primarily related to the development of a typhoid-ETEC-cholera combination travelers vaccine and the CDX-1135 complement inhibitor in the amounts of $7.8 million and $6 million, respectively. The significant assumptions underlying the valuations included potential revenues, costs of completion, the timing of product approvals and the selection of appropriate probability of success and discount rates. None of the Company's IPR&D projects had reached technological feasibility nor did they have any alternative future use. Consequently, in accordance with the former purchase method of accounting, the fair value allocated to IPR&D was charged as an expense in the Company's consolidated financial statements as of the date of acquisition. The remaining acquired intangible assets arising from the acquisition are being amortized on a straight line basis over their estimated lives.

In January 2009, the Company entered into a license agreement with Vaccine Technologies, Inc. ("VTI") under which it granted a worldwide exclusive license to VTI to develop and commercialize our CholeraGarde® and ETEC vaccine programs. The Company may receive milestones payments and royalties with respect to development and commercialization of the technology licensed to VTI and no longer expects to incur significant costs on these projects. The Company is continuing the development of CDX-1135 and expects to incur approximately $6.3 million to move this project to the point of potentially out-licensing it to a third party. Estimated revenues from CDX-1135 are expected to be generated beginning in 2014.

**(19) CURAGEN MERGER**

In connection with the CuraGen Merger, effective October 1, 2009, the Company (i) issued 15,722,713 shares of common stock of the Company, or 0.2739 shares, in exchange for each share of outstanding CuraGen common stock, plus cash in lieu of fractional shares (the "CuraGen Exchange Ratio"), (ii) assumed all of the CuraGen Stock Options and (iii) assumed the CuraGen Debt. The Company acquired CuraGen to gain access to a pipeline of oncology-focused antibodies, including

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(19) CURAGEN MERGER (Continued)**

CDX-011 (formerly CR011) currently in Phase 2 clinical development for the treatment of breast and melanoma cancer, and cash, cash equivalents and marketable securities of $70.3 million.

The transaction is being accounted for under the acquisition method of accounting. All of the assets acquired and liabilities assumed in the transaction are recognized at their acquisition-date fair values, while transaction costs associated with the transaction are expensed as incurred.

*Purchase Price*

The purchase price for CuraGen is based on the acquisition-date fair value of the consideration transferred, which was calculated based on the closing price of the Company's common stock of $5.43 per share on October 1, 2009. The acquisition-date fair value of the consideration transferred consisted of the following (in thousands):

| | | |
|---|---|---|
| Fair value of common stock issued | $ | 85,374 |
| Fair value of CuraGen Stock Options | | 2,868 |
| Total consideration transferred | $ | 88,242 |

U.S. GAAP requires that the fair value of replacement awards attributable to precombination service be included in the consideration transferred. Of the CuraGen Stock Options assumed, all but 1%, were immediately vested upon closing in accordance with the terms of the stock option agreements and employment agreements. The fair value of the CuraGen Stock Options that has been attributed to precombination service is included in the consideration transferred.

*Allocations of Assets and Liabilities*

The Company has allocated the consideration transferred for CuraGen to net tangible assets, intangible assets, goodwill and a severance obligation. The difference between the aggregate consideration transferred and the fair value of assets acquired and liabilities assumed was allocated to goodwill. This goodwill relates to the potential synergies from the CuraGen Merger and a deferred tax liability related to acquired IPR&D intangible assets. None of the goodwill is expected to be deductible for income tax purposes. The following table summarizes the fair values of the assets acquired and liabilities assumed at the acquisition date (in thousands):

| | | |
|---|---|---|
| Cash and cash equivalents | $ | 51,654 |
| Marketable securities | | 18,638 |
| Identifiable intangible assets: | | |
| IPR&D | | 11,800 |
| Amgen Amendment | | 14,500 |
| TopoTarget Agreement | | 2,400 |
| Other current and long-term assets | | 756 |
| Goodwill | | 8,965 |
| CuraGen Debt | | (11,503) |
| Deferred tax liabilities, net | | (5,190) |
| Other assumed liabilities | | (3,778) |
| Total | $ | 88,242 |

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(19) CURAGEN MERGER (Continued)**

The purchase price allocation has been prepared on a preliminary basis and is subject to change as additional information becomes available concerning the fair value and tax basis of the acquired assets and liabilities. Any adjustments to the purchase price allocation will be made as soon as practicable but no later than one year from the acquisition date.

The estimated fair value attributed to IPR&D intangible assets represents an estimate of the fair value of purchased in-process technology for CuraGen's research programs that, as of October 1, 2009, had not reached technological feasibility and have no alternative future use. Only those research programs that had advanced to a stage of development where the Company believed reasonable net future cash flow forecasts could be prepared and a reasonable likelihood of technical success existed were included in the estimated fair value. Accordingly, the IPR&D programs primarily represent the estimated fair value of CDX-011. The estimated fair value of the IPR&D programs was determined based on estimates of expected future net cash flows. These expected future net cash flows included estimates for revenue and associated costs for the IPR&D programs based on (i) relevant industry factors, (ii) current and expected trends in the product development life cycle, (iii) the ability to engage a strategic partner, (iv) the ability to obtain regulatory approval, and (v) the ability to manufacture and commercialize the products. The probability-adjusted future net cash flows which reflect the different stages of development of each program are then present valued utilizing an estimate of the appropriate discount rate which is consistent with the uncertainties of the cash flows utilized. Finally, the expected future net cash flows were calculated assuming the Amgen Amendment (defined below) was not entered into because the fair value attributable to the Amgen Amendment is separated from the fair value of the IPR&D programs.

The expected future net cash flows for CDX-011 were based on the expectation that a Biologics License Application ("BLA") for CDX-011 will be filed with the FDA by the end of 2015. The Company expects the commercial launch as promptly as commercially practicable after necessary regulatory approvals are received. Assuming a traditional timeline for the regulatory review process, the Company expects CDX-011 will be commercially launched in 2016. These assumptions require various levels of in-house and external testing, clinical trials and approvals from the FDA or comparable foreign regulatory authorities before CDX-011 could be commercialized in the U.S. or other territories. Drug development involves a high degree of risk and most products that make it into clinical development do not receive marketing approval. Numerous risks and uncertainties can delay or stop clinical development of a pharmaceutical product prior to the receipt of marketing approval, including, but not limited to, results from clinical trials that do not support continuing development, issues related to manufacturing or intellectual property protection, and other events or circumstances that cause unanticipated delays, technical problems or other difficulties. Given these risks and uncertainties, there can be no assurance that the development of CDX-011 will be successfully completed. If the development of CDX-011 is not successful, in whole or in part, or completed in a timely manner, the Company may not realize the expected financial benefits from the development of CDX-011 or the transaction as a whole.

The estimated fair value attributed to the May 2009 amendment to the CuraGen and Amgen Fremont (successor in-interest to Abgenix) license agreement relates to CuraGen's exclusive rights to develop and commercialize CDX-011 and 11 other licensed antigens ("Amgen Amendment"). Under the Amgen Amendment, CuraGen and Amgen Fremont agreed to modify the terms of their existing cross-license of antigens whereby the amended license would be fully paid-up and royalty-free (except for any potentially required payments by CuraGen to the original licensor of CDX-011). The estimated

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(19) CURAGEN MERGER (Continued)**

fair value of the Amgen Amendment was based on the increase in expected future net cash flows for the IPR&D programs related to CDX-011 after the Amgen Amendment was entered into as compared to the expected future net cash flows if the Amgen Amendment was not entered into. The estimated fair value attributed to the Amgen Amendment is being amortized through the date of the last expiring patent covering CDX-011.

The estimated fair value attributed to the April 2008 agreement ("TopoTarget Agreement") between CuraGen and TopoTarget A/S ("TopoTarget") relates to CuraGen's rights under the TopoTarget Agreement to receive up to $6 million in either potential commercial milestone payments related to future net sales of Belinostat or 10% of any sublicense income received by TopoTarget ("TopoTarget Payments"). Under the TopoTarget Agreement, CuraGen sold back its Belinostat rights to TopoTarget and received $25 million in cash, 5 million shares of TopoTarget common stock (sold by CuraGen in 2008 for net proceeds of $12 million) and the right to receive the TopoTarget Payments. In addition, TopoTarget assumed all financial and operational responsibility for the clinical development of Belinostat under the TopoTarget Agreement. The estimated fair value of the TopoTarget Agreement was based on estimates of the probability-adjusted expected future net cash flows of the TopoTarget Payments. The estimated fair value attributed to the TopoTarget Agrement is being amortized through the date of the estimated receipt of the last payment under the TopoTarget Payments. In February 2010, TopoTarget entered into a co-development and commercialization agreement for Belinostat with Spectrum Pharmaceuticals, Inc. resulting in the Company's receipt of $3 million of the TopoTarget Payments.

The deferred tax liability, net of $5.2 million primarily relates to the temporary differences associated with the IPR&D intangible assets, which are not deductible for tax purposes.

*Acquisition-Related Expenses, Including Severance*

The Company incurred $2.9 million in acquisition-related expenses in the consolidated statements of operations for the year ended December 31, 2009. These costs include fees for investment banking services, legal, accounting, due diligence, tax, valuation, printing and other various services necessary to complete the transaction. In addition, the Company recorded $3.3 million and $0.9 million in CuraGen Severance expenses to general and administrative and research and development, respectively, in the consolidated statements of operations for the year ended December 31, 2009.

*Pro Forma Financial Information*

The operating results of CuraGen, which include approximately $2.3 million of research and development expense and $3.7 million in general and administrative expense, have been included in the accompanying consolidated financial statements from October 1, 2009, to December 31, 2009. CuraGen had no revenues from October 1, 2009 through December 31, 2009. The following unaudited pro forma financial summary is presented as if the operations of the Company and CuraGen were combined as of January 1, 2008. The unaudited pro forma combined results are not necessarily indicative of the actual

**CELLDEX THERAPEUTICS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(19) CURAGEN MERGER (Continued)**

results that would have occurred had the acquisition been consummated at that date or of the future operations of the combined entities.

| | Years Ended December 31, | |
|---|---|---|
| | 2009 | 2008 |
| | (In thousands) | |
| Revenue | $ 15,180 | $ 8,630 |
| Net loss | (40,262) | (25,786) |

**(20) SELECTED QUARTERLY FINANCIAL DATA (Unaudited)**

| 2009 | Q1 2009 | Q2 2009 | Q3 2009 | Q4 2009 |
|---|---|---|---|---|
| | (In thousands, except per share amounts) | | | |
| Total revenue | $ 3,732 | $ 2,685 | $ 4,030 | $ 4,733 |
| Net loss | (7,703) | (8,705) | (7,174) | (12,943) |
| Basic and diluted net loss per common share | (0.49) | (0.55) | (0.45) | (0.41) |

| 2008 | Q1 2008 | Q2 2008 | Q3 2008 | Q4 2008 |
|---|---|---|---|---|
| | (In thousands, except per share amounts) | | | |
| Total revenue | $ 147 | $ 1,962 | $ 2,358 | $ 2,988 |
| Net loss | (22,131) | (10,260) | (7,656) | (7,454) |
| Basic and diluted net loss per common share | (2.19) | (0.67) | (0.49) | (0.47) |

**Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

Not applicable.

**Item 9A. CONTROLS AND PROCEDURES**

*Evaluation of Disclosure Controls and Procedures*

As of December 31, 2009, we evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2009. Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within time periods specified by the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

*Management's Annual Report on Internal Control Over Financial Reporting*

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as the process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer, and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with the authorizations of management and directors; and
- provide reasonable assurance regarding the prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework provided in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2009.

The effectiveness of our internal control over financial reporting as of December 31, 2009 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

*Changes in Internal Control Over Financial Reporting*

There were no changes in our internal control over financial reporting during the three months ended December 31, 2009 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. OTHER INFORMATION.**

*Submission of Matters to a Vote of Security Holders*

On December 16, 2009, we held our Annual Meeting of Stockholders at which the stockholders (i) elected nine directors to our Board of Directors; (ii) ratified the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2009; (iii) approved an amendment to our 2008 Stock Option and Incentive Plan to increase the shares reserved for issuance thereunder to 3,900,000 and (iv) approved an amendment to our 2004 Employee Stock Purchase Plan to increase the shares reserved for issuance thereunder to 62,500.

At the Annual Meeting of Stockholders, the following votes were tabulated for the proposals before our Stockholders:

**PROPOSAL I**

Election of Directors:

| | Number of Shares/Votes | |
|---|---|---|
| | For | Authority Withheld |
| Larry Ellberger | 22,320,214 | 1,334,572 |
| Anthony S. Marucci | 22,231,618 | 1,423,168 |
| Herbert J. Conrad | 22,314,720 | 1,340,066 |
| George O. Elston | 22,290,130 | 1,354,256 |
| Karen Shoos Lipton | 22,325,111 | 1,329,675 |
| Rajesh B. Parekh, Ph.D. | 19,731,867 | 3,922,919 |
| Harry H. Penner, Jr. | 22,211,760 | 1,443,026 |
| Charles R. Schaller | 22,221,826 | 1,432,960 |
| Timothy M. Shannon | 22,281,701 | 1,373,085 |

**PROPOSAL II**

Ratification of the appointment of PricewaterhouseCoopers LLP:

| FOR | AGAINST | ABSTAIN | BROKER NON-VOTES |
|---|---|---|---|
| 22,824,672 | 703,037 | 127,077 | — |

**PROPOSAL III**

Approval of an amendment to our 2008 Stock Option and Incentive Plan to increase the shares reserved for issuance thereunder to 3,900,000:

| FOR | AGAINST | ABSTAIN | BROKER NON-VOTES |
|---|---|---|---|
| 11,780,331 | 1,142,425 | 51,787 | 10,658,145 |

**PROPOSAL IV**

Approval of an amendment to our 2004 Employee Stock Purchase Plan to increase the shares reserved for issuance thereunder to 62,500:

| FOR | AGAINST | ABSTAIN | BROKER NON-VOTES |
|---|---|---|---|
| 11,936,847 | 989,380 | 48,316 | 10,658,145 |

The number of shares issued, outstanding and eligible to vote as of the record date of November 2, 2009 was 31,602,188. A quorum was present with 23,654,786 shares represented by proxies or 74.9% of the eligible voting shares.

## PART III

### Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10 will be included in the definitive Proxy Statement for our 2010 Annual Meeting of Stockholders, or the 2010 Proxy Statement, under "Information Regarding the Current Directors and Executive Officers of Celldex," "Section 16(a) Beneficial Ownership Reporting Compliance," "Code of Business Conduct and Ethics" and "The Board of Directors and Its Committees" and is incorporated herein by reference. If the 2010 Proxy Statement is not filed with the SEC within 120 days after the end of our most recent fiscal year, we will provide such information by means of an amendment to this Annual Report on Form 10-K.

### Item 11. EXECUTIVE COMPENSATION

The information required by this Item 11 will be included in the 2010 Proxy Statement under "Executive Compensation," and "Compensation Committee Interlocks and Insider Participation," and is incorporated herein by reference. If the 2010 Proxy Statement is not filed with the SEC within 120 days after the end of our most recent fiscal year, we will provide such information by means of an amendment to this Annual Report on Form 10-K.

### Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 will be included in the 2010 Proxy Statement under "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" and is incorporated herein by reference. If the 2010 Proxy Statement is not filed with the SEC within 120 days after the end of our most recent fiscal year, we will provide such information by means of an amendment to this Annual Report on Form 10-K.

### Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item 13 will be included in the 2010 Proxy Statement under "Election of Directors" and "Approval of Related Person Transactions and Transactions with Related Persons" and is incorporated herein by reference. If the 2010 Proxy Statement is not filed with the SEC

within 120 days after the end of our most recent fiscal year, we will provide such information by means of an amendment to this Annual Report on Form 10-K.

**Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this Item 14 will be included in the 2010 Proxy Statement under "Independent Registered Public Accounting Firm" and is incorporated herein by reference. If the 2010 Proxy Statement is not filed with the SEC within 120 days after the end of our most recent fiscal year, we will provide such information by means of an amendment to this Annual Report on Form 10-K.

## PART IV

### Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

*(A)*

The following documents are filed as part of this Form 10-K:

*(1)*

*Financial Statements:*

See "Index to Consolidated Financial Statements" at Item 8.

*(2)*

*Financial Statement Schedules:*

Schedules are omitted since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the Consolidated Financial Statements or Notes thereto.

*(3)*

*Exhibits:*

| | | Incorporated by Reference to | | |
|---|---|---|---|---|
| **No.** | **Description** | **Form and SEC File No.** | **Exhibit No.** | **SEC Filing Date** |
| *Plan of Acquisition, Reorganization, Arrangement, Liquidation or Succession* | | | | |
| 2.1 | Agreement and Plan of Merger, dated as of October 19, 2007, by and among AVANT, Celldex Merger Corporation, and Celldex Therapeutics, Inc. | 8-K (000-15006) | 2.1 | 10/22/07 |
| 2.2 | Agreement and Plan of Merger, dated as of May 28, 2009, by and among Celldex Therapeutics, Inc., CuraGen Corporation and Cottrell Merger Sub, Inc. | 8-K (000-15006) | 2.1 | 5/29/09 |
| *Articles of Incorporation and By-Laws* | | | | |
| 3.1 | Third Restated Certificate of Incorporation | S-4 (333-59215) | 3.1 | 7/16/98 |
| 3.2 | Certificate of Amendment of Third Restated Certificate of Incorporation | S-4 (333-59215) | 3.1 | 7/16/98 |
| 3.3 | Second Certificate of Amendment of Third Restated Certificate of Incorporation | S-4 (333-59215) | 3.2 | 7/16/98 |
| 3.4 | Third Certificate of Amendment of Third Restated Certificate of Incorporation | 10-Q (000-15006) | 3.1 | 5/10/02 |
| 3.5 | Fourth Certificate of Amendment of Third Restated Certificate of Incorporation | 8-K (000-15006) | 3.1 | 3/11/08 |
| 3.6 | Fifth Certificate of Amendment of Third Restated Certificate of Incorporation | 8-K (000-15006) | 3.2 | 3/11/08 |
| 3.7 | Amended and Restated By-Laws as of March 14, 2007 | 10-K (000-15006) | 3.5 | 3/18/08 |
| *Instruments Defining the Rights of Security Holders* | | | | |
| 4.1 | Shareholder Rights Agreement dated November 5, 2004 | 8-A (000-15006) | 4.1 | 11/8/04 |
| 4.2 | Amendment No. 1 to Shareholder | 8-A/A | 10.1 | 10/22/07 |

| No. | Description | Incorporated by Reference to | | |
|---|---|---|---|---|
| | | Form and SEC File No. | Exhibit No. | SEC Filing Date |
| 4.3 | Amendment No. 2 to Shareholder Rights Agreement dated March 7, 2008 | 8-A/A (000-15006) | 10.1 | 3/7/08 |
| 4.4 | Certificate of Designations, Preferences and Rights of a Series of Preferred Stock classifying and designating the Series C-1 Junior Participating Cumulative Preferred Stock | 8-A (000-15006) | 3.1 | 11/8/04 |
| 4.5 | Indenture, dated February 17, 2004 between CuraGen and Trustee | Filed herewith | | |
| 4.6 | Supplemental Indenture, dated September 30, 2009, by and among Celldex, CuraGen, Merger Sub, and Trustee. | 8-K (000-15006) | 4.1 | 10/2/09 |
| 4.7 | Second Supplemental Indenture, dated December 31, 2009, by and among Celldex, CuraGen, and Trustee. | 8-K (000-15006) | 4.1 | 12/31/09 |
| *Material Contracts—Leases* | | | | |
| 10.1 | Commercial Lease Agreement of May 1, 1996 between the Company and Fourth Avenue Ventures Limited Partnership | 10-Q/A (000-15006) | 10.11 | 8/23/96 |
| 10.2 | Extension of Lease Agreement of May 1, 1997 between the Company and DIV Needham 53 LLC (successor in interest to Fourth Avenue Ventures Limited Partnership) dated as of August 23, 2001 | 10-K (000-15006) | 10.9 | 3/27/02 |
| 10.3 | First Amendment to Lease by and between the Company and DIV Needham 53 LLC dated November 29, 2005 | 10-K (000-15006) | 10.40 | 3/16/06 |
| *10.4 | Lease Agreement, by and between the Company and the Massachusetts Development Finance Agency, dated as of December 22, 2003 | 10-Q (000-15006) | 10.1 | 4/30/04 |
| 10.5 | Second Amendment to Lease by and between the Company and the Massachusetts Development Finance Agency dated as of November 4, 2005 | 10-K (000-15006) | 10.41 | 3/16/06 |
| 10.6 | Lease Agreement dated as of October 21, 2005 by and between Phillipsburg Associates, L.P. and the Company. | S-4 (333-148291) | 10.10 | 1/18/08 |
| *Material Contracts—License, Collaboration, Supply and Distribution Agreements* | | | | |
| *10.7 | License and Royalty Agreement by and between Pfizer Inc and the Company dated as of December 1, 2000 | 10-K (000-15006) | 10.13 | 3/27/01 |
| *10.8 | Amendment to License and Royalty Agreement by and between Pfizer Inc and the Company dated as of | 10-K (000-15006) | 10.14 | 3/27/01 |

| | | | | |
|---|---|---|---|---|
| | December 1, 2000 | | | |
| *10.9 | Collaborative Research and Development Agreement by and between Pfizer Inc. and the Company dated as of December 1, 2000 | 10-K (000-15006) | 10.15 | 3/27/01 |
| *10.10 | License Agreement between the Company and SmithKline Beecham PLC dated as of December 1, 1997 | 10-K (000-15006) | 10.20 | 3/28/00 |

| No. | Description | Incorporated by Reference to | | |
|---|---|---|---|---|
| | | Form and SEC File No. | Exhibit No. | SEC Filing Date |
| 10.11 | Amendment Agreement, dated January 9, 2003, between the Company and SmithKline Beecham PLC | 10-K/A (000-15006) | 10.21 | 9/12/03 |
| 10.12 | License Agreement, dated as of January 31, 2003, by and between the Company and Elan Drug Delivery Limited | 10-K/A (000-15006) | 10.22 | 9/12/03 |
| 10.13 | License and Clinical Trials Agreement, effective as of February 27, 1995, between the Company and the James N. Gamble Institute of Medical Research | 10-K/A (000-15006) | 10.23 | 9/12/03 |
| 10.14 | License Agreement, dated as of November 25, 1988, by and among The Johns Hopkins University, Brigham and Women's Hospital and the Company | 10-K/A (000-15006) | 10.28 | 9/12/03 |
| 10.15 | Purchase Agreement, dated as of May 16, 2005, by and between the Company and PRF Vaccine Holdings LLC | 8-K (000-15006) | 10.1 | 5/18/05 |
| 10.16 | Amendment Agreement to Purchase Agreement between the Company and PRF Vaccine Holdings LLC, dated as of March 14, 2006 | 8-K (000-15006) | 10.1 | 3/15/06 |
| *10.17 | Exclusive License Agreement dated February 1, 2003 by and between Thomas Jefferson University ("TJU") and the Company | S-4 (333-148291) | 10.1 | 1/18/08 |
| *10.18 | License Agreement dated as of November 1, 2005 by and between The Rockefeller University and the Company | S-4 (333-148291) | 10.2 | 1/18/08 |
| *10.19 | License Agreement dated September 1, 2006 by and between Duke University and the Company | S-4 (333-148291) | 10.3 | 1/18/08 |
| *10.20 | Assignment and License Agreement, as amended, dated April 6, 2004 by and among Medarex, Inc., GenPharm International, Inc. and the Company | S-4 (333-148291) | 10.4 | 1/18/08 |
| *10.21 | Research and Commercialization Agreement, as amended, dated as of April 6, 2004 by and among Medarex, Inc., GenPharm International, Inc. and the Company | S-4 (333-148291) | 10.5 | 1/18/08 |
| *10.22 | Supply Agreement dated August 18, 2006 by and between the Company and Biosyn | S-4 (333-148291) | 10.9 | 1/18/08 |
| 10.23 | License and Development Agreement dated as of April 16, 2008 between the Company and Pfizer Vaccines, LLC | 10-Q (000-15006) | 10.1 | 5/19/08 |
| *10.24 | Research Collaboration and | 10-K | 10.45 | 3/2/09 |

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|---|---|---|---|---|
| | Commercialization Agreement effective October 20, 2006 between the Company and the Ludwig Institute for Cancer Research | (000-15006) | | |
| *10.25 | Vaccine Adjuvant License and Collaboration Agreement dated on May 30, 2008 between the Company and 3M Innovation Properties Company | 10-K (000-15006) | 10.46 | 3/2/09 |

| No. | Description | Incorporated by Reference to | | |
|---|---|---|---|---|
| | | Form and SEC File No. | Exhibit No. | SEC Filing Date |
| *10.26 | Exclusive Patent and Know-How License Agreement dated as of November 5, 2008 between the Company and the University of Southampton | 10-K (000-15006) | 10.47 | 3/2/09 |
| *10.27 | Collaboration Agreement dated June 18, 2004 between Seattle Genetics and CuraGen | Filed herewith | | |
| *10.28 | Second Restated Collaboration Agreement dated April 12, 2004 and amended October 19, 2004 between Abgenix Inc. and CuraGen | Filed herewith | | |
| 10.29 | Amgen Letter Agreement, by and between CuraGen and Amgen Fremont, Inc. dated May 2, 2009 | Filed herewith | | |
| *10.30 | Transfer and Termination Agreement, dated as of April 21, 2008 by and between TopoTarget A/S and CuraGen | Filed herewith | | |
| *Material Contracts—Stock Purchase, Financing and Credit Agreements* | | | | |
| *10.31 | Security Agreement, by and between the Company and the Massachusetts Development Finance Agency, dated as of December 22, 2003 | 10-Q (000-15006) | 10.2 | 4/30/04 |
| *10.32 | Secured Promissory Note: Equipment Loan, by and between the Company and the Massachusetts Development Finance Agency, dated as of December 22, 2003 | 10-Q (000-15006) | 10.3 | 4/30/04 |
| *10.33 | Common Stock Purchase Agreement dated as of April 16, 2008 between the Company and Pfizer Vaccines, LLC | 10-Q (000-15006) | 10.2 | 8/11/08 |
| *Material Contracts—Management Contracts and Compensatory Plans* | | | | |
| †10.34 | 2008 Stock Option and Incentive Plan, as amended and restated | Filed herewith | | |
| †10.35 | 2004 Employee Stock Purchase Plan, as amended and restated | Filed herewith | | |
| †10.36 | Employment Agreement, dated January 6, 2009, by and between the Company and Avery W. Catlin | 8-K (000-15006) | 10.1 | 1/8/09 |
| †10.37 | Employment Agreement, dated January 6, 2009, by and between the Company and Thomas Davis, MD | 8-K (000-15006) | 10.2 | 1/8/09 |
| †10.38 | Employment Agreement, dated January 6, 2009, by and between the Company and Tibor Keler, Ph.D. | 8-K (000-15006) | 10.3 | 1/8/09 |
| †10.39 | Amended and Restated Employment Agreement, dated January 6, 2009, by and between the Company and Anthony S. Marucci. | 8-K (000-15006) | 10.4 | 1/8/09 |

| | | | | |
|---|---|---|---|---|
| †10.40 | Form of Stock Option Agreement | 8-K (000-15006) 111 | 10.1 | 1/25/10 |

| No. | Description | Incorporated by Reference to | | |
|---|---|---|---|---|
| | | Form and SEC File No. | Exhibit No. | SEC Filing Date |
| †10.41 | CuraGen 2007 Stock Incentive Plan, amended and restated | Filed herewith | | |
| †10.42 | Form of Restricted Stock Award | Filed herewith | | |
| 21.0 | List of Subsidiaries | Filed herewith | | |
| 23.1 | Consent of PricewaterhouseCoopers LLP Independent Registered Public Accounting Firm of Celldex Therapeutics, Inc. (formerly known as AVANT Immunotherapeutics, Inc.) | Filed herewith | | |
| 23.2 | Consent of Ernst & Young LLP Independent Registered Public Accounting Firm of Celldex Research Corporation (formerly known as Celldex Therapeutics, Inc.) | Filed herewith | | |
| 31.1 | Certification of President and Chief Executive Officer | Filed herewith | | |
| 31.2 | Certification of Senior Vice President and Chief Financial Officer | Filed herewith | | |
| 32 | Section 1350 Certifications | Furnished herewith | | |

*

Confidential treatment has been requested for certain provisions of this Exhibit pursuant to Rule 24b-2 promulgated under the Securities Exchange Act of 1934, as amended.

†

Indicates a management contract or compensation plan, contract or arrangement.

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**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**CELLDEX THERAPEUTICS, INC.**

By: /s/ ANTHONY S. MARUCCI

Anthony S. Marucci
*President and Chief Executive Officer*

**Date**
March 12, 2010

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ ANTHONY S. MARUCCI<br>Anthony S. Marucci | President, Chief Executive Officer, and Director (Principal Executive Officer) | March 12, 2010 |
| /s/ AVERY W. CATLIN<br>Avery W. Catlin | Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer) | March 12, 2010 |
| /s/ LARRY ELLBERGER<br>Larry Ellberger | Director, Chairman of the Board of Directors | March 12, 2010 |
| /s/ HERBERT J. CONRAD<br>Herbert J. Conrad | Director | March 12, 2010 |
| /s/ GEORGE O. ELSTON<br>George O. Elston | Director | March 12, 2010 |
| /s/ KAREN SHOOS LIPTON<br>Karen Shoos Lipton | Director | March 12, 2010 |
| /s/ DR. RAJESH B. PAREKH<br>Dr. Rajesh B. Parekh | Director | March 12, 2010 |
| /s/ HARRY H. PENNER, JR.<br>Harry H. Penner, Jr. | Director | March 12, 2010 |
| /s/ CHARLES R. SCHALLER<br>Charles R. Schaller | Director | March 12, 2010 |
| /s/ TIMOTHY M. SHANNON, M.D. | Director | March 12, 2010 |

**EXHIBIT 4.5**

**CURAGEN CORPORATION**

**AS ISSUER**

**THE BANK OF NEW YORK, AS TRUSTEE**

**UP TO $120,000,000 AGGREGATE PRINCIPAL AMOUNT OF**
**4.0% CONVERTIBLE SUBORDINATED NOTES DUE 2011**

**INDENTURE**
**DATED AS OF FEBRUARY 17, 2004**

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(continued)

**TABLE OF CONTENTS**
(continued)

**TABLE OF CONTENTS**
(continued)

INDENTURE, dated as of February 17, 2004, between CURAGEN CORPORATION, a Delaware corporation (the "Company"), and The Bank of New York, a New York banking corporation, as Trustee (the "Trustee").

Each party agrees as follows for the benefit of the other party and for the equal and ratable benefit of the Holders of the Company's 4.0% Convertible Subordinated Notes due 2011:

## ARTICLE I

## DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.1. Definitions.

"Additional Interest" has the meaning set forth in the Registration Rights Agreement. All references herein or in the Securities to interest accrued or payable as of any date shall include any Additional Interest accrued or payable as of such date as provided in the Registration Rights Agreement.

"Additional Shares" has the meaning set forth in the Registration Rights Agreement.

"Affiliate" of any specified person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For the purposes of this definition, "control" when used with respect to any specified Person means the power to direct or cause the direction of the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

"Agent Members" has the meaning set forth in Section 2.1(c).

"Applicable Procedures" means, with respect to any transfer or transaction involving a Global Security or beneficial interest therein, the rules and procedures of the Depositary for such Security, in each case to the extent applicable to such transaction and as in effect from time to time.

"Applicable Stock" means (a) the Common Stock and (b) in the event of a transaction referred to in Section 12.4 in which the Securities become convertible into Equity Interests of another person. such Equity Interests or any other Equity Interests into which such Equity Interests shall be reclassified or changed.

"Bankruptcy Law" means Title 11, United States Code, or any similar United States federal or state law for the relief of debtors.

"Board of Directors" means either the board of directors of the Company or any duly authorized committee of such board.

"Board Resolution" means a resolution of the Board of Directors.

"Business Day" means each day of the year other than a Saturday or a Sunday or other day on which banking institutions in the City of New York are required or authorized by law, regulation or executive order to close.

"Cash" means such coin or currency of the United States as at any time of payment is legal tender for the payment of public and private debts.

"Certificated Securities" means Securities that are in substantially the form attached hereto as Exhibit A and that do not include the information called for by footnotes 1 and 2 thereof.

"Closing Sale Price" of a share of Applicable Stock on any date means the closing per share sale price (or, if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on such date as reported by the Nasdaq National Market system or, if the shares of Applicable Stock are not quoted on the Nasdaq National Market system, as reported on a national securities exchange. If the Applicable Stock is not listed for trading on a national securities exchange and not quoted by the Nasdaq National Market on the relevant date, the "Closing Sale Price" shall be the last quoted bid for the Applicable Stock in the over-the-counter market on the relevant date as reported by the National Quotation Bureau or similar organization. If the Applicable Stock is not so quoted, the "Closing Sale Price" shall be the average of the midpoint of the last bid and ask prices for the Applicable Stock on the relevant date from each of at least three nationally recognized independent investment banking firms selected by the Company for this purpose.

"Code" means the Internal Revenue Code of 1986, as amended.

"Common Stock" means the authorized common stock, $0.01 par value per share, of the Company or any other shares of Equity Interest of the Company into which such Common Stock shall be reclassified or changed; provided, that after the consummation of any transaction referred to in Section 12.4, all references to "Common Stock" shall, to the extent necessary to protect the interests of the Holders, become references to "Applicable Stock".

"Company" means the party named as the "Company" in the first paragraph of this Indenture until a successor replaces it pursuant to the applicable provisions of this Indenture and, thereafter, means such successor. The foregoing sentence shall likewise apply to any subsequent successor or successors to such successors.

"Company Request" or "Company Order" means a written request or order signed in the name of the Company by any two Officers, at least one of whom is the Chief Executive Officer or the Chief Financial Officer.

"Conversion Agent" has the meaning set forth in Section 2.3.

"Conversion Notice" has the meaning set forth in Section 12.2(c).

"Conversion Price" means, at any time, $1,000 divided by the Conversion Rate in effect at such time, rounded to two decimal places (rounded up if the third decimal place thereof is 5 or more and otherwise rounded down).

"Conversion Rate" means the number of shares of Common Stock issuable upon conversion of each $1,000 of Principal Amount of Securities, which is initially 103.2429 shares, subject to adjustments as set forth in this Indenture.

"Corporate Trust Office" means the office of the Trustee at which at any time its corporate trust business shall be principally administered, which office at the date hereof is located at 101 Barclay Street, New York, New York 10286, Attention: Corporate Trust Division - Corporate Finance Unit or such other address as the Trustee may designate from time to time by notice to the Holders and the Company, or the principal corporate trust office of any

successor Trustee (or such other address as a successor Trustee may designate from time to time by notice to the Holders and the Company).

"Current Market Price" has the meaning set forth in Section 12.3(g).

"Custodian" means any receiver, trustee, assignee, liquidator, custodian or similar official under any Bankruptcy Law.

"Default" means, when used with respect to the Securities, any event which is, or after notice or passage of time or both would be, an Event of Default.

"Depositary" means, with respect to any Global Securities, a securities clearing agency that is registered as such under the Exchange Act and is designated by the Company to act as Depositary for such Global Securities (or any successor securities clearing agency so registered), which shall initially be DTC.

"Designated Senior Indebtedness" means any particular Senior Indebtedness if the instrument creating or evidencing the same or the assumption thereof (or related agreements or documents to which the Company is a party) expressly provides that such Indebtedness shall be "Designated Senior Indebtedness" for purposes of this Indenture (provided that such instrument, agreement or other document may place limitations and conditions on the right of such Senior Indebtedness to exercise the rights of Designated Senior Indebtedness.)

"Designated Subsidiary" means any existing or future, direct or indirect, Subsidiary of the Company that would constitute a "significant subsidiary" as such term is defined under Rule 1.02 of Regulation S-X.

"Distributed Assets" has the meaning set forth in Section 12.3(d).

"DTC" means The Depository Trust Company, a New York corporation.

"EDGAR" has the meaning set forth in Section 6.2(b).

"Equity Interest" of any Person means any and all shares, interests, rights to purchase, warrants, options, participations or other equivalents of or interests in (however designated) corporate stock or other equity participations, including partnership interests, whether general or limited, of such Person.

"Event of Default" has the meaning set forth in Section 8.1.

"Exchange Act" means the United States Securities Exchange Act of 1934, as amended.

"Ex-Dividend Time" means, with respect to any issuance or distribution on Common Stock, the first Trading Day on which the Common Stock trades regular way on the principal securities market on which the Common Stock is then traded without the right to receive such issuance or distribution.

"Expiration Time" has the meaning set forth in Section 12.3(e).

"Fair Market Value" has the meaning set forth in Section 12.3(g).

"Fundamental Change" means the occurrence of any of the following events: (i) any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act), becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Exchange Act, except that a Person shall be deemed to have beneficial ownership of all shares that such Person has the right to acquire, whether such right is exercisable immediately or only after the passage

of time), directly or indirectly, of more than 50% of the total outstanding Voting Stock of the Company; (ii) during any period of two consecutive years, individuals who at the beginning of such period constituted the Board of Directors (together with any new directors whose election to such Board of Directors or whose nomination for election by the stockholders of the Company, was approved by a vote of at least 66²/3% of the directors then still in office who were either directors at the beginning of such period or whose election or nomination for election was previously so approved) cease for any reason to constitute a majority of such Board of Directors then in office; (iii) the Company consolidates with or merges with or into any Person or conveys, transfers, sells or otherwise disposes of or leases all or substantially all of its assets to any Person, or any corporation consolidates with or merges into or with the Company, in any such event pursuant to a transaction in which the outstanding Voting Stock of the Company is changed into or exchanged for cash, securities or other property, other than (1) any such transaction where the outstanding Voting Stock of the Company is not changed or exchanged at all (except to the extent necessary to reflect a change in the jurisdiction of incorporation of the Company) or (2) where the stockholders of the Company immediately before such transaction own, directly or indirectly, immediately following such transaction, more than 50% of the total outstanding Voting Stock of the surviving corporation; or (iv) the Company is liquidated or dissolved or adopts a plan of liquidation or dissolution other than in a transaction which complies with the provisions described under Article VII.

A "Fundamental Change" shall not be deemed to have occurred if either:

(1) the last Closing Sale Price of the Common Stock for each of at least five Trading Days within:

(x) the period of the ten consecutive Trading Days immediately after the later of the Fundamental Change or the public announcement of the Fundamental Change, in the case of a Fundamental Change resulting solely from a Fundamental Change in clause (i) of the definition of Fundamental Change; or

(y) the period of the ten consecutive Trading Days immediately preceding the Fundamental Change, in the case of a Fundamental Change resulting from a Fundamental Change in clauses (ii), (iii) or (iv) of the definition of Fundamental Change;

is at least equal to 105% of the quotient where the numerator is the Principal Amount and the denominator is the Conversion Rate in effect on each of such five Trading Days, with such calculation being made for each Trading Day; or

(2) in the case of a merger or consolidation described in clause (iii) of the definition of Fundamental Change, at least 95% of the consideration, excluding cash payments for fractional shares and cash payments pursuant to dissenters' approval rights, in the merger or consolidation constituting the Fundamental Change, consists of common stock traded on a U.S. national securities exchange or quoted on the Nasdaq National Market (or which shall be so traded or quoted when issued or exchanged in connection with such Fundamental Change) and as

a result of such transaction or transactions the Securities become convertible solely into such common stock.

"Fundamental Change Purchase Date" has the meaning set forth in Section 5.1(a).

"Fundamental Change Purchase Notice" has the meaning set forth in Section 5.1(c).

"Fundamental Change Purchase Price" has the meaning set forth in Section 5.1 (a).

"Global Securities" means Securities that are in substantially the form attached hereto as Exhibit A and that include the information called for by footnotes 1 and 2 thereof and that are deposited with the Depositary or its custodian and registered in the name of, the Depositary or its nominee.

"Holder" means a person in whose name a Security is registered on the Registrar's books.

"Indebtedness" means, with respect to any Person,

(a) all indebtedness, obligations and other liabilities, contingent or otherwise:

(i) for borrowed money, including obligations in respect of overdrafts and any loans or advances from banks, whether or not evidenced by notes or similar instruments, or

(ii) evidenced by credit or loan agreements, bonds, debentures, notes or similar instruments, whether or not the recourse of the lender is to the whole of such Person's assets or to only a portion thereof, other than any account payable or other accrued current liability or obligation incurred in the ordinary course of business in connection with the obtaining of materials or services;

(b) all reimbursement obligations and other liabilities, contingent or otherwise, with respect to letters of credit, bank guarantees or bankers' acceptances;

(c) all obligations and liabilities, contingent or otherwise, in respect of leases required, in conformity with generally accepted accounting principles, to be accounted for as capitalized lease obligations on such Person's balance sheet;

(d) all obligations and other liabilities, contingent or otherwise, under any lease or related document, including a purchase agreement, conditional sale or other title retention agreement, in connection with the lease of real property or improvements thereon (or any personal property included as part of any such lease) which provides that such Person is contractually obligated to purchase or cause a third party to purchase the leased property or pay an agreed upon residual value of the leased property, including such Person's obligations under such lease or related document to purchase or cause a third party to purchase such leased property or pay an agreed upon residual value of the leased property to the lessor;

(e) all obligations, contingent or otherwise, with respect to an interest rate, currency or other swap, cap, floor or collar agreement or hedge agreement,

forward contract or other similar instrument or agreement or foreign currency hedge, exchange, purchase or similar instrument or agreement;

(f) all direct or indirect guarantees or similar agreements to purchase or otherwise acquire or otherwise assure a creditor against loss in respect of, Indebtedness, Obligations or liabilities of another Person or the kind described in clauses (a) through (e);

(g) any and all deferral, renewals, extensions, refinancings and refundings of or amendment, modifications or supplements to any indebtedness, obligation or liability of the kinds described in clauses (a) through (f).

The amount of Indebtedness of any Person at any date shall be (i) the outstanding principal amount of all unconditional obligations described above, as such amount would be reflected on a balance sheet prepared in accordance with United States generally accepted accounting principles, and the maximum liability at such date of such Person for any contingent obligations described above, (ii) the accreted value thereof, in the case of any Indebtedness issued with original issue discount, and (iii) the principal amount thereof, together with any interest thereon that is more than 30 days past due, in the case of any other Indebtedness.

"Indenture" means this Indenture, as amended or supplemented from time to time in accordance with the terms hereof, including the provisions of the TIA that are explicitly incorporated in this Indenture by reference to the TIA.

"Lien" means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset given to secure Indebtedness, whether or not filed, recorded or otherwise perfected under applicable law (including any conditional sale or other title retention agreement, any lease in the nature thereof, any option or other agreement to sell or give a security interest in and any filing of or agreement to give any financing statement under the Uniform Commercial Code (or equivalent statutes) of any jurisdiction with respect to any such lien, pledge, charge or security interest).

"Interest Payment Date" has the meaning set forth in Exhibit A attached hereto.

"Issue Date" of any Security means the date on which such Security was originally issued or deemed issued as set forth on the face of the Security.

"Legal Holiday" means any day other than a Business Day.

"Market Price" means the average of the Closing Sale Prices of one share of Applicable Stock for the 20-Trading Day period immediately preceding and including the Business Day immediately preceding the Purchase Date or Fundamental Change Purchase Date, as the case may be (or if the Business Day immediately preceding the Purchase Date or Fundamental Change Purchase Date, as the case may be, is not a Trading Day, then on the last Trading Day immediately preceding the Business Day), appropriately adjusted to take into account the occurrence, during the period commencing on the first of such Trading Days during such 20-Trading Day period and ending on the Purchase Date or Fundamental Change Purchase Date, as the case may be, of any event described in Section 12.3 or Section 12.4.

"Non-Electing Share" has the meaning set forth in Section 12.4.

"Obligations" means any principal, interest, penalties, fees, indemnifications, reimbursements, damages and other liabilities payable under the documentation governing any Indebtedness.

"Officer" means the Chief Executive Officer, the President, the Chief Financial Officer, any Vice President, the Treasurer, or the Secretary of the Company.

"Officers' Certificate" means a written certificate containing the information specified in Section 14.4 and Section 14.5, signed in the name of the Company by any two Officers, at least one of whom is the Chief Executive Officer or the Chief Financial Officer, and delivered to the Trustee. An Officers' Certificate given pursuant to Section 6.3 shall be signed by the Chief Financial Officer and one other Officer.

"Opinion of Counsel" means a written opinion containing the information specified in Section 14.4 and Section 14.5, from legal counsel who is reasonably acceptable to the Trustee. The counsel may be an employee of, or counsel to, the Company.

"Paying Agent" has the meaning set forth in Section 2.3.

"Payment Blockage Notice" has the meaning set forth in Section 4.3(b).

"Payment Blockage Period" has the meaning set forth in Section 4.3(b).

"Person" or "Persons" means any individual, corporation, limited liability company, partnership, joint venture, association, joint-stock company, trust, unincorporated organization, or government or any agency or political subdivision thereof (and for purposes of the definition of "Fundamental Change" shall also have the meaning set forth in such definition).

"Principal Amount" of a Security means the principal amount of the Security as set forth on the face of the Security.

"Purchase Date" has the meaning set forth in Section 4.1(a).

"Purchase Notice" has the meaning set forth in Section 4.1(c).

"Purchase Price" has the meaning set forth in Section 4.1(a).

"QIB" means a "qualified institutional buyer" as defined in Rule 144A.

"Record Date" has the meaning set forth in Section 12.3(g).

"Redemption Date" means, when used with respect to any Security to be redeemed, the date fixed for redemption pursuant to this Indenture.

"Redemption Price" shall mean (i) with respect to a Redemption Date occurring during the period commencing on February 18, 2009 to and including February 14, 2010, an amount equal to 101.143% of the Principal Amount of the Securities to be redeemed plus any accrued and unpaid interest (including any Additional Interest) to, but excluding, the Redemption Date and (ii) with respect to a Redemption Date occurring on or after February 15, 2010, an amount equal to 100.571% of the Principal Amount of the Securities to be redeemed plus any accrued and unpaid interest (including any Additional Interest) to, but excluding, the Redemption Date.

"Reference Period" has the meaning set forth in Section 12.3(d).

"Registrar" has the meaning set forth in Section 2.3.

"Register" has the meaning set forth in Section 2.3.

"Registration Rights Agreement" means the Registration Rights Agreement, dated February 17, 2004, between the Company and Bear, Stearns & Co. Inc., as amended, modified or supplemented from time to time.

"Regular Record Date" has the meaning set forth in Exhibit A attached hereto.

"Responsible Officer" means (i) when used with respect to the Trustee, the officer within the Corporate Finance Unit of the Corporate Trust Division of the Trustee (or any successor unit, department or division of the Trustee) located at the Corporate Trust Office of the Trustee, who has direct responsibility for the administration of this Indenture and, for the purposes of Section 9.1(c)(ii) and the second sentence of Section 9.5 shall also include any officer of the Trustee to whom any corporate trust matter is referred because of such person's knowledge of and familiarity with the particular subject and (ii) when used with respect to the Company, means the Chief Executive Officer, the President or the Chief Financial Officer.

"Restricted Certificated Security" means a Certificated Security which is a Transfer Restricted Security.

"Restricted Global Security" means a Global Security that is a Transfer Restricted Security.

"Restricted Security" means a Restricted Certificated Security or a Restricted Global Security.

"Rule 144A" means Rule 144A under the Securities Act (or any successor provision), as it may be amended from time to time.

"SEC" means the United States Securities and Exchange Commission, or any successor thereto.

"Securities" means any of the Company's 4.0% Convertible Subordinated Notes due 2011, as amended or supplemented from time to time, issued under this Indenture.

"Securities Act" means the United States Securities Act of 1933, as amended, or any successor statute thereto and the rules and regulations thereunder.

"Senior Indebtedness" means the principal of, premium, if any, interest, including all interest accruing after the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowed as a claim in the proceeding, and rent payable on or in connection with, and all fees, costs, expenses and other amounts accrued, due or to become due, on or in connection with Indebtedness of the Company outstanding on the date of this Indenture or thereafter created, incurred, assumed, guaranteed or in effect guaranteed by the Company, including all deferrals, renewals, extensions or refundings of, or amendment, modifications or supplements to, the foregoing, unless in the case of any particular Indebtedness, the instrument creating or evidencing the same or the assumption or guarantee thereof expressly provides that such Indebtedness shall not be senior in right of the Securities.

Notwithstanding the foregoing, Senior Indebtedness does not include: (i) Indebtedness that expressly provides that such Indebtedness shall not be senior in right of payment to the Securities or expressly provides that such Indebtedness is on the same basis or junior to the Securities and; (ii) any Indebtedness to any of the Company's majority-owned subsidiaries, other than Indebtedness to a Subsidiary arising by reason of guarantees by the Company of Indebtedness of such Subsidiary to a person that is not a Subsidiary. Senior Indebtedness does

not include any of the Company's obligations with respect to its outstanding 6.0% Convertible Subordinated Debentures due 2007.

"Special Record Date" has the meaning set forth in Exhibit A attached hereto.

"Spin-Off" has the meaning set forth in Section 12.3(d).

"Stated Maturity", when used with respect to any Security, means February 15, 2011.

"Subsidiary" means any person of which at least a majority of the outstanding Voting Stock shall at the time directly or indirectly be owned or controlled by the Company or by one or more Subsidiaries or by the Company and one or more Subsidiaries.

"TIA" means the United States Trust Indenture Act of 1939 as in effect on the date of this Indenture, provided, however, that in the event the TIA is amended after such date, TIA means, to the extent required by any such amendment, the TIA as so amended.

"Trading Day" means a day during which trading in securities generally occurs on the Nasdaq National Market system or, if the Applicable Stock is not quoted on the Nasdaq National Market system, on the principal U.S. national or regional securities exchange on which the Applicable Stock is then listed or, if the Applicable Stock is not listed on a U.S. national or regional securities exchange, and not quoted on the Nasdaq National Market system, on the principal other market on which the Applicable Stock is then traded (provided that no day on which trading of the Applicable Stock is suspended on such exchange or other trading market will count as a Trading Day) (it being understood that for purposes of this definition a market shall include obtaining quotations as provided in the last sentence of the definition of "Closing Sales Price," if applicable).

"Transfer Certificate" has the meaning set forth in Section 2.12(f).

"Transfer Restricted Security" has the meaning set forth in Section 2.12(f).

"Trigger Event" has the meaning set forth in Section 12.3(d).

"Trustee" means the party named as the "Trustee" in the first paragraph of this Indenture until a successor replaces it pursuant to the applicable provisions of this Indenture and, thereafter, shall mean such successor. The foregoing sentence shall likewise apply to any such subsequent successor or successors.

"Unrestricted Certificated Security" means a Certificated Security that is not a Transfer Restricted Security.

"Unrestricted Global Security" means a Global Security that is not a Transfer Restricted Security.

"Voting Stock" of a person means the Equity Interest of such person of the class or classes pursuant to which the holders thereof have the general voting power under ordinary circumstances to elect at least a majority of the board of directors, managers or trustees of such person (irrespective of whether or not at the time the Equity Interest of any other class or classes shall have or might have voting power by reason of the happening of any contingency).

Section 1.2. Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture. The following TIA terms used in this Indenture have the following meanings:

"Commission" means the SEC.

"Indenture Securities" means the Securities.

"Indenture Security Holder" means a Holder.

"Indenture to be Qualified" means this Indenture.

"Indenture Trustee" or "Institutional Trustee" means the Trustee.

"Obligor" on the indenture securities means the Company.

All other TIA terms used but not defined in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule have the meanings assigned to them by such definitions.

Section 1.3. Rules of Construction.

Unless the context otherwise requires:

(a) a term has the meaning assigned to it;

(b) an accounting term not otherwise defined has the meaning assigned to it in accordance with accounting principles generally accepted in the United States as in effect from time to time;

(c) "or" is not exclusive;

(d) "including" means including, without limitation; and

(e) words in the singular include the plural, and words in the plural include the singular.

Section 1.4. Acts of Holders.

(a) Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by the Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders in person or by an agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee and, where it is hereby expressly required, to the Company, as described in Section 14.2. Such instrument or instruments (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the "Act" of the Holders signing such instrument or instruments. Proof of execution of any such instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section 1.4.

(b) The fact and date of the execution by any person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such instrument or writing acknowledged to such officer the execution thereof. Where such execution is by a signer acting in a capacity other than such signer's individual capacity, such certificate or affidavit shall also constitute sufficient proof of such signer's authority, if it so states. The fact and date of the execution of any such instrument or writing, or the authority of the person executing the same, may also be proved in any other manner which the Trustee deems sufficient.

(c) The principal amount and serial number of any Security and the ownership of Securities shall be proved by the Register maintained by the Registrar for the Securities.

(d) Any request, demand, authorization, direction, notice, consent, waiver or other Act of the Holder of any Security shall bind every future Holder of the same Security and the Holder of every Security issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Security.

(e) If the Company shall solicit from the Holders any request, demand, authorization, direction, notice, consent, waiver or other Act, the Company may, at its option, by or pursuant to a Board Resolution, fix in advance a record date for the determination of Holders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other Act, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other Act may be given before or after such record date, but only the Holders of record at the close of business on such record date shall be deemed to be Holders for the purposes of determining whether Holders of the requisite proportion of outstanding Securities have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other Act, and for that purpose the outstanding Securities shall be computed as of such record date; provided that no such authorization, agreement or consent by the Holders on such record date shall be deemed effective unless it shall become effective pursuant to the provisions of this Indenture not later than six months after the record date.

## ARTICLE II

## THE SECURITIES

Section 2.1. Form and Dating. (a) The Securities shall be designated as the "4.0% Convertible Subordinated Notes due 2011" of the Company. The aggregate principal amount of Securities outstanding at any time may not exceed $120,000,000 except as provided in Section 2.7.

The Securities and the Trustee's certificate of authentication shall be substantially in the form of Exhibit A attached hereto, which is incorporated in and made a part of this Indenture.



The Securities may have notations, legends or endorsements required by law, stock exchange rule or usage (provided that any such notation, legend or endorsement required by usage is in a form acceptable to the Company). The Company shall provide any such notations, legends or endorsements to the Trustee in writing. Each Security shall be dated the date of its authentication.

(b) *Restricted Global Securities*. All of the Securities are being offered and sold within the United States to QIBs in reliance on Rule 144A and shall be issued, initially in the form of one or more Restricted Global Securities, which shall be deposited with the Trustee at its Corporate Trust Office, as custodian for and registered in the name of DTC or the nominee thereof, duly executed by the Company and authenticated by the Trustee as hereinafter provided. Subject to Section 2.1(a), the aggregate principal amount of the Restricted Global Securities may from time to time be increased or decreased by adjustments made on the records of the Trustee and the Depositary as hereinafter provided.

(c) *Global Securities in General*. Each Global Security shall represent such of the outstanding Securities as shall be specified therein and each shall provide that it shall initially represent the aggregate amount of outstanding Securities stated thereon, but that the aggregate amount of outstanding Securities represented thereby may from time to time be reduced or increased, as appropriate, to reflect exchanges, redemptions, repurchases and conversions of such Securities.

Any adjustment of the aggregate principal amount of a Global Security to reflect the amount of any increase or decrease in the amount of outstanding Securities represented thereby shall be made by the Trustee in accordance with instructions given by the Holder thereof as required by Section 2.12 and shall be made on the records of the Trustee and the Depositary.

Neither any members of, or participants in, the Depositary (collectively, the "Agent Members") nor any other persons on whose behalf Agent Members may act may exercise any rights under this Indenture with respect to any Global Security registered in the

name of the Depositary or any nominee thereof, or under any such Global Security, and the Depositary or such nominee, as the case may be, may be treated by the Company, the Trustee and any agent of the Company or the Trustee as the absolute owner and holder of such Global Security for all purposes whatsoever. Notwithstanding the foregoing, nothing contained herein shall (A) prevent the Company, the Trustee or any agent of the Company or the Trustee from giving effect to any written certification, proxy or other authorization furnished by the Depositary or such nominee, as the case may be, or (B) impair, as between the Depositary, its Agent Members and any other person on whose behalf an Agent Member may act, the operation of customary practices of such Persons governing the exercise of the rights of a holder of any Security.

(d) *Certificated Securities*. Certificated Securities shall be issued only under the limited circumstances provided in Section 2.12(a)(i).

Section 2.2. Execution and Authentication.

The Securities shall be executed on behalf of the Company by any Officer. The signature of the Officer on the Securities may be manual or facsimile.

A Security bearing the manual or facsimile signature of an individual who was at the time of the execution of the Security an Officer shall bind the Company, notwithstanding that such individual has ceased to hold such office(s) prior to the authentication and delivery of such Securities or did not hold such office(s) at the date of authentication of such Securities.

No Security shall be entitled to any benefit under this Indenture or be valid or obligatory for any purpose unless there appears on such Security a certificate of authentication substantially in the form provided for herein duly executed by the Trustee by manual signature of an authorized signatory, and such certificate upon any Security shall be conclusive evidence, and the only evidence, that such Security has been duly authenticated and delivered hereunder.

The Trustee shall authenticate and deliver the Securities for original issuance in an aggregate principal amount of up to $120,000,000 upon one or more Company Orders without any further action by the Company (other than as contemplated below and in Section 14.4 and Section 14.5). The aggregate principal amount due at the Stated Maturity of the Securities outstanding at any time may not exceed the amount set forth in the foregoing sentence except as provided in Section 2.7. In authenticating such Securities, and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall receive and shall be fully protected in relying upon:

(a) a copy of the Board Resolution in or pursuant to which the terms and form of the Securities were established, the issuance and sale of the Securities was authorized, this Indenture was authorized and specified Officers were authorized to establish the form and determine the terms of the Securities and the form of this Indenture, to execute the Securities and this Indenture on behalf of the Company and to take any other necessary actions relating thereto and evidence of any actions taken by authorized Officers pursuant to that Board Resolution, certified by the Secretary, an Assistant Secretary or a Vice President of the Company to have been duly adopted by the Board of Directors or taken by any authorized Officer and to be in full force and effect as of the date of such certificate; and

(b) an Officers' Certificate delivered in accordance with Section 14.4 and Section 14.5.

(c) an Opinion of Counsel delivered in accordance with Section 14.4 and Section 14.5.

The Trustee shall act as the initial authenticating agent. Thereafter, the Trustee may appoint an authenticating agent acceptable to the Company to authenticate Securities. An authenticating agent may authenticate Securities whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent.

The Securities shall be issued only in registered form without coupons and only in denominations of $1,000 of principal amount and any integral multiple of $1,000.

Section 2.3. Registrar, Paying Agent and Conversion Agent.

Pursuant to Section 6.5, the Company shall maintain an office or agency where Securities may be presented for registration of transfer or for exchange ("Registrar"), an office or agency where Securities may be presented for redemption, repurchase or payment ("Paying Agent"), an office or agency where Securities may be presented for conversion ("Conversion Agent") and an

office or agency where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served. Pursuant to Section 6.5, the Company shall at all times maintain a Registrar, Paying Agent, Conversion Agent and an office or agency where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served in the Borough of Manhattan, New York City. The Registrar shall keep a register of the Securities (the "Register") and of their transfer and exchange.

The Company may have one or more co-registrars, one or more additional paying agents and one or more additional conversion agents. The term Paying Agent includes any additional paying agent, including any named pursuant to Section 6.5. The term Conversion Agent includes any additional conversion agent, including any named pursuant to Section 6.5.

The Company shall enter into an appropriate limited agency agreement with any Registrar, Paying Agent, Conversion Agent or co-registrar (in each case, if such Registrar, agent or co-registrar is a Person other than the Trustee). Each such agreement shall implement the provisions of this Indenture that relate to such agent. The Company shall notify the Trustee of the name and address of any such agent. If the Company fails to maintain a Registrar or Paying Agent, the Trustee shall act as such and shall be entitled to appropriate compensation therefor pursuant to Section 9.7. The Company or any Subsidiary or an Affiliate of either of them may act as Paying Agent, Registrar, Conversion Agent or co-registrar and, if the Company fails to maintain a Conversion Agent, the Company shall act as such.

The Company hereby initially appoints The Bank of New York as Registrar, Paying Agent and Conversion Agent in connection with the Securities. The initial office of the Registrar, Paying Agent and Conversion Agent shall be the office of the Trustee that is located in the Borough of Manhattan, New York City, which office on the date hereof is 101 Barclay Street, New York, New York 10286, Attention: Corporate Trust Division - Corporate Finance Unit.

Section 2.4. Paying Agent to Hold Assets in Trust.

Except as otherwise provided herein, prior to 10:00 a.m., New York City time, on each due date of payments in respect of any Security, the Company shall deposit with the Paying Agent, cash (in immediately available funds if deposited on the due date), sufficient to make such payments when so becoming due. The Company shall require each Paying Agent (other than the Trustee) to agree in writing that the Paying Agent shall hold in trust for the benefit of Holders or the Trustee all cash and Applicable Stock held by the Paying Agent for the making of payments in respect of the Securities and shall notify the Trustee of any default by the Company in making any such payment. The Company at any time may require a Paying Agent to pay all cash held by it to the Trustee, and to account for any funds disbursed by it, and the Trustee may at any time during the continuance of any such default, upon the written request to the Paying Agent, require such Paying Agent to forthwith pay to the Trustee all cash so held in trust. Upon doing so, the Paying Agent shall have no further liability for such cash.

Section 2.5. Holder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Holders. If the Trustee is not the Registrar, the Company shall cause to be furnished to the Trustee on or before each semiannual interest payment date and at such other times as the Trustee may request in writing a list in such

form and as of such date as the Trustee may reasonably require of the names and addresses of Holders.

Section 2.6. Transfer and Exchange.

(a) Subject to compliance with any applicable additional requirements contained in Section 2.12, when a Security is presented to the Registrar with a request to register a transfer thereof or to exchange such Security for an equal principal amount of Securities of other authorized denominations, the Registrar shall register the transfer or make the exchange as requested; provided, however, that every Security presented or surrendered for registration of transfer or exchange shall be duly endorsed or accompanied by an assignment form and, if applicable, a transfer certificate, each in the form included in Exhibit A attached hereto and in form satisfactory to the Registrar and each duly executed by the Holder thereof or its attorney duly authorized in writing. To permit registration of transfers and exchanges, upon surrender of any Security for registration of transfer or exchange at an office or agency maintained for such purpose pursuant to Section 2.3, the Company shall execute, and the Trustee shall authenticate, Securities of a like aggregate principal amount at the Registrar's request. Any transfer or exchange shall be without charge, except that the Company or the Registrar may require payment of a sum sufficient to pay all taxes, assessments or other governmental charges that may be imposed in connection with the transfer or exchange of the Securities from the Holder requesting such transfer or exchange.

Neither the Company, the Registrar nor the Trustee shall be required to exchange or register a transfer of (i) any Securities selected for redemption (except, in the case of Securities to be redeemed in part, the portion thereof not to be redeemed), or (ii) any Securities in respect of which a Purchase Notice or a Fundamental Change Purchase Notice has been given and not withdrawn by the Holder thereof in accordance with the terms of this Indenture (except, in the case of Securities to be repurchased in part, the portion thereof not to be repurchased), or (iii) any Securities surrendered for conversion (except, in the case of Securities to be converted in part, the portion thereof not to be converted). All Securities issued upon any transfer or exchange of Securities in accordance with this Indenture shall be valid obligations of the Company, evidencing the same debt and entitled to the same benefits under this Indenture, as the Securities surrendered upon such transfer or exchange.

(b) Any Registrar appointed pursuant to Section 2.3 shall provide to the Trustee such information as the Trustee may reasonably require in connection with the delivery by such Registrar of Securities upon transfer or exchange of Securities.

(c) The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Security (including any transfers between or among Agent Members or other beneficial owners of interests in any Global Security) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

Section 2.7. Replacement Securities.

If (a) any mutilated Security is surrendered to the Company, the Registrar or the Trustee, or (b) the Company, the Registrar and the Trustee receive evidence to their satisfaction of the destruction, loss or theft of any Security, and there is delivered to the Company, the Registrar and the Trustee such security or indemnity as may be requested by them to save each of them harmless, then, in the absence of notice to the Company, the Registrar or the Trustee that such Security has been acquired by a bona fide purchaser, the Company shall execute and upon its written request the Trustee shall authenticate and deliver, in exchange for any such mutilated Security or in lieu of any such destroyed, lost or stolen Security, a new Security of like tenor and principal amount, bearing a certificate number not contemporaneously outstanding.

In case any such mutilated, destroyed, lost or stolen Security has become or is about to become due and payable, or is about to be redeemed by the Company pursuant to Article III or repurchased by the Company pursuant to Article V, the Company in its discretion may, instead of issuing a new Security, pay, redeem or repurchase such Security, as the case may be.

Upon the issuance of any new Securities under this Section 2.7, the Company may require the payment of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee or the Registrar) connected therewith.

Every new Security issued pursuant to this Section 2.7 in lieu of any mutilated, destroyed, lost or stolen Security shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone, and shall be entitled to all benefits of this Indenture equally and proportionately with any and all other Securities duly issued hereunder.

The provisions of this Section 2.7 are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

Section 2.8. Outstanding Securities; Determinations of Holders' Action.

Securities outstanding at any time are all the Securities authenticated by the Trustee, except for:

(a) those cancelled by it,

(b) those paid, redeemed or repurchased pursuant to Section 2.7,

(c) those delivered to it for cancellation, and

(d) those described in this Section 2.8 as not outstanding.

A Security does not cease to be outstanding because the Company or an Affiliate thereof holds the Security; provided, however, that in determining whether the Holders of the requisite principal amount of Securities have given or concurred in any request, demand, authorization, direction, notice, consent, waiver, or other Act hereunder, Securities owned by the Company or any other obligor upon the Securities or any Affiliate of the Company or such other obligor shall be disregarded and deemed not to be outstanding, except that, in determining whether the Trustee

shall be protected in relying upon any such request, demand, authorization, direction, notice, consent, waiver or other Act, only Securities which a Responsible Officer of the Trustee actually knows to be so owned shall be so disregarded. Subject to the foregoing, only Securities outstanding at the time of such determination shall be considered in any such determination.

If a Security is replaced pursuant to Section 2.7, the replaced Security ceases to be outstanding unless the Trustee receives proof satisfactory to it that the replaced Security is held by a bona fide purchaser unaware that such Security has been replaced.

If the Paying Agent holds, in accordance with the terms of this Indenture, prior to 10:00 a.m., New York City time, on a Redemption Date, a Purchase Date, a Fundamental Change Purchase Date or Stated Maturity, as the case may be, cash or securities, if permitted hereunder, sufficient to pay Securities payable on that date, then on such Redemption Date, Purchase Date, Fundamental Change Purchase Date or Stated Maturity, as the case may be, such Securities shall cease to be outstanding and interest and Additional Interest, if any, on such Securities shall cease to accrue.

If a Security is converted in accordance with Article XII, then from and after the time of conversion on the date of conversion, such Security shall cease to be outstanding and interest and Additional Interest, if any, on such Security shall cease to accrue.

Section 2.9. Temporary Securities.

Pending the preparation of definitive Securities, the Company may execute, and upon Company Order, the Trustee shall authenticate and deliver, temporary Securities which are printed, lithographed, typewritten, mimeographed or otherwise produced, in any authorized denomination, substantially of the tenor of the definitive Securities in lieu of which they are issued and with such appropriate insertions, omissions, substitutions and other variations as the Officers executing such Securities may determine, as conclusively evidenced by their execution of such Securities.

If temporary Securities are issued, the Company shall cause definitive Securities to be prepared without unreasonable delay. After the preparation of definitive Securities, the temporary Securities shall be exchangeable for definitive Securities upon surrender of the temporary Securities at the office or agency of the Company designated for such purpose pursuant to Section 2.3, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Securities the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a like principal amount of definitive Securities of authorized denominations. Until so exchanged the temporary Securities shall in all respects be entitled to the same benefits and subject to the same limitations under this Indenture as definitive Securities.

Section 2.10. Cancellation.

All Securities surrendered for payment, repurchase by the Company pursuant to Article V, conversion, redemption or registration of transfer or exchange shall, if surrendered to any person other than the Trustee, be delivered to the Trustee and shall be promptly cancelled by it or, if surrendered to the Trustee, shall be promptly cancelled by it. The Company may at any time deliver to the Trustee for cancellation any Securities previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever, and all Securities so delivered shall be promptly cancelled by the Trustee. The Company may not issue new

Securities to replace Securities it has paid or delivered to the Trustee for cancellation or that any Holder has converted pursuant to Article XII. No Securities shall be authenticated in lieu of or in exchange for any Securities cancelled as provided in this Section 2.10, except as expressly permitted by this Indenture. All cancelled Securities held by the Trustee shall be disposed of by the Trustee in accordance with the Trustee's customary procedure.

Section 2.11. Persons Deemed Owners.

Prior to due presentment of a Security for registration of transfer, the Company, the Trustee, any Paying Agent and any agent of the Company, the Trustee or the Paying Agent may treat the person in whose name such Security is registered as the owner of such Security for the purpose of receiving payment of principal of, Redemption Price, Purchase Price or Fundamental Change Purchase Price, and interest and Additional Interest, if any, on, the Security, for the purpose of receiving cash or Applicable Stock upon conversion and for all other purposes whatsoever, whether or not such Security be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

Section 2.12. Additional Transfer and Exchange Requirements.

(a) *Transfer and Exchange of Global Securities*.

(i) Certificated Securities shall be issued in exchange for interests in the Global Securities only if (x) the Depositary notifies the Company that it is unwilling or unable to continue as Depositary for the Global Securities, (y) the Depositary ceases to be a "clearing agency" registered under the Exchange Act, if so required by applicable law or regulation and a successor Depositary is not appointed by the Company within 90 calendar days, or (z) an Event of Default has occurred and is continuing and the Registrar has received a request from the Depositary requesting such exchange. In either case, the Company shall execute, and the Trustee shall, upon receipt of a Company Order (which the Company agrees to deliver promptly), authenticate and deliver Certificated Securities in an aggregate principal amount equal to the principal amount of such Global Securities in exchange therefor. Only Restricted Certificated Securities shall be issued in exchange for beneficial interests in Restricted Global Securities, and only Unrestricted Certificated Securities shall be issued in exchange for beneficial interests in Unrestricted Global Securities. Certificated Securities issued in exchange for beneficial interests in Global Securities shall be registered in such names and shall be in such authorized denominations as the Depositary, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver or cause to be delivered such Certificated Securities to the Persons in

whose name such Securities are so registered. Such exchange shall be effected in accordance with the Applicable Procedures.

(ii) Notwithstanding any other provisions of this Indenture other than the provisions set forth in Section 2.12(a)(i), a Global Security may not be transferred except as a whole by the Depositary to a nominee of the Depositary or by a nominee of the Depositary to the Depositary or another nominee of the Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such successor Depositary.

(b) *Transfer and Exchange of Certificated Securities*. In the event that Certificated Securities are issued in exchange for beneficial interests in Global Securities in accordance with Section 2.12(a)(i), and, on or after such event, Certificated Securities are presented by a Holder to the Registrar with a request:

(x) to register the transfer of the Certificated Securities to a person who shall take delivery thereof in the form of Certificated Securities only; or

(y) to exchange such Certificated Securities for an equal principal amount of Certificated Securities of other authorized denominations,

such Registrar shall register the transfer or make the exchange as requested; provided, however, that the Certificated Securities presented or surrendered for register of transfer or exchange:

(i) shall be duly endorsed or accompanied by a written instrument of transfer in accordance with the proviso to the first paragraph of Section 2.6; and

(ii) in the case of a Restricted Certificated Security, such request shall be accompanied by the following additional information and documents, as applicable:

(A) if such Restricted Certificated Security is being delivered to the Registrar by a Holder for registration in the name of such Holder, without transfer, or such Restricted Certificated Security is being transferred to the Company or a Subsidiary of the Company, a certification to that effect from such Holder (in substantially the form set forth in the Transfer Certificate); or

(B) if such Restricted Certificated Security is being transferred to a person the Holder reasonably believes is a QIB in accordance with Rule 144A or pursuant to an effective registration statement under

the Securities Act, a certification to that effect from such Holder (in substantially the form set forth in the Transfer Certificate).

(c) *Transfer of a Beneficial Interests in a Restricted Global Security for a Beneficial Interest in an Unrestricted Global Security.* Any person having a beneficial interest in a Restricted Global Security may upon request, subject to the Applicable Procedures, transfer such beneficial interest to a person who is required or permitted to take delivery thereof in the form of an Unrestricted Global Security. Upon receipt by the Trustee of written instructions, or such other form of instructions as is customary for the Depositary, from the Depositary or its nominee on behalf of any person having a beneficial interest in a Restricted Global Security and the following additional information and documents in such form as is customary for the Depositary from the Depositary or its nominee on behalf of the person having such beneficial interest in the Restricted Global Security (all of which may be submitted by facsimile or electronically):

(i) if such beneficial interest is being transferred pursuant to an effective registration statement under the Securities Act, a certification to that effect from the Holder (in substantially the form set forth in the Transfer Certificate); or

(ii) if such beneficial interest is being transferred pursuant to an exemption from the registration requirements of the Securities Act in accordance with Rule 144, a certification to that effect from the Holder (in substantially the form set forth in the Transfer Certificate) and, if the Company or the Trustee so requests, a customary Opinion of Counsel.

The Trustee, as the Registrar, shall reduce or cause to be reduced the aggregate principal amount of the Restricted Global Security by the appropriate principal amount and shall increase or cause to be increased the aggregate principal amount of the Unrestricted Global Security by a like principal amount. Such transfer shall otherwise be effected in accordance with the Applicable Procedures. If no Unrestricted Global Security is then outstanding, the Company shall execute and the Trustee shall, upon receipt of a Company Order (which the Company agrees to deliver promptly), authenticate and deliver an Unrestricted Global Security.

(d) *Transfers of Certificated Securities for Beneficial Interest in Global Securities*. In the event that Certificated Securities are issued in exchange for beneficial interests in Global Securities and, thereafter, the events or conditions specified in Section 2.12(a)(i) which required such exchange shall cease to exist, the Company shall mail notice to the Trustee and to the Holders stating that Holders may exchange Certificated Securities or interests in Global Securities by complying with the procedures set forth in this Indenture and briefly describing such procedures and the events or circumstances requiring

that such notice be given. Thereafter, if Certificated Securities are presented by a Holder to a Registrar with a request:

(x) to register the transfer of such Certificated Securities to a person who shall take delivery thereof in the form of a beneficial interest in a Global Security, which request shall specify whether such Global Security shall be a Restricted Global Security or an Unrestricted Global Security, or

(y) to exchange such Certificated Securities for an equal principal amount of beneficial interests in a Global Security, which beneficial interests shall be owned by the Holder transferring such Certificated Securities (provided that in the case of such an exchange, Restricted Certificated Securities may be exchanged only for Restricted Global Securities and Unrestricted Certificated Securities may be exchanged only for Unrestricted Global Securities), the Registrar shall register the transfer or make the exchange as requested by canceling such Certificated Security and causing, or directing the Registrar to cause, the aggregate principal amount of the applicable Global Security to be increased accordingly and, if no such Global Security is then outstanding, the Company shall issue and the Trustee shall, upon receipt of a Company Order (which the Company agrees to deliver promptly) authenticate and deliver a new Global Security; provided, however, that the Certificated Securities presented or surrendered for registration of transfer or exchange:

(1) shall be duly endorsed or accompanied by a written instrument of transfer in accordance with the proviso to the first paragraph of Section 2.6;

(2) in the case of a Restricted Certificated Security to be transferred for a beneficial interest in an Unrestricted Global Security, such request shall be accompanied by the following additional information and documents, as applicable:

(i) if such Restricted Certificated Security is being transferred pursuant to an effective registration statement under the Securities Act, a certification to that effect from such Holder (in substantially the form set forth in the Transfer Certificate); or

(ii) if such Restricted Certificated Security is being transferred pursuant to an exemption from the registration requirements of the Securities Act in accordance with Rule 144, a certification to that effect from such Holder (in substantially the form set forth in the Transfer Certificate) and, if the Company or the Registrar so requests, a customary Opinion of Counsel;

(3) in the case of a Restricted Certificated Security to be transferred or exchanged for a beneficial interest in a Restricted Global Security, such request shall be accompanied by a certification from such Holder (in substantially the form set forth in the Transfer Certificate) to the effect that such Restricted Certificated Security is being transferred to a person the Holder reasonably believes is a QIB (which, in the case of an exchange, shall be such Holder) in accordance with Rule 144A.

(4) in the case of an Unrestricted Certificated Security to be transferred or exchanged for a beneficial interest in a Restricted Global Security, such request shall be accompanied by a certification from such Holder (in substantially, the form set forth in the Transfer Certificate) to the effect that such Unrestricted Certificated Security is being transferred to a person the Holder reasonably believes is a QIB (which, in the case of an exchange, shall be such Holder) in accordance with Rule 144A.

(e) *Legends*.

(1) Except as permitted by the following paragraphs (2), (3) and (4), each Global Security and Certificated Security (and all Securities issued in exchange therefor or upon registration of transfer or replacement thereof) shall bear a legend in substantially the form called for by footnote 2 to Exhibit A and footnote 1 to Exhibit B attached hereto (each a "Transfer Restricted Security"), for so long as it is required by this Indenture to bear such legend. Each Transfer Restricted Security shall have attached thereto a certificate (a "Transfer Certificate") in substantially the form called for by footnote 3 to Exhibit A attached hereto.

(2) Upon any sale or transfer of a Transfer Restricted Security (x) after the expiration of the holding period applicable to sales of the Securities under Rule 144(k) of the Securities Act, (y) pursuant to Rule 144 or (z) pursuant to an effective registration statement under the Securities Act:

(i) in the case of any Restricted Certificated Security, any Registrar shall permit the Holder thereof to exchange such Restricted Certificated Security for an Unrestricted Certificated Security, or (under the circumstances described in Section 2.12(e)) to transfer such Restricted Certificated Security to a transferee who shall take such Security in the form

of a beneficial interest in an Unrestricted Global Security, and in each case shall rescind any restriction on the transfer of such Security; provided, however, that the Holder of such Restricted Certificated Security shall, in connection with such exchange or transfer, comply with the other applicable provisions of this Section 2.12; and

(ii) in the case of any beneficial interest in a Restricted Global Security, the Trustee shall permit the beneficial owner thereof to transfer such beneficial interest to a transferee who shall take such interest in the form of a beneficial interest in an Unrestricted Global Security and shall rescind any restriction on transfer of such beneficial interest; provided, that such Unrestricted Global Security shall continue to be subject to the provisions of Section 2.12(a)(ii); and provided, further, that the owner of such beneficial interest shall, in connection with such transfer, comply with the other applicable provisions of this Section 2.12.

(3) Upon the exchange, registration of transfer or replacement of Securities not bearing the legend described in paragraph (1) above, the Company shall execute, and the Trustee upon receipt of a Company Request shall authenticate and deliver Securities that do not bear such legend and that do not have a Transfer Certificate attached thereto.

(4) After the expiration of the holding period pursuant to Rule 144(k) of the Securities Act, the Company shall remove any restriction of transfer on such Security, and the Company shall execute, and the Trustee upon receipt of a Company Request shall authenticate and deliver Securities that do not bear such legend and that do not have a Transfer Certificate attached thereto.

(5) Until the expiration of the holding period applicable to sales of the Securities under Rule 144(k) of the Securities Act or a transfer pursuant to Rule 144 or pursuant to an effective registration statement under the Securities Act, the Applicable Stock issued upon conversion of the Securities shall bear the legend in substantially the form called for by Exhibit B attached hereto.

(f) *Transfers to the Company*. Nothing contained in this Indenture or in the Securities shall prohibit the sale or other transfer of any Securities (including

beneficial interests in Global Securities) to the Company or any of its Subsidiaries. The Company shall ensure that if any such securities shall be reissued, such reissuance shall comply with applicable law and any securities reissued as Transfer Restricted Securities shall be assigned a different "CUSIP" number than any other securities.

(g) *Amendments to Rule 144(k)*. Notwithstanding any other provision in this Indenture, if Rule 144(k) as promulgated under the Securities Act is amended to shorten the two-year period under Rule 144(k), then the references to "two years" in the restrictive legend of each Transfer Restricted Security and footnote one to Exhibit A shall be deemed to refer to such shorter period, from and after receipt by the Trustee of the documents described in Section 2.12(e)(2) from the Company or from a Holder of a Transfer Restricted Security; provided that, a Transfer Restricted Security shall not be deemed to refer to such shorter period if to do so would be prohibited by, or would otherwise cause a violation of, the U.S. federal securities laws applicable at the time. As soon as practicable after a Responsible Officer of the Company receives notice of the effectiveness of any such amendment to shorten the two-year period under Rule 144(k), unless causing the Transfer Restricted Securities to refer to such shorter period would otherwise be prohibited by, or would otherwise cause a violation of, the U.S. federal securities laws applicable at the time, the Company will provide to the Trustee the documents described in Section 2.12(e)(2) respecting the effectiveness of such amendment.

Section2.13. CUSIP Numbers.

The Company may issue the Securities with one or more "CUSIP" numbers (if then generally in use), and, if so, the Trustee shall use "CUSIP" numbers in notices of redemption or repurchase as a convenience to Holders; provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption or repurchase and that reliance may be placed only on the other identification numbers printed on the Securities, and any such redemption or repurchase shall not be affected by any defect in or omission of such numbers. The Company shall promptly notify the Trustee of any change in the CUSIP numbers.

Section2.14. Ranking.

The Company agrees, and each holder of Securities by accepting the same agrees, that the indebtedness of the Company arising under or in connection with this Indenture and every outstanding Security issued under this Indenture from time to time constitutes and shall constitute a subordinate unsecured general obligation of the Company. The Securities will be subordinated in right of payment to all other existing and future Senior Indebtedness of the Company as provided in Section 4.1 hereof. Notwithstanding the foregoing, nothing in this Section 2.14 shall impair the claims of, or payments to, the Trustee under or pursuant to Sections 8.10 and 9.07, and the Trustee's rights to compensation, indemnification and reimbursement of expenses under Sections 8.10 and 9.07 are not subordinated.



## ARTICLE III

## REDEMPTION

Section 3.1. The Company's Right to Redeem; Notice to Trustee.

Prior to February 18, 2009, the Securities shall not be redeemable at the Company's option. On or after February 18, 2009, the Company, at its option, may redeem the Securities in accordance with this Article III for cash at any time as a whole, or from time to time in part, at the Redemption Price.

In the event that the Company elects to redeem the Securities on a date that is after any Regular Record Date but on or before the corresponding Interest Payment Date, the Company shall be required to pay any accrued and unpaid interest and Additional Interest, if any, to the holder of the redeemed Security and not the Holder on the corresponding Regular Record Date.

If the Company elects to redeem Securities, it shall notify the Trustee in writing of the Redemption Date, the principal amount of Securities to be redeemed and the Redemption Price. The Company shall give this notice to the Trustee by a Company Order at least 30 days before the Redemption Date (unless a shorter notice shall be satisfactory to the Trustee).

Section 3.2. Selection of Securities to Be Redeemed.

If fewer than all of the outstanding Securities are to be redeemed, unless the procedures of the Depositary provide otherwise, the Trustee shall select the Securities to be redeemed by lot or on a pro rata basis or by another method the Trustee, in its discretion, considers fair and appropriate. The Trustee shall make the selection within five Business Days after it receives the notice provided for in Section 3.1 from outstanding Securities not previously called for redemption.

Securities and portions of Securities that the Trustee selects shall be in principal amounts of $1,000 or an integral multiple of $1,000. Provisions of this Indenture that apply to Securities called for redemption also apply to portions of Securities called for redemption. The Trustee shall notify the Company promptly of the Securities or portions of the Securities to be redeemed.

Securities and portions of Securities that are to be redeemed are convertible by the Holder until 5:00 p.m., New York City time, on the second Business Day immediately preceding the Redemption Date. If any Security selected for partial redemption is converted in part before termination of the conversion right with respect to the portion of the Security so selected, the converted portion of such Security shall be deemed (so far as may be) to be the portion selected for redemption. Securities which have been converted during a selection of Securities to be redeemed may be treated by the Trustee as outstanding for the purpose of such selection.

Section 3.3. Notice of Redemption.

At least 20 calendar days but not more than 60 calendar days before a Redemption Date, the Company shall mail a notice of redemption by first-class mail, postage prepaid, to each Holder of Securities to be redeemed. The notice of redemption shall identify the Securities to be redeemed and shall state:

(a) the Redemption Date;

(b) the Redemption Price;

(c) the Conversion Rate and any adjustments thereto;

(d) the name and address of the Paying Agent and Conversion Agent;

(e) that Securities called for redemption may be converted at any time prior to 5:00 p.m., New York City time, on the second Business Day preceding the Redemption Date;

(f) that Holders who want to convert their Securities must satisfy the requirements set forth in Article XII;

(g) that Securities called for redemption must be surrendered to the Paying Agent to collect the Redemption Price;

(h) if fewer than all of the outstanding Securities are to be redeemed, the serial numbers, if any, and principal amounts of the particular Securities to be redeemed;

(i) that, unless the Company defaults in making payment of such Redemption Price, interest and Additional Interest, if any, on Securities called for redemption shall cease to accrue on and after the Redemption Date;

(j) the CUSIP number(s) of the Securities; and

(k) any other information the Company wants to present.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at the Company's expense; provided, however, that the Company makes such request at least five Business Days (unless a shorter period shall be satisfactory to the Trustee) prior to the date by which such notice of redemption must be given to Holders in accordance with this Section 3.3; provided, further, that the text of the notice of redemption shall be prepared by the Company.

Section 3.4. Effect of Notice of Redemption.

Once notice of redemption is given, Securities called for redemption become due and payable on the Redemption Date and at the Redemption Price, except for Securities which are converted in accordance with the terms of this Indenture. Upon surrender to the Paying Agent, such Securities shall be paid at the Redemption Price.

Section 3.5. Deposit of Redemption Price.

Prior to 10:00 a.m., New York City time, on the applicable Redemption Date, the Company shall deposit with the Paying Agent (or if the Company or a Subsidiary or an Affiliate of either of them is acting as the Paying Agent, shall segregate and hold in trust as provided in Section 2.4) an amount of cash (in immediately available funds if deposited on the Redemption

Date) sufficient to pay the aggregate Redemption Price of all Securities or portions thereof which are to be redeemed as of such Redemption Date other than Securities or portions of Securities called for redemption which on or prior thereto have been delivered by the Company to the Trustee for cancellation or have been converted.

If the Paying Agent holds, in accordance with the terms hereof, at 10:00 a.m., New York City time, on the applicable Redemption Date, cash sufficient to pay the Redemption Price of any Securities for which notice of redemption is given, then, on such Redemption Date, such Securities shall cease to be outstanding and interest and Additional Interest, if any, on such Securities shall cease to accrue, whether or not such Securities are delivered to the Paying Agent, and the rights of the Holders in respect thereof shall terminate (other than the right to receive the Redemption Price upon delivery of such Securities).

Section 3.6. Securities Redeemed in Part.

Any Certificated Security which is to be redeemed only in part shall be surrendered at the office of the Paying Agent and the Company shall execute and the Trustee shall authenticate and deliver to the Holder of such Security, without charge, a new Security or Securities, of any authorized denomination as requested by such Holder in aggregate principal amount equal to the unredeemed portion of the Security surrendered.

Section 3.7. Repayment to the Company.

To the extent that the aggregate amount of cash deposited by the Company pursuant to Section 3.5 exceeds the aggregate Redemption Price of the Securities or portions thereof which the Company is redeeming as of the Redemption Date, then, promptly after the Redemption Date, the Paying Agent shall return any such excess to the Company together with interest, if any, thereon.

Section 3.8. No Sinking Fund.

The Securities shall not have a sinking fund.

## ARTICLE IV

## SUBORDINATION

Section 4.1. Agreement of Subordination.

The Company agrees, and each holder of Securities by accepting the same agrees, that the Indebtedness evidenced by the Securities is subordinated in right of payment (to the extent and in the manner provided in this Article IV) to the prior payment in full in cash or payment satisfactory to holders of Senior Indebtedness of all Senior Indebtedness (whether outstanding on the date hereof or hereafter created, incurred or assumed), and that the subordination is for the benefit of the holders of Senior Indebtedness.

Section 4.2. Liquidation; Dissolution; Bankruptcy.

Upon any distribution to creditors of the Company in a liquidation or dissolution of the Company or in a bankruptcy, reorganization, insolvency, receivership or similar proceeding

relating to the Company or its property, in an assignment for the benefit of creditors or any marshaling of the Company's assets and liabilities:

(a) holders of Senior Indebtedness shall be entitled to receive payment in full of all Obligations due in respect of such Senior Indebtedness (including interest after the commencement of any such proceeding at the rate specified in the applicable Senior Indebtedness) in cash or other payment satisfactory to the holders of the Senior Indebtedness before holders of the Securities shall be entitled to receive any payment with respect to the Securities; and

(b) until all Senior Indebtedness is paid in full in cash or other payment satisfactory to the holders of the Senior Indebtedness, any distribution to which holders of the Securities would be entitled but for this Article IV shall be made to holders of Senior Indebtedness, as their interests may appear.

Section 4.3. Default on Designated Senior Indebtedness.

Anything in this Indenture to the contrary notwithstanding, no payment of Principal Amount, plus any accrued and unpaid interest (including any Additional Interest) on or other amounts due on the Securities, and no redemption, repurchase or other acquisition of the Securities, shall be made by or on behalf of the Company unless:

(a) full payment of all amounts then due for principal of and interest on, and of all other amounts then due on, all Designated Senior Indebtedness has been made or duly provided for pursuant to the terms of the instruments governing such Designated Senior Indebtedness; and

(b) at the time for, and immediately after giving effect to, any such payment, redemption, repurchase or other acquisition, there shall not exist under any Designated Senior Indebtedness, or any agreement pursuant to which any Designated Senior Indebtedness is issued, any default which shall not have been cured or waived and which default shall have resulted in the full amount of such Designated Senior Indebtedness being declared due and payable.

In addition, if a Responsible Officer of the Trustee at the Corporate Trust Office shall receive written notice from the holders of Designated Senior Indebtedness or their representative (a "Payment Blockage Notice") that there has occurred and is continuing under such Designated Senior Indebtedness, or any agreement pursuant to which such Designated Senior Indebtedness is issued, any non-payment default, which default shall not have been cured or waived, giving the holders of such Designated Senior Indebtedness the right to declare such Designated Senior Indebtedness immediately due and payable, then, anything in this Indenture to the contrary notwithstanding, no payment of Principal Amount, plus any accrued and unpaid interest (including any Additional Interest) on, or any other amounts due on the Securities, and no redemption, repurchase or other acquisition of the Securities, shall be made by or on behalf of the Company during the period (the "Payment Blockage Period") commencing on the date of receipt of the Payment Blockage Notice and ending on the earliest of (i) the date on which such default shall have been cured or waived, (ii) 179 days from the receipt of the Payment Blockage Notice and (iii) the date the Payment Blockage Notice is withdrawn by the holders of such

Designated Senior Indebtedness. Notwithstanding the provisions described in the immediately preceding sentence (but subject to the provisions contained in Section 4.2 and the first sentence of this Section 4.3), unless the holders of such Designated Senior Indebtedness or the representative of such holders shall have accelerated the maturity of such Designated Senior Indebtedness, the Company may resume payments on the Securities after the end of such Payment Blockage Period. Not more than one Payment Blockage Notice may be given in any consecutive 365-day period, irrespective of the number of defaults with respect to one or more issues of Designated Senior Indebtedness during such period.

Section 4.4. Acceleration of Convertible Subordinated Notes.

In the event of the acceleration of the Securities because of an Event of Default, the Company may not make any payment or distribution to the Trustee or any holder of Securities in respect of Obligations with respect to the Securities and may not acquire or purchase from the Trustee or any holder of Securities any Securities until all Senior Indebtedness has been paid in full in cash or other payment satisfactory to the holders of Senior Indebtedness or such acceleration is rescinded in accordance with the terms of this Indenture.

If payment of the Securities is accelerated because of an Event of Default, the Company shall promptly notify holders of Senior Indebtedness or trustees of such Senior Indebtedness of the acceleration.

Section 4.5. When Distribution Must Be Paid Over.

In the event that the Trustee, any holder of Securities or any other person receives any payment or distributions of assets of the Company of any kind with respect to the Securities in contravention of any subordination terms contained in this Indenture, whether in cash, property or securities, including, without limitation, by way of set-off or otherwise, then such payment shall be held by the recipient in trust for the benefit of holders of Senior Indebtedness, and shall be immediately paid over and delivered to the holders of Senior Indebtedness or their representative, to the extent necessary to make payment in full of all Senior Indebtedness remaining unpaid, after giving effect to any concurrent payment or distribution or provision therefor, to or for the holders of Senior Indebtedness; provided, however, that the foregoing shall apply to the Trustee only if a Responsible Officer of the Trustee has actual knowledge (as determined in accordance with Section 4.11) that such payment or distribution is prohibited by this Indenture.

With respect to the holders of Senior Indebtedness, the Trustee undertakes to perform only such obligations on the part of the Trustee as are specifically set forth in this Article IV, and no implied covenants or obligations with respect to the holders of Senior Indebtedness shall be read into this Indenture against the Trustee. The Trustee shall not be deemed to owe any fiduciary duty to the holders of Senior Indebtedness, and shall not be liable to any such holders if the Trustee shall in good faith mistakenly pay over or distribute to or on behalf of holders of Securities or the Company or any other person money or assets to which any holders of Senior Indebtedness shall be entitled by virtue of this Article IV.

Section 4.6. Subordination Notice by Company.

The Company shall promptly notify the Trustee in writing of any facts known to the Company that would cause a payment of any Obligations with respect to the Securities or the

purchase of any Securities by the Company to violate this Article IV, but failure to give such notice shall not affect the subordination of the Securities to the Senior Indebtedness as provided in this Article IV.

Notwithstanding the provisions of this or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts which would prohibit the making of any payment to or by the Trustee in respect of the Securities, unless and until a Responsible Officer of the Trustee shall have received written notice at the Corporate Trust Office from the Company or a holder of Senior Indebtedness or from any trustee or agent therefor; and, prior to the receipt of any such written notice, the Trustee shall be entitled in all respects to assume that no such facts exist; provided, however, that if a Responsible Officer of the Trustee shall not have received, at least three Business Days prior to the date upon which by the terms hereof any such money may become payable for any purpose, the notice with respect to such money provided for in this Section 4.6, then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to receive such money and to apply the same to the purpose for which such money was received and shall not be affected by any notice to the contrary which may be received by it within three Business Days prior to such date.

The Trustee shall be entitled to conclusively rely on the delivery to it of a written notice by a person representing himself to be a holder of Senior Indebtedness (or a trustee or agent on behalf of such holder) to establish that such notice has been given by a holder of Senior Indebtedness (or a trustee or agent on behalf of any such holder). In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any person as a holder of Senior Indebtedness to participate in any payment or distribution pursuant to this Article, the Trustee may request such person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Indebtedness held by such person, the extent to which such person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such person under this Article, and if such evidence is not furnished, the Trustee may defer any payment which it may be required to make for the benefit of such person pursuant to the terms of this Indenture pending judicial determination as to the rights of such person to receive such payment.

Section 4.7. Subrogation.

After all Senior Indebtedness is paid in full and until the Securities are paid in full, holders of Securities shall be subrogated (equally and ratably with all other indebtedness pari passu with the Securities) to the rights of holders of Senior Indebtedness to receive distributions applicable to Senior Indebtedness to the extent that distributions otherwise payable to the holders of Securities have been applied to the payment of Senior Indebtedness. A distribution made under this Article IV to holders of Senior Indebtedness that otherwise would have been made to holders of Securities is not, as between the Company and holders of Securities, a payment by the Company on the Securities.

Section 4.8. Relative Rights.

This Article IV defines the relative rights of holders of Securities and holders of Senior Indebtedness. Nothing in this Indenture shall:

(a) impair, as between the Company and holders of Securities, the obligation of the Company, which is absolute and unconditional, to pay the Principal Amount and interest (including any Additional Interest) on the Securities in accordance with their terms;

(b) affect the relative rights of holders of Securities and creditors (other than with respect to Senior Indebtedness) of the Company, other than their rights in relation to holders of Senior Indebtedness; or

(c) prevent the Trustee or any holder of Securities from exercising its available remedies upon a Default or Event of Default, subject to the rights of holders and owners of Senior Indebtedness to receive distributions and payments otherwise payable to holders of Securities.

If the Company fails because of this Article IV to pay the Principal Amount, plus any accrued and unpaid interest (including any Additional Interest) on a Security on the due date, the failure is still a Default or Event of Default.

Section 4.9. Subordination May Not Be Impaired by Company.

No right of any holder of Senior Indebtedness to enforce the subordination of the indebtedness evidenced by the Securities shall be impaired by any act or failure to act by the Company or any holder of Securities or by the failure of the Company or any such holder to comply with this Indenture.

Section 4.10. Distribution or Notice to Representative.

Whenever a distribution is to be made or a notice given to holders of Senior Indebtedness, the distribution may be made and the notice given to their representative.

Upon any payment or distribution of assets of the Company referred to in this Article IV, the Trustee and the holders of Securities shall be entitled to rely upon any order or decree made by any court of competent jurisdiction or upon any certificate of such representative or of the liquidating trustee or agent or other person making any distribution to the Trustee or to the holders of Securities for the purpose of ascertaining the persons entitled to participate in such distribution, the holders of the Senior Indebtedness and other indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article IV.

Section 4.11. Rights of Trustee and Paying Agent.

Notwithstanding the provisions of this Article IV or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts that would prohibit the making of any payment or distribution by the Trustee, and the Trustee may continue to make payments on the Securities, unless a Responsible Officer of the Trustee shall have received at the Corporate Trust Office at least five Business Days prior to the date of such payment or distribution written notice of facts that would cause such payment or distribution with respect to the Securities to violate this Article IV. Only the Company may give such notice.

Nothing in this Article IV shall impair the claims of, or payments to, the Trustee under or pursuant to Section 8.1 and Section 9.7 hereof, and the Trustee's rights to compensation, reimbursement and indemnification under Section 8.10 and Section 9.07 are not subordinated.

The Trustee in its individual or any other capacity may hold Senior Indebtedness with the same rights it would have if it were not Trustee.

Section 4.12. Authorization to Effect Subordination.

Each holder of a Security by the holder's acceptance thereof authorizes and directs the Trustee on the holder's behalf to take such action as may be necessary or appropriate to effectuate the subordination as provided in this Article IV, and appoints the Trustee to act as the holder's attorney-in-fact for any and all such purposes. If the Trustee does not file a proper proof of claim or proof of debt in the form required in any proceeding referred to in Section 8.9 hereof at least 30 days before the expiration of the time to file such claim, the holders of any Senior Indebtedness or their representatives are hereby authorized to file an appropriate claim for and on behalf of the holders of the Securities.

Section 4.13. Article Applicable to Paying Agents.

In case at any time any Paying Agent other than the Trustee shall have been appointed by the Company and be then acting hereunder, the term "Trustee" as used in this Article IV shall in such case (unless the context otherwise requires) be construed as extending to and including such Paying Agent within its meaning as fully for all intents and purposes as if such Paying Agent were named in this Article IV in addition to or in place of the Trustee; provided, however, that the second and third paragraphs of Section 4.11 shall not apply to the Company or any Subsidiary of the Company if it or such Subsidiary acts as Paying Agent.

Section 4.14. Senior Indebtedness Entitled to Rely.

The holders of Senior Indebtedness shall have the right to rely upon this Article IV, and no amendment or modification of the provisions contained herein shall diminish the rights of such holders unless the holders affected thereby shall have agreed in writing thereto.

Section 4.15. Permitted Payments.

Notwithstanding anything to the contrary in this Article IV, the holders of Securities may receive and retain at any time on or prior to Stated Maturity (i) securities that are subordinated to at least the same extent as the Securities to (a) Senior Indebtedness and (b) any securities issued in exchange for Senior Indebtedness and (ii) payments and other distributions made from any trust created pursuant to Section 10.1.

## ARTICLE V

## PURCHASE AT THE OPTION OF HOLDERS UPON A FUNDAMENTAL CHANGE

Section 5.1. Fundamental Change Put.

(a) In the event that a Fundamental Change shall occur at any time prior to February 15, 2011, each Holder shall have the right, at the Holder's option, but subject to the provisions of this Section 5.1, to require the Company to purchase, and upon the

exercise of such right, the Company shall purchase, all of such Holder's Securities not theretofore called for redemption, or any portion of the Principal Amount thereof that is equal to $1,000 or an integral multiple thereof, as directed by such Holder pursuant to this Section 5.1, on the date designated by the Company (the "Fundamental Change Purchase Date") that is a Business Day no later than 35 Business Days after the date of notice pursuant to Section 5.1(b) of the occurrence of a Fundamental Change (subject to extension to comply with applicable law). The Company shall be required to purchase such Securities at a purchase price in cash or subject to fulfillment by the Company of the conditions set forth in this Section 5, shares of Applicable Stock (valued at 95% of the market price of such stock), in an amount or value equal to 100% of the Principal Amount plus any accrued and unpaid interest (including any Additional Interest) to, but excluding, the Fundamental Change Purchase Date (the "Fundamental Change Purchase Price"). In the event that a Fundamental Change Purchase Date is a date that is after any Regular Record Date but on or before the corresponding Interest Payment Date, the Company shall be required to pay accrued and unpaid interest and Additional Interest, if any, to the holder of the repurchased Security and not the Holder on the Regular Record Date.

Subject to the fulfillment by the Company of the conditions set forth in this Section 5, the Company may elect to pay the Fundamental Change Purchase Price by delivering a number of shares of Common Stock equal to (i) the Fundamental Change Purchase Price divided by (ii) 95% of the average of the closing sales prices per share of Common Stock for the five consecutive Trading Days immediately preceding the second Trading Day prior to the Fundamental Change Purchase Date.

(b) No later than 20 calendar days after the occurrence of a Fundamental Change, the Company shall mail a written notice of the Fundamental Change by first class mail to the Trustee (and the Paying Agent if the Trustee is not then acting as Paying Agent) and to each Holder at its address shown in the Register of the Registrar, and to beneficial owners as required by applicable law. The notice shall include a form of Fundamental Change Purchase Notice to be completed by the Holder and shall briefly state, as applicable:

(i) the date of such Fundamental Change and, briefly, the events causing such Fundamental Change;

(ii) the date by which the Fundamental Change Purchase Notice must be delivered to the Paying Agent in order for a Holder to exercise the purchase right pursuant to this Section 5.1;

(iii) the Fundamental Change Purchase Date;

(iv) the Fundamental Change Purchase Price and whether the Fundamental Change Purchase Price will be paid in cash or Applicable Stock;

(v) the name and address of the Paying Agent and Conversion Agent;

(vi) the Conversion Rate and any adjustments thereto;

(vii) that the Securities as to which a Fundamental Change Purchase Notice has been given may be converted into Common Stock pursuant to Article XII of this Indenture only if the Fundamental Change Purchase Notice has been withdrawn in accordance with the terms of this Indenture;

(viii) that the Securities must be surrendered to the Paying Agent to collect payment;

(ix) that the Fundamental Change Purchase Price for any Security as to which a Fundamental Change Purchase Notice has been duly given and not withdrawn shall be paid promptly following the later of the Fundamental Change Purchase Date and the time of surrender of such Security as described in Section 5.1(b)(viii)

(x) the procedures the Holder must follow to exercise rights under this Section 5.1 and a brief description of such rights;

(xi) briefly, the conversion rights of the Securities, and that the Holder must satisfy the requirements set forth in the Indenture in order to convert the Securities;

(xii) the procedures for withdrawing a Fundamental Change Purchase Notice, including a form of notice of withdrawal;

(xiii) that, unless the Company defaults in making payment of such Fundamental Change Purchase Price, interest (including any Additional Interest), if any, on Securities surrendered for purchase by the Company shall cease to accrue on and after the Fundamental Change Purchase Date; and

(xiv) the CUSIP number(s) of the Securities.

Upon receipt of a Company Request, the Trustee shall give the notice of purchase right in the Company's name and at the Company's expense; provided, however, that the Company makes such request at least five Business Days (unless a shorter period shall be satisfactory to the Trustee) prior to the date by which such notice of purchase right must be given to the Holders in accordance with this Section 5.1(b); provided, further, that the text of the notice of purchase right shall be prepared by the Company.

If any of the Securities is in the form of a Global Security, then the Company shall modify such notice to the extent necessary to accord with the procedures of the Depositary applicable to the purchase of Global Securities.

Simultaneously with delivering the written notice pursuant to this Section 5.1(b), the Company shall publish a notice containing all information specified in such written notice in a newspaper of general circulation in New York, New York or publish such information on the Company's website, or through such other public medium that reasonably could be expected to inform Holders of such information.

(c) A Holder may exercise its rights specified in clause (a) of this Section 5.1 upon delivery of a written notice (which shall be in substantially the form included on the reverse side of the Securities entitled "Option of Holder to Elect Purchase" and which may be delivered by letter, overnight courier, hand delivery, facsimile transmission or in any other written form and, in the case of Global Securities, may be delivered electronically or by other means in accordance with the Depositary's customary procedures) of the exercise of such rights (a "Fundamental Change Purchase Notice") to the Paying Agent at any time on or before the 20th Business Day after the date of the Company's notice of the Fundamental Change (subject to extension to comply with applicable law).

The Fundamental Change Purchase Notice delivered by a Holder shall state (i) the Fundamental Change Purchase Date, (ii) if certificated Securities, the certificate number or numbers of the Security or Securities which the Holder shall deliver to be purchased (if not certificated, the notice must comply with Applicable Procedures), (iii) the portion of the Principal Amount of the Security which the Holder shall deliver to be purchased, which portion must be $1,000 or an integral multiple thereof, and (iv) that such Security shall be purchased pursuant to the terms and conditions specified in the Securities and this Indenture.

Delivery of a Security (together with all necessary endorsements) to the Paying Agent by book-entry transfer or physical delivery prior to, on or after the Fundamental Change Purchase Date at the offices of the Paying Agent is a condition to receipt by the Holder of the Fundamental Change Purchase Price therefor; provided, however, that such Fundamental Change Purchase Price shall be so paid pursuant to this Section 5.1 only if the Security so delivered to the Paying Agent shall conform in all respects to the description thereof in the related Fundamental Change Purchase Notice, as determined by the Company.

The Company shall purchase from the Holder thereof, pursuant to this Section 5.1, a portion of a Security if the Principal Amount of such portion is $1,000 or an integral multiple of $1,000. Provisions of the Indenture that apply to the purchase of all of a Security pursuant to Section 5.1 through Section 5.6 also apply to the purchase of such portion of such Security.

A Paying Agent shall promptly notify the Company of the receipt by it of any Fundamental Change Purchase Notice or written withdrawal thereof.

Anything herein to the contrary notwithstanding, in the case of Global Securities, any Fundamental Change Purchase Notice may be delivered or withdrawn and such Securities may be surrendered or delivered for purchase in accordance with the Applicable Procedures as in effect from time to time.

Section 5.2. Conditions to the Company's Election to Pay the Fundamental Change Purchase Price in Applicable Stock.

The Company may, at its option pay the Fundamental Change Purchase Price payable to Holders pursuant to Section 5.1 in shares of Applicable Stock, if the following conditions are satisfied:

(1) The Company shall have provided written notice of the Fundamental Change to the Trustee (and the Paying Agent if the Trustee is not then acting as Paying Agent) and to each Holder pursuant to Section 5.1(b).

(2) The shares of Applicable Stock to be so issued:

(a) shall be, or shall have been approved for, listing on a national securities exchange or quoted on the Nasdaq National Market, prior to the Fundamental Change Purchase Date;

(b) shall not require registration under the Securities Act or the Exchange Act before such shares may be freely transferable without being subject to any transfer restrictions under the Securities Act or if such registration is required, such registration shall be completed and shall become effective prior to the Fundamental Change Purchase Date;

(c) shall not require qualification or registration with, or approval of, any governmental authority under any state law before such shares may be validly issued or delivered or if such qualification or registration is required or such approval must be obtained, such qualification or registration shall be completed, or such approval shall be obtained, prior to the Fundamental Change Purchase Date; and

(d) shall, upon issuance, be duly and validly issued and fully paid and nonassessable, free and clear of any preemptive or similar rights.

Section 5.3. Effect of Fundamental Change Purchase Notice.

(a) Upon receipt by the Paying Agent of the Fundamental Change Purchase Notice specified in Section 5.1(c), the Holder of the Security in respect of which such Fundamental Change Purchase Notice was given shall (unless such Fundamental Change Purchase Notice is withdrawn as specified in the following paragraph) thereafter be entitled to receive the Fundamental Change Purchase Price with respect to such Security. Such Fundamental Change Purchase Price shall be paid to such Holder, subject to receipt of cash or if the conditions for payment in Applicable Stock set forth in Section 5 are fulfilled, Common Stock by the Paying Agent, promptly following the later of (a) the Fundamental Change Purchase Date with respect to such Security (provided the conditions in Section 5.1(c) have been satisfied) and (b) the time of book-entry transfer or delivery of such Security to the Paying Agent by the Holder thereof in the manner required by Section 5.1(c). Securities in respect of which a Fundamental Change Purchase Notice has been given by the Holder thereof may not be converted pursuant to Article XII on or after the date of the delivery of such



Fundamental Change Purchase Notice unless such Fundamental Change Purchase Notice has first been validly withdrawn as specified in the following paragraph.

(b) A Fundamental Change Purchase Notice may be withdrawn by means of a written notice (which may be delivered by letter, overnight courier, hand delivery, facsimile transmission or in any other written form and, in the case of Global Securities, may be delivered electronically or by other means in accordance with the Depositary's customary procedures) of withdrawal delivered by the Holder to the Paying Agent at any time prior to the close of business on the Business Day immediately preceding the Fundamental Change Purchase Date, specifying (a) the Principal Amount of the Security or portion thereof (which must be a Principal Amount of $1,000 or an integral multiple of $1,000 in excess thereof) with respect to which such notice of withdrawal is being submitted, (b) if certificated Securities have been issued, the certificate numbers of the withdrawn Securities, or if not certificated, such notice must comply with Applicable Procedures, and (c) the Principal Amount, if any, which remains subject to the Fundamental Change Purchase Notice. If a Fundamental Change Purchase Notice has been properly withdrawn pursuant to this Section 5.3(b) prior to the Fundamental Change Purchase Date, the Company shall not be obligated to purchase those Securities so identified in such notice of withdrawal.

Section 5.4. Deposit of Fundamental Change Purchase Price.

Prior to 10:00 a.m., New York City time, on the applicable Fundamental Change Purchase Date, the Company shall deposit with the Paying Agent (or if the Company or a Subsidiary or an Affiliate of either of them is acting as the Paying Agent, shall segregate and hold in trust as provided in Section 2.4) an amount of cash (in immediately available funds if deposited on such Business Day) or, if the conditions for payment in Applicable Stock set forth in this Section 5 are fulfilled, Common Stock with a value sufficient to pay the aggregate Fundamental Change Purchase Price of all the Securities or portions thereof which are to be purchased as of such

Fundamental Change Purchase Date.

If the Paying Agent holds, in accordance with the terms hereof, at 10:00 a.m., New York City time, on the applicable Fundamental Change Purchase Date, cash or Applicable Stock sufficient to pay the Fundamental Change Purchase Price of any Securities for which a Fundamental Change Purchase Notice has been tendered and not withdrawn pursuant to Section 5.3(b), then, on such Fundamental Change Purchase Date, such Securities shall cease to be outstanding and interest and Additional Interest, if any, on such Securities shall cease to accrue, whether or not such Securities are delivered to the Paying Agent, and the rights of the Holders in respect thereof shall terminate (other than the right to receive the Fundamental Change Purchase Price upon delivery of such Securities).

The Company shall publicly announce the Principal Amount of Securities purchased as a result of such Fundamental Change on or as soon as practicable after the Fundamental Change Purchase Date by publishing a notice containing such information in a newspaper of general circulation in New York, New York or by publishing such information on the Company's website, or through such other public medium that reasonably could be expected to inform Holders of such information.

Section 5.5. Securities Purchased in Part.

Any Certificated Security that is to be purchased only in part shall be surrendered at the office of the Paying Agent (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or such Holder's attorney duly authorized in writing) and promptly after the Fundamental Change Purchase Date the Company shall execute and the Trustee shall authenticate and deliver to the Holder of such Security, without charge, a new Security or Securities, of any authorized denomination or denominations as may be requested by such Holder, in aggregate Principal Amount equal to, and in exchange for, the portion of the Principal Amount of the Security so surrendered that is not purchased.

Section 5.6. Covenant to Comply With Securities Laws Upon Purchase of Securities.

When complying with the provisions of Section 5.1 hereof (provided that such offer or purchase constitutes an "issuer tender offer" for purposes of Rule 13e-4 (which term, as used herein, includes any successor provision thereto) under the Exchange Act at the time of such offer or purchase), and subject to any exemptions available under applicable law, the Company shall: (a) if applicable, comply with Rule 13e-4 and Rule 14e-1 (or any successor provision) under the Exchange Act; (b) file the related Schedule TO (or any successor schedule, form or report) if required under the Exchange Act; and (c) otherwise comply with all United States federal and state securities laws so as to permit the rights and obligations under this Article V to be exercised in the time and in the manner specified therein.

Section 5.7. Repayment to the Company.

To the extent that the aggregate amount of cash or Applicable Stock (valued in accordance with the provisions of Section 5.1(a) hereof) deposited by the Company pursuant to Section 5.4 exceeds the aggregate Fundamental Change Purchase Price of the Securities or portions thereof which the Company is obligated to purchase as of the Fundamental Change Purchase Date then, promptly after the Fundamental Change Purchase Date, the Paying Agent shall return any such excess to the Company together with interest, if any, thereon.

## ARTICLE VI

## COVENANTS

Section 6.1. Payment of Securities.

The Company shall pay interest on the Securities as provided in the Securities. The Company shall promptly make all payments in respect of the Securities on the dates and in the manner provided in the Securities or pursuant to this Indenture. Principal amount, Redemption Price, Purchase Price and Fundamental Change Purchase Price and accrued and unpaid interest and Additional Interest, if any, shall be considered paid on the applicable date due if by 10:00 a.m., New York City time, on such date the Paying Agent holds, in accordance with this Indenture, cash or securities, if permitted hereunder, sufficient to pay all such amounts then due. The Company shall, to the fullest extent permitted by law, pay interest on overdue principal and overdue installments of interest and Additional Interest, if any, at the rate borne by the Securities

per annum. All references in this Indenture or the Securities to interest shall be deemed to include Additional Interest, if any, payable pursuant to the Registration Rights Agreement.

Payment of the principal of and interest and Additional Interest, if any, on the Securities shall be in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts or in Applicable Stock, as the case may be.

Subject to Section 3.1 and Section 5.1, the Company shall pay interest and Additional Interest, if any, on the Securities to the Person in whose name the Securities are registered at the close of business on the Regular Record Date next preceding the corresponding Interest Payment Date. Any such interest and Additional Interest, if any, not so punctually paid or duly provided for shall forthwith cease to be payable to the Holder on such Regular Record Date and may be paid (a) to the Person in whose name the Securities are registered at the close of business on a Special Record Date for the payment of such defaulted interest and Additional Interest, if any, to be fixed by the Trustee, notice whereof shall be given to the Holders not less than 10 calendar days prior to such Special Record Date or (b) at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities may be listed, and upon such notice as may be required by such exchange.

The Holder must surrender the Securities to the Paying Agent to collect payment of principal. Payment of interest and Additional Interest, if any, on Certificated Securities in the aggregate principal amount of $5,000,000 or less shall be made by check mailed to the address of the Person entitled thereto as such address appears in the Register, and payment of interest and Additional Interest, if any, on Certificated Securities in aggregate principal amount in excess of $5,000,000 shall be made by wire transfer in immediately available funds at the election of such Holder. Notwithstanding the foregoing, so long as the Securities are registered in the name of a Depositary or its nominee, all payments with respect to the Securities shall be made by wire transfer of immediately available funds to the account of the Depositary or its nominee.

Section 6.2. SEC and Other Reports to the Trustee.

(a) The Company shall ensure delivery to the Trustee within 15 calendar days after it files such annual and quarterly reports, information, documents and other reports with the SEC, copies of its annual report and of the information, documents and other reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act in accordance with TIA Section 314(a). In the event the Company is at any time no longer subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, it shall continue to provide the Trustee with reports containing substantially the same information as would have been required to be filed with the SEC had the Company continued to have been subject to such reporting requirements. In such event, such reports shall be provided at the times the Company would have been required to provide reports had it continued to have been subject to such reporting requirements. The Company also shall comply with the other provisions of TIA Section 314(a). Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely conclusively on

Officers' Certificates). The Trustee shall have no duty or responsibility to review such reports, information or documents.

(b) The Company intends to file the reports referred to in paragraph (a) above in this Section 6.2 hereof with the SEC in electronic form pursuant to Regulation S-T of the SEC using the SEC's Electronic Data Gathering, Analysis and Retrieval ("EDGAR") system. Within 15 days after the Company files with the SEC copies of its annual reports and other information, documents and reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which it is required to file with the SEC pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, the Company shall file the same with the Trustee. The Company also shall comply with the other provisions of TIA 314(a). The Company may deliver such reports to the Trustee by electronic means in replace of mailing such reports, provided, however, the Trustee agrees to such other means in writing. The Trustee shall have no duty to search for or obtain any electronic or other filings that the Company makes with the SEC, regardless of whether such filings are periodic, supplemental or otherwise. Delivery of the reports, information and documents to the Trustee pursuant to this Section 6.2(b) shall be solely for the purposes of compliance with this Section 6.2(b) and with TIA Section 314(a). The Trustee's receipt of such reports, information and documents shall not constitute notice to it of the contents thereof or of any matter determinable from the content thereof, including the Company's compliance with any of its covenants hereunder, as to which the Trustee is entitled to rely upon Officers' Certificates.

Section 6.3. Compliance Certificate.

The Company shall deliver to the Trustee within 120 calendar days after the end of each fiscal year of the Company an Officers' Certificate, stating whether or not to the knowledge of the signers thereof, the Company is in compliance with all conditions and covenants under this Indenture.

Section 6.4. Further Instruments and Acts.

The Company shall execute and deliver such further instruments and do such further acts as may be reasonably necessary or proper to carry out more effectively the purposes of this Indenture.

Section 6.5. Maintenance of Office or Agency of the Trustee, Registrar, Paying Agent and Conversion Agent.

The Company shall maintain in the Borough of Manhattan, New York, New York, an office or agency of the Trustee, Registrar, Paying Agent and Conversion Agent where Securities may be presented or surrendered for payment, where Securities may be surrendered for registration of transfer, exchange, redemption, repurchase or conversion and where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served. The office of the Trustee located in New York City at Corporate Trust Office, shall initially be such office or agency for all of the aforesaid purposes. The Company shall give prompt written notice to the Trustee of the location, and of any change in the location, of any such office or agency (other than a change in the location of the office of the Trustee). If at any time the

Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the address of the Trustee set forth in Section 14.2.

The Company may also from time to time designate one or more other offices or agencies where the Securities may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in the Borough of Manhattan, New York, New York, for such purposes.

Section 6.6. Delivery of Information Required Under Rule 144A.

Upon the request of a Holder or any beneficial owner of Securities or holder or beneficial owner of Common Stock issued upon conversion thereof, the Company shall promptly furnish or cause to be furnished the information required pursuant to Rule 144A(d)(4) under the Securities Act to such Holder or any beneficial owner of Securities or holder or beneficial owner of Common Stock, or to a prospective purchaser of any such security designated by any such holder, as the case may be, to the extent required to permit compliance by such Holder or holder with Rule 144A under the Securities Act in connection with the resale of any such security. Whether a person is a beneficial owner shall be determined by the Company to the Company's reasonable satisfaction.

Section 6.7. Waiver of Stay, Extension or Usury Laws.

The Company covenants (to the extent that it may lawfully do so) that it shall not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay or extension law or any usury or other law wherever enacted, now or at any time hereafter in force, which would prohibit or forgive the Company from paying all or any portion of the Principal Amount, Redemption Price, Purchase Price or Fundamental Change Purchase Price in respect of Securities, or any interest and Additional Interest, if any, on such amounts, as contemplated herein, or which may affect the covenants or the performance of this Indenture; and the Company (to the extent that it may lawfully do so) hereby expressly waives all benefit or advantage of any such law, and covenants that it shall not hinder, delay or impede the execution of any power herein granted to the Trustee, but shall suffer and permit the execution of every such power as though no such law had been enacted.

Section 6.8. Statement by Officers as to Default.

The Company shall deliver to the Trustee, as soon as practicable and in any event within five Business Days after the Company becomes aware of the occurrence of any Default or Event of Default, an Officers' Certificate setting forth the details of such Default or Event of Default and the action which the Company proposes to take with respect thereto.

## ARTICLE VII

## SUCCESSOR CORPORATION

Section 7.1. When Company May Merge or Transfer Assets.

The Company shall not consolidate with or merge with or into any other person or convey, transfer, sell, lease or otherwise dispose of all or substantially all of its properties and assets to any person, unless:

(a) either (i) the Company shall be the continuing corporation or (ii) the Person (if other than the Company) formed by such consolidation or into which the Company is merged or the Person which acquires by conveyance, transfer, sale, lease or other disposition all or substantially all of the properties and assets of the Company substantially as an entirety (1) shall be organized and validly existing under the laws of the United States or any State thereof or the District of Columbia and (2) shall expressly assume, by an indenture supplemental hereto, executed and delivered to the Trustee, in form reasonably satisfactory to the Trustee, all of the obligations of the Company under the Securities, this Indenture and the Registration Rights Agreement and, to the extent applicable, otherwise comply with the provisions of Section 12.4;

(b) immediately after giving effect to such transaction, no Default shall have occurred and be continuing; and

(c) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that such consolidation, merger, conveyance, transfer, sale, lease or other disposition and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture, comply with this Article VII and that all conditions precedent herein provided for relating to such transaction have been satisfied.

For purposes of the foregoing, the transfer (by lease, assignment, sale or otherwise) of the properties and assets of one or more Subsidiaries, which, if such assets were owned by the Company, together with the assets of all of the other Subsidiaries of the Company, would constitute all or substantially all of the properties and assets of the Company, shall be deemed to be the transfer of all or substantially all of the properties and assets of the Company unless such transfer is to the Company or another Subsidiary. The successor Person formed by such consolidation or into which the Company is merged or the successor Person to which such conveyance, transfer, sale, lease or other disposition is made shall succeed to, and be substituted for, and may exercise every right and power of, the Company under this Indenture with the same effect as if such successor had been named as the Company herein; and thereafter, except in the case of a conveyance, transfer, sale, lease or other disposition and any obligations the Company may have under a supplemental indenture, the Company shall be discharged from all obligations and covenants under this Indenture and the Securities. Subject to Section 11.6, the Company, the Trustee and the successor Person shall enter into a supplemental indenture to evidence the succession and substitution of such successor Person and such discharge and release of the Company.

## ARTICLE VIII

## DEFAULTS AND REMEDIES

Section 8.1. Events of Default.

So long as any Securities are outstanding, each of the following shall be an "Event of Default":

(a) the failure by the Company to pay the principal amount of any Security when the same becomes due and payable whether at maturity or upon acceleration;

(b) the failure by the Company to pay any accrued and unpaid interest on any Security and Additional Interest, if any, in each case, when due and payable, and such default shall continue for a period of 30 days;

(c) the failure by the Company to convert any portion of any Security following the exercise by the Holder of the right to convert such Security into Common Stock pursuant to and in accordance with Article XII;

(d) the failure by the Company to redeem any Security, or any portion thereof, called for redemption by the Company pursuant to and in accordance with Article III and;

(e) the failure by the Company to purchase any Security, or any portion thereof, upon the exercise by the Holder of such Holder's right to require the Company to purchase such Securities pursuant to and in accordance with Article V;

(f) the failure by the Company to provide notice in the event of a Fundamental Change in accordance with Section 5.1(b);

(g) the failure by the Company to perform or observe any other term, covenant or agreement contained in the Securities or the Indenture for a period of 60 calendar days after written notice of such failure has been given, by certified mail, (1) to the Company by the Trustee or (2) to the Company and the Trustee by the Holders of at least 25% in aggregate principal amount of the Securities then outstanding;

(h) there shall have occurred a default under any credit agreement, mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness of the Company or any of its Subsidiaries for money borrowed whether such Indebtedness now exists, or is created after the date of this Indenture, which default (i) involves the failure to pay principal of or any premium or interest on such Indebtedness in an amount in excess of $7.5 million when such Indebtedness becomes due and payable at the stated maturity thereof, and such default shall continue after any applicable grace period or (ii) results in the acceleration of such Indebtedness prior to the stated maturity thereof, and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness so unpaid at its stated maturity or the stated maturity of which has been so accelerated, aggregates $10,000,000 or more;

(i) there shall be a failure by the Company or any of its Subsidiaries to pay final judgments not covered by insurance aggregating in excess of $7,500,000, which judgments are not paid, discharged or stayed for a period of 60 calendar days;

(j) the Company or any Designated Subsidiary, or any group of two or more Subsidiaries that, taken as a whole, would constitute a Designated Subsidiary, pursuant to or under or within the meaning of any Bankruptcy Law:

(i) commences a voluntary case or proceeding;

(ii) consents to the entry of any order for relief against it in an involuntary case or proceeding or the commencement of any case against it;

(iii) consents to the appointment of a Custodian of it or for any substantial part of its property;

(iv) makes a general assignment for the benefit of its creditors;

(v) files a petition in bankruptcy or answer or consent seeking reorganization or relief; or

(vi) consents to the filing of such petition or the appointment of or taking possession by a Custodian; or

(k) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Company or any Designated Subsidiary in an involuntary case or proceeding, or adjudicates the Company or any Designated Subsidiary insolvent or bankrupt;

(ii) appoints a Custodian of the Company or any Designated Subsidiary or for any substantial part of the property of either; or

(iii) orders the winding up or liquidation of the Company or any Designated Subsidiary, and the order of decree remains unstayed and in effect for 60 days.

Section 8.2. Acceleration.

If an Event of Default (other than an Event of Default specified in Section 8.1(j) or Section 8.1(k) with respect to the Company) occurs and is continuing (including an Event of Default specified in Section 8.1(j) or Section 8.1(k) with respect to one or more Designated Subsidiaries), the Trustee by notice to the Company, or the Holders of at least 25% in aggregate principal amount of the Securities at the time outstanding by notice to the Company and the

Trustee, may declare the principal amount plus accrued and unpaid interest and Additional Interest, if any, on all the Securities to be immediately due and payable.

Upon such a declaration, such accelerated amount shall be due and payable immediately.

If an Event of Default specified in Section 8.1(j) or Section 8.1(k) occurs with respect to the Company and is continuing, the principal amount plus accrued and unpaid interest and Additional Interest, if any, on all the Securities shall become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holders.

The Holders of not less than a majority in aggregate principal amount of the Securities at the time outstanding, by notice to the Trustee (and without notice to any other Holder) may rescind an acceleration and its consequences if the rescission would not conflict with any judgment or decree of a court of competent jurisdiction and if all existing Events of Default have been cured or waived except nonpayment of the Principal Amount plus accrued and unpaid interest and Additional Interest, if any, that have become due solely as a result of acceleration. No such rescission shall affect any subsequent Default or impair any right consequent thereto.

Section 8.3. Other Remedies.

If an Event of Default occurs and is continuing, the Trustee may, but shall not be obligated to, pursue any available remedy to collect the payment of the Principal Amount plus accrued and unpaid interest and Additional Interest, if any, on the Securities or to enforce the performance of any provision of the Securities or this Indenture.

The Trustee may maintain a proceeding even if the Trustee does not possess any of the Securities or does not produce any of the Securities in the proceeding. A delay or omission by the Trustee or any Holder in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of, or acquiescence in, the Event of Default. No remedy is exclusive of any other remedy. All available remedies are cumulative.

Section 8.4. Waiver of Existing Defaults.

Subject to Section 8.7 and Section 11.2, the Holders of a majority in aggregate principal amount of the Securities at the time outstanding, by notice to the Trustee (and without notice to any other Holder), may waive certain provisions of this Indenture relating to the Securities, except for: (a) an Event of Default described in Section 8.1(a), Section 8.1(b), or Section 8.1(c); or (b) a Default in respect of any provision of this Indenture or the Securities, which, under Section 11.2, cannot be amended or modified without the consent of each Holder affected thereby.

When a Default is waived, it is deemed cured, but no such waiver shall extend to any subsequent or other Default or impair any consequent right. This Section 8.4 shall be in lieu of Section 316(a)1(B) of the TIA and such Section 316(a)1(B) is hereby expressly excluded from this Indenture, as permitted by the TIA.

Section 8.5. Control by Majority.

The Holders of a majority in aggregate principal amount of the Securities at the time outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or of exercising any trust or power conferred on the Trustee. However,

the Trustee may refuse to follow any direction that conflicts with law or this Indenture or that the Trustee determines in good faith is prejudicial to the rights of other Holders or would involve the Trustee in personal liability or expense unless the Trustee is provided security or indemnity satisfactory to it. This Section 8.5 shall be in lieu of Section 316(a)1(A) of the TIA and such Section 316(a)1(A) is hereby expressly excluded from this Indenture, as permitted by the TIA.

Section 8.6. Limitation on Suits.

A Holder may not pursue any remedy with respect to this Indenture or the Securities unless:

(a) the Holder gives to the Trustee written notice stating that an Event of Default is continuing;

(b) the Holders of at least 25% in aggregate principal amount of the Securities at the time outstanding make a written request to the Trustee to pursue the remedy;

(c) such Holder or Holders provide to the Trustee security or indemnity satisfactory to the Trustee against any loss, liability or expense;

(d) the Trustee does not comply with the request within 60 days after receipt of such notice, request and offer of security or indemnity; and

(e) the Holders of a majority in aggregate principal amount of the Securities at the time outstanding do not give the Trustee a direction inconsistent with the request during such 60-day period.

A Holder may not use this Indenture to prejudice the rights of any other Holder or to obtain a preference or priority over any other Holder.

Section 8.7. Rights of Holders to Receive Payment or to Convert.

Notwithstanding any other provision of this Indenture, the right of any Holder to receive payment of the Principal Amount, Redemption Price, Purchase Price, Fundamental Change Purchase Price or interest and Additional Interest, if any, in respect of the Securities held by such Holder, on or after the respective due dates expressed in the Securities and in this Indenture, and to convert such Securities in accordance with Article XII, or to bring suit for the enforcement of any such payment on or after such respective dates or the right to convert, is absolute and unconditional and shall not be impaired or affected adversely without the consent of such Holder.

Section 8.8. Collection Suit by Trustee.

If an Event of Default described in Section 8.1(a), Section 8.1(b), Section 8.1(d) or Section 8.1(e) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Company or another obligor on the Securities for the whole amount owing with respect to the Securities and the amounts provided for in Section 9.7.

Section 8.9. Trustee May File Proofs of Claim.

In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to the Company or any other obligor upon the Securities or the property of the Company or of such other obligor or their creditors, the Trustee (irrespective of whether the Principal Amount, Redemption Price, Purchase Price, Fundamental Change Purchase Price or interest and Additional Interest, if any, in respect of the Securities shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Company for the payment of any such amount) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(a) to file and prove a claim for the whole amount of the Principal Amount, Redemption Price, Purchase Price, Fundamental Change Purchase Price, or interest and Additional Interest, if any, and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel or any other amounts due the Trustee under Section 9.7) and of the Holders allowed in such judicial proceeding, and

(b) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 9.7.

Nothing contained herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 8.10. Priorities.

After an Event of Default any money or other property distributable in respect of the Company's obligations under this Indenture shall be paid in the following order:

FIRST: to the Trustee (including any predecessor trustee) for amounts due under Section 9.7;

SECOND: to Holders for amounts due and unpaid on the Securities for the Principal Amount, Redemption Price, Purchase Price, Fundamental Change Purchase Price or interest and Additional Interest, if any, as the case may be, ratably, without preference or priority of any kind, according to such amounts due and payable on the Securities; and

THIRD: the balance, if any, to the Company.

The Trustee may fix a record date and payment date for any payment to Holders pursuant to this Section 8.10. At least 10 calendar days prior to such record date, the Trustee shall mail to each Holder and the Company a notice that states the record date, the payment date and the amount to be paid.

Section 8.11. Undertaking for Costs.

In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as Trustee, a court in its discretion may require the filing by any party litigant (other than the Trustee) in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees and expenses, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section 8.11 does not apply to a suit by the Trustee, a suit by a Holder pursuant to Section 8.7 or a suit by Holders of more than 10% in aggregate principal amount of the Securities at the time outstanding. This Section 8.11 shall be in lieu of Section 315(e) of the TIA and such Section 315(e) is hereby expressly excluded from this Indenture, as permitted by the TIA.

## ARTICLE IX

## TRUSTEE

Section 9.1. Duties of Trustee.

(a) If an Event of Default has occurred and is continuing, the Trustee shall exercise the rights and powers vested in it by this Indenture and use the same degree of care and skill in their exercise as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.

(b) Except during the continuance of an Event of Default:

(i) the Trustee need perform only those duties that are specifically set forth in this Indenture and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture, but in the case of any such certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture, but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein.



This Section 9.1(b) shall be in lieu of Section 315(a) of the TIA and such Section 315(a) is hereby expressly excluded from this Indenture, as permitted by the TIA.

(c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) this clause (c) does not limit the effect of clause (b) or (d) of this Section 9.1;

(ii) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer of the Trustee unless it is proved that the Trustee was negligent in ascertaining the pertinent facts; and

(iii) the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 8.5.

Subparagraphs (c)(i), (ii) and (iii) shall be in lieu of Sections 315(d)(1), 315(d)(2) and 315(d)(3) of the TIA, respectively, and such Sections 315(d)(1), 315(d)(2) and 315(d)(3) are hereby expressly excluded from this Indenture, as permitted by the TIA.

(d) The Trustee may refuse to perform any duty or exercise any right or power or expend or risk its own funds or otherwise incur any financial liability unless it receives security or indemnity reasonably satisfactory to it against any loss, liability or expense.

(e) Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law. The Trustee (acting in any capacity hereunder) shall be under no liability for interest on any money received by it hereunder unless otherwise agreed in writing with the Company.

(f) The Trustee shall comply with the reporting requirements set forth in Section 313 of the TIA.

(g) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraphs (a), (b), (c) and (d) of this Section.

Section 9.2. Rights of Trustee.

Subject to its duties and responsibilities under the TIA and this Indenture,

(a) the Trustee may conclusively rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document (whether in its original or facsimile form) believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) whenever in the administration of this Indenture the Trustee shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, the Trustee (unless other evidence be herein specifically prescribed) may, in the absence of bad faith on its part, conclusively rely upon an Officers' Certificate;

(c) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder;

(d) the Trustee shall not be liable for any action taken, suffered, or omitted to be taken by it in good faith which it reasonably believes to be authorized or within its rights or powers conferred under this Indenture;

(e) the Trustee may consult with counsel selected by it and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or suffered or omitted by it hereunder in good faith and in reliance on such advice or Opinion of Counsel;

(f) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Holders, pursuant to the provisions of this Indenture, unless such Holders shall have provided to the Trustee security or indemnity satisfactory to it against the costs, expenses and liabilities which may be incurred therein or thereby;

(g) any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order and any resolution of the Board of Directors may be sufficiently evidenced by a Board Resolution;

(h) the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney at the sole cost of the Company and shall incur no liability or additional liability of any kind by reason of such inquiry or investigation;

(i) the Trustee shall not be deemed to have notice of any Default or Event of Default unless a Responsible Officer of the Trustee has actual knowledge thereof or unless written notice of such Default or Event of Default is received by the Trustee at the Corporate Trust Office of the Trustee, and such notice references the Securities and this Indenture;

(j) the rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and

shall be enforceable by, the Trustee in each of its capacities hereunder, and to each agent, custodian and other person employed to act hereunder;

(k) the Trustee may request that the Company deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded;

(l) to the extent permitted by the TIA, in no event shall the Trustee be responsible or liable for special, indirect, or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action; and

(m) The Trustee shall not be responsible or liable for any failure or delay in the performance of its obligations under this Indenture arising out of or caused, directly or indirectly, by circumstances beyond its reasonable control, including, without limitation, acts of God; earthquakes; fire; flood; terrorism; wars and other military disturbances; sabotage; epidemics; riots; interruptions; loss or malfunctions of utilities, computer (hardware or software) or communication services; accidents; labor disputes; acts of civil or military authority and governmental action.

Section 9.3. Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or its Affiliates with the same rights it would have if it were not Trustee; provided that the Trustee must comply with Section 9.10 and Section 9.11. Any Paying Agent, Registrar, Conversion Agent or co-registrar may do the same with like rights.

Section 9.4. Trustee's Disclaimer.

The Trustee makes no representation as to the validity or adequacy of this Indenture or the Securities, it shall not be accountable for the Company's use or application of the proceeds from the Securities, it shall not be responsible for any statement in any registration statement for the Securities under the Securities Act or in any offering document for the Securities, this Indenture or the Securities (other than its certificate of authentication), or the determination as to which beneficial owners are entitled to receive any notices hereunder.

Section 9.5. Notice of Defaults.

If a Default occurs and if it is known to a Responsible Officer of the Trustee, the Trustee shall give to each Holder notice of the Default within 90 calendar days after it occurs or, if later, within 15 calendar days after it is known to the Trustee, unless such Default shall have been cured or waived before the giving of such notice. Notwithstanding the preceding sentence, except in the case of a Default described in Section 8.1(a), Section 8.1(b), Section 8.1(d) or Section 8.1(e), the Trustee may withhold the notice if and so long as the Responsible Officer of the Trustee or a committee of its Responsible Officers or a committee of its executive officers in

good faith determines that withholding the notice is in the interest of the Holders. The preceding sentence shall be in lieu of the proviso to Section 315(b) of the TIA and such proviso is hereby expressly excluded from this Indenture, as permitted by the TIA.

Section 9.6. Reports by Trustee to Holders.

Within 60 days after each May 15 beginning with the May 15 following the date of this Indenture, the Trustee shall mail to each Holder a brief report dated as of such May 15 that complies with TIA Section 313(a), if required by such Section 313(a). The Trustee also shall comply with TIA Section 313(b).

A copy of each report at the time of its mailing to Holders shall be filed with the SEC and each securities exchange, if any, on which the Securities are listed. The Company agrees to notify the Trustee promptly whenever the Securities become listed on any securities exchange and of any delisting thereof.

Section 9.7. Compensation and Indemnity.

The Company agrees to:

(a) pay to the Trustee from time to time such compensation as the Company and the Trustee shall from time to time agree in writing for all services rendered by it hereunder (which compensation shall not be limited (to the extent permitted by law) by any provision of law in regard to the compensation of a trustee of an express trust);

(b) reimburse the Trustee upon its request for all expenses, disbursements and advances incurred or made by the Trustee in accordance with any provision of this Indenture (including the reasonable compensation expenses, advances and disbursements of its agents and counsel), except any such expense, disbursement or advance as may be attributable to its own negligence or willful misconduct; and

(c) fully indemnify the Trustee or any predecessor Trustee and their agents for, and to hold them harmless against, any and all loss, damage, claim, liability, cost or expense (including attorney's fees and expenses, and taxes (other than taxes based upon, measured by or determined by the income of the Trustee)) incurred without the Trustee's negligent action, negligent failure to act or willful misconduct, arising out of or in connection with the acceptance or administration of this trust, including the costs and expenses of defending itself against any claim (whether asserted by the Company or any Holder or any other person) or liability in connection with the exercise or performance of any of its powers or duties hereunder, or in connection with enforcing the provisions of this Section 9.7.

With regard to its indemnification rights under Section 9.7(c) where the Company has assumed the defense in any action or proceeding, the Trustee shall have the right to employ separate counsel in any such action or proceeding and participate in the investigation and defense thereof, and the Company shall pay the reasonable fees and expenses of such separate counsel; provided, however, that the Trustee may only employ separate counsel at the expense of the Company if in the reasonable determination of the Trustee (i) a conflict of interest exists by reason of common representation or (ii) there are legal defenses available to the Trustee that are

different from or are in addition to those available to the Company or (iii) if all parties commonly represented do not agree as to the action (or inaction) of counsel.

To secure the Company's payment obligations in this Section 9.7, the Trustee shall have a lien prior to the Securities on all money or property held or collected by the Trustee, except that held in trust to pay the Principal Amount, Redemption Price, Purchase Price, Fundamental Change Purchase Price or interest and Additional Interest, if any, as the case may be, on particular Securities.

The Company's payment obligations pursuant to this Section 9.7 and the lien referred to in this Section 9.7 shall survive the discharge of this Indenture and the resignation or removal of the Trustee. When the Trustee incurs expenses after the occurrence of a Default specified in Section 8.1(j) or Section 8.1(k), the expenses including the reasonable charges and expenses of its counsel, are intended to constitute expenses of administration under any Bankruptcy Law.

Section 9.8. Replacement of Trustee.

The Trustee may resign by so notifying the Company; provided, however, that no such resignation shall be effective until a successor Trustee has accepted its appointment pursuant to this Section 9.8. The Holders of a majority in aggregate principal amount of the Securities at the time outstanding may remove the Trustee by so notifying the Trustee and the Company. The Company shall remove the Trustee if:

(a) the Trustee fails to comply with Section 9.10;

(b) the Trustee is adjudged bankrupt or insolvent;

(c) a receiver or public officer takes charge of the Trustee or its property; or

(d) the Trustee otherwise becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint, by resolution of its Board of Directors, a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company satisfactory in form and substance to the retiring Trustee and the Company. Thereupon the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture. The successor Trustee shall mail a notice of its succession to Holders. The retiring Trustee shall promptly transfer all property held by it as Trustee to the successor Trustee, upon payment of all the retiring Trustee's fees and expenses then due and payable and subject to the lien provided for in Section 9.7.

If a successor Trustee does not take office within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Holders of a majority in aggregate principal amount of the Securities at the time outstanding may petition at the expense of the Company any court of competent jurisdiction at the expense of the Company for the appointment of a successor Trustee.

If the Trustee fails to comply with Section 9.10, any Holder may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

Section 9.9. Successor Trustee by Merger.

If the Trustee consolidates with, merges or converts into, or transfers all or substantially all its corporate trust business or assets to, another corporation, the resulting, surviving or transferee corporation without any further act shall be the successor Trustee.

Section 9.10. Eligibility; Disqualification.

The Trustee and any successor Trustee shall at all times satisfy the requirements of TIA Sections 310(a)(1) and 310(b). The Trustee (or its parent holding company) shall have a combined capital and surplus of at least $50,000,000 as set forth in its most recent published annual report of condition. Nothing contained herein shall prevent the Trustee from filing with the Commission the application referred to in the penultimate paragraph of TIA Section 310(b). If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section 9.10, it shall resign immediately in the manner and with the effect specified above in this Article.

Section 9.11. Preferential Collection of Claims Against Company.

The Trustee shall comply with TIA Section 311(a), excluding any creditor relationship listed in TIA Section 311(b). A Trustee who has resigned or been removed shall be subject to TIA Section 311(a) to the extent indicated therein.

## ARTICLE X

## DISCHARGE OF INDENTURE

Section 10.1. Discharge of Liability on Securities.

When (i) the Company delivers to the Trustee all outstanding Securities (other than Securities replaced or repaid pursuant to Section 2.7) for cancellation or (ii) all outstanding Securities have become due and payable (whether at the Stated Maturity or upon acceleration, or on any Redemption Date, Purchase Date or Fundamental Change Purchase Date, or upon conversion) and the Company deposits with the Paying Agent or Conversion Agent cash or Applicable Stock sufficient to pay all amounts due and owing on all outstanding Securities (other than Securities replaced pursuant to Section 2.7), and if in either case the Company pays all other sums payable hereunder by the Company, then this Indenture shall, subject to Section 9.7, cease to be of further effect subject to any extension required by Section 12. to effect settlement upon conversion of the Notes. The Trustee shall join in the execution of a document prepared by the Company acknowledging satisfaction and discharge of this Indenture on demand of the Company accompanied by an Officers' Certificate and Opinion of Counsel and at the cost and expense of the Company.

Section 10.2. Repayment to the Company.

The Trustee and the Paying Agent shall return to the Company upon written request any cash or securities held by them for the payment of any amount with respect to the Securities that

remains unclaimed for two years, subject to applicable unclaimed property law. After return to the Company, Holders entitled to the cash or securities must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person and the Trustee and the Paying Agent shall have no further liability to the Holders with respect to such cash or securities for that period commencing after the return thereof.

## ARTICLE XI

## AMENDMENTS

Section 11.1. Without Consent of Holders.

The Company and the Trustee may amend this Indenture or the Securities without the consent of any Holder to:

(a) add to the covenants of the Company for the benefit of the Holders of Securities;

(b) surrender any right or power herein conferred upon the Company;

(c) provide for conversion rights of Holders of Securities if any reclassification or change of the Common Stock or any consolidation, merger or sale of all or substantially all of the Company's assets occurs;

(d) provide for the assumption of the Company's obligations to the Holders of Securities in the case of a merger, consolidation, conveyance, transfer, sale, lease or other disposition pursuant to Article VII;

(e) increase the Conversion Rate; provided, however, that such increase in the Conversion Rate shall not adversely affect the interests of the Holders of Securities (after taking into account tax and other consequences of such increase);

(f) comply with the requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA;

(g) make any changes or modifications necessary in connection with the registration of the Securities under the Securities Act as contemplated in the Registration Rights Agreement; provided, however, that such action pursuant to this clause (g) does not, in the good faith opinion of the Board of Directors (as evidenced by a Board Resolution), adversely affect the interests of the Holders of Securities in any material respect;

(h) cure any ambiguity, correct or supplement any provision herein which may be inconsistent with any other provision herein or which is otherwise defective, or to make any other provisions with respect to matters or questions arising under this Indenture which the Company may deem necessary or desirable and which shall not be inconsistent with the provisions of this Indenture; provided, however, that such action pursuant to this clause (h)

does not, in the good faith opinion of the Board of Directors (as evidenced by a Board Resolution), adversely affect the interests of the Holders of Securities in any material respect;

(i) to evidence the succession of another Person to the Company or any other obligor upon the Securities, and the assumption by any such successor of the covenants of the Company or such obligor herein and in the Securities, in each case in compliance with the provisions of this Indenture;

(j) to evidence and provide the acceptance of the appointment of a successor trustee hereunder; or

(k) add or modify any other provisions herein with respect to matters or questions arising hereunder which the Company and the Trustee may deem necessary or desirable and which shall not adversely affect the interests of the Holders of Securities.

Section 11.2. With Consent of Holders.

Except as provided below in this Section 11.2, this Indenture or the Securities may be amended, modified or supplemented, and noncompliance in any particular instance with any provision of this Indenture or the Securities may be waived, in each case with the written consent or affirmative vote of the Holders of at least a majority of the principal amount of the Securities at the time outstanding.

This Indenture and the Securities may not be modified or amended without the written consent or the affirmative vote of each Holder of Securities affected thereby, to:

(a) change the maturity of the principal amount of, or the payment date of any installment of interest or Additional Interest, if any, on, any Security;

(b) reduce the Principal Amount of, or interest or Additional Interest, if any, on, or the Redemption Price, Purchase Price or Fundamental Change Purchase Price of, any Security;

(c) change the currency of payment of Principal Amount of, or interest or Additional Interest, if any, on, or the Redemption Price, Purchase Price or Fundamental Change Purchase Price of, any Security from U.S. Dollars;

(d) impair or adversely affect the rate of accrual of interest or Additional Interest, if any, on any Security, or the manner of calculation thereof;

(e) impair the right of any Holder to institute suit for the enforcement of any payment or with respect to, or conversion of, any Security;

(f) modify the Company's obligation to maintain a Paying Agent in the Borough of Manhattan, New York City;

(g) impair or adversely affect the conversion rights of the Holder of the Securities as provided in Article XII;

(h) impair or adversely affect the purchase rights of the Holders of the Securities as provided in Article V;

(i) modify the optional redemption provisions of Article III in a manner adverse to the Holders of the Securities;

(j) reduce the percentage of the Principal Amount of the outstanding Securities the written consent or affirmative vote of whose Holders is required for any amendment, modification or supplement to this Indenture;

(k) reduce the percentage of the Principal Amount of the outstanding Securities the written consent or affirmative vote of whose Holders is required to rescind an acceleration and its consequences or for any waiver of any past Default provided for in this Indenture; or

(l) waive any matter set forth in Section 8.4(a), Section 8.4(b), or Section 8.4(c).

It shall not be necessary for the consent of the Holders under this Section 11.2 to approve the particular form of any proposed amendment, but it shall be sufficient if such consent approves the substance thereof.

After an amendment under this Section 11.2 becomes effective, the Company shall mail to each Holder a notice briefly describing the amendment.

Nothing contained in this Section 11.2 shall impair the ability of the Company and the Trustee to amend this Indenture or the Securities without the consent of any Holder to provide for the assumption of the Company's obligations to the Holders of Securities in the case of a merger, consolidation, conveyance, transfer, sale, lease or other disposition pursuant to Article VII.

Section 11.3. Compliance with Trust Indenture Act.

Every supplemental indenture executed pursuant to this Article shall comply with the TIA.

Section 11.4. Revocation and Effect of Consents, Waivers and Actions.

Until an amendment, waiver or other action by Holders becomes effective, a consent thereto by a Holder of a Security hereunder is a continuing consent by the Holder and every subsequent Holder of that Security or portion of the Security that evidences the same obligation as the consenting Holder's Security, even if notation of the consent, waiver or action is not made on the Security. However, any such Holder or subsequent Holder may revoke the consent, waiver or action as to such Holder's Security or portion of the Security if the Trustee receives the notice of revocation before the date the amendment, waiver or action becomes effective. After an amendment, waiver or action becomes effective, it shall bind every Holder.

Section 11.5. Notation on or Exchange of Securities.

Securities authenticated and delivered after the execution of any supplemental indenture pursuant to this Article XI may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any such supplemental indenture may be prepared and executed by the Company and authenticated and delivered by the Trustee in exchange for outstanding Securities.

Section 11.6. Trustee to Sign Supplemental Indentures.

The Trustee shall sign any supplemental indenture authorized pursuant to this Article XI if the amendment contained therein does not adversely affect the rights, duties, liabilities or immunities of the Trustee. If it does, the Trustee may, but need not, sign such supplemental indenture. In signing such supplemental indenture the Trustee shall receive, and (subject to the provisions of Section 9.1) shall be fully protected in relying upon, an Officers' Certificate and an Opinion of Counsel stating that such amendment is authorized or permitted by this Indenture.

Section 11.7. Effect of Supplemental Indentures.

Upon the execution of any supplemental indenture under this Article, this Indenture shall be modified in accordance therewith, and such supplemental indenture shall form a part of this Indenture for all purposes; and every Holder of Securities theretofore or thereafter authenticated and delivered hereunder shall be bound thereby.

## ARTICLE XII

## CONVERSION

Section 12.1. Conversion Right.

(a) Subject to and upon compliance with the provisions of this Article XII, a Holder of a Security shall have the right, at such Holder's option, to convert all or any portion (if the portion to be converted is $1,000 or an integral multiple of $1,000) of the Principal Amount of such Security into a number of shares of Common Stock equal to the product of (x) the Conversion Rate in effect on the date of conversion times (y) the quotient of the Principal Amount at Issuance of the Security or portion thereof surrendered for conversion divided by 1,000:

(i) At any time prior to Stated Maturity unless such Security has been previously redeemed or repurchased by the Company; or

(ii) as provided in clause (b) of this Section 12.1.

With respect to any conversion of a Security during a Registration Default Period following satisfaction of any of the conditions to conversion described in this Indenture (and during the prescribed time periods in respect thereof), a Holder shall be entitled to, 103% of the number

of shares of Common Stock that the Holder would have otherwise been entitled to upon conversion.

(b) (i) In the event that:

(A) the Company distributes to all holders of its Common Stock rights or warrants entitling them (for a period expiring within 60 days of the Record Date for such distribution) to subscribe for or purchase Common Stock at a price per share of Common Stock less than the Closing Sale Price of the Common Stock on the Business Day immediately preceding the announcement of such distribution;

(B) the Company distributes to all holders of its Common Stock cash or other assets, debt securities or rights or warrants to purchase its securities, including the declaration of any cash dividends, payable quarterly or otherwise, where the Fair Market Value (as determined by the Board of Directors) of such distribution per share of Common Stock exceeds 10% of the Closing Sale Price of the Common Stock on the Business Day immediately preceding the date of declaration of such distribution; or

(C) a Fundamental Change occurs,

then, in each case, the Securities may be surrendered for conversion at any time on and after the date that the Company gives notice to the Holders of such right, which shall be, in the case of (A) or (B), not less than 15 Business Days prior to the Ex-Dividend Time for such distribution, or, in the case of (C), within 15 Business Days after the occurrence of the Fundamental Change, until 5:00 p.m., New York City time, on the earlier of the Business Day immediately preceding the Ex-Dividend Time and the date the Company announces that such distribution shall not take place in the case of (A) or (B), or within 20 Business Days of the Company's delivery of the notice of the Fundamental Change in the case of (C); provided, however, that in the case of (A) or (B), a Holder of Securities may not surrender Securities for conversion if the Holder shall otherwise participate in such distribution without conversion.

(ii) In addition, in the event that the Company consolidates with or merges into another corporation, or is a party to a binding share exchange pursuant to which the Common Stock would be converted into cash, securities or other property as set forth in Section 12.4, then the Securities may be surrendered for conversion at any time from and after the date which is 15 calendar days prior to the date announced by the Company as the anticipated effective



time of such transaction until 15 calendar days after the actual date of such transaction.

(c) Notwithstanding the foregoing, a Security in respect of which a Holder has delivered a Fundamental Change Purchase Notice, as the case may be, exercising such Holder's right to require the Company to repurchase such Security may be converted only if such Fundamental Change Purchase Notice is withdrawn in accordance with Section 4.2(b) or Section 5.2(b) prior to 5:00 p.m., New York City time, on the Business Day immediately preceding such Purchase Date or Fundamental Change Purchase Date.

Section 12.2. Conversion Procedures; Conversion Rate; Fractional Shares.

(a) Each Security shall be convertible at the office of the Conversion Agent into fully paid and nonassessable shares of Common Stock (calculated to the nearest 1/10,000th of a share).

(b) The Conversion Agent shall notify the Company when it receives a Conversion Notice. The Company shall determine the number of shares of Common Stock and/or the amount of cash, if any, that the Holder that submitted the Conversion Notice is entitled to receive upon surrender of the Securities covered by that Conversion Notice. A certificate for the number of full shares of Common Stock into which the Securities are converted (and cash in lieu of fractional shares) shall be delivered to such Holder, assuming all of the other requirements have been satisfied by such Holder, as soon as practicable. Notwithstanding the foregoing, the Company shall not be required to deliver certificates for Common Stock while the stock transfer books for such stock or the security register are duly closed for any purpose, but certificates for Common Stock shall be issued and delivered as soon as practicable after the opening of such books or security register. No cash payment of accrued and unpaid interest or Additional Interest shall be paid by the Company on a converted Security, except as described in Section 12.9. Accrued and unpaid interest and Additional Interest, if any, shall be deemed to be paid in full with the shares of Common Stock issued or cash paid upon conversion, rather than deemed cancelled, extinguished or forfeited.

Except as described in Section 12.9, the Company will not make any payment in cash or Common Stock or other adjustment for accrued and unpaid interest or Additional Interest on any Securities when they are converted. The Company's delivery to the Holder of the full number of shares of Common Stock into which the Security is convertible, together with any cash payment for such Holder's fractional shares, shall be deemed to satisfy the Company's obligation to pay the Principal Amount of the Security and to

satisfy its obligation to pay accrued and unpaid interest and Additional Interest, if any through the conversion date. As a result, accrued interest, and Additional Interest are deemed paid in full rather than cancelled, extinguished or forfeited. Notwithstanding the foregoing, accrued interest and Additional Interest, if any, will be payable upon any conversion of Securities made concurrently with or after acceleration of the Securities following an Event of Default.

If a Holder has submitted any or all of its Securities for repurchase, a Holder's conversion rights on the Securities so subject to repurchase shall expire at 5:00 p.m., New York City time, on the Business Day immediately preceding the Fundamental Change Purchase Date. Notwithstanding the foregoing, a Security in respect of which a Holder has delivered a

Fundamental Change Purchase Notice exercising such Holder's right to require the Company to repurchase such Security may be converted only if such Fundamental Change Purchase Notice is withdrawn in accordance with Section 4.2(b) prior to 5:00 p.m., New York City time, on the Business Day immediately preceding the Fundamental Change Purchase Date.

(c) Before any Holder shall be entitled to convert the same into Common Stock, such Holder shall, in the case of Global Securities, comply with the Applicable Procedures of the Depositary in effect at that time, and in the case of Certificated Securities, surrender such Securities, duly endorsed to the Company or in blank, at the office of the Conversion Agent, and shall give written notice to the Company at said office or place in the form of the Conversion Notice attached to the Security (the "Conversion Notice") that such Holder elects to convert the same and shall state in writing therein the Principal Amount at issuance of Securities to be converted (in whole or in part so long as the Principal Amount to be converted is in multiples of $1,000) and the name or names (with addresses) in which such Holder wishes the certificate or certificates for Common Stock to be issued.

Before any such conversion, a Holder also shall pay all funds required, if any, relating to interest or Additional Interest, if any, on the Securities, as provided in Section 12.9 and all taxes or duties, if any, as provided in Section 12.8.

If more than one Security shall be surrendered for conversion at one time by the same Holder, the number of full shares of Common Stock that shall be deliverable upon conversion shall be computed on the basis of the aggregate Principal Amount at issuance of the Securities (or specified portions thereof to the extent permitted thereby) so surrendered.

If shares of Common Stock to be issued upon conversion of a Restricted Security is to be issued in the name of a Person other than the Holder of such Restricted Security, such Holder shall deliver to the Conversion Agent a certification in substantially the form set forth in a Transfer Certificate dated the date of surrender of such Restricted Security and signed by such Holder, as to compliance with the restrictions on transfer applicable to such Restricted Security. The Company shall not be required to issue Common Stock upon conversion of any such Restricted Security to a Person other than the Holder if such Restricted Security is not so accompanied by a properly completed certification, and the Registrar shall not be required to register Common Stock upon conversion of any such Restricted Security in the name of a Person other than the Holder if such Restricted Security is not so accompanied by a properly completed certification.

(d) A Security shall be deemed to have been converted immediately prior to 5:00 p.m., New York City time, on the date on which all of the conversion requirements set forth in Section 12.2(b) have been satisfied, and the person or persons entitled to receive the Common Stock issuable upon such conversion shall be treated for all purposes as the record Holder or Holders of such Common Stock as of 5:00 p.m., New York City time, on such date.

(e) In case any Certificated Security shall be surrendered for partial conversion, the Company shall execute and the Trustee shall authenticate and deliver to or upon the written order of the Holder of the Security so surrendered, without charge to such Holder (subject to the provisions of Section 12.8), a new Security or Securities in authorized

denominations in an aggregate principal amount equal to the unconverted portion of the surrendered Certificated Securities.

Section 12.3. Adjustment of Conversion Rate.

The Conversion Rate shall be adjusted from time to time as follows:

(a) In case the Company shall, at any time or from time to time while any of the Securities are outstanding, pay a dividend or make a distribution in Common Stock to all or substantially all holders of its outstanding Common Stock, then the Conversion Rate in effect immediately prior to the close of business on the Record Date fixed for the determination of stockholders entitled to receive such dividend or other distribution shall be adjusted so that the Holder of any Security thereafter surrendered for conversion shall be entitled to receive that number of shares of Common Stock which it would have received had such Security been converted immediately prior to the happening of such event as well as such additional shares it would have received as a result of such event. Such adjustment shall become effective immediately prior to the opening of business on the day following the Record Date fixed for such determination. If any dividend or distribution of the type described in this Section 12.3(a) is declared but not so paid or made, the Conversion Rate shall again be adjusted to the Conversion Rate which would then be in effect if such dividend or distribution had not been declared.

(b) In case the Company shall, at any time or from time to time while any of the Securities are outstanding, subdivide its outstanding shares of Common Stock into a greater number of Common Stock or combine its outstanding shares of Common Stock into a smaller number of Common Stock, then the Conversion Rate in effect immediately prior to the close of business on the day upon which such subdivision or combination becomes effective shall be adjusted so that the Holder of any Security thereafter surrendered for conversion shall be entitled to receive that number of shares of Common Stock which it would have received had such Security been converted immediately prior to the happening of such event as well as such additional shares as it would have received as a result of such event. Such adjustment shall become effective immediately prior to the opening of business on the day following the day upon which such subdivision or combination becomes effective.

(c) In case the Company shall, at any time or from time to time while any of the Securities are outstanding, issue rights or warrants for a period expiring within 60 days (other than any rights or warrants referred to in Section 12.3(d)) to all or substantially all holders of its outstanding Common Stock entitling them to subscribe for or purchase Common Stock (or securities convertible into or exchangeable or exercisable for Common Stock), at a price per share of Common Stock (or having a conversion, exchange or exercise price per share of Common Stock) less than the Closing Sale Price of the Common Stock on the Business Day immediately preceding the date of announcement of such issuance (treating the conversion, exchange or exercise price per share of Common Stock of the securities convertible, exchangeable or exercisable into Common Stock as equal to (x) the sum of (i) the price for a unit of the security convertible into or exchangeable or exercisable for Common Stock and (ii) any additional consideration initially payable upon the conversion of or exchange or exercise for such security into Common Stock divided by (y) the number of shares of Common Stock initially underlying such convertible, exchangeable or exercisable

security), then the Conversion Rate shall be adjusted by multiplying the Conversion Rate in effect at the opening of business on the date after such date of announcement by a fraction:

(i) the numerator of which shall be the number of shares of Common Stock outstanding at the close of business on the date of announcement, plus the total number of additional shares of Common Stock so offered for subscription or purchase (or into which the convertible, exchangeable or exercisable securities so offered are convertible, exchangeable or exercisable); and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding on the close of business on the date of announcement, plus the number of shares of Common Stock (or convertible, exchangeable or exercisable securities) which the aggregate offering price of the total number of shares of Common Stock (or convertible, exchangeable or exercisable securities) so offered for subscription or purchase (or the aggregate conversion, exchange or exercise price of the convertible, exchangeable or exercisable securities so offered) would purchase at such Closing Sale Price of the Common Stock.

Such adjustment shall become effective immediately prior to the opening of business on the day following the Record Date for such determination. To the extent that shares of Common Stock (or securities convertible, exchangeable or exercisable into shares of Common Stock) are not delivered pursuant to such rights or warrants, upon the expiration or termination of such rights or warrants, the Conversion Rate shall be readjusted to the Conversion Rate which would then be in effect had the adjustments made upon the issuance of such rights or warrants been made on the basis of the delivery of only the number of shares of Common Stock (or securities convertible, exchangeable or exercisable into shares of Common Stock) actually delivered. In the event that such rights or warrants are not so issued, the Conversion Rate shall again be adjusted to be the Conversion Rate which would then be in effect if the Record Date fixed for the determination of stockholders entitled to receive such rights or warrants had not been fixed. In determining whether any rights or warrants entitle the holders to subscribe for or purchase shares of Common Stock at less than such Closing Sale Price, and in determining the aggregate offering price of such shares of Common Stock, there shall be taken into account any consideration received for such rights or warrants, the value of such consideration if other than cash, to be determined by the Board of Directors.

(d) (A) In case the Company shall, at any time or from time to time while any of the Securities are outstanding, by dividend or otherwise, distribute to all or substantially all holders of its outstanding shares of Common Stock (including any such distribution made in connection with a consolidation or merger in which the Company is the continuing corporation and the shares of Common Stock are not changed or exchanged), shares of its capital stock, evidences of its Indebtedness or other assets, including securities, but excluding (i) dividends or distributions of Common Stock referred to in Section 12.3(a),

(ii) any rights or warrants referred to in Section 12.3(c), (iii) dividends and distributions paid exclusively in cash referred to in this Section 12.3(d) and (iv) dividends and distributions of stock, securities or other property or assets (including cash) in connection with the reclassification, change, merger, consolidation, statutory share exchange, combination, sale or conveyance to which Section 12.4 applies (such capital stock, evidence of its indebtedness, other assets or securities being distributed hereinafter in this Section 12.3(d) called the "Distributed Assets"), then, in each such case, subject to paragraphs (D) and (E) of this Section 12.3(d), the Conversion Rate shall be adjusted by multiplying the Conversion Rate in effect immediately prior to the close of business on the Record Date with respect to such distribution by a fraction:

(i) the numerator of which shall be the Current Market Price; and

(ii) the denominator of which shall be such Current Market Price of the Common Stock, less the Fair Market Value on such date of the portion of the distributed assets so distributed applicable to one share of Common Stock (determined on the basis of the number of shares of Common Stock outstanding on the Record Date) on such date.

Such adjustment shall become effective immediately prior to the opening of business on the day following the Record Date for such distribution. In the event that such dividend or distribution is not so paid or made, the Conversion Rate shall again be adjusted to be the Conversion Rate which would then be in effect if such dividend or distribution had not been declared.

(B) If the Board of Directors determines the Fair Market Value of any distribution for purposes of this Section 12.3(d) by reference to the actual or when issued trading market for any distributed assets comprising all or part of such distribution, it must in doing so consider the prices in such market over the same period (the "Reference Period") used in computing the Current Market Price pursuant to Section 12.3(g) to the extent possible, unless the Board of Directors determines in good faith that determining the Fair Market Value during the Reference Period would not be in the best interest of the Holders.

(C) In the event any such distribution consists of shares of capital stock of, or similar equity interests in, one or more of the Company's Subsidiaries (a "Spin-Off"), the Fair Market Value of the securities to be distributed shall equal the average of the Closing Sale Prices of such securities on the principal securities market on which such securities are traded for the five consecutive Trading Days commencing on and including the sixth Trading Day of those securities after the effectiveness of the Spin-Off, and the Current Market Price shall be measured for the same period. In the event, however, that an underwritten initial public offering of the securities in the Spin-Off occurs simultaneously with the Spin-Off, Fair Market Value of the securities distributed in the Spin-Off shall mean the initial public offering price of such securities and the Current Market Price shall mean the Closing Sale Price for the Common Stock on the same Trading Day.

(D) Rights or warrants distributed by the Company to all holders of its outstanding shares of Common Stock entitling them to subscribe for or purchase shares of Equity Interest (either initially or under certain circumstances), which rights or warrants, until the occurrence of a specified event or events ("Trigger Event"), (x) are deemed to be transferred with such shares of Common Stock, (y) are not exercisable and (z) are also issued in respect of future issuances of Common Stock shall be deemed not to have been distributed for purposes of this Section 12.3(d) (and no adjustment to the Conversion Rate under this Section 12.3(d) shall be required) until the occurrence of the earliest Trigger Event. If such right or warrant is subject to subsequent events, upon the occurrence of which such right or warrant shall become exercisable to purchase different distributed assets, evidences of indebtedness or other assets, or entitle the holder to purchase a different number or amount of the foregoing or to purchase any of the foregoing at a different purchase price, then the occurrence of each such event shall be deemed to be the date of issuance and Record Date with respect to a new right or warrant (and a termination or expiration of the existing right or warrant without exercise by the holder thereof). In addition, in the event of any distribution (or deemed distribution) of rights or warrants, or any Trigger Event or other event (of the type described in the preceding sentence) with respect thereto, that resulted in an adjustment to the Conversion Rate under this Section 12.3(d):

(i) in the case of any such rights or warrants which shall all have been redeemed or repurchased without exercise by any holders thereof, the Conversion Rate shall be readjusted upon such final redemption or repurchase to give effect to such distribution or Trigger Event, as the case may be, as though it were a cash distribution, equal to the per share redemption or purchase price received by a holder of shares of Common Stock with respect to such rights or warrants (assuming such holder had retained such rights or warrants), made to all holders of Common Stock as of the date of such redemption or purchase; and

(ii) in the case of such rights or warrants which shall have expired or been terminated without exercise, the Conversion Rate shall be readjusted as if such rights and warrants had never been issued.

(E) For purposes of this Section 12.3(d) and Section 12.3(a), Section 12.3(b) and Section 12.3(c), any dividend or distribution to which this Section 12.3(d) is applicable that also includes (x) shares of Common Stock, (y) a subdivision or combination of Common Stock to which Section 12.3(b) applies or (z) rights or warrants to subscribe for or purchase shares of Common Stock to which Section 12.3(c) applies (or any combination thereof), shall be deemed instead to be:

(i) a dividend or distribution of the evidences of indebtedness, assets, shares of capital stock, rights or warrants, other than such shares of Common

Stock, such subdivision or combination or such rights or warrants to which Section 12.3(a), Section 12.3(b) and Section 12.3(c) apply, respectively (and any Conversion Rate adjustment required by this Section 12.3(d) with respect to such dividend or distribution shall then be made), immediately followed by

(ii) a dividend or distribution of such shares of Common Stock, such subdivision or combination or such rights or warrants (and any further Conversion Rate adjustment required by Section 12.3(a), Section 12.3(b) and Section 12.3(c) with respect to such dividend or distribution shall then be made), except:

(1) the Record Date of such dividend or distribution shall be substituted as (i) "the date fixed for the determination of stockholders entitled to receive such dividend or other distribution," "Record Date fixed for such determinations" and "Record Date" within the meaning of Section 12.3(a), (ii) "the day upon which such subdivision or combination becomes effective" within the meaning of Section 12.3(b), and (iii) as "the Record Date fixed for the determination of the stockholders entitled to receive such rights or warrants" and such "Record Date" within the meaning of Section 12.3(c); and

(2) any reduction or increase in the number of shares of Common Stock resulting from such subdivision or combination shall be disregarded in connection with such dividend or distribution.

(e) In case the Company shall, at any time or from time to time after the initial Issue Date while any of the Securities are outstanding, by dividend or otherwise, distribute to all or substantially all holders of its outstanding shares of Common Stock, cash (including any quarterly cash dividends, but excluding any cash that is distributed upon a reclassification, change, merger, consolidation, statutory share exchange, combination, sale or conveyance to which Section 12.4 applies or as part of a distribution referred to in Section 12.3(d)), then, and in each case, immediately after the close of business on such date, the Conversion Rate shall be adjusted by multiplying the Conversion Rate in effect immediately prior to the close of business of such Record Date by a fraction:

(A) the numerator of which shall be equal to the Current Market Price on such date; and

(B) the denominator of which shall be equal to the Current Market Price on the Record Date, less an amount equal to the quotient of (x) the aggregate amount of such cash distribution and (y) the number of shares of Common Stock outstanding on the Record Date.

Such adjustment shall become effective immediately prior to the opening of business on the day following the Record Date for such distribution. In the event that such distribution is not so made, the Conversion Rate shall again be adjusted to be the Conversion Rate which would then be in effect if such distribution had not been declared.

Notwithstanding the foregoing, adjustments to the conversion rate resulting from any quarterly cash dividends may not cause the conversion rate (as adjusted for any other adjustment) to exceed the quotient obtained by dividing the principal amount of a note by the last reported sale price of our common stock on the cover page of this offering memorandum.

(f) In case a tender offer or exchange offer (other than as part of a stock option exchange offer) made by the Company or any of its Subsidiaries for all or any portion of the Common Stock shall expire, then and in each such case, immediately prior to the opening of business on the day after the date of the last time (the "Expiration Time") tenders or exchanges could have been made pursuant to such tender offer or exchange offer, the Conversion Rate shall be adjusted so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the close of business on the date of the Expiration Time by a fraction:

(A) the numerator of which shall be the sum of (x) the product of (i) the number of shares of Common Stock outstanding (excluding any tendered or exchanged shares) at the Expiration Time and (ii) the Current Market Price of the Common Stock at the Expiration Time, and (y) the Fair Market Value of the aggregate consideration payable to stockholders based on acceptance (up to any maximum specified in the terms of the tender offer or exchange offer) of all shares validly tendered and not withdrawn as of the Expiration Time; and

(B) the denominator of which shall be the product of the number of shares of Common Stock outstanding (including any tendered or exchanged shares) at the Expiration Time and the Current Market Price of the Common Stock at the Expiration Time.

Such adjustment (if any) shall become effective immediately prior to the opening of business on the day following the Expiration Time. In the event that the Company is obligated to purchase shares pursuant to any such tender offer or exchange offer, but the Company is permanently prevented by applicable law from effecting any such purchases or all or a portion of such purchases are rescinded, the Conversion Rate shall again be adjusted to be the Conversion Rate which would then be in effect if such (or such portion of the) tender offer or exchange offer had not been made. If the application of this Section 12.3(e) to any tender offer or exchange offer would result in a decrease in the Conversion Rate, no adjustment shall be made for such tender offer under this Section 12.3(e).

To the extent the Company has a rights plan in effect upon the conversion of the Securities, if Holders of the Securities exercising the right of conversion attaching after the date the rights separate from the underlying Common Stock are not entitled to receive the rights that would otherwise be attributable to the Common Stock received upon conversion, the Conversion Rate shall be adjusted as though the rights were being distributed to holders of Common Stock on the date of such separation. If such an adjustment is made and the rights are later redeemed, invalidated or terminated, then a corresponding reversing adjustment shall be made to the Conversion Rate on an equitable basis.

(g) For purposes of this Article XII, the following terms shall have the meanings indicated:

"Current Market Price" on any date means the average of the daily Closing Sale Prices per share of Common Stock for the ten consecutive Trading Days immediately prior to such date; provided, however, that if:

(i) the "ex" date (as hereinafter defined) for any event (other than the issuance or distribution requiring such computation) that requires an adjustment to the Conversion Rate pursuant to Section 12.3(a), Section 12.3(b), Section 12.3(c), Section 12.3(d), Section 12.3(e) or Section 12.3(f) occurs during such ten consecutive Trading Days, the Closing Sale Price for each Trading Day prior to the "ex" date for such other event shall be adjusted by multiplying such Closing Sale Price by the same fraction by which the Conversion Rate is so required to be adjusted as a result of such other event;

(ii) the "ex" date for any event (other than the issuance or distribution requiring such computation) that requires an adjustment to the Conversion Rate pursuant to Section 12.3(a), Section 12.3(b), Section 12.3(c), Section 12.3(d), Section 12.3(e) or Section 12.3(f) occurs on or after the "ex" date for the issuance or distribution requiring such computation and prior to the day in question, the Closing Sale Price for each Trading Day on and after the "ex" date for such other event shall be adjusted by multiplying such Closing Sale Price by the reciprocal of the fraction by which the Conversion Rate is so required to be adjusted as a result of such other event; and

(iii) the "ex" date for the issuance or distribution requiring such computation is prior to the day in question, after taking into account any adjustment required pursuant to clause (1) or (2) of this proviso, the Closing Sale Price for each Trading Day on or after such "ex" date shall be adjusted by adding thereto the amount of any cash and the Fair Market Value (as determined by the Board of Directors in a manner consistent with any determination of such value for purposes of Section 12.3(d), Section 12.3(e) or Section 12.3(f)) of the evidences of Indebtedness, shares of capital stock or assets being distributed applicable to one share of Common Stock as of the close of business on the day before such "ex" date.

For purposes of any computation under Section 12.3(e), if the "ex" date for any event (other than the tender offer requiring such computation) that requires an adjustment to the Conversion Rate pursuant to Section 12.3(a), Section 12.3(b), Section 12.3(c), Section 12.3(d), Section 12.3(e) or Section 12.3(f) occurs on or after the Expiration Time for the tender or exchange offer requiring such computation and prior to the day in question, the Closing Sale Price for each Trading Day on and after the "ex" date for such other event shall be adjusted by multiplying such Closing Sale Price by the reciprocal of the fraction by which the Conversion Rate is so required to be adjusted as a result of such other event. For purposes of this paragraph, the term "ex" date, when used:

(i) with respect to any issuance or distribution, means the first date on which the Common Stock trade regular way on the relevant exchange or in the relevant market from which the Closing Sale Price was obtained without the right to receive such issuance or distribution;

(ii) with respect to any subdivision or combination of Common Stock, means the first date on which the Common Stock trade regular way on such exchange or in such market after the time at which such subdivision or combination becomes effective; and

(iii) with respect to any tender offer or exchange offer, means the first date on which the Common Stock trade regular way on such exchange or in such market after the Expiration Time of such offer.

Notwithstanding the foregoing, whenever successive adjustments to the Conversion Rate are called for pursuant to this Section 12.3, such adjustments shall be made to the Current Market Price as may be necessary or appropriate to effectuate the intent of this Section 12.3 and to avoid unjust or inequitable results as determined in good faith by the Board of Directors.

"Fair Market Value" means the amount which a willing buyer would pay a willing seller in an arm's length transaction (as determined by the Board of Directors, whose determination shall be made in good faith and, absent manifest error, shall be final and binding on Holders of the Securities).

"Record Date" means, with respect to any dividend, distribution or other transaction or event in which the holders of Common Stock have the right to receive any cash, securities or other property or in which the Common Stock (or other applicable security) is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of stockholders entitled to receive such cash, securities or other property (whether such date is fixed by the Board of Directors or by statute, contract or otherwise).

(h) The Company shall be entitled to make such additional adjustments in the Conversion Rate, in addition to those required by Section 12.3(a), Section 12.3(b), Section 12.3(c), Section 12.3(d), Section 12.3(e) or Section 12.3(f) if the Board of Directors determines that it is advisable, subject to compliance with Nasdaq Marketplace Rule 4350(i), in order that any dividend or distribution of Common Stock, any subdivision, reclassification or combination of Common Stock or any issuance of rights or warrants referred to above shall not be taxable to the holders of Common Stock for United States federal income tax purposes.

(i) To the extent permitted by applicable law, the Company may, from time to time, increase the Conversion Rate by any amount for any period of time if such period is at least 20 calendar days, the increase is irrevocable during the period and the Board of Directors, in good faith and absent manifest error, determines that such increase would be in the best interest of the Company, subject to compliance with Nasdaq Marketplace Rule 4350(i). Whenever the Conversion Rate is increased pursuant to the preceding sentence or clause (h) above, the Company shall mail to the Trustee and each Holder at the address of such Holder as it appears in the register of the Securities maintained by the Registrar, at least 15 calendar days prior to the date the increased Conversion Rate takes effect, a notice of the increase stating the increased Conversion Rate and the period during which it shall be in effect.

(j) In any case in which this Section 12.3 shall require that any adjustment be made effective as of or retroactively immediately following a Record Date, the Company may elect to defer (but only for five Trading Days following the filing of the notice referred to in Section 12.5) issuing to the Holder of any Securities converted after such Record Date the Common Stock issuable upon such conversion over and above the Common Stock issuable upon such conversion on the basis of the Conversion Rate prior to adjustment; provided, however, that the Company shall deliver to such Holder a due bill or other appropriate instrument evidencing such Holder's right to receive such additional Common Stock upon the occurrence of the event requiring such adjustment.

(k) All calculations under this Section 12.3 shall be made to the nearest cent or one-hundredth of a share, with one-half cent and 0.005 of a share, respectively, being rounded upward. Notwithstanding any other provision of this Section 12.3, the Company shall not be required to make any adjustment of the Conversion Rate unless such adjustment would require an increase or decrease of at least 1% in the Conversion Rate as last adjusted. Any lesser adjustment shall be carried forward and shall be made at the time of and together with the next subsequent adjustment which, together with any adjustment or adjustments so carried forward, shall amount to an increase or decrease of at least 1% in the Conversion Rate as last adjusted. Any adjustments under this Section 12.3 shall be made successively whenever an event requiring such an adjustment occurs.

(l) In the event that at any time, as a result of an adjustment made pursuant to this Section 12.3, the Holder of any Securities thereafter surrendered for conversion shall become entitled to receive any shares of Applicable Stock of the Company other than Common Stock into which the Securities originally were convertible, the Conversion Rate of such other shares so receivable upon conversion of any such Security shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to Common Stock contained in subparagraphs (a) through (j) of this Section 12.3, and the provision of Section 12.1, Section 12.2 and Section 12.4 through Section 12.9 with respect to the Common Stock shall apply on like or similar terms to any such other shares and the determination of the Board of Directors as to any such adjustment shall be conclusive.

(m) No adjustment shall be made pursuant to this Section 12.3 if the effect thereof would be to reduce the Conversion Price below the par value (if any) of the Common Stock.

Section 12.4. Consolidation or Merger of the Company.

If any of the following events occurs, namely:

(a) any reclassification or change of the outstanding shares of Common Stock (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination);

(b) any merger, consolidation, statutory share exchange or combination of the Company with another Person as a result of which holders of Common Stock shall be entitled to receive stock, securities or other property or assets (including cash) with respect to or in exchange for such Common Stock; or

(c) any sale or conveyance of all or substantially all the properties and assets of the Company as, or substantially as, an entirety to any other Person as a result of which holders of Common Stock shall be entitled to receive stock, securities or other property or assets (including cash) with respect to or in exchange for such Common Stock;

the Company or the successor or purchasing Person, as the case may be, shall execute with the Trustee a supplemental indenture (which shall comply with the Trust Indenture Act as in force at the date of execution of such supplemental indenture, if such supplemental indenture is then required to so comply) providing that such Securities shall be convertible into the kind and amount of shares of stock and other securities or property or assets (including cash) which such Holder would have been entitled to receive upon such reclassification, change, merger, consolidation, statutory share exchange, combination, sale or conveyance had such Securities been converted into Common Stock immediately prior to such reclassification, change, merger, consolidation, statutory share exchange, combination, sale or conveyance assuming such holder of Common Stock did not exercise its rights of election, if any, as to the kind or amount of securities, cash or other property receivable upon such merger, consolidation, statutory share exchange, sale or conveyance (provided, that if the kind or amount of securities, cash or other property receivable upon such merger, consolidation, statutory share exchange, sale or conveyance is not the same for each share of Common Stock in respect of which such rights of election shall not have been exercised ("Non-Electing Share"), then for the purposes of this Section 12.4, the kind and amount of securities, cash or other property receivable upon such merger, consolidation, statutory share exchange, sale or conveyance for each Non-Electing Share shall be deemed to be the kind and amount so receivable per share by a plurality of the Non-Electing Shares). Such supplemental indenture shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article XII. If, in the case of any such reclassification, change, merger, consolidation, statutory share exchange, combination, sale or conveyance, the stock or other securities and assets receivable thereupon by a holder of Common Stock includes shares of stock or other securities and assets of a Person other than the successor or purchasing Person, as the case may be, in such reclassification, change, merger, consolidation, statutory share exchange, combination, sale or conveyance, then such supplemental indenture shall also be executed by such other Person and shall contain such

additional provisions to protect the interests of the Holders of the Securities as the Board of Directors shall reasonably consider necessary by reason of the foregoing.

The Company shall cause notice of the execution of such supplemental indenture to be mailed to each Holder, at the address of such Holder as it appears on the register of the Securities maintained by the Registrar, within 20 days after execution thereof. Failure to deliver such notice shall not affect the legality or validity of such supplemental indenture.

The above provisions of this Section 12.4 shall similarly apply to successive reclassifications, mergers, consolidations, statutory share exchanges, combinations, sales and conveyances.

If this Section 12.4 applies to any event or occurrence, Section 12.3 shall not apply.

Section 12.5. Notice of Adjustment.

Whenever an adjustment in the Conversion Rate with respect to the Securities is required:

(a) the Company shall forthwith place on file with the Trustee and any Conversion Agent for such securities a certificate of the Chief Financial Officer of the Company, stating the adjusted Conversion Rate determined as provided herein and setting forth in reasonable detail such facts as shall be necessary to show the reason for and the manner of computing such adjustment; and

(b) a notice stating that the Conversion Rate has been adjusted and setting forth the adjusted Conversion Rate shall forthwith be given by the Company or, upon a Company Request, by the Trustee in the name and at the expense of the Company, to each Holder in the manner provided in Section 14.2. Any notice so given shall be conclusively presumed to have been duly given, whether or not the Holder receives such notice.

Section 12.6. Notice in Certain Events.

In case of:

(a) a consolidation or merger to which the Company is a party and for which approval of any stockholders of the Company is required, or of the sale or conveyance to another Person or entity or group of Persons or entities acting in concert as a partnership, limited partnership, syndicate or other group (within the meaning of Rule 13d-3 under the Exchange Act) of all or substantially all of the property and assets of the Company; or

(b) the voluntary or involuntary dissolution, liquidation or winding up of the Company; or

(c) any action triggering an adjustment of the Conversion Rate referred to in clauses (x) or (y) below;

then, in each case, the Company shall cause to be filed with the Trustee and the Conversion Agent, and shall cause to be given to the Holders of the Securities in the manner provided in Section 14.2, at least 15 days prior to the applicable date hereinafter specified, a notice stating:



(x) the date on which a record is to be taken for the purpose of any distribution or grant of rights or warrants triggering an adjustment to the Conversion Rate pursuant to this Article XII, or, if a record is not to be taken, the date as of which the holders of record of Common Stock entitled to such distribution, rights or warrants are to be determined; or

(y) the date on which any reclassification, consolidation, merger, sale, conveyance, dissolution, liquidation or winding up triggering an adjustment to the Conversion Rate pursuant to this Article XII is expected to become effective, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reclassification, consolidation, merger, sale, conveyance, dissolution, liquidation or winding up.

Failure to give such notice or any defect therein shall not affect the legality or validity of the proceedings described in Section 12.6(a), Section 12.6(b) or Section 12.6(c).

Section 12.7. Company To Reserve Stock; Registration; Listing.

(a) The Company shall, prior to issuance of any Securities hereunder, and from time to time as may be necessary, reserve and keep available, free from preemptive rights, out of its authorized but unissued Common Stock, for the purpose

of effecting the conversion of the Securities, such number of its duly authorized Common Stock as shall from time to time be sufficient to effect the conversion of all Securities then outstanding into such Common Stock at any time (assuming that, at the time of the computation of such number of Common Stock, all such Securities would be held by a single Holder). The Company covenants that all Common Stock which may be issued upon conversion of Securities shall upon issue be fully paid and nonassessable and free from all liens and charges and, except as provided in Section 12.8, taxes with respect to the issue thereof.

(b) Except with respect to shares issued upon conversion of a Transfer Restricted Security prior to the second anniversary of the initial Issue Date, if any shares of Applicable Stock which would be issuable upon conversion of Securities hereunder (including, without limitation, in connection with any transaction referred to in Section 12.4) require registration with or approval of any governmental authority before such shares may be issued upon such conversion, the Company shall use its reasonable best efforts to cause such shares to be duly registered or approved, as the case may be, or to cause such shares not to be Transfer Restricted Securities. In addition, in connection with any transaction referred to in Section 12.4, the Company and any parent company of the Company required to issue Applicable Stock upon conversion of a Note shall take such actions as are required to entitle the Company or such parent company, as the case may be, to rely on Section 3(a)(9) of the Securities Act in connection with conversion of the Securities without extending any holding periods under Rule 144 or otherwise permit such Applicable Stock issued upon conversion of the Securities to be resold without requiring registration thereof under the Securities Act. The Company further covenants that so long as the Common Stock shall be quoted on the Nasdaq National Market system, the Company shall use its reasonable best efforts, if permitted by the rules of the Nasdaq National Market system, to keep so quoted all Common Stock issuable

upon conversion of the Securities, and the Company shall use its reasonable best efforts to list or obtain approval for the quotation of the Common Stock to be delivered upon conversion of the Securities prior to such delivery upon any other national securities exchange or quotation system upon which the outstanding Common Stock is listed or quoted at the time of such delivery.

Section 12.8. Taxes on Conversion.

The issue of stock certificates on conversion of Securities shall be made without charge to the converting Holder for any documentary, stamp or similar issue or transfer taxes in respect of the issue thereof, and the Company shall pay any and all documentary, stamp or similar issue or transfer taxes that may be payable in respect of the issue or delivery of Common Stock on conversion of Securities pursuant hereto. The Company shall not, however, be required to pay any such tax which may be payable in respect of any transfer involved in the issue or delivery of Common Stock or the portion, if any, of the Securities which are not so converted in a name other than that in which the Securities so converted were registered, and no such issue or delivery shall be made unless and until the Person requesting such issue has paid to the Company the amount of such tax or has established to the satisfaction of the Company that such tax has been paid.

Section 12.9. Conversion After Regular Record Date.

Except as provided in the succeeding paragraph, upon conversion the Holder of Securities shall not be entitled to receive any accrued and unpaid interest or Additional Interest, if any.

If any Securities are surrendered for conversion subsequent to the close of business on any Regular Record Date but prior to the opening of business on the corresponding Interest Payment Date, the Holder of such Securities at the close of business on such Regular Record Date shall receive the interest and Additional Interest, if any, payable on such Securities on such Interest Payment Date notwithstanding the conversion thereof. Securities surrendered for conversion during the period from the close of business on any Regular Record Date to the opening of business on the corresponding Interest Payment Date shall (except in the case of Securities which have been called for redemption on a Redemption Date within such period or Securities surrendered for conversion after acceleration of the Securities) be accompanied by payment by Holders, for the account of the Company, in New York Clearing House funds or other funds acceptable to the Company of an amount equal to the interest and Additional Interest, if any, payable on such interest payment date on the Securities being surrendered for conversion.

Except as described in Section 12.2(a) and this Section 12.9, the Company will not make any payment in cash or other adjustment for Common Stock accrued and unpaid interest or Additional Interest, if any, on a Security when it is converted.

Section 12.10. Company Determination Final.

Except as otherwise provided herein or the Security, the Company or its agents shall be responsible for making all calculations required under the terms of this Article XII. Any determination that the Company or the Board of Directors must make pursuant to this Article XII shall be set forth in a Board Resolution, shall be made in good faith and, absent manifest error,

shall be final and binding on holders of the Securities. The Company or its agents shall be required to deliver to the Trustee a schedule of its calculations and the Trustee shall be entitled to conclusively rely upon the accuracy of such calculations without independent verification.

Section 12.11. Responsibility of Trustee for Conversion Provisions.

The Trustee has no duty to determine when an adjustment under this Article XII should be made, how it should be made or what it should be. The Trustee makes no representation as to the validity or value of any securities or assets issued upon conversion of Securities. The Trustee shall not be responsible for any failure of the Company to comply with this Article XII. Each Conversion Agent other than the Company shall have the same protection under this Section 12.11 as the Trustee.

The rights, privileges, protections, immunities and benefits given to the Trustee under this Indenture including, without limitation, its rights to be indemnified, are extended to, and shall be enforceable by, other than the Company, the Trustee in each of its capacities hereunder, and each Paying Agent or Conversion Agent, other than the Company, acting hereunder.

Section 12.12. Unconditional Right of Holders to Convert.

Notwithstanding any other provision in this Indenture, the Holder of any Security shall have the right, which is absolute and unconditional, to convert its Security in accordance with this Article XII and to bring an action against the Company for the enforcement of any such right to convert, and such rights shall not be impaired or affected without the consent of such Holder.

## ARTICLE XIII

## TAX TREATMENT

Section 13.1. Tax Treatment.

The Company agrees, and by acceptance of beneficial ownership interest in the Securities each beneficial holder of the Securities will be deemed to have agreed, for United States federal income tax purposes (1) to treat the Securities as indebtedness that is subject to Treas. Reg. Sec. 1.1275-4 (the "Contingent Payment Regulations") and, for purposes of the Contingent Payment Regulations, to treat the fair market value of any stock beneficially received by a beneficial holder upon any conversion of the Securities as a contingent payment and (2) to be bound by the Company's determination of the "comparable yield" and "projected payment schedule," within the meaning of the Contingent Payment Regulations, with respect to the Securities. A Holder may obtain the issue price, amount of original issue discount, issue date, yield to maturity, comparable yield and projected payment schedule for the Securities by submitting a written request for such information to the Company at the address set forth in Section 14.2.

## ARTICLE XIV

## MISCELLANEOUS

Section 14.1. Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies, or conflicts with the duties imposed by Section 318(c) of the TIA, such section of the TIA shall control. If any provision of this Indenture expressly modifies or excludes any provision of the TIA that may be so modified or excluded under the TIA, the Indenture provision so modifying or excluding such provision of the TIA shall be deemed to apply.

Section 14.2. Notices.

Any request, demand, authorization, notice, waiver, consent or communication shall be in writing and delivered in person (including by commercial courier services) or mailed by first-class mail, postage prepaid, addressed as follows or transmitted by facsimile transmission (confirmed by guaranteed overnight courier) to the following facsimile numbers:

if to the Company:

CURAGEN CORPORATION
555 Long Wharf Drive, 11th Floor
New Haven, Connecticut 06511
Attention: Chief Financial Officer
Facsimile No.: (03) 401-3333

with a copy to:

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY & POPEO, P.C.
One Financial Center
Boston, Massachusetts 02111
Attention: Michael Fantozzi, Esq.
Facsimile No.: (617) 542-2241

if to the Trustee:

THE BANK OF NEW YORK
101 Barclay Street
New York, New York 10286
Attention: Corporate Trust Department
Facsimile No.:

The Company or the Trustee by notice given to the other in the manner provided above may designate additional or different addresses for subsequent notices or communications.

Any notice or communication given to a Holder shall be mailed to the Holder, by first-class mail, postage prepaid, at the Holder's address as it appears on the registration books of the Registrar and shall be sufficiently given if so mailed within the time prescribed.

Failure to mail a notice or communication to a Holder or any defect in it shall not affect its sufficiency with respect to other Holders. If a notice or communication is mailed in the manner provided above, it is duly given, whether or not received by the addressee.

If the Company mails a notice or communication to the Holders, it shall mail a copy to the Trustee and each Registrar, Paying Agent, Conversion Agent, or co-registrar.

Notwithstanding the foregoing, in the case of the Trustee, notice must be actually received by the Corporate Trust Office of the Trustee.

Section 14.3. Communication by Holders with Other Holders.

Holders may communicate pursuant to Section 312(b) of the TIA with other Holders with respect to their rights under this Indenture or the Securities. The Company, the Trustee, the Registrar, the Paying Agent, the Conversion Agent and anyone else shall have the protection of TIA Section 312(c).

Section 14.4. Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

(a) an Officers' Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and

(b) an Opinion of Counsel (except in connection with the original issuance of Securities) stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Section 14.5. Statements Required in Certificate or Opinion.

Each Officers' Certificate or Opinion of Counsel with respect to compliance with a covenant or condition provided for in this Indenture shall include:

(a) a statement that each person making such Officers' Certificate or Opinion of Counsel has read such covenant or condition;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such Officers' Certificate or Opinion of Counsel are based;

(c) a statement that, in the opinion of each such person, he has made such examination or investigation as is necessary to enable such person to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(d) a statement that, in the opinion of such person, such covenant or condition has been complied with.

In giving such Opinion of Counsel, counsel may rely as to factual matters on an Officers' Certificate or on certificates of public officials.

Section 14.6. Separability Clause.

In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 14.7. Rules by Trustee, Paying Agent, Conversion Agent, Registrar.

The Trustee may make reasonable rules for action by or a meeting of Holders. The Registrar, the Conversion Agent and the Paying Agent may make reasonable rules for their functions.

Section 14.8. Legal Holidays.

If any specified date (including a date for giving notice) is a Legal Holiday, the action shall be taken on the next succeeding day that is not a Legal Holiday, and, if the action to be taken on such date is a payment in respect of the Securities, no interest, if any, shall accrue for the intervening period.

Section 14.9. Governing Law; Submission to Jurisdiction; Service of Process.

This Indenture shall be governed by, and construed in accordance with, the laws of the State of New York. The Company submits to the non-exclusive jurisdiction of the courts of the State of New York and the courts of the United States of America, in each case located in the Borough of Manhattan, New York, New York over any suit, action or proceeding arising under or in connection with this Indenture or the transactions contemplated hereby or the Securities. The Company waives any objection that it may have to the venue of any suit, action or proceeding arising under or in connection with this Indenture or the transactions contemplated hereby or the Securities in the courts of the State of New York or the courts of the United States of America, in each case located in the Borough of Manhattan, New York, New York, or that such suit, action or proceeding brought in the courts of the State of New York or the courts of the United States of America, in each case located in the Borough of Manhattan, New York, New York, was brought in an inconvenient court and agrees not to plead or claim the same.

The Company agrees that service of all writs, process and summonses in any suit, action or proceeding arising under or in connection with this Indenture or the transactions contemplated thereby or the Securities against the Company in any court of the State of New York or any United States Federal court, in each case, sitting in the Borough of Manhattan, New York, New York, may be made upon Corporation Service Company at 80 State Street, Albany, New York 12207, whom the Company irrevocably appoints as its authorized agent for service of process. The Company represents and warrants that Corporation Service Company has agreed to act as the Company's agent for service of process. The Company agrees that such appointment shall be irrevocable until the irrevocable appointment by the Company of a successor in New York, New York as its authorized agent for such purpose and the acceptance of such appointment by such successor. The Company further agrees to take any and all action, including the filing of any and all documents and instruments that may be necessary to continue such appointment in full force and effect as aforesaid. If Corporation Service Company shall cease to act as the agent for service of process for the Company, the Company shall appoint without delay, another such agent and provide prompt written notice to the Trustee of such appointment.

Section 14.10. No Recourse Against Others.

No recourse under or upon any obligation, covenant or agreement contained in this Indenture, or in any Security, or because of any indebtedness evidenced thereby, shall be had against any incorporator, as such, or against any past, present or future stockholder, officer or director, as such, of the Company or of any successor, either directly or through the Company or any successor, under any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise, all such liability being expressly waived and released by the acceptance of the Securities by the Holders and as part of the consideration for the issue of the Securities.

Section 14.11. Successors.

All agreements of the Company in this Indenture and the Securities shall bind its successor. All agreements of the Trustee in this Indenture shall bind its successor.

Section 14.12. Multiple Originals.

The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement. One signed copy is enough to prove this Indenture.

* * * *

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IN WITNESS WHEREOF, the undersigned, being duly authorized, have executed this Indenture on behalf of the respective parties hereto as of the date first above written.

CURAGEN CORPORATION

By: /s/ JONATHAN M. ROTHBERG
Name: Jonathan M. Rothberg, Ph.D.
Title: Chief Executive Officer and President

THE BANK OF NEW YORK
As Trustee

By: /s/ GEOVANNI BARRIS
Name: Geovanni Barris
Title: Vice President

EXHIBIT A

[FORM OF face OF SECURITY]

[UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (AND ANY PAYMENT HEREON IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL SINCE THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN. THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE THEREOF. THIS SECURITY IS EXCHANGEABLE FOR SECURITIES REGISTERED IN THE NAME OF A PERSON OTHER THAN THE DEPOSITARY OR ITS NOMINEE ONLY IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE AND, UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY.](1)

[THE SECURITY EVIDENCED BY THIS CERTIFICATE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT OF 1933"), OR ANY STATE SECURITIES LAWS, AND MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ACQUISITION HEREOF OR A BENEFICIAL INTEREST HEREIN, THE HOLDER:

(1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT OF 1933;

(2) AGREES THAT IT SHALL NOT WITHIN TWO YEARS AFTER THE ORIGINAL ISSUANCE OF THIS SECURITY, RESELL OR OTHERWISE TRANSFER THE SECURITY EVIDENCED HEREBY OR THE SHARES OF COMMON STOCK ISSUABLE UPON CONVERSION OF SUCH SECURITY EXCEPT (A) TO THE COMPANY OR ANY SUBSIDIARY THEREOF, (B) TO A PERSON THAT THE HOLDER REASONABLY BELIEVES IS A "QUALIFIED INSTITUTIONAL BUYER" AS DEFINED IN, AND IN COMPLIANCE WITH, RULE 144A UNDER THE SECURITIES ACT OF 1933, (C) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT OF 1933 (IF AVAILABLE), (D) PURSUANT TO AN

(1) This legend should be included only if the Security is a Global Security.

EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT OF 1933 (IF AVAILABLE) TO AN INSTITUTIONAL ACCREDITED INVESTOR THAT, PRIOR TO SUCH TRANSFER, FURNISHES TO AMERICAN STOCK TRANSFER AND TRUST COMPANY, AS TRANSFER AGENT (OR ANY SUCCESSOR TRANSFER AGENT, AS APPLICABLE), SUCH CERTIFICATIONS AND OPINION OF COUNSEL REQUIRED BY THE COMPANY OR THE TRANSFER AGENT OR (E) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT OF 1933 AND THAT CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER; AND

(3) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THE SECURITY EVIDENCED HEREBY IS TRANSFERRED (OTHER THAN A TRANSFER PURSUANT TO CLAUSE 2(C) OR 2(E) ABOVE), A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND.](2)

[THE HOLDER OF THIS SECURITY IS ENTITLED TO THE BENEFITS OF A REGISTRATION RIGHTS AGREEMENT (AS SUCH TERM IS DEFINED IN THE INDENTURE REFERRED TO ON THE REVERSE HEREOF) AND, BY ITS ACCEPTANCE HEREOF, AGREES TO BE BOUND BY AND TO COMPLY WITH THE PROVISIONS OF SUCH REGISTRATION RIGHTS AGREEMENT.](2)

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(2) This legend should be included only if the Security is a Transfer Restricted Security.

CURAGEN CORPORATION
4.0% CONVERTIBLE SENIOR NOTES DUE 2011

No. CUSIP:

CURAGEN CORPORATION, a Delaware corporation (the "Company", which term shall include any successor corporation under the Indenture referred to on the reverse hereof), for value received, promises to pay to , or registered assigns, the principal amount of Dollars ($ ) on February 15, 2011

In addition, for value received, the Company hereby promises to pay interest to the Holder of this security from February 17, 2004 or from the most recent Interest Payment Date to which interest has been paid or duly provided for, on February 15 and August 15 in each year (each, an "INTEREST PAYMENT DATE"), commencing on August 15, 2004, at the rate of 4.0% per annum until the principal hereof is paid or made available for payment at February 15, 2011 or upon acceleration, or until such date on which the Securities are converted, redeemed or purchased as provided herein.

Interest, and Additional Interest, if any, on Securities converted after the close of business on a Regular Record Date but prior to the opening of business on the corresponding Interest Payment Date shall be paid to the Holder of the Securities on the Regular Record Date but, upon conversion, the Holder must pay the Company an amount equal to the interest and Additional Interest, if any, which has accrued and shall be paid on such Interest Payment Date. No such payment need be made with respect to Notes converted after a Regular Record Date and prior to the corresponding Interest Payment Date after being called for redemption or upon acceleration.

All references herein to interest accrued or payable as of any date shall, without duplication, be deemed to include Additional Interest, if any, payable pursuant to the Registration Rights Agreement.

Reference is hereby made to the further provisions of this Security set forth on the reverse side of this Security, which further provisions shall for all purposes have the same effect as if set forth at this place.

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed.

Dated:

CURAGEN CORPORATION

By: /s/ Jonathan M. Rothberg
Name: **Jonathan M. Rothberg**
Title: **Chief Executive Officer and President**

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This is one of the Securities referred to in the within-mentioned Indenture.

Dated: February 17, 2004

THE BANK OF NEW YORK
as Trustee

By:

This Security is one of a duly authorized issue of 4.0% Convertible Senior Notes due 2011 (the "Securities") of CURAGEN CORPORATION, a Delaware corporation (including any successor corporation under the Indenture hereinafter referred to, the "Company"), issued under an Indenture, dated as of February 17, 2004 (the "Indenture"), between the Company and The Bank of New York, a New York banking corporation, as Trustee (the "Trustee"). The terms of the Security include those stated in the Indenture, those made part of the Indenture by reference to the Trust Indenture Act of 1939, as amended ("TIA"), and those set forth in this Security. This Security is subject to all such terms, and Holders are referred to the Indenture and the TIA for a statement of all such terms. To the extent permitted by applicable law, in the event of any inconsistency between the terms of this Security and the terms of the Indenture, the terms of the Indenture shall control. Capitalized terms used but not defined herein have the meanings assigned to them in the Indenture referred to below unless otherwise indicated.

1. Interest.

Interest on the Securities shall be computed on the basis of a 360-day year of twelve 30-day months. If this Security is redeemed pursuant to Section 6 of this Security or the Holder elects to require the Company to purchase this Security pursuant to Section 7 of this Security, on a date that is after the Regular Record Date and on or before the corresponding Interest Payment Date, interest and Additional Interest, if any, accrued and unpaid hereon to, but excluding, the applicable Redemption Date or Fundamental Change Purchase Date shall be paid to the same Holder to whom the Company pays the principal of this Security. Interest and Additional Interest, if any, accrued and unpaid hereon at the Stated Maturity also shall be paid to the same Holder to whom the Company pays the principal of this security.

Interest and Additional Interest, if any, on Securities converted after the close of business on a Regular Record Date but prior to the opening of business on the corresponding Interest Payment Date shall be paid to the Holder of the Securities on the Regular Record Date but, upon conversion, the Holder must pay the Company an amount equal to interest and Additional Interest, if any, which has accrued and shall be paid on such Interest Payment Date. No such payment need be made with respect to Securities which shall be converted after a Regular Record Date and prior to the corresponding Interest Payment Date after being called for redemption.

All references herein to interest accrued or payable as of any date shall without duplication be deemed to include any Additional Interest, if any, pursuant to the Registration Rights Agreement.

2. Method of Payment.

Payment of the principal of and interest and Additional Interest, if any, on the Securities shall be in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts or in Applicable Stock, as the case may be. The Holder must surrender the Securities to the Paying Agent to collect payment of principal. Payment of interest and Additional Interest, if any, on Certificated Securities in the aggregate principal amount of $5,000,000 or less shall be made by check mailed to the address of the Person entitled thereto as such address appears in the Register and payment of interest and



Additional Interest, if any, on Certificated Securities in aggregate principal amount in excess of $5,000,000 shall be made by wire transfer in immediately available funds at the election of such Holder. Notwithstanding the foregoing, so long as the Securities are registered in the name of a Depositary or its nominee, all payments with respect to the Securities shall be made by wire transfer of immediately available funds to the account of the Depositary or its nominee.

3. Paying Agent, Registrar, Conversion Agent.

Initially, The Bank of New York shall act as Paying Agent, Registrar and Conversion Agent. The Company may appoint and change any Paying Agent, Registrar and Conversion Agent without notice, other than notice to the Trustee; provided that the Company shall maintain at least one Paying Agent in Borough of Manhattan, New York, New York, which shall initially be an office or agency of the Trustee. The Company or any of its Subsidiaries or any of their Affiliates may act as Paying Agent, Registrar or Conversion Agent.

4. Indenture.

The Securities are general unsecured obligations of the Company limited to up to $120,000,000 aggregate principal amount. The Indenture does not limit other indebtedness of the Company, secured or unsecured.

5. Subordination.

The indebtedness evidenced by the Securities is, to the extent and in the manner provided in the Indenture, subordinate and

junior in right of payment to the prior payment in full in cash of all Senior Indebtedness. Any Holder by accepting this Security agrees to and shall be bound by such subordination provisions and authorizes the Trustee to give them effect.

6. Redemption of the Notes by the Company.

The Securities are redeemable for cash at the option of the Company, in whole or in part, at any time or from time to time on, or after February 18, 2009 at the Redemption Price.

Notice of redemption pursuant to this Section of this Security shall be mailed at least 20 calendar days but not more than 60 calendar days before the Redemption Date to each Holder of Securities to be redeemed at the Holder's registered address. If cash sufficient to pay the Redemption Price of all Securities (or portions thereof) to be redeemed on the Redemption Date is deposited with the Paying Agent prior to 10:00 a.m., New York City time, on the Redemption Date, then, on such Redemption Date interest and Additional Interest, if any ceases to accrue on such Securities or portions thereof. Securities in denominations larger than $1,000 of principal amount may be redeemed in part but only in integral multiples of $1,000 of principal amount.

7. Purchase by the Company at the Option of the Holder or Upon a Fundamental Change.

In the event that a Fundamental Change shall occur at any time prior to the Stated Maturity, each Holder shall have the right, at the Holder's option, but subject to the provisions of the Indenture, to require the Company to purchase all or any part of such Holder's Notes not theretofore called for redemption, or any portion of the Principal Amount at issuance thereof that is equal to $1,000 or an integral multiple thereof. The Company shall be required to purchase such Notes at a purchase price in cash equal to 100% of the Principal Amount plus any accrued and unpaid interest and Additional Interest, if any to, but excluding, the Fundamental Change Purchase Date. The Company may, at its option, in lieu of paying the Fundamental Change

Purchase Price in cash, pay the Fundamental Change Purchase Price in Common Stock valued at 95% of the average of the Closing Sales Prices of the Common Stock for the five consecutive Trading Days immediately preceding the second Trading Day prior to the Fundamental Change Purchase Date. To exercise such right, a Holder shall deliver a Fundamental Change Purchase Notice to the Paying Agent at any time on or before the 20th Business Day after the date of the Company's notice of the Fundamental Change (subject to extension to comply with applicable law).

Holders have the right to withdraw any Purchase Notice or Fundamental Change Purchase Notice by delivering to the Paying Agent a written notice of withdrawal in accordance with the provisions of the Indenture.

If the Paying Agent holds, in accordance with the terms hereof, at 10:00 a.m., New York City time, on the applicable Fundamental Change Purchase Date, cash or Applicable Stock sufficient to irrevocably pay the Fundamental Change Purchase Price, as the case may be, of any Securities for which a Fundamental Change Purchase Notice, as the case may be, has been tendered and not withdrawn pursuant to the Indenture, then, on such Fundamental Change Purchase Date, as the case may be, such Securities shall cease to be outstanding and interest and Additional Interest, if any, on such Securities shall cease to accrue, whether or not such Securities are delivered to the Paying Agent, and the rights of the Holders in respect thereof shall terminate (other than the right to receive the Fundamental Change Purchase Price, as the case may be, upon delivery of such Securities).

8. Conversion.

Subject to and in compliance with the provisions of the Indenture (including, without limitation, the conditions to conversion of this Security set forth in Section 12.1 thereof), a Holder is entitled, at such Holder's option, to convert the Holder's Security (or any portion of the principal amount thereof that is $1,000 or an integral multiple $1,000), into fully paid and nonassessable shares of Common Stock at the Conversion Rate in effect on the date of conversion. The number of shares of Common Stock issuable upon conversion of each $1,000 of Principal Amount of Securities is initially 103.2429 shares of Common Stock, and is subject to adjustment in certain events as set forth in the Indenture.

A Security in respect of which a Holder has delivered a Fundamental Change Purchase Notice, as the case may be, exercising the right of such Holder to require the Company to purchase such Security may be converted only if such Fundamental Change Purchase Notice is withdrawn in accordance with the terms of the Indenture.

Except as described in the Indenture, the Company will not make any payment in cash or Common Stock or other adjustment for accrued and unpaid interest or Additional interest on any Securities when they are converted. The Company's delivery to the Holder of the full number of shares of Common Stock into which the Security is convertible, together with any cash payment for such Holder's fractional shares, shall be deemed to satisfy the Company's obligation to pay the Principal Amount of the Security and to satisfy its obligation to pay accrued and unpaid interest and Additional Interest, if any through the conversion date. As a result, accrued interest and Additional Interest are deemed paid in full rather than cancelled, extinguished or forfeited. Notwithstanding the foregoing, accrued interest and Additional

Interest, if any, will be payable upon any conversion of Securities made concurrently with or after acceleration of the Securities following an Event of Default.

Before any Holder shall be entitled to convert any Securities into Common Stock, such Holder shall, in the case of Global Securities, comply with the Applicable Procedures of the Depositary in effect at that time, and in the case of Certificated Securities, complete and manually sign the conversion notice on the back of the Securities (or a facsimile thereof), deliver the completed conversion notice and the Security to be converted to the office of the Conversion Agent and, if required by the Conversion Agent, furnish appropriate endorsements and transfer documents. Before any such conversion, a Holder also shall pay all funds required, if any, relating to interest or Additional Interest, if any, on the Securities, as provided in the Indenture, and all taxes or duties, if any, as provided in the Indenture.

If the Company (i) reclassifies the Common Stock, (ii) is a party to a consolidation, merger or binding share exchange or (iii) sell or conveys all or substantially all of its properties or assets to any Person, the right to convert a Security into shares of Common Stock may be changed into a right to convert it into securities, cash or other assets of the Company or such other Person, in each case in accordance with the Indenture.

9. Denominations; Transfer; Exchange.

The Securities are in fully registered form, without coupons, in denominations of $1,000 of principal amount and integral multiples of $1,000. A Holder may transfer or exchange Securities in accordance with the Indenture. The Registrar may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and to pay any taxes and fees required by law or permitted by the Indenture. Neither the Company, the Trustee or the Registrar shall be required to exchange or register a transfer of (i) any Securities selected for redemption (except, in the case of a Security to be redeemed in part, the portion of the Security not to be redeemed) or (ii) any Securities in respect of which a Fundamental Change Purchase Notice has been given and not withdrawn by the Holder thereof in accordance with the terms of this Indenture (except, in the case of a Security to be repurchased in part, the portion of the Security not to be repurchased) or (iii) any Securities surrendered for conversion.

10. Persons Deemed Owners.

The registered Holder of this Security may be treated as the owner of this Security for all purposes.

11. Unclaimed Money or Securities.

The Trustee and the Paying Agent shall return to the Company upon written request any cash or securities held by them for the payment of any amount with respect to the Securities that remains unclaimed for two years, subject to applicable unclaimed property law. After return to the Company, Holders entitled to the money or securities must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person.

12. Amendment; Waiver.

Subject to certain exceptions set forth in the Indenture, (i) the Indenture or the Securities may be amended with the written consent or affirmative vote of the Holders of at least a majority in aggregate principal amount of the outstanding Securities and (ii) certain Defaults may be

waived with the written consent or affirmative vote of the Holders of a majority in aggregate principal amount of the outstanding Securities.

Without the consent of any Holder, the Company and the Trustee may amend the Indenture or the Securities to:

(a) add to the covenants of the Company for the benefit of the Holders of Securities;

(b) surrender any right or power herein conferred upon the Company;

(c) provide for conversion rights of Holders of Securities if any reclassification or change of the Common Stock or any consolidation, merger or sale of all or substantially all of the Company's assets occurs;

(d) provide for the assumption of the Company's obligations to the Holders of Securities in the case of a merger, consolidation, conveyance, transfer, sale, lease or other disposition pursuant to Article VII;

(e) increase the Conversion Rate; provided, however, that such increase in the Conversion Rate shall not adversely affect the interests of the Holders of Securities (after taking into account tax and other consequences of such increase);

(f) comply with the requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA;

(g) make any changes or modifications necessary in connection with the registration of the Securities under the Securities Act as contemplated in the Registration Rights Agreement; provided, however, that such action pursuant to this clause (g) does not, in the good faith opinion of the Board of Directors (as evidenced by a Board Resolution), adversely affect the interests of the Holders of Securities in any material respect;

(h) cure any ambiguity, correct or supplement any provision herein which may be inconsistent with any other provision herein or which is otherwise defective, or to make any other provisions with respect to matters or questions arising under this Indenture which the Company may deem necessary or desirable and which shall not be inconsistent with the provisions of this Indenture; provided, however, that such action pursuant to this clause (h) does not, in the good faith opinion of the Board of Directors (as evidenced by a Board Resolution), adversely affect the interests of the Holders of Securities in any material respect;

(i) to evidence the succession of another Person to the Company or any other obligor upon the Securities, and the assumption by any such successor of the covenants of the Company or such obligor herein and in the Securities, in each case in compliance with the provisions of this Indenture;

(j) to evidence and provide the acceptance of the appointment of a successor trustee hereunder; or

(k) add or modify any other provisions herein with respect to matters or questions arising hereunder which the Company and the Trustee may deem necessary or desirable and which shall not adversely affect the interests of the Holders of Securities.

13. Defaults and Remedies.

If any Event of Default other than as a result of certain events of bankruptcy, insolvency or reorganization of the Company or its designated Subsidiaries occurs and is continuing, the principal of all the Securities may be declared due and payable in the manner and with the effect provided in the Indenture. If an Event of Default occurs as a result of certain events of bankruptcy, insolvency or reorganization of the Company or its designated Subsidiaries, the principal of all the Securities shall become due and payable immediately without any declaration or other act on the part of the Trustee or any Holder, all as and to the extent provided in the Indenture.

14. Trustee Dealings with the Company.

Subject to certain limitations imposed by the TIA, the Trustee under the Indenture, in its individual or any other capacity, may become the owner or pledgee of Securities and may otherwise deal with and collect obligations owed to it by the Company or its Affiliates and may otherwise deal with the Company or its Affiliates with the same rights it would have if it were not Trustee.

15. Calculations in Respect of Securities.

The Company or its agents shall be responsible for making all calculations called for under the Securities including, but not limited to, determination of the Market Price and Closing Sale Price of the Applicable Stock, the number of shares of Applicable Stock and/or the amount of cash issuable or payable upon conversion and the amounts of interest and Additional Interest, if any, on the Securities. Any calculations made in good faith and without manifest error shall be final and binding on Holders of the Securities. The Company or its agents shall be required to deliver to the Trustee a schedule of its calculations and the Trustee shall be entitled to conclusively rely upon the accuracy of such calculations without independent verification.

16. No Recourse Against Others.

No recourse under or upon any obligation, covenant or agreement contained in the Indenture, or in this Security, or because of any indebtedness evidenced thereby, shall be had against any incorporator, as such, or against any past, present or future stockholder, officer or director, as such, of the Company or of any successor, either directly or through the Company or any successor, under any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise, all such liability being expressly waived and released by the acceptance of the Securities by the Holders and as part of the consideration for the issue of the Securities.

17. Authentication.

This Security shall not be valid until an authorized signatory of the Trustee signs, manually or by facsimile, the Trustee's Certificate of Authentication on the other side of this Security.

18. Abbreviations.

Customary abbreviations may be used in the name of a Holder or an assignee, such as TEN COM (=tenants in common), TEN ENT (=tenants by the entireties), JT TEN (=joint tenants with right of survivorship and not as tenants in common), CUST (=custodian), and U/G/M/A (=Uniform Gift to Minors Act).

19. INDENTURE TO CONTROL; GOVERNING LAW.

IN THE CASE OF ANY CONFLICT BETWEEN THE PROVISIONS OF THIS SECURITY AND THE INDENTURE, THE PROVISIONS OF THE INDENTURE SHALL CONTROL. THE INDENTURE AND THIS SECURITY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

The Company shall furnish to any Holder upon written request and without charge a copy of the Indenture which has in it the text of this Security in larger type. Requests may be made to:

if to the Company:

CURAGEN CORPORATION
555 Long Wharf Drive, 11th Floor
New Haven, Connecticut 06511
Attention: Chief Financial Officer
Facsimile No.: (403) 401-3333

with a copy to:

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY & POPEO, P.C.
One Financial Center
Boston, Massachusetts 02111
Attention: Michael Fantozzi, Esq.
Facsimile No.: (617) 542-2241

20. Registration Rights.

The Holders of the Securities are entitled to the benefits of a Registration Rights Agreement, dated as of February 17, 2004, between the Company and Bear, Stearns & Co. Inc., as amended, modified or supplements in accordance therewith, including the receipt of Additional Interest upon a Registration Default (as defined in such agreement).

ASSIGNMENT FORM

To assign this Security, fill in the form below:

I or we assign and transfer this Security to

(Insert assignee's soc. sec. or tax ID no.)

(Print or type assignee's name, address and zip code) and irrevocably appoint agent to transfer this Security on the books of the Company. The agent may substitute another to act for him.

Your Signature(s):

Date:

(Sign exactly as your name(s) appears on the other side of this Security)

Signature Guaranteed

Participant in a Recognized Signature
Guarantee Medallion Program

By:

Authorized Signatory

OPTION OF HOLDER TO ELECT PURCHASE

If you wish to have this Security purchased by the Company pursuant to Article V (Purchase at the Option of Holders Upon a Fundamental Change) of the Indenture, check the box: Article V ☐.

If you wish to have a portion of this Security purchased by the Company pursuant to Article V of the Indenture, as applicable, state the amount (in Principal Amount): $ .

If certificated, the certificate numbers of the Securities to be delivered for purchase are: .

Any purchase of Securities pursuant hereto shall be pursuant to the terms and conditions specified in the Indenture.

Your Signature(s):

Date:

(Sign exactly as your name(s) appears on the other side of this Security)

Signature Guaranteed

Participant in a Recognized Signature
Guarantee Medallion Program

By:

Authorized Signatory

CONVERSION NOTICE

To convert this Security into Common Stock of the Company, check the box ☐.

To convert only part of this Security, state the principal amount to be converted (which must be $1,000 or an integral multiple of $1,000): .

Please check one:

☐ I certify that neither I nor any other Person shall become a 10% Stockholder upon satisfaction by the Company of the Conversion Obligation underlying this Conversion Notice in Common Stock.

☐ I do not certify that neither I nor any other Person shall become a 10% Stockholder upon satisfaction by the Company of the Conversion Obligation underlying this Conversion Notice in Common Stock.

"10% Stockholder" means a Person that owns, directly or indirectly, applying the provisions of Section 958(a) of the Internal Revenue Code of 1986, as amended (the "Code"), or by attribution, applying the provisions of Section 958(b) of the Code, 10% or more of the outstanding shares of Common Stock.

If you want the stock certificate made out in another person's name fill in the form below:

(Insert the other person's soc. sec. or tax ID no.)

(Print or type the other person's name, address and zip code) Your Signature(s):

Date:

(Sign exactly as your name(s) appears on the other side of this Security)

Signature Guaranteed

Participant in a Recognized Signature
Guarantee Medallion Program

By:

Authorized Signatory

TRANSFER CERTIFICATE(3)
RE: 4.0% CONVERTIBLE SENIOR NOTES DUE 2011 (THE "SECURITIES") OF
CURAGEN CORPORATION (THE "COMPANY")

This certificate relates to $ principal amount of Securities owned in (check applicable box) ☐ book-entry ☐ definitive form by (the "Transferor").

The Transferor has requested a Registrar or the Trustee to exchange or register the transfer of such Securities.

In connection with such request and in respect of each such Security, the Transferor does hereby certify that the Transferor is familiar with transfer restrictions relating to the Securities as provided in Section 2.6 and Section 2.12 of the Indenture dated February , 2004 between the Company and The Bank of New York, as Trustee (the "Indenture"), and the transfer of such Security is being made pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act") (check applicable box) or the transfer or exchange, as the case may be, of such Security does not require registration under the Securities Act because (check applicable box):

☐ Such Security is being transferred to the Company or a Subsidiary; or

☐ Such Security is being transferred to a Qualified Institutional Buyer in compliance with Rule 144A under the Securities Act; or

☐ Such Security is being transferred pursuant to and in compliance with an exemption from the registration requirements under the Securities Act in accordance with Rule 144 (or any successor thereto) ("Rule 144") under the Securities Act; or

☐ Such Security is being transferred to an institutional investor that is an "accredited investor" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that has transferred a letter making certain representations, warranties and agreements relating to restrictions on transfer and an opinion of counsel to as transfer agent (or any successor transfer agent, as applicable) that such transfer is in compliance with the Securities Act.

☐ Such Security is being transferred pursuant to an effective registration statement under the Securities Act; or

☐ Such Security is being acquired for the Transferor's own account, without transfer.

The Transferor acknowledges and agrees that, if the transferee shall hold any such Securities in the form of beneficial interests in a Global Security which is a "restricted security" within the meaning of Rule 144 under the Securities Act, then such transfer can only be made pursuant to Rule 144A under the Securities Act and such transferee must be a "qualified institutional buyer" (as defined in Rule 144A).

Date:

Signature(s) of Transferor

(3) This certificate should only be included if this Security is a Transfer Restricted Security.

(If the registered owner is a corporation, partnership or fiduciary, the title of the person signing on behalf of such registered owner must be stated. ) Signature Guaranteed

Participant in a Recognized Signature
Guarantee Medallion Program

By:
Authorized Signatory

EXHIBIT B
[FORM OF RESTRICTIVE LEGEND FOR
COMMON STOCK ISSUED UPON CONVERSION](4)

THE SECURITY EVIDENCED BY THIS CERTIFICATE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT OF 1933"), OR ANY STATE SECURITIES LAWS, AND MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ACQUISITION HEREOF, THE HOLDER:

(1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT OF 1933;

(2) AGREES THAT IT SHALL NOT, WITHIN TWO YEARS AFTER THE ORIGINAL ISSUANCE OF THE SECURITY UPON THE CONVERSION OF WHICH THE SHARES OF COMMON STOCK EVIDENCED HEREBY WERE ISSUED, RESELL OR OTHERWISE TRANSFER THE SECURITY EVIDENCED HEREBY EXCEPT (A) TO THE COMPANY OR ANY SUBSIDIARY THEREOF, (B) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT OF 1933 (IF AVAILABLE), (C) PURSUANT TO AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT OF 1933 (IF AVAILABLE) TO AN INSTITUTIONAL ACCREDITED INVESTOR THAT PRIOR TO SUCH TRANSFER, FURNISHES TO, AS TRANSFER AGENT (OR ANY SUCCESSOR TRANSFER AGENT, AS APPLICABLE), CERTIFICATIONS AND OPINION OF COUNSEL REQUIRED BY THE COMPANY OR TRANSFER AGENT OR (D) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT OF 1933 AND THAT CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER; AND (3) AGREES THAT IT SHALL DELIVER TO EACH PERSON TO WHOM THE SECURITY EVIDENCED HEREBY IS TRANSFERRED (OTHER THAN A TRANSFER PURSUANT TO CLAUSE 2(B) OR 2(D) ABOVE), A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND.]

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(4) This legend should be included only if the Security is a Global Security.

**Exhibit 10.27**

# COLLABORATION AGREEMENT

This Agreement is entered into as of June 18, 2004 by and between:

**SEATTLE GENETICS, INC.**, a Delaware corporation, having its principal place of business at 21823 30th Drive S.E., Bothell, Washington 98021

(hereinafter referred to as "SGI")

and:

**CURAGEN CORPORATION**, a Delaware corporation, having its principal place of business at 555 Long Wharf Avenue, New Haven, CT 06511

(hereinafter referred to as "Licensee").

## WITNESSETH

**WHEREAS,** SGI owns or controls intellectual property rights relating to certain technology useful for linking certain proprietary cytotoxins to other molecules such as antibodies capable of directing such cytotoxins to specific tissues and/or cells;

**WHEREAS,** Licensee is currently conducting research and development programs to discover antigens that may have activity in certain disease-related pathways, and to develop antibodies that bind to those antigens;

**WHEREAS,** the Parties have created ADCs (as such term is defined below) to, and conducted initial characterization work regarding, the First Exclusive Antigen (as such term is defined below) pursuant to the terms and subject to the conditions of the Initial Agreements (as such term is defined below);

**WHEREAS,** Licensee wishes to obtain an exclusive worldwide license under certain of SGI's patent rights and know-how related to SGI's proprietary cytotoxin and linker technology to the First Exclusive Antigen for use in conjunction with Licensee's antibodies on the terms set forth below and Licensee wishes to acquire from SGI an exclusive option to obtain an exclusive worldwide license under SGI's patent rights and know-how related to SGI's proprietary cytotoxin and linker technology to a Second Exclusive Antigen for use in conjunction with Licensee's antibodies; and

**WHEREAS,** SGI wishes to grant to Licensee such license and option and to allow Licensee to evaluate SGI's cytotoxin and linker technology for use with certain of Licensee's antigens and antibodies.

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**NOW, THEREFORE**, in consideration of the mutual covenants and obligations set forth herein, the Parties hereto, intending to be legally bound, agree as follows:

## ARTICLE 1 - DEFINITIONS AND INTERPRETATION

**1.1 Definitions:** For the purposes of this Agreement the following words and phrases shall have the following meanings:

**1.1.1** "**AAA**" has the meaning set forth in Section 19.3.4.

**1.1.2** "**ADC**" or "**Antibody-Drug Conjugate**" means an Antibody that is linked to a cytotoxin or cytostatic agent and that contains, uses or is made using SGI Technology.

**1.1.3** "**ADC Access Fee**" has the meaning set forth in Section 6.1.1.

**1.1.4** "**Affiliate**" of a Party means any corporation or other business entity that, directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with a Party. As used herein, the term "control" means the direct or indirect ownership of [***] or more of the stock having the right to vote for directors thereof or the ability to otherwise control the management thereof.

**1.1.5** "**Agreement**" means this agreement, all amendments and supplements to this Agreement and all schedules to this Agreement, including the following:

**1.1.6** Schedule A - Research Plan.

**1.1.7** Schedule B - SGI Patents.

**1.1.8** Schedule C - SGI In-Licenses.

**1.1.9** Schedule D - Designated Antigens and Exclusive Antigens.

**1.1.10** "**Antibody**" or "**Antibodies**" means any antibody, or [***], that binds to an Antigen.

**1.1.11** "**Antigen**" means any [***], that is Controlled by Licensee.

**1.1.12 "[***]"** means [***] having a GenBank accession number of [***].

**1.1.13 "[***]"** means the SGI Technology licensed to SGI under the BMS Agreement (as defined in the definition of "SGI In-Licenses").

**1.1.14** "**Breaching Party**" has the meaning set forth in Section 13.3.

**1.1.15** "**Calendar Quarter**" means any of the three-month periods beginning January 1, April 1, July 1 and October 1 in any year.

**1.1.16** "**Change in Control**" has the meaning set forth in Article 16.

**1.1.17** "**Claims**" has the meaning set forth in Section 14.1.1.

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**1.1.18** "**Combination Product**" means any Licensed Product that contains, in addition to an ADC, one or more other ingredients that (a) are not covered by SGI Technology, and (b) [***].

**1.1.19** "**Confidential Information**" has the meaning set forth in Section 8.1.

**1.1.20** "**Control**" means, with respect to any information or intellectual property right, possession by a Party of the ability to grant the right to access or use, or to grant a license or a sublicense to, such information or intellectual property right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party. [***].

**1.1.21** "**Cost of Goods**" shall mean with respect to Drug Conjugate Materials supplied to Licensee (a) for manufacturing activities performed by Third Parties, [***], as well as [***], including without limitation [***]; and (b) for manufacturing activities performed by SGI or its Affiliates, the [***].

**1.1.22** "**Designated Antigen**" means the [***] Antigens targeted by the ADCs prepared by SGI and designated as such in accordance with Section 2.5 of this Agreement.

**1.1.23** "**[***]**" means the [***] that may be [***] pursuant to [***] of this Agreement.

**1.1.24** "**Drug Conjugation Materials**" means the compound monomethyl Auristatin E and [***] and [***] thereof, including [***], as well as compounds that are useful in attaching such compounds to [***], in each case to the extent included in or covered by the SGI Technology. Drug Conjugation Materials shall also include Improvements to Drug Conjugation Materials and any additional cytotoxic or cytostatic compounds that are included in New Technologies and that the Parties agree to include under this Agreement pursuant to Section 3.7.2.

**1.1.25** "**Drug Conjugation Technology**" means chemical compositions and methods that are useful to attach cytotoxins or cytostatic compounds to Antibodies, including the composition and methods of making and using cytotoxic or cytostatic compounds, as well as compositions and methods useful for attaching the foregoing cytotoxic or cytostatic compounds to Antibodies.

**1.1.26** "**Effective Date**" means the date set forth in the first line of this Agreement.

**1.1.27** "**Events of Force Majeure**" has the meaning set forth in Article 15.

**1.1.28** "**Exclusive Antigen**" means collectively, the First Exclusive Antigen, the Second Exclusive Antigen and any Replacement Antigen.

**1.1.29** "**Exclusive License**" has the meaning set forth in Section 3.2.

**1.1.30** "**Exclusive License Maintenance Fee**" has the meaning set forth in Section 6.2.

**1.1.31** "**Existing Third Party Royalties**" has the meaning set forth in Section 6.5.1.

**1.1.32** "**FD&C Act**" means the federal Food, Drug & Cosmetic Act, as amended.

**1.1.33** "**FDA**" means the United States Food and Drug Administration, and any successor agency thereto.

**1.1.34** "**Field**" means the [***]; provided, that, with respect to use of the [***], the Field shall be limited to [***].

**1.1.35** "**First Commercial Sale**" means, in each country of the Territory, the first commercial sale of a Licensed Product by Licensee, its Affiliates or Sublicensees to a Third Party following, if required by law, Regulatory Approval and, when Regulatory Approval is not required by law, the first commercial sale in that country, in each case for use or consumption of such Licensed Product in such country by the general public. Sales for test marketing, sampling and promotional uses, clinical trial purposes or compassionate or similar use shall not be considered to constitute a First Commercial Sale.

**1.1.36** "**First Exclusive Antigen**" means Antigen CG56972 having a [***].

**1.1.37** "**FTE Fees**" has the meaning set forth in Section 6.1.2.

**1.1.38 "GAAP"** means generally accepted accounting principles in the United States.

**1.1.39** "**Good Laboratory Practices**" means the then-current standards for laboratory activities for pharmaceuticals, as set forth in the FD&C Act and applicable regulations and guidances promulgated thereunder, including without limitation the Code of Federal Regulations, as amended from time to time.

**1.1.40** "**Improvements**" means all patentable or non-patentable inventions, discoveries, or other know-how developed and Controlled by either Party during the Term that utilize, incorporate, are derived from, or are made using, the SGI Technology; provided that Improvements shall not include any [***] or any of the foregoing developed by SGI that, within a reasonable time period after such inventions, discoveries or know-how are made or identified, [***], which instead shall be included in [***].

**1.1.41** "**IND**" means (a) an Investigational New Drug Application filed with the FDA or its equivalent in any country outside the United States where a regulatory filing is required or obtained to conduct a clinical trial; or (b) with respect to any country where a regulatory filing is not required or obtained to conduct a clinical trial, the first enrollment of a patient in the first trial involving the first use of a Licensed Product in humans.

**1.1.42** "**Indemnitee**" has the meaning set forth in Section 14.2.

**1.1.43** "**Indemnitor**" has the meaning set forth in Section 14.2.

**1.1.44** "**Initial Agreements**" means (a) the [***] by and between the Parties and (b) the [***] by and between the Parties.

**1.1.45** "**Initiation**" means, with respect to a human clinical trial, the dosing of the first patient with a Licensed Product pursuant to the clinical protocol for the specified clinical trial.

**1.1.46** "**Joint Patents**" has the meaning set forth in Section 9.2.2.

**1.1.47** "**Liabilities**" has the meaning set forth in Section 14.1.1.

**1.1.48** "**Licensed Product**" means any and all products containing an ADC comprised of an Antibody that binds specifically to an Exclusive Antigen and that is attached to a cytotoxin or cytostatic agent included in the Drug Conjugation Materials: (a) the manufacture, use, sale, offer for sale or import of which [***]; or (b) [***].

**1.1.49** "**Licensee ADC Know-How**" means all Program Inventions developed by Licensee using SGI Technology, and that are necessary or useful for identifying, developing, making, using or selling ADCs that bind to any Exclusive Antigen or Designated Antigen.

**1.1.50** "**Licensee ADC Patents**" means all patent applications and patents that are Controlled by Licensee that claim Licensee ADC Know-How.

**1.1.51** "**Licensee Know-How**" means all technical information, processes, formulae, data, inventions, methods, chemical compounds, biological or physical materials, know-how and trade secrets, in each case that are not in the public domain, used by Licensee in the Research Program and that are Controlled by Licensee, including technical information, processes, formulae, data, inventions, methods, chemical compounds, biological or physical materials, know-how and trade secrets that relate to (a) the composition, method of using or method of making an Exclusive Antigen or Designated Antigen, or (b) the composition, method of using or method of making an Antibody that binds specifically to an Exclusive Antigen or Designated Antigen. [***].

**1.1.52** "**Licensee Materials**" means any tangible chemical, biological or physical research materials that are furnished by or on behalf of Licensee to SGI in connection with this Agreement.

**1.1.53** "**Licensee Patents**" means all patent applications and patents that claim Licensee Know-How.

**1.1.54** "**Net Sales**" means, as to each calendar quarter, the gross invoiced sales prices charged for all Licensed Products sold by or for Licensee, its Affiliates and Sublicensees to independent Third Parties during such quarter, [***]:

(a) [***];

(b) [***];

(c) [***]; and

(d) [***].

All of the [***] from the gross invoiced sales prices of Licensed Products shall be determined in accordance with GAAP. In the event that Licensee, its Affiliates or Sublicensees make any adjustments [***] after the associated Net Sales have been reported pursuant to this Agreement, the adjustments shall be reported and reconciled in the next report and payment of any royalties due.

In the event a Licensed Product is sold as part of a Combination Product, the Net Sales from the Combination Product, for the purposes of determining royalty payments, shall be determined by multiplying the Net Sales of the Combination Product (as defined in the standard Net Sales definition above), during the applicable royalty reporting period, by [***]. In the event that such average sale price cannot be determined for the Licensed Product, on the one hand, and all other product(s) included in the Combination Product, on the other, Net Sales for the purposes of determining royalty payments shall be [***].

**1.1.55** "[***]" means any [***], or other [***] that either: (a) are developed by SGI after the Effective Date and that, within a reasonable time period after such [***] are made or identified, SGI determines are [***] or (b) are in-licensed by SGI after the Effective Date, and that in each case either (x) [***], or (y) [***]. [***] shall include without limitation cytotoxic or cytostatic compounds other than those included in the Drug Conjugation Materials as of the Effective Date that SGI Controls during the Term.

**1.1.56** "**Notice of Dispute**" has the meaning set forth in Section 19.3.1.

**1.1.57** "**Option**" has the meaning set forth in Section 3.3.

**1.1.58** "**Option Period**" means, with respect to each Designated Antigen, the period commencing on the date such [***] and continuing until [***] (a) [***] or (b) [***]; provided that all Option Periods shall terminate when [***] pursuant to the terms hereof; and provided further that, if applicable, the Option Period for [***] shall be for a period of [***] after SGI notifies Licensee that [***].

**1.1.59** "**Parties**" means Licensee and SGI, and "Party" means either of them.

**1.1.60** "**Phase II Clinical Trial**" means a controlled dose clinical trial prospectively designed to evaluate the efficacy and safety of a candidate drug in the targeted patient population and to define the optimal dosing regimen.

**1.1.61** "**Phase III Clinical Trial**" means a controlled, and usually multi-center, clinical trial, involving patients with the disease or condition of interest to obtain sufficient efficacy and safety data to support Regulatory Approval of a candidate drug.

**1.1.62** "**Program Invention**" means any process, formula, method, chemical compound, biological or physical material, invention, technology, know-how, trade secret or data conceived or reduced to practice by either Party or jointly by both Parties in the conduct of the

activities under this Agreement and/or under the Initial Agreements; provided, that any Program Inventions made pursuant to the Initial Agreements that are not related to a Designated Antigen or an Exclusive Antigen shall remain governed by the terms of the Initial Agreements.

**1.1.63** "**Program Licensee Patents**" has the meaning set forth in Section 9.3.3.

**1.1.64** "**Publication**" has the meaning set forth in Section 8.5.

**1.1.65** "**Regulatory Approval**" means final regulatory approval (including, where applicable, pricing approval in the event that actual sales do not take place before such approval) required to market a Licensed Product for a disease or condition in accordance with the applicable laws and regulations of a given country. In the United States, its territories and possessions, Regulatory Approval means approval of a New Drug Application ("NDA"), Biologics License Application ("BLA") or an equivalent by the FDA.

**1.1.66** "**[***]**" means the Designated Antigen, if any, designated by Licensee to replace the [***] in accordance with [***] of this Agreement.

**1.1.67** "**Reports**" has the meaning set forth in Section 7.1.1.

**1.1.68** "**Research Fees**" has the meaning set forth in Section 6.1.2.

**1.1.69** "**Research Fees Report**" has the meaning set forth in Section 6.1.2.

**1.1.70 "Research License"** has the meaning set forth in Section 3.1.

**1.1.71** "**Research Plan**" means the plan for the Research Program agreed upon by the Parties and attached hereto as Schedule A.

**1.1.72** "**Research Program**" means the research program conducted pursuant to Article 2.

**1.1.73** "**Research Program Term**" means the term of the Research Program set forth in Section 2.2.

**1.1.74** "**Royalty Term**" means, on a Licensed Product-by-Licensed Product and country-by-country basis, until the later to occur of: (a) the (10th) tenth anniversary of the date of First Commercial Sale of the Licensed Product in such country; or (b) the expiration of the last to expire Valid Patent Claim that would be infringed by the sale of the Licensed Product in such country, if not for the licenses granted hereunder.

**1.1.75** "**Second Exclusive Antigen**" means a Designated Antigen, other than the First Exclusive Antigen, for which Licensee exercises the Option for an Exclusive License under Section 3 of this Agreement.

**1.1.76** "**SGI In-Licenses**" means the following agreements between SGI and the indicated Third Parties: (a) the [***]); (b) [***]; and (c) any other license agreement between SGI and a Third Party covering [***] under which Licensee is [***].

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**1.1.77** "**SGI Know-How**" means any and all technical information, processes, formulae, data, inventions, methods, chemical compounds, biological or physical materials, know-how and trade secrets, in each case that are not in the public domain, that relate to or are useful to practice the Drug Conjugation Technology and that have been, or hereafter are during the Term, Controlled by SGI. SGI Know-How shall include Improvements Controlled by SGI but shall exclude [***] unless [***].

**1.1.78** "**SGI Patents**" means:

(a) any existing patents and patent applications listed in Schedule B to this Agreement, which shall be amended from time to time to reflect any other patents and patent applications;

(b) any patents and patent applications covering Improvements and, solely to the extent the Parties so agree [***], [***], in each case that are Controlled by SGI;

(c) any future patents issued from any patent applications referred to above and any future patents issued from any continuation, continuation-in part (to the extent Controlled by SGI), or divisional of any of the foregoing patent applications or any patent applications from which the foregoing patents issued, in each case to the extent Controlled by SGI; and

(d) any reissues, reexaminations, confirmations, renewals, registrations, substitutions, extensions, or counterparts of any of the foregoing, in each case to the extent Controlled by SGI.

**1.1.79** "**SGI Technology**" means the SGI Patents and the SGI Know-How.

**1.1.80** "**Sublicensees**" means any person or entity that is granted a sublicense under the SGI Technology by Licensee or its Affiliates in accordance with the terms of this Agreement.

**1.1.81** "**Supply Fees**" has the meaning set forth in Section 6.1.2.

**1.1.82** "**Term**" has the meaning set forth in Article 13.

**1.1.83** "**Territory**" means all countries in the world.

**1.1.84** "**Third Party**" means any person or entity other than Licensee, SGI and their respective Affiliates.

**1.1.85** "**Valid Patent Claim**" means (a) an unexpired claim of an issued patent which has not been found to be unpatentable, invalid or unenforceable by an unreversed and unappealable decision of a court or other authority in the subject country; or (b) a claim of an application for a patent that has been pending for less than [***].

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**1.2 Certain Rules of Interpretation in this Agreement and the Schedules.**

**1.2.1** Unless otherwise specified, all references to monetary amounts are to United States of America currency (U.S. Dollars);

**1.2.2** The preamble to this Agreement and the descriptive headings of Articles and Sections are inserted solely for convenience of reference and are not intended as complete or accurate descriptions of the content of this Agreement or of such Articles or Sections;

**1.2.3** The use of words in the singular or plural, or with a particular gender, shall not limit the scope or exclude the application of any provision of this Agreement to such person or persons or circumstances as the context otherwise permits;

**1.2.4** The words "include" and "including" have the inclusive meaning frequently identified with the phrases "without limitation" and "but not limited to";

**1.2.5** Unless otherwise specified, time periods within or following which any payment is to be made or act is to be done shall be calculated by excluding the day on which the period commences and including the day on which the period ends and by extending the period to the next business day following if the last day of the period is not a business day in the jurisdiction of the Party to make such payment or do such act; and

**1.2.6** Whenever any payment is to be made or action to be taken under this Agreement is required to be made or taken on a day other than a business day, such payment shall be made or action taken on the next business day following such day to make such payment or do such act.

## ARTICLE 2 - RESEARCH PROGRAM

**2.1 Objective and Conduct of the Research Program.** Licensee intends to conduct a Research Program, with SGI's support, to evaluate ADCs for commercial development under this Agreement with the goal of using SGI Technology to identify [***] for further development by Licensee as Licensed Products, as more fully described in the Research Plan. Licensee acknowledges that, in addition to the licenses to the SGI Patents granted hereunder, the SGI Know-How transferred to Licensee under this Agreement contains valuable information that is critical to Licensee's development of ADCs hereunder. All research work performed by Licensee and SGI hereunder shall be performed in a good scientific manner and in compliance with all applicable laws.

**2.2 Term of the Research Program.** The term of the Research Program shall initially be for a period of [***] after the Effective Date (the "Research Program Term"), unless terminated earlier in accordance with Article 13.

**2.3 Delivery of Drug Conjugation Materials.** In support of the Research Program, SGI will deliver Drug Conjugation Materials to Licensee at mutually agreed upon times and in mutually agreed upon quantities to enable Licensee to attach such materials to Licensee's Antibodies to create ADCs. At Licensee's request, SGI will also provide Licensee with the [***] provided to Licensee to [***]. All such Drug Conjugation Materials and other information provided by SGI to Licensee hereunder will be deemed Confidential Information of SGI pursuant to Article 8.

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**2.4 SGI Preparation of ADCs.** [***]. In order to identify the Second Exclusive Antigen during the Research Program Term, SGI will prepare mutually agreed upon research quantities of ADCs using the Drug Conjugation Materials for up to [***] targeted to up to [***] supplied by Licensee to SGI.

**2.5 Availability of Antigens.** Licensee shall provide SGI with a confidential written description of each Antigen, including to the extent available, the GenBank accession number and the cDNA and/or amino acid sequence for each Antigen, which Licensee desires to designate as a Designated Antigen for purposes of this Agreement. Within [***] following SGI's receipt of such written notice with respect to a particular Antigen, SGI shall notify Licensee in writing whether the Exclusive License described in Article 3 of this Agreement is available with respect to such Antigen. In addition, SGI shall promptly notify Licensee in writing if at any time during the Research Program Term [***]. To the extent such Exclusive License to [***] is and/or becomes available as described in this Section 2.5, then [***] shall be deemed to be a Designated Antigen under this Agreement and Licensee shall have an Option Period of [***] thereafter to determine whether to exercise an Exclusive License to [***] as the Second Exclusive Antigen. Schedule D to this Agreement will be amended from time to time to list the Designated Antigens and the Second Exclusive Antigen (including a description thereof) under this Agreement. The Parties hereby acknowledge and agree that an Antigen shall be available for designation by Licensee as a Designated Antigen unless (a) [***] or (b) [***]. Licensee may not designate Antigens as Designated Antigens following expiration of the Research Program Term. If, after designation of an Antigen as a Designated Antigen, a [***], SGI shall inform Licensee in writing, and Licensee shall have a period of [***] to inform SGI in writing that Licensee [***]. If Licensee does not exercise an Exclusive License for such Designated Antigen [***], then (a) [***] (b) below and (b) [***].

**2.6 Additional Activities under Research Program.** Upon mutual agreement of the Parties, the Research Program may also include the development by SGI of a technology transfer program for the conjugation of toxins to Antibodies, including the associated purification and analytics.

**2.7 Payment.** Licensee shall pay SGI the amounts set forth in Section 6.1.2 for any research efforts or other assistance provided by SGI.

**2.8 Supply of Licensee Materials.** From time to time during the Term, Licensee may supply SGI with Licensee Materials for use in the Research Program. In connection therewith, SGI hereby agrees that (a) it shall not use Licensee Materials for any purpose other than exercising any rights granted to it hereunder; (b) it shall use the Licensee Materials only in compliance with all applicable federal, state, and local laws and regulations; (c) it shall not transfer any Licensee Materials to any Third Party without the prior written consent of Licensee; (d) Licensee shall retain full ownership of all such Licensee Materials; and (e) upon the expiration or termination of this Agreement, SGI shall at the instruction of Licensee either destroy or return any unused Licensee Materials.

**2.9 Disclaimers.** EXCEPT AS MAY BE OTHERWISE PROVIDED IN ARTICLE 12, SGI MAKES NO REPRESENTATIONS AND GRANTS NO WARRANTIES, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR

OTHERWISE, REGARDING THE DRUG CONJUGATION MATERIALS OR ANY ADCs PREPARED BY SGI, INCLUDING ANY WARRANTY OF QUALITY, MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR USE OR PURPOSE. EXCEPT AS MAY BE OTHERWISE PROVIDED IN ARTICLE 12, LICENSEE MAKES NO REPRESENTATIONS AND GRANTS NO WARRANTIES, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, BY STATUTE OR OTHERWISE, REGARDING THE LICENSEE MATERIALS, INCLUDING ANY WARRANTY OF QUALITY, MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR USE OR PURPOSE.

**ARTICLE 3 - LICENSES; OPTION; DROPPED ANTIGENS**

**3.1 Research License Grants.** Upon payment of the ADC Access Fee set forth in Section 6.1.1, subject to the terms and conditions of this Agreement, SGI shall automatically be deemed to have granted to Licensee a non-exclusive, worldwide, royalty-free license under the SGI Technology solely to conduct the Research Program in accordance with Article 2 of this Agreement (the "Research License"). The Research License shall include the right to evaluate and conduct research on ADCs that bind to any Designated Antigen solely for the purpose of determining Licensee's interest in exercising the Option for such Designated Antigen, but shall not include (a) the right to grant sublicenses thereto to any Third Party, (b) the right to initiate any human clinical trial utilizing such ADCs in any country or (c) the right to make, have made, use or sell a Licensed Product or any SGI Technology. Notwithstanding the foregoing, [***], a form of which has been provided by Licensee to SGI. The Research License shall continue for the Research Program Term, unless earlier terminated pursuant to Article 13; provided that the Research License shall terminate when Licensee no longer has the right to designate any Designated Antigen(s) as either a Replacement Antigen or a Second Exclusive Antigen pursuant to the terms hereof.

**3.2 Exclusive License Grants.** Upon payment of the ADC Access Fee set forth in Section 6.1.1 with respect to the First Exclusive Antigen, and the Option Exercise Fee set forth in Section 6.3 of this Agreement with respect to the Second Exclusive Antigen, subject to the terms and conditions of this Agreement, and commencing as of the date SGI has received the ADC Access Fee or Option Exercise Fee, as the case may be, from Licensee, SGI shall automatically be deemed to have granted to Licensee an exclusive (even as to SGI), royalty-bearing license under the SGI Technology, with the right to sublicense as permitted in Section 3.6, to discover, develop, have developed, make, have made, import, use, offer for sale, and sell Licensed Products that bind specifically to the Exclusive Antigen within the Field in the Territory (each, an "Exclusive License" and collectively, the "Exclusive Licenses"). Each Exclusive License shall continue for the Royalty Term, unless earlier terminated pursuant to Article 13, subject to payment of applicable milestones, royalties and the Exclusive License Maintenance Fees set forth in Section 6.2 of this Agreement applicable to such Exclusive License.

**3.3 Grant of Option.** Subject to the provisions of this Agreement, SGI hereby grants Licensee an option to obtain the Exclusive License described in Section 3.2 of this Agreement to the Second Exclusive Antigen (the "Option") during the Option Period.

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**3.4 Procedure to Exercise Option.** At any time during the Option Period, Licensee shall have the right to notify SGI in writing that it desires to obtain the Exclusive License to the Second Exclusive Antigen by providing written notice to SGI. Licensee shall pay SGI the Option Exercise Fee described in Section 6.3 of this Agreement (the date of payment by Licensee of the Option Exercise Fee being referred to herein as the "Option Exercise Date") whereupon (a) such Designated Antigen shall be deemed to be the Second Exclusive Antigen for purposes of this Agreement and (b) Licensee shall be deemed to have been granted an Exclusive License with respect to such Second Exclusive Antigen in accordance with Section 3.2 of this Agreement, without any further action of the Parties. [***].

**3.5 [***].** If at any time during the period commencing on the Effective Date and continuing for a period of [***] thereafter, Licensee reasonably determines [***] for purposes of this Agreement by providing SGI with written notice of same. Licensee shall have the right to designate [***] as a [***] in accordance with the procedure described in Sections 2.5 and 3.4 of this Agreement. Once the [***] becomes a [***] (a) [***], (b) [***] and (c) [***].

**3.6 Rights to Sublicense.**

**3.6.1** Licensee shall have the right to grant sublicenses of each Exclusive License to any Affiliate or Third Party with respect to any Licensed Product for which Licensee has either retained marketing rights or upon which Licensee has expended material research and/or development effort, it being understood that any Licensed Product that contains a Designated Antigen and/or an Antibody to a Designated Antigen developed by Licensee shall be deemed to have satisfied the foregoing condition and that Licensee shall have the right to grant sublicenses under the Exclusive License with respect to such Licensed Product, subject to the remainder of this Section 3.6.1. Licensee agrees to contractually obligate any Sublicensee to make all payments due to SGI pursuant to this Agreement by reason of achievement of any milestones set forth in Section 6.6 or owed on Net Sales of any Licensed Products by any such Sublicensee pursuant to Sections 6.4 and 6.5, as well as to comply with all terms of this Agreement and the SGI In-Licenses applicable to Licensee (including all terms of this Agreement identified as applicable to Sublicensee). Licensee shall also require any such Sublicensee to agree in writing to keep books and records and permit SGI to review the information concerning such books and records in accordance with the terms of this Agreement.

**3.6.2** Licensee shall notify SGI of each sublicense granted to Affiliates or Third Parties and shall provide SGI with the name and address of each Sublicensee and a description of the rights granted and the territory covered by each Sublicensee.

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

**3.7 Improvements and New Technologies.**

**3.7.1 Improvements.** In the event that, during the Research Program Term, either Party conceives, develops or reduces to practice an Improvement, such Party shall promptly notify the other Party of the discovery of such Improvement. SGI shall own all Improvements and, to the extent that any Improvements shall have been conceived, developed or reduced to practice by Licensee, Licensee hereby assigns all of its right, title and interest therein to SGI. SGI's interest in any such Improvements shall be included in the SGI Technology and made available to Licensee via the Research License and Exclusive License provided in Article 3.

**3.7.2 [***].** Subject to the [***], Licensee shall have the right to practice any [***] pursuant to the Exclusive Licenses granted under Article 3 as follows: SGI shall [***] of any [***] by providing to Licensee a written [***] of the [***], including all [***] under which [***] would be able to access such [***]. If Licensee is interested in practicing such [***], the Parties shall discuss in good faith modifications to this Agreement to reflect the terms governing Licensee's access to any [***] pursuant to this Agreement, which shall include without limitation Licensee's agreement to [***] attributable to Licensee's use of such [***] and; provided that the [***] shall be deemed to include [***] (as applicable) relating to or covering such [***] only after the Parties execute an amendment to this Agreement specifying such modified terms. Except as set forth in the foregoing sentence and any modifications to this Agreement including any such modification relating to [***] for [***], SGI shall be responsible for [***] of all consideration (including all [***]) [***] under any agreements covering [***].

**3.7.3 [***]**. [***] shall be amended from time to time to [***] Controlled by SGI [***] in accordance with this Section 3.7.

**3.8 Compliance with the SGI In-Licenses.**

**3.8.1** Licensee, its Affiliates and Sublicensees shall comply with all obligations, covenants and conditions of the SGI In-Licenses listed in Schedule C applicable to Licensee and its Affiliates and Sublicensees, and any amendments thereto following written disclosure thereof to Licensee, that apply under each of the SGI In-Licenses. The Parties agree that BMS is a Third Party beneficiary of this Agreement solely to the extent SGI Technology licensed to Licensee hereunder includes technology sublicensed by SGI under the BMS Agreement.

**3.8.2** SGI will not [***] any [***] to an [***] that [***] or [***] of the [***] hereunder [***].

**3.9 License to SGI.** Subject to the provisions of this Agreement, Licensee hereby grants to SGI during the Research Program Term a non-exclusive, royalty-free, sublicenseable license under the Licensee Patents and Licensee Know-How, to enable SGI to perform or have performed its responsibilities under the Research Program.

**ARTICLE 4 - TECHNOLOGY DISCLOSURE**

**4.1 Disclosure of Drug Conjugation Technology.** During the Term, SGI shall (a) disclose to Licensee such SGI Know-How as is reasonably useful to enable Licensee to use the

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Drug Conjugation Materials and Drug Conjugation Technology as provided in the Research Plan or to practice the Research License and Exclusive Licenses, and subject to the conditions, of this Agreement and (b) upon Licensee's reasonable request and with adequate notice to SGI, make available to Licensee at SGI's facilities, SGI's personnel to provide a reasonable amount of technical assistance and training to Licensee's personnel. Licensee shall pay to SGI for such assistance an amount equal to the FTE Fees in accordance with Section 6.1.2 for SGI employees providing such assistance.

**ARTICLE 5 - DEVELOPMENT AND COMMERCIALIZATION; MANUFACTURING**

**5.1 Diligence.** Licensee shall use commercially reasonable efforts to develop, commercialize and market Licensed Products, such efforts to be consistent with the exercise of prudent scientific and business judgment and comparable to the efforts Licensee applies to its other projects of similar potential and market size. Without limiting the foregoing, Licensee shall, as commercially prudent, (a) conduct such preclinical and clinical trials as are necessary to obtain Regulatory Approvals for Licensed Products in major markets therefor, (b) diligently obtain any necessary approvals to market such Licensed Products in major markets therefor (including, as relevant, pricing and reimbursement approval), and (c) market such Licensed Products in each country in which Licensee has received Regulatory Approval therefor. Licensee shall comply with all applicable laws, rules and regulations (including Good

Laboratory Practices, and good clinical and manufacturing practices, to the extent applicable) in the development and commercialization of such Licensed Products, and shall cause its Affiliates and Sublicensees to do the same.

**5.2 Funding and Progress Reports.** Except as expressly set forth herein, as between SGI and Licensee, Licensee shall be solely responsible for funding all costs of the development and commercialization of Licensed Products. Licensee shall keep SGI informed in a timely manner as to the progress of the development of Licensed Products.

**5.3 Manufacturing.** Except as otherwise expressly set forth in this Agreement, Licensee shall be responsible for all manufacturing and supply of the Licensed Products. Notwithstanding the foregoing, SGI shall (a) [***], including in accordance with good manufacturing practices for clinical trials, on an [***] and (b) consider in good faith any request by Licensee for supply of other Drug Conjugate Materials. In the event SGI [***], the Parties shall [***], including [***] and other such terms as may be appropriate and customary in [***].

## ARTICLE 6 - FEES, ROYALTIES AND PAYMENTS

**6.1 Research Fees.** Licensee shall pay to SGI the following amounts in consideration of the Research Program:

**6.1.1** Within ten (10) business days of the Effective Date, Licensee shall pay to SGI the sum of Two Million U.S. Dollars ($2,000,000) by wire transfer of immediately available funds (the "ADC Access Fee").

**6.1.2** Licensee shall pay SGI at an annual rate of [***] per FTE who provides assistance as requested by Licensee pursuant to this Agreement in each of the first [***] of the Term (the "FTE Fees"). Commencing upon the [***] of the Effective Date (the "[***]") and

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upon [***] thereafter, the FTE Fees will [***] by [***] per FTE per year; provided, that, notwithstanding the foregoing, the Parties hereby agree that Licensee shall pay no consideration to SGI in connection with any preparation of ADCs or related characterization work performed by SGI under the Initial Agreements. Licensee shall also pay SGI for all Drug Conjugation Materials supplied by SGI to Licensee hereunder at the rate of [***] of SGI's Cost of Goods therefor (the "Supply Fees"). The FTE Fees and the Supply Fees are collectively referred to herein as (the "Research Fees"). Within [***] after the end of each [***], SGI shall submit a report to Licensee supporting the calculation of the Research Fees due for such [***] (a "Research Fees Report"). Licensee shall pay all Research Fees to SGI within [***] of receipt of each Research Fees Report.

**6.2 Exclusive License Maintenance Fees.** Licensee shall be [***] to SGI in the sum of [***] per Exclusive Antigen by wire transfer of immediately available funds (the "Exclusive License Maintenance Fee") on [***] (with respect to the [***]) and the Option Exercise Date (with respect to the [***] ) up through the date on which [***].

**6.3 Option Exercise Fee.** Licensee shall pay to SGI an Option Exercise Fee of [***] for the Exclusive License obtained by Licensee with respect to the [***] to the extent such Exclusive License is obtained on or before the [***] of the Effective Date, [***] to the extent such Exclusive License is obtained on or before the [***] of the Effective Date and [***] to the extent such Exclusive License is obtained on or before the [***] of the Effective Date, payable in either case, within [***] after the exercise by Licensee of the Option with respect to the [***] in accordance with Section 3.4 of this Agreement.

**6.4 Royalties Payable by Licensee.** In consideration for the Exclusive Licenses granted to Licensee herein, during the Royalty Term, and subject to Section 6.5, Licensee shall pay to SGI and BMS royalties on Net Sales of Licensed Products during the Royalty Term. Such royalties shall be paid at the following rates, determined on a Licensed Product-by-Licensed Product basis as set forth below:

**6.4.1 Royalties Payable to SGI.**

**(a)** [***] of the first [***] in aggregate [***] of [***] in each [***]; and

**(b)** [***] of the portion of aggregate [***] of [***] in excess of [***] in each [***].

**6.4.2 Royalties Payable to BMS.** [***] of [***] of [***] in each [***] during the Royalty Term, subject to all of the terms and conditions of the BMS Agreement. Solely for the purpose of this Section 6.4.2, the terms "Net Sales", "Licensed Products" and "Royalty Term" and any other relevant terms related to calculation of royalties payable to BMS shall have their respective meanings set forth in the BMS Agreement.

**6.4.3 Royalty Background.** In establishing the royalty structure of this Section 6.4, the Parties recognize, and Licensee acknowledges, the substantial value of the various actions and investments undertaken by SGI prior to the Effective Date. Such value is significant and in addition to the value of SGI's grant to Licensee of the Exclusive License pursuant to

Section 3.2, as it enables the rapid and effective development and commercialization of the Licensed Products in the Territory. Therefore, the Parties agree that the royalty payments calculated as a percentage of Net Sales (plus the license fee, milestone payments and other payment provided for elsewhere herein) provide fair compensation to SGI for these additional benefits.

**6.5 Third Party Royalties; Adjustments to Royalties.**

**6.5.1** Licensee shall be solely responsible for paying all royalties owed to Third Parties by either Licensee or SGI on account of sales of Licensed Products by Licensee, its Affiliates or Sublicensees, including royalties owed due to use of the SGI Technology, [***]. SGI shall be responsible for the payment of all other consideration (including any milestone payments) due and payable under the SGI In-Licenses except as described in the foregoing sentence and/or except as set forth in Section 3.7.2 with regard to any New Technologies. SGI represents and warrants that [***].

**6.5.2** The royalties otherwise due and payable to SGI pursuant to Section 6.4.1 of this Agreement shall [***] with respect to any Licensed Product sold in any country where commercialization, manufacture, marketing or sale of such Licensed Product [***].

**6.5.3** If the sum of (a) [***] under [***] and (b) any other royalties Licensee is required to pay any [***] in order to practice the SGI Technology to make, use and sell [***] (including any royalties payable with respect to [***] of [***] of a [***] in any calendar year, then the royalties otherwise due and payable by Licensee under Section 6.4.1 [***] of any royalties due by Licensee with respect to Net Sales of a Licensed Product in such [***] of such [***]; provided, however, that in no event shall the [***] pursuant to Section 6.4.1 with respect to a Licensed Product in any calendar year be [***] of the [***] under Section 6.4.1 but for such offsets.

**6.5.4** If, as a result of either (a) negotiations between [***] conducted during the Term of this Agreement and/or (b) use of SGI Technology in Licensed Products that does not [***], the royalty payable to [***] under [***] above by Licensee, its Affiliates or Sublicensees is [***] of [***] (the amount of any such [***], the [***]), then the royalty otherwise due and payable by Licensee to SGI under [***] shall be [***] of the [***]. For purposes of clarity, this Section 6.5.4 shall not apply to any [***] to the [***] agreed to or implemented pursuant to [***] above prior to the Effective Date (including without limitation any [***] that are contained in the [***] as of the Effective Date), which [***] shall be applied to the royalty payable by Licensee [***] under [***] without any corresponding increase in the [***].

**6.6 Milestone Payments.** As additional consideration for the licenses, rights and privileges granted to it hereunder, Licensee shall pay to SGI the following milestone payments within [***] of the first occurrence of each event set forth below with respect to the [***] Licensed Product that targets each Exclusive Antigen (regardless of how many Licensed Products are developed to target that Exclusive Antigen), whether such events are achieved by Licensee, its Affiliates or Sublicensees, as follows:

**(a)** Upon [***] for a [***];

**(b)** Upon [***] for a [***];

**(c)** Upon [***] for a [***];

**(d)** Upon [***] or equivalent for a [***]; and

**(e)** Upon [***] for a [***].

If any of (a) through (d) above is achieved before a preceding milestone payment has become due, then such payment shall be deemed to become due within [***] of the achievement of the subsequent milestone.

**6.7 Payment Terms.** Royalties shown to have accrued by each Report provided for under Article 6 of this Agreement shall be due on the date such Report is due pursuant to Section 7.1.3.

**6.8 Payment Method.** All payments by Licensee to SGI under this Agreement shall be paid in U.S. dollars, and all such payments shall be made by bank wire transfer in immediately available funds to the bank account designated by SGI in writing.

**6.9 Exchange Control.** If at any time legal restrictions prevent the prompt remittance of part or all royalties with respect to any country in the Territory where Licensed Product is sold, payment shall be made through such lawful means or method as the Parties reasonably shall determine.

**6.10 Withholding Taxes.** Except as otherwise provided below, all amounts due from Licensee to SGI under this Agreement are gross amounts. Licensee shall be entitled to deduct the amount of any withholding taxes payable or required to be withheld by Licensee, its Affiliates or Sublicensees, to the extent Licensee, its Affiliates or Sublicensees pay such withheld amounts to the appropriate governmental authority on behalf of SGI. Licensee shall use commercially reasonable efforts to minimize any such taxes, levies or charges required to be withheld on behalf of SGI by Licensee, its Affiliates or Sublicensees. Licensee promptly shall deliver to SGI proof of payment of all such taxes, levies and other charges, together with copies of all communications from or with such governmental authority with respect thereto, and shall cooperate with SGI in seeking any related tax credits that may be available to SGI with respect thereto.

## ARTICLE 7 - ROYALTY REPORTS AND ACCOUNTING

**7.1 Reports, Exchange Rates.**

**7.1.1** During the Royalty Term, Licensee shall furnish to SGI, with respect to each [***], a written report showing, on a consolidated basis in reasonably specific detail and on a country-by-country basis, (a) the gross sales of Licensed Products sold by Licensee, its Affiliates and its Sublicensees in the Territory during the [***] and the calculation of Net Sales from such gross sales; (b) the royalties payable in U.S. dollars, if any, which shall have accrued hereunder based upon such Net Sales of Licensed Products; (c) the withholding taxes, if any, required by law to be deducted in respect of such royalties; (d) the dates of the First Commercial

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Sale of each Licensed Product in each country in the Territory, if it has occurred during the corresponding [***]; and (e) the exchange rates (as determined pursuant to Section 7.1.4 herein) used in determining the royalty amount expressed in U.S. dollars (collectively, "Reports").

**7.1.2** Licensee shall include in each permitted sublicense granted by it pursuant to this Agreement a provision requiring its Affiliates and Sublicensees to make Reports to Licensee within [***] of the close of each [***] and to keep and maintain records of sales made pursuant to such sublicense as if such sales were by Licensee for the purpose of Section 7.1.1.

**7.1.3** Reports shall be due on the [***] following the end of the [***] to which such Report relates. Licensee shall keep complete and accurate records in sufficient detail to properly reflect all gross sales and Net Sales and to enable the royalties payable hereunder to be determined.

**7.1.4** With respect to sales of Licensed Products invoiced in U.S. dollars, the gross sales, Net Sales, and royalties payable shall be expressed in U.S. dollars. With respect to sales of Licensed Products invoiced in a currency other than U.S. dollars, the gross sales, Net Sales and royalties payable shall be expressed in the currency of the invoice issued by the Party making the sale together with the U.S. dollars equivalent of the royalty due, calculated using the [***].

**7.2 Audits.**

**7.2.1** Upon the written request of SGI and with at least [***] prior written notice, but not more than [***] in any [***], Licensee shall permit an independent certified public accounting firm of internationally recognized standing, selected by SGI and reasonably acceptable to Licensee, [***], to have access during normal business hours to such of the records of Licensee as required to be maintained under this Agreement to verify the accuracy of the Reports due hereunder. Such accountants may audit records relating to Reports made for any year ending not more than [***] prior to the date of such request. The accounting firm shall disclose to SGI only whether the Reports were correct or not, and the specific details concerning any discrepancies. No other information obtained by such accountants shall be shared with SGI.

**7.2.2** If such accounting firm concludes that any royalties were owed but not paid to SGI, Licensee shall pay the additional royalties within [***] of the date SGI delivers to Licensee such accounting firm's written report so concluding. The fees charged by such accounting firm shall be [***]; provided, however, if the audit discloses that the royalties payable by Licensee for the audited period [***] of the royalties actually paid for such period, then [***] charged by such accounting firm. If such accounting firm concludes that the royalties paid were more than what was owed during such period, SGI shall refund the overpayments within [***] of the date SGI receives such accounting firm's written report so concluding.

**7.3 Confidential Financial Information.** SGI shall treat all financial information subject to review under this Article 7 or under any sublicense agreement as Confidential Information of Licensee as set forth in Article 8, and shall cause its accounting firm to retain all such financial information in confidence under terms substantially similar to those set forth in Article 8.

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**ARTICLE 8 - CONFIDENTIALITY**

**8.1 Non-Disclosure Obligations.** Except as otherwise provided in this Article 8, during the Term and for a period of [***] thereafter, each Party shall maintain in confidence, and use only for purposes as expressly authorized and contemplated by this Agreement, all confidential or proprietary information, data, documents or other materials supplied by the other Party under this Agreement and marked or otherwise identified as "Confidential." Confidential Information of SGI shall include SGI Technology and SGI's interest in any Improvements and [***]. Confidential Information of a Party may also include information relating to such Party's research programs, development, marketing and other business practices and finances. For purposes of this Agreement, information and data described above shall be hereinafter referred to as "Confidential Information." Each Party shall use at least the same standard of care as it uses to protect its own Confidential Information to ensure that its and its Affiliates' employees, agents, consultants and clinical investigators only make use of the other Party's Confidential Information for purposes as expressly authorized and contemplated by this Agreement and do not disclose or make any unauthorized use of such Confidential Information.

**8.2 Permitted Disclosures.** Notwithstanding the foregoing, but subject to the last sentence of this Section 8.2, the provisions of Section 8.1 shall not apply to information, documents or materials that the receiving Party can conclusively establish:

**(a)** have become published or otherwise entered the public domain other than by breach of this Agreement by the receiving Party or its Affiliates;

**(b)** are permitted to be disclosed by prior consent of the other Party;

**(c)** have become known to the disclosing Party by a Third Party, provided such Confidential Information was not obtained by such Third Party directly or indirectly from the other Party under this Agreement on a confidential basis;

**(d)** prior to disclosure under the Agreement, was already in the possession of the receiving Party, its Affiliates or Sublicensees, provided such Confidential Information was not obtained directly or indirectly from the other Party under this Agreement;

**(e)** are required to be disclosed by the receiving Party to comply with any applicable law, regulation or court order, or are reasonably necessary to obtain patents, copyrights or authorizations to conduct clinical trials with, and to commercially market, Licensed Product(s), provided that the receiving Party shall provide prior notice of such disclosure to the other Party and take reasonable and lawful actions to avoid or minimize the degree of disclosure;

**(f)** to the extent reasonably needed in a patent application claiming Program Inventions made hereunder to be filed with the United States Patent and Trademark Office and/or any similar foreign agency, provided that the Party filing the patent shall provide prior notice of such disclosure to the other Party and take reasonable and lawful actions to avoid or minimize the degree of disclosure;

**(g)** to a potential Sublicensee or Sublicensee as permitted hereunder, provided that such potential Sublicensee or Sublicensee is then subject to obligations of confidentiality

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and limitations on use of such Confidential Information substantially similar to those contained herein; and

**(h)** to a potential or bona fide collaborator or manufacturing, development or sales contractor or partner, but only to the extent directly relevant to the collaboration, partnership or contract and provided that such collaborator, partner or contractor is then subject to obligations of confidentiality and limitations on use of such Confidential Information substantially similar to those contained herein.

Notwithstanding the disclosures permitted under subsections (e)-(h), if the information, documents or materials covered by such subsection is otherwise protected by obligations of confidentiality, then the confidentiality obligations of Section 8.1 shall still apply.

**8.3 Terms of the Agreement.** Licensee and SGI shall not disclose any terms or conditions of this Agreement to any Third Party without the prior consent of the other Party, except as required by applicable laws, regulations or a court order or to comply with rules of a securities exchange, in which case the disclosing Party shall provide notice to the other Party and take reasonable and lawful actions to avoid or minimize the degree of such disclosures.

**8.4 Press Releases and Other Disclosures to Third Parties.** Neither SGI nor Licensee will, without the prior consent of the other, issue any press release or make any other public announcement or furnish any statement to any person or entity (other than either Parties' respective Affiliates) concerning the existence of this Agreement, its terms and the transactions contemplated hereby, except for (i) an initial press release mutually agreed upon by the Parties, (ii) disclosures made in compliance with Sections 8.2 and 8.3, (iii) attorneys, consultants, and accountants retained to represent the Parties in connection with the transactions contemplated hereby.

**8.5 Publications Regarding Results of the Research Program.** Neither Party may publish, present or announce results of the Research Program either orally or in writing (a "Publication") without complying with the provisions of this Section 8.5. The other Party shall have [***] from receipt of a proposed Publication to provide comments and/or proposed changes to the publishing Party. The publishing Party shall take into account the comments and/or proposed changes made by the other Party on any Publication and shall agree to designate employees or others acting on behalf of the other Party as co-authors on any Publication describing results to which such persons have contributed in accordance with standards applicable to authorship of scientific publications. If the other Party reasonably determines that the Publication would entail the public disclosure of such Party's Confidential Information and/or of a patentable invention upon which a patent application should be filed prior to any such disclosure, submission of the concerned Publication to Third Parties shall be delayed for [***] any such Confidential Information of the other Party (if the other Party has requested deletion thereof from the proposed Publication), and/or the drafting and filing of a patent application covering such invention, provided such additional period shall not exceed [***] from the date the publishing Party first provided the proposed Publication to the other Party.

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**ARTICLE 9 - INVENTIONS AND PATENTS**

**9.1 Ownership of Inventions and Technology; Use of Data.**

**9.1.1 Disclosure of Inventions.** Each Party shall promptly disclose to the other Party the making, conception or reduction to practice of any Program Inventions.

**9.1.2 Ownership of Program Inventions.** All right, title and interest in all Program Inventions that are discovered, made or conceived as part of the activities conducted pursuant to this Agreement shall be owned as follows:

(a) [***] shall own all Program Inventions that (A) are invented solely by one or more employees, agents or consultants of [***] and do not primarily relate to the [***] or (B) are invented solely or jointly by employees, agents or consultants of Licensee and/or [***] and [***]. To the extent that any such Program Inventions relating primarily to an [***] shall have been invented by [***] and are owned by [***], [***] hereby assigns all of its right, title and interest therein to [***].

(b) [***] shall own all Program Inventions that (i) are invented solely by one or more employees, agents or consultants of [***] and do not primarily relate to an [***] or (ii) are invented solely or jointly by employees, agents or consultants of Licensee and/or SGI and primarily relate to the [***]. To the extent that any Program Inventions relating primarily to [***] shall have been invented by [***] and are owned by [***], [***] hereby assigns all of its right, title and interest therein to [***].

(c) Except as set forth in Sections 9.1.2(a) and 9.1.2(b), [***] and [***] shall [***] own all other Program Inventions. For purposes of clarification and notwithstanding anything to the contrary set forth herein, all Program Inventions that relate primarily to [***], including without limitation, [***] owned.

(d) Inventorship, for the purposes of this Agreement, shall be determined in accordance with U.S. laws of inventorship.

**9.1.3 Ownership of Technology**.

(a) Licensee shall own all right, title and interest in and to all Licensee Know-How.

(b) SGI shall own all right, title and interest in and to all SGI Technology.

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**9.2 Patent Prosecution and Maintenance.**

**9.2.1** SGI shall be responsible for and shall control the preparation, filing, prosecution, grant and maintenance of all SGI Patents. SGI shall, at its sole expense, prepare, file, prosecute and maintain such SGI Patents in good faith consistent with its customary patent policy and its reasonable business judgment, and shall consider in good faith the interests of Licensee in so doing.

**9.2.2** Each Party shall be responsible for and shall control the preparation, filing, prosecution, grant and maintenance, of any patents and patent applications claiming Program Inventions owned solely by it in accordance with Section 9.1 and shall, at its sole expense, prepare, file, prosecute and maintain such patent rights in good faith consistent with its customary patent policy and its reasonable business judgment. Patents and patent applications claiming Program Inventions owned [***] in accordance with [***]([***]) shall be controlled, prepared, filed, prosecuted and maintained by [***] (a) [***], (b) [***] or (c) of [***]. The cost of such outside legal expenses shall be borne by the Party that controls such [***] under (a) or (b) above and [***] if such [***] is controlled by [***]. The Party responsible for filing and controlling patent prosecution and maintenance for Program Inventions shall provide to the other Party copies of any response, document or communication with patent authorities that could materially affect the scope of any patent or patent application covering Program Inventions or detrimentally effect the rights of the Parties in such inventions in any way, at least [***] prior to the planned submission or communication. Such other Party shall have the opportunity to comment on the response or document within such [***] period, which comments shall be reasonably considered by the Party primarily responsible for the prosecution.

**9.2.3** If either Party decides not to continue prosecuting patent applications or not to maintain a patent claiming an invention assigned to such Party pursuant to Section 9.1 in whole or in part, then such Party shall promptly so notify the other Party (which notice shall be at least [***] before any relevant deadline for such patent application or patent). Thereafter, the other Party shall have the right to prosecute or maintain such patent application or patent, at such Party's sole expense.

**9.2.4** The Parties shall at all times fully cooperate in order to reasonably implement the foregoing provisions, such cooperation may include the execution of necessary legal documents and the provision of the assistance of its relevant personnel.

**9.3 Enforcement of SGI Patents.**

**9.3.1** SGI shall have the first right, at its sole expense, but not the obligation, to determine the appropriate course of action to enforce the SGI Patents or otherwise abate the infringement thereof, to take (or refrain from taking) appropriate action to enforce the SGI Patents, to control any litigation or other enforcement action and to enter into, or permit, the settlement of any such litigation or other enforcement action with respect to the SGI Patents. SGI shall in good faith consider the interests of Licensee in conducting the foregoing activities. All monies recovered upon the final judgment or settlement of any such suit to enforce any SGI Patents with respect to the manufacture, use or sale by Third Parties of products competitive with Licensed Products or technologies competitive with SGI Patents shall be [***]. Licensee shall

fully cooperate with SGI in any such action at SGI's expense, to enforce the SGI Patents, including being joined as a party to such action if necessary.

**9.3.2** If SGI fails to take any action to enforce the SGI Patents or control any litigation with respect to the SGI Patents with respect to the manufacture, use or sale by Third Parties of products competitive with Licensed Products or technologies competitive with SGI Patents within a period of [***] after the Parties receive reasonable notice of the infringement of the SGI Patents, then Licensee shall have the right to bring and control any such action by counsel of its own choice, [***]. In such case, all monies recovered upon the final judgment or settlement of any such suit to enforce any SGI Patents shall be [***]. In such a case, SGI shall cooperate fully with Licensee, at Licensee's expense, in its efforts to enforce the SGI Patents, including being joined as a party to such action if necessary. In no event may Licensee assert an argument or settle a suit in a manner which would render a claim in the SGI Patents invalid or unenforceable without SGI's prior written consent.

**9.3.3** Licensee shall have the right, at its sole expense, to determine the appropriate course of action to enforce patents claiming Program Inventions owned solely by Licensee in accordance with Section 9.1 ("Program Licensee Patents"), or otherwise to abate the infringement thereof, to take (or refrain from taking) appropriate action to enforce the Program Licensee Patents, to control any litigation or other enforcement action and to enter into, or permit, the settlement of any such litigation or other enforcement action with respect to the Program Licensee Patents. All monies recovered upon the final judgment or settlement of any such suit to enforce any Program Licensee Patents shall be retained by Licensee. SGI shall fully cooperate with Licensee, at Licensee's expense, in any action to enforce the Program Licensee Patents.

**9.3.4** In the event either Party becomes aware of an infringement by a Third Party of a Joint Patent, it shall promptly notify the other Party and the Parties shall determine a mutually agreeable course of action. In no event shall a Party make an argument or settle a dispute which would render a claim in a Joint Patent to be invalid or unenforceable without the other Party's prior written consent.

**9.4 Prior Patent Rights.** Notwithstanding anything to the contrary in this Agreement, with respect to any SGI Patents that are subject to the SGI In-Licenses, the rights and obligations of the Parties under Section 9.2 and 9.3 shall be subject to SGI's licensors' rights to participate in and control prosecution, maintenance and enforcement of such SGI Patents, and to receive a share of damages recovered in such action, in accordance with the terms and conditions of the applicable SGI In-License.

## ARTICLE 10 - INFRINGEMENT ACTIONS BROUGHT BY THIRD PARTIES

If Licensee, SGI or any of their respective Affiliates, or any of Licensee's Sublicensees, is sued by a Third Party for infringement of a Third Party's patent because of the use of the SGI Technology in connection with activities conducted pursuant to this Agreement, the Party that has been sued shall promptly notify the other Party within [***] of its receipt of notice of such suit. The notice shall set forth the facts of such infringement available to the relevant Party. The Parties shall then meet to discuss each Party's commercial interests in the defense of the suit, a

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plan for the defense of the suit, how the costs of the suit should be allocated, and which Party should have primary control of the suit, provided that if such infringement relates previously to SGI Technology, then SGI shall have the first right to control such suit. In no event may the Party controlling the suit settle or otherwise consent to an adverse judgment in such suit that diminishes the rights or interests of the non-controlling Party without the express written consent of the non-controlling Party.

**ARTICLE 11 - REGULATORY ASSISTANCE**

Licensee shall be solely responsible for, and shall solely own, all applications for Regulatory Approval with respect to Licensed Products. Should Licensee desire to file an IND or an application for Regulatory Approval, or equivalents of the foregoing, for a Licensed Product, SGI will use reasonable commercial efforts to provide at Licensee's request, technical information reasonably required for Licensee, including information relating to the chemical structure of the ADC, the toxin used to create such ADC, and the linker and chemistry used to create such ADC, as well as documents necessary to compile the Chemistry Manufacturing and Controls section of any application for Regulatory Approval, or to provide other toxicity and safety data for such filings, and any other relevant information as the Parties may mutually agree. Licensee shall reimburse SGI for any out-of-pocket costs incurred by SGI in providing any such information plus an amount equal to SGI's then current FTE Fee for SGI's personnel engaged in such activities, as set forth in Section 6.1.2. If SGI has a drug master file with the FDA or equivalent that contains information related to Drug Conjugation Materials that is useful to support an IND or application for Regulatory Approval, Licensee shall have a right of reference or access to the contents of such drug master file on mutually agreeable terms.

**ARTICLE 12 - REPRESENTATIONS AND WARRANTIES**

**12.1 Representations and Warranties.**

**12.1.1** This Agreement has been duly executed and delivered by each Party and constitutes the valid and binding obligation of each Party, enforceable against such Party in accordance with its terms, except as enforceability may be limited by bankruptcy, fraudulent conveyance, insolvency, reorganization, moratorium or other laws relating to or affecting creditors' rights generally and by general equitable principals. The execution, delivery and performance of this Agreement has been duly authorized by all necessary action on the part of each Party, its officers and directors.

**12.1.2** The execution, delivery and performance of the Agreement by each Party does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it is bound, nor violate any law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

**12.1.3** SGI represents and warrants that (a) the SGI Technology is [***] on the Effective Date related to SGI's [***] of Licensed Products in the manner contemplated hereunder, (b) it has the right to grant the licenses granted herein and that as of the Effective Date it has no knowledge of any rights of any Third Parties that would be infringed by the practice of the SGI Patents or other SGI Technology in connection with activities to be

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conducted hereunder, (c) as of the Effective Date, there are no claims, judgments or settlements against SGI pending or to its knowledge, threatened, seeking to invalidate the SGI Patents; (d) SGI has provided Licensee with accurate and complete copies of the SGI In-Licenses, with certain information redacted therefrom that has no impact on the grant of the license to Licensee under this Agreement; and (e) as of the Effective Date, (i) the SGI In-Licenses are the only in-license agreements executed by SGI with respect to the SGI Technology licensed to Licensee under this Agreement, (ii) each of the SGI In-Licenses is in full force and effect and (iii) SGI has not breached, or received notice regarding any actual or alleged breach of, or issued any notice of breach to any party to, the SGI In-Licenses. Licensee represents and warrants that it has the right to grant the licenses granted to SGI herein and that as of the Effective Date it has no knowledge of any rights of any Third Parties that would be infringed by activities to be conducted by the Parties hereunder.

**12.2 Performance by Affiliates.** The Parties recognize that each may perform some or all of its obligations under this Agreement through Affiliates, provided, however, that each Party shall remain responsible and be a guarantor of the performance by its Affiliates and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance.

## ARTICLE 13 - TERM AND TERMINATION

**13.1 Term.** Unless earlier terminated pursuant to this Article 13, the term of this Agreement (the "Term") shall commence on the Effective Date and shall remain in full force and effect until the later of: (a) the expiration or termination of the [***]; or (b) with respect to each Exclusive License obtained by Licensee prior to the expiration or termination of the [***], the expiration of the last to expire Royalty Term.

**13.2 Termination of Exclusive License by Licensee.** Licensee shall have the right to terminate an Exclusive License under this Agreement by providing not less than [***] prior written notice to SGI of such termination. [***].

**13.3 Termination for Cause.** Either Party may terminate this Agreement for material breach by the other Party (the "Breaching Party") of any material provision of the Agreement, if the Breaching Party has not cured such breach within [***] after notice thereof.

**13.4 Termination Upon Insolvency.** Either Party may terminate this Agreement if, at any time, (a) the other Party shall file in any court or agency pursuant to any statute or regulation of any state, country or jurisdiction, a petition in bankruptcy or insolvency or for reorganization or for an arrangement or for the appointment of a receiver or trustee of that Party or of its assets, (b) such other Party proposes a written agreement of composition or extension of its debts, (c) such other Party shall be served with an involuntary petition against it, filed in any insolvency proceeding, and such petition shall not be dismissed within [***] after the filing thereof, (d) such other Party shall propose or be a party to any dissolution or liquidation, or (e) such other Party shall make an assignment for the benefit of its creditors. All rights and licenses granted under this Agreement are, and shall be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code, licenses of rights to "intellectual property" as defined under Section 101(56) of the United States Bankruptcy Code. The Parties agree that in the event of the



commencement of a bankruptcy proceeding by or against one Party hereunder under the United States Bankruptcy Code, the other Party shall be entitled to complete access to any such intellectual property, and all embodiments of such intellectual property, pertaining to the rights granted in the licenses hereunder of the Party by or against whom a bankruptcy proceeding has been commenced, subject, however, to payment of the fees, milestone payments and royalties set forth in this Agreement through the effective date of any termination hereunder.

**13.5 Termination of SGI In-Licenses.** All rights and obligations under an SGI In-License sublicensed under this Agreement shall terminate upon [***] prior written notice by SGI to Licensee if Licensee performs any action that would constitute a breach of any material provision of such SGI In-License Agreement and fails to cure such breach within such [***] period; provided, however, such cure period may be extended by mutual written consent of the Parties. All rights and obligations under the BMS Agreement shall automatically terminate if Licensee fails to maintain the insurance required under Article 18 of this Agreement. SGI covenants that (a) it will use reasonable commercial efforts to maintain all SGI In-Licenses for the duration of this Agreement, (b) it shall not modify Section 13.7 of the BMS Agreement without Licensee's prior written consent and (c) it shall provide Licensee with prompt written notice if it receives or issues any notice of breach or alleged breach under the SGI In-Licenses.

**13.6 Effect of Expiration and Termination.**

**13.6.1** In the event that this Agreement is terminated by Licensee pursuant to Sections 13.3 or by either Party pursuant to 13.4, Licensee shall continue to have all Exclusive Licenses then in effect, subject to its continued payment of the applicable

fees, milestone payments and royalties with respect thereto as set forth in Article 6.

**13.6.2** In the event that this Agreement is terminated by SGI pursuant to Section 13.3 or 13.5 (a) all licenses granted by SGI to Licensee hereunder, including all Exclusive Licenses, will immediately terminate and (b) any Sublicense agreement in effect as of the date of such termination that is not the subject of the material breach shall not terminate but instead, shall become a direct license between SGI and the Sublicensee and shall otherwise continue in full force and effect in accordance with its terms, subject to each such Sublicensee signing a written acknowledgement with SGI agreeing to be bound by all of the terms and conditions of this Agreement applicable to such Sublicensee.

**13.6.3** Upon any termination of any Exclusive License (except for termination by Licensee pursuant to Section 13.3) and in the case of a [***] and/or any Designated Antigens for which the relevant Option Periods have expired, Licensee shall be automatically deemed to have granted to SGI a worldwide, nonexclusive, irrevocable, royalty-free, sublicensable license in the Territory under the Licensee ADC Know-How and Licensee ADC Patents to identify, develop and commercialize products that contain an ADC consisting of an Antibody that binds specifically to the Antigen that was the subject of the terminated Exclusive License(s) or Option(s).

**13.6.4** Except where explicitly provided within this Agreement, termination of this Agreement for any reason, or expiration of this Agreement, will not affect any: (a) obligations, including payment of any royalties or other sums which have accrued as of the date

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of termination or expiration, and (b) rights and obligations which, from the context thereof, are intended to survive termination or expiration of this Agreement, including provisions of Articles 1, 8, 9, 10, 14 (as to actions arising during the term of this Agreement or in the course of a Party practicing any licenses retained by such Party thereafter), 18 and 19, Sections 3.5, 7.2, 7.3 and 13.6 and any payment obligations pursuant to Article 6 incurred prior to termination.

**13.6.5** Upon the expiration of the Royalty Term, SGI shall grant, and shall by this provision be deemed to have granted, to Licensee a royalty-free, perpetual, worldwide, nonexclusive license to use the SGI Technology to make, use, sell, offer for sale and import Licensed Products that bind specifically to each Exclusive Antigen, with no further obligation to SGI.

## ARTICLE 14 - INDEMNITY

**14.1 Direct Indemnity.**

**14.1.1** Each Party shall defend, indemnify and hold harmless the other Party from and against all liabilities, losses, damages, and expenses, including reasonable attorneys' fees and costs, (collectively, the "Liabilities") resulting from all Third Party claims, suits, actions, terminations or demands (collectively, the "Claims") that are incurred, relate to or arise out of (a) the breach of any material provision of this Agreement by the indemnifying Party (or the inaccuracy of any representation or warranty made by such Party in this Agreement), or (b) the gross negligence, recklessness or willful misconduct of the indemnifying Party in connection with the performance of its obligations hereunder.

**14.1.2** Licensee shall defend, indemnify and hold harmless SGI from and against all Liabilities resulting from all Claims that are incurred, relate to or arise out of the development, manufacture or commercialization of Licensed Products by SGI for Licensee or by Licensee, its Affiliates or Sublicensees, including any failure to test for or provide adequate warnings of adverse side effects, or any manufacturing defect in any Licensed Product; except in each case to the extent such Liabilities resulted from the gross negligence, recklessness or willful misconduct by SGI or the inaccuracy of any representation or warranty made by SGI in this Agreement or from any other action for which SGI must indemnify Licensee under Section 14.1.3.

**14.1.3** SGI shall defend, indemnify and hold harmless Licensee from and against all Liabilities resulting from all Claims that are incurred, relate to or arise out of any claims of infringement of Third Party rights arising out of the use of SGI Technology to make Antibodies that bind specifically to a Research Antigen or to make a Licensed Product (but not any other technology, including the composition or methods of making or using Antibodies or technology not relating to SGI Technology), except to the extent such Liabilities resulted from the gross negligence, recklessness or willful misconduct by Licensee or the inaccuracy of any representation or warranty made by Licensee in this Agreement or any other action for which Licensee must indemnify SGI hereunder.

**14.2 Procedure.** A Party (the "Indemnitee") that intends to claim indemnification under this Article 14 shall promptly provide notice to the other Party (the "Indemnitor") of any

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Liability or action in respect of which the Indemnitee intends to claim such indemnification, which notice shall include a reasonable identification of the alleged facts giving rise to such Liability, and the Indemnitor shall have the right to participate in, and, to the extent the Indemnitor so desires, jointly with any other Indemnitor similarly noticed, to assume the defense thereof with counsel selected by the Indemnitor. However, notwithstanding the foregoing, the Indemnitee shall have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnitor, if representation of such Indemnitee by the counsel retained by the Indemnitor would be inappropriate due to actual or potential differing interests between such Indemnitee and any other Party represented by such counsel in such proceedings. Any settlement of a Liability for which any Indemnitee seeks to be indemnified, defended or held harmless under this Article 14 that could adversely affect the Indemnitee shall be subject to prior consent of such Indemnitee, provided that such consent shall not be withheld unreasonably

**ARTICLE 15 - FORCE MAJEURE**

No Party (or any of its Affiliates) shall be held liable or responsible to the other Party (or any of its Affiliates), or be deemed to have defaulted under or breached the Agreement, for failure or delay by such Party in fulfilling or performing any term of the Agreement when such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party (or any of its Affiliates), including fire, floods, embargoes, war, acts of war (whether war be declared or not), insurrections, riots, civil commotions, acts of God or acts, earthquakes, or omissions or delays in acting by any governmental authority (collectively, "Events of Force Majeure"); provided, however, that the affected Party shall exert all reasonable efforts to eliminate, cure or overcome any such Event of Force Majeure and to resume performance of its covenants promptly. Notwithstanding the foregoing, to the extent that an Event of Force Majeure continues for a period in excess of [***], the affected Party shall promptly notify in writing the other Party of such Event of Force Majeure and within [***] of the other Party's receipt of such notice, the Parties shall negotiate in good faith either (a) a resolution of the Event of Force Majeure, if possible, (b) an extension by mutual agreement of the time period to resolve, eliminate, cure or overcome such Event of Force Majeure, (c) an amendment of this Agreement to the extent reasonably possible, or (d) an early termination of this Agreement.

**ARTICLE 16 - ASSIGNMENT**

This Agreement may not be assigned or otherwise transferred, nor, except as expressly provided hereunder, may any right or obligations hereunder be assigned or transferred to any Third Party by either Party without the consent of the other Party, such consent not to be unreasonably withheld; provided, however, that either Party may, without such consent but with notification, assign this Agreement and its rights and obligations hereunder to any of its Affiliates or in connection with the transfer or sale of all or substantially all of its business, or in the event of its merger or consolidation of such Party (such merger or consolidation shall be hereinafter referred to as a "Change in Control"). Any permitted assignee shall assume all rights and obligations of its assignor under this Agreement; [***]. Any attempted assignment of this Agreement not in accordance with this Article 16 shall be void and of no effect.

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**ARTICLE 17 - SEVERABILITY**

Each Party hereby agrees that it does not intend to violate any public policy, statutory or common laws, rules, regulations, treaty or decision of any government agency or executive body thereof of any country or community or association of countries. Should one or more provisions of this Agreement be or become invalid, the Parties hereto shall substitute, by mutual consent, valid provisions for such invalid provisions, in their economic effect, are sufficiently similar to the invalid provisions that it can be reasonably assumed that the Parties would have entered into this Agreement based on such valid provisions. In case such alternative provisions cannot be agreed upon, the invalidity of one or several provisions of this Agreement shall not affect the validity of this Agreement as a whole, unless the invalid provisions are of such essential importance to this Agreement that it is to be reasonably assumed that the Parties would not have entered into this Agreement without the invalid provisions.

**ARTICLE 18 - INSURANCE**

During the Term and thereafter for the period of time required below, each Party shall maintain an [***]; and commencing not later than [***] and thereafter for the period of time required below, Licensee shall obtain and maintain on an ongoing basis [***] (including [***] coverage on Licensee's [***] under this Agreement) in the amount of at least [***]. All of such insurance coverage shall be maintained with an insurance company or companies having an [***] or better and an aggregate deductible not to exceed [***]. Not later than the Effective Date, and not later than [***], Licensee shall provide to SGI a certificate(s) evidencing all required coverage hereunder. Thereafter, Licensee shall maintain such insurance coverage without interruption during the Term and for a period of at least [***] thereafter, and shall provide certificates evidencing such insurance coverage without interruption on an annual basis during the period of time for which such coverage must be maintained. Licensee's insurance shall name [***] and [***] as additional insureds on the [***] required hereunder and shall state that SGI shall be provided at least [***] prior written notice of any cancellation or material change in the insurance policy.

**ARTICLE 19 - MISCELLANEOUS**

**19.1 Notices.** Any consent, notice or report required or permitted to be given or made under this Agreement by one of the Parties hereto to the other shall be in writing, delivered personally or by facsimile (and promptly confirmed by personal delivery, first class air mail or courier), first class air mail or courier, postage prepaid (where applicable), addressed to such other Party at its address indicated below, or to such other address as the addressee shall have last furnished in writing to the address or in accordance with this Section 19.1 and (except as otherwise provided in this Agreement) shall be effective upon receipt by the addressee.

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If to SGI:
Seattle Genetics, Inc.
21823 30th Drive S.E.
Bothell, WA 98021
Attention: General Counsel
Telephone: (425) 527-4000
Facsimile: (425) 527-4109

If to Licensee:
CuraGen Corporation
555 Long Wharf Avenue
New Haven, CT 06511
Attention: Executive Vice President
Telephone: 203-401-3330
Facsimile: 203-401-3333

With a copy to:
[***]
[***]
[***]
Attention: [***]
Telephone: [***]
Facsimile: [***]

**19.2 Applicable Law.** The Agreement shall be governed by and construed in accordance with the laws of the State of Washington, without regard to the conflict of law principles thereof that may dictate application of the laws of any other state.

**19.3 Dispute Resolution.** The Parties agree that if any dispute or disagreement arises between Licensee on the one hand and SGI on the other in respect of this Agreement, they shall follow the following procedure in an attempt to resolve the dispute or disagreement.

**19.3.1** The Party claiming that such a dispute exists shall give notice in writing ("Notice of Dispute") to the other Party of the nature of the dispute;

**19.3.2** Within [***] of receipt of a Notice of Dispute, a nominee or nominees of Licensee and a nominee or nominees of SGI shall meet in person and exchange written summaries reflecting, in reasonable detail, the nature and extent of the dispute, and at this meeting they shall use their reasonable endeavors to resolve the dispute.

**19.3.3** If, within a further period of [***], the dispute has not been resolved, the President of SGI and the President of Licensee shall meet at a mutually agreed upon time and location for the purpose of resolving such dispute.

**19.3.4** If, within a further period of [***], the dispute has not been resolved or if, for any reason, the required meeting has not been held, then the same shall be submitted by the

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Parties for resolution by an arbitral body in [***] in accordance with the then-current commercial arbitration rules of the American Arbitration Association ("AAA") except as otherwise provided herein. The Parties shall choose, by mutual agreement, [***] within [***] of receipt of notice of the intent to arbitrate. If no arbitrator is appointed within the times herein provided or any extension of time that is mutually agreed upon, the AAA shall make such appointment within [***] of such failure. The judgment rendered by the arbitrator shall include costs of arbitration, reasonable attorneys' fees and reasonable costs for expert and other witnesses. Nothing in this Agreement shall be deemed as preventing either Party from seeking injunctive relief (or any other equitable or provisional remedy). If the issues in dispute involve scientific, technical or commercial matters, any arbitrator chosen hereunder shall have educational training and/or industry experience sufficient to demonstrate a reasonable level of relevant scientific, medical and industry knowledge.

**19.3.5** In the event of a dispute regarding any payments owing under this Agreement, all undisputed amounts shall be paid promptly when due and the balance, if any, promptly after resolution of the dispute.

**19.3.6** Notwithstanding the foregoing, any disputes relating to inventorship or the validity, enforceability or scope of any patent or trademark rights shall be submitted for resolution by a court of competent jurisdiction.

**19.4 Entire Agreement.** This Agreement contains the entire understanding of the Parties with respect to the specific subject matter hereof. All express or implied agreements and understandings, either oral or written, heretofore made are expressly superseded by this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by both Parties hereto.

**19.5 Independent Contractors.** SGI and Licensee each acknowledge that they shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture, agency or any type of fiduciary relationship. Neither SGI nor Licensee shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior consent of the other Party to do so.

**19.6 Affiliates.** Each Party shall cause its respective Affiliates to comply fully with the provisions of this Agreement to the extent such provisions specifically relate to, or are intended to specifically relate to, such Affiliates, as though such Affiliates were expressly named as joint obligors hereunder.

**19.7 Waiver.** The waiver by either Party hereto of any right hereunder or the failure to perform or of a breach by the other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by said other Party whether of a similar nature or otherwise.

**19.8 Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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*[Signature page follows]*

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

**SEATTLE GENETICS, INC.**

By: /s/ Clay B. Siegall
Name: Clay B. Siegall
Title: President & CEO

**CURAGEN CORPORATION**

By: /s/ Jonathan M. Rothberg
Name: Jonathan M. Rothberg
Title: CEO

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential treatment under Rule 24b-2 of the Securities Exchange Act of 1934.**

## SCHEDULE A

## RESEARCH PLAN

**RESEARCH SUPPORT**

SGI will conjugate research quantities [***] of Antibodies to Designated Antigens with several combinations of [***]. Licensee shall perform or have performed *[***]*.

**DEVELOPMENT SUPPORT**

Assistance will be provided in the form of [***].

**Preclinical Development**

SGI will provide the following preclinical support:

**a. [***]**

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**SCHEDULE B**

**SGI PATENTS**

**Existing SGI Technology**

| | | | |
|---|---|---|---|
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |
| [***] | [***] | [***] | [***] |

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**SCHEDULE C**

**SGI IN-LICENSES**

The following SGI In-Licenses are attached:

[***]

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## SCHEDULE D

### DESIGNATED ANTIGENS AND EXCLUSIVE ANTIGENS

"**First Exclusive Antigen**" means Antigen CG56972 having a [***].

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**Exhibit 10.28**

SECOND RESTATED COLLABORATION AGREEMENT

THIS SECOND RESTATED COLLABORATION AGREEMENT (this "Agreement"), dated as of April 12, 2004, the "Revision Date", is made between ABGENIX, INC., a Delaware corporation ("ABX"), having a place of business at 7601 Dumbarton Circle, Fremont, California 94555, and CURAGEN CORPORATION, a Delaware corporation ("CuraGen"), having a place of business at 555 Long Wharf Drive, New Haven, Connecticut 06511, with respect to the following facts:

**RECITALS**

A. The parties entered into the Collaboration Agreement effective as of December 8, 1999 (the "Original Agreement") and a Restated Collaboration Agreement effective as of November 27, 2000, as subsequently amended on January 23, 2001, January 16, 2002 and January 10, 2003 (the "Restated Agreement")**.**

B. The parties desire to amend the Restated Agreement in certain respects effective as of the date hereof, and for convenience to restate the Restated Agreement, on the terms and conditions set forth below.

NOW THEREFORE, in consideration of the foregoing premises and the mutual covenants set forth below, the parties amend the Restated Agreement and agree as follows:

1. **DEFINITIONS**

For purposes of this Agreement, the terms set forth in this Article 1 shall have the respective meanings set forth below:

1.1 "ABX In-License" shall mean a license, sublicense or other agreement under which ABX acquired rights to the ABX Patent Rights or ABX Know-How, specifically including (a) that certain license agreement between ABX and the Medical Research Council, dated December 14, 1998 (as amended or restated from time to time), (b) that certain license agreement between ABX and Babraham Bioscience Technologies Limited dated May 14, 2002 (as amended or restated from time to time) and (c) that certain license agreement between ABX and ImmunoGen, Inc. dated September 5, 2000 (as amended or restated from time to time) (the "ImmunoGen Agreement") **.**

1.2 "ABX Know-How" shall mean, collectively, all inventions, discoveries, data, information, methods, techniques, technology and other results, whether or not patentable but which are not generally known, regarding ABX Technology and Information. All ABX Know-How shall be Confidential Information of ABX.

1.3 "ABX Licensed Antigens" shall mean all ABX Optioned Antigens for which ABX has exercised an option to obtain a commercial license pursuant to Article 7 below, and "ABX Licensed Antigen" shall mean any one of the ABX Licensed Antigens.

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1.4 "ABX Optioned Antigens" shall mean all antigens which are selected from the Eligible Antigens by ABX pursuant to Article 5 below (or otherwise pursuant to the Extended Research Program), for which CuraGen has the right to grant ABX the commercial license under Article 7 below, and which are not Licensed Antigens, and "ABX Optioned Antigen" shall mean any one of the ABX Optioned Antigens.

1.5 "ABX Patent Claim" shall mean a Patent Claim within the Licensed ABX Intellectual Property Rights.

1.6 "ABX Patent Rights" shall mean, collectively, (a) all patents and patent applications listed on Exhibit A and any foreign counterparts claiming priority thereof; (b) all patent applications heretofore or hereafter filed in any country which claim (and only to the extent they claim) ABX Technology and Information or the use thereof; (c) all patents that have issued or in the future issue from any of the foregoing patent applications, including without limitation utility models, design patents and certificates of invention; and (d) all divisionals, continuations, continuations-in-part, reissues, renewals, supplemental protection certificates, extensions or additions to any such patents and patent applications.

1.7 "ABX Product" shall mean, with respect to any ABX Licensed Antigen, any product comprising (a) an Antibody or Antibody Equivalent which binds to such ABX Licensed Antigen; or (b) Genetic Material that encodes such an Antibody or Antibody Equivalent, wherein, in respect of each ABX Product, said Genetic Material does not encode multiple antibodies.

1.8 "ABX Technology and Information" shall mean, collectively, (a) [**********]; (b) [**********]; (c) [**********], and (d) [**********]. [**********].

1.9 "Affiliate" shall mean, with respect to any person or entity, any other person or entity which controls, is controlled by or is under common control with such person or entity. A person or entity shall be regarded as in control of another entity if it owns or controls at least fifty percent (50%) of the equity securities of the subject entity entitled to vote in the election of directors (or, in the case of an entity that is not a corporation, for the election of the corresponding managing authority).

1.10 "Antibody" shall mean a composition comprising (a) a whole antibody, or any fragment thereof, derived from the XenoMouse Animals hereunder; or (b) a whole antibody, or any fragment thereof, which is derived from a whole antibody or any fragment thereof, which itself is derived from the XenoMouse Animals hereunder or which is derived from the Genetic Material encoding or derived from, or the amino acid sequences of or derived from, a whole antibody or any fragment thereof, which itself is derived from the XenoMouse Animals hereunder.

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1.11 "Antibody Cells" shall mean all cells that contain, express, or secrete antibodies or Genetic Materials that encode antibodies.

1.12 "Antibody Equivalent" shall mean (i) [**********], or (ii) [**********]. For purposes of clarification, the following are not [**********]: (a) [**********] and (b) [**********].

1.13 "Antigen Specific Materials and Information" shall mean with respect to an Antigen, collectively, (a) [**********]; and (b) [**********].

1.14 "Antigens" shall mean, collectively, the Research Antigens, Eligible Antigens, Optioned Antigens and Licensed Antigens, and "Antigen" shall mean any one of the Antigens.

1.15 "BLA" shall mean a Biologics License Application, Product License Application, New Drug Application, or similar application for marketing approval of a product for use in the Therapeutic Field submitted to the FDA, or its foreign equivalent.

1.16 "Commercial Field" shall mean, collectively, the Therapeutic Field and the Diagnostic Field.

1.17 "Confidential Information" shall mean, with respect to a party, all information of any kind whatsoever, and all tangible and intangible embodiments thereof of any kind whatsoever, which is disclosed by such party to the other party pursuant to this Agreement, and (if disclosed in writing or other tangible medium) is marked or identified in writing as confidential at the time of disclosure to the receiving party or (if otherwise disclosed or if not so marked or identified in writing) is identified as confidential at the time of disclosure to the receiving party and is summarized and identified as confidential in writing or by electronic means within thirty (30) days after such disclosure. Notwithstanding the foregoing, Confidential Information of a party shall not include information which, and only to the extent, the receiving party can establish by written documentation or electronic records (a) has been publicly known prior to disclosure of such information by the disclosing party to the receiving party; (b) has become publicly known without fault on the part of the receiving party, subsequent to disclosure of such information by the disclosing party to the receiving party; (c) has been received by the receiving party at any time from a source, other than the disclosing party, rightfully having possession of and the right to disclose such information free of confidentiality obligations; (d) has been otherwise known by the receiving party free of confidentiality obligations prior to disclosure of such information by the disclosing party to the receiving party; or (e) has been independently developed (as demonstrated by contemporaneous written or electronic evidence maintained in the ordinary course of business of the receiving party) by employees or agents of the receiving party without access to or use of such information disclosed by the disclosing party to the receiving party.

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1.18 "CuraGen Databases" shall mean, collectively, all data, information and materials (other than Research Program Technology and Information) related to human Genetic Materials and the expression products thereof which as of the Effective Date are contained in CuraGen's SeqCalling Database or which at any time during the term of this Agreement are added thereto. For purposes hereof, the CuraGen SeqCalling Database shall include without limitation the following data, information, and materials possessed, acquired or developed by CuraGen as of the Effective Date or at any time during the term of this Agreement, the acquisition or development of which has not been sponsored or directed by a commercial Third Party to whom rights in such data, information, and materials have been granted in advance (without breaching the exclusivity obligations of this Agreement): (i) sequence data with respect to human Genetic Materials (including expressed sequences) and expression products thereof; (ii) the tissue or cellular distribution relating to such Genetic Materials, their expression and expression products; (iii) literature publications and patent status (i.e., information related to CuraGen filing dates, priority of claim(s) and any related patents and patent applications, and any information known by CuraGen regarding Third Party patents and patent applications) related to such Genetic Materials and expression products; (iv) the biological function of such Genetic Materials and expression products; (v) clones, expression products, proteins, cell lines and vectors related to such Genetic Materials and expression products, and (vi) all of the data, information, and materials described in the foregoing clauses (i) to (v) with respect to any homologs of such Genetic Materials and expression products. As of the Effective Date, the CuraGen SeqCalling Database includes at least [**********].

1.19 "CuraGen Exclusive Antigen" shall mean an antigen (other than a Research Antigen) or Research Antigen that is designated by CuraGen as a CuraGen Exclusive Antigen in accordance with Section 4.6.

1.20 "CuraGen Know-How" shall mean, collectively, all inventions, discoveries, data, information, methods, techniques, technology and other results, whether or not patentable but which are not generally known, regarding CuraGen Technology and Information. All CuraGen Know-How shall be Confidential Information of CuraGen.

1.21 "CuraGen Licensed Antigens" shall mean all CuraGen Optioned Antigens for which CuraGen has exercised an option to obtain a commercial license pursuant to Article 7 below, and "CuraGen Licensed Antigen" shall mean any one of the CuraGen Licensed Antigens.

1.22 "CuraGen Optioned Antigens" shall mean all antigens which are selected from the Eligible Antigens by CuraGen pursuant to Article 5 below (or otherwise pursuant to the Extended Research Program), for which ABX has the right to grant CuraGen the commercial license under Article 7 below, and which are not Licensed Antigens, and "CuraGen Optioned Antigen" shall mean any one of the CuraGen Optioned Antigens.

1.23 "CuraGen Patent Claim" shall mean a Patent Claim within the Licensed CuraGen Intellectual Property Rights, other than Patent Claims that are (i) directed to a method of use of the Research Antigen or antibodies to such antigen that is initially identified solely

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through the use of Antigen Specific Materials and Information or (ii) enabled solely by data relating to or supporting a specific indication that was initially identified solely through the use of the Antigen Specific Materials and Information.

1.24 "CuraGen Patent Rights" shall mean, collectively, (a) all patent applications heretofore or hereafter filed in any country which claim (and only to the extent they claim) CuraGen Technology and Information or the use thereof; (b) all patents that have issued or in the future issue from any of the foregoing patent applications, including without limitation utility models, design patents and certificates of invention; and (c) all divisionals, continuations, continuations-in-part, reissues, renewals, supplemental protection certificates, extensions or additions to any such patents and patent applications.

1.25 "CuraGen Product" shall mean, with respect to any CuraGen Licensed Antigen, any product comprising (a) an Antibody or Antibody Equivalent which binds to such CuraGen Licensed Antigen, or (b) Genetic Material that encodes such an Antibody or Antibody Equivalent wherein, in respect of each CuraGen Product, said Genetic Material does not encode multiple antibodies.

1.26 "CuraGen Technology and Information" shall mean, collectively, (a) [**********]; (b) [**********]; (c) [**********]; and (d) [**********]. [**********].

1.27 "Derived" or "derived" shall mean obtained, developed, created, synthesized, designed, derived or resulting from, based upon or otherwise generated (whether directly or indirectly, or in whole or in part).

1.28 "Diagnostic Field" shall mean the use of Products for the following human medical purposes: the detection, diagnosis and monitoring of [**********], predisposition, state or condition in humans or the selection of a particular patient(s) to receive a particular therapeutic treatment(s).

1.29 "Effective Date" shall mean December 8, 1999.

1.30 "Eligible Antigen" shall mean a Research Antigen which satisfies the criteria of Exhibit B as determined by the JMC pursuant to Section 3.2 below or the arbitrator pursuant to Section 3.5 below, and which is not an Optioned Antigen.

1.31 "Excluded ABX Technology" shall mean, collectively, [**********] (a) [**********]; (b) [**********]; (c) [**********]; (d) [**********]; (e) [**********]; and (f) [**********].

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1.32 "Excluded CuraGen Technology" shall mean, collectively, [**********] (a) [**********]; (b) [**********]; and (c) [**********].

1.33 "FDA" shall mean the United States Food and Drug Administration or its successor agency.

1.34 "First Commercial Sale" shall mean, with respect to each Product in each country, the date of first commercial sale (other than for purposes of obtaining regulatory approval) of such Product by a party hereto, its Sublicensee or their respective Affiliates to an unaffiliated Third Party in such country.

1.35 "Gene Therapy" shall mean the treatment or prevention of a disease by means of Ex Vivo or In Vivo delivery (via viral or nonviral gene transfer systems) of compositions comprising either (a) Genetic Material that encodes an Antibody, wherein such Antibody serves a material function in the treatment or prevention of such disease; (b) Genetic Material that encodes a moiety other than an Antibody, wherein the moiety serves a material function in the treatment or prevention of such disease and wherein such composition incorporates an Antibody (or Genetic Material that encodes such Antibody), which Antibody is used as a targeting vehicle for the composition; or (c) Genetic Material that encodes an Antibody that serves a material function in the treatment or prevention of such disease, wherein such composition also incorporates an Antibody (or Genetic Material that encodes such Antibody) which Antibody is used as a targeting vehicle for the composition. "Ex Vivo" delivery shall mean the introduction, outside of the body of a human, of such compositions into a cell, tissue, organoid, or organ, followed by the administration of the cell, tissue, organoid, or organ which contains such introduced compositions into the body of the same (autologous) or different (allogeneic) human, without limitation as to the formulation, anatomic site, or route of administration or the use of encapsulation or other devices for such administration. "In Vivo" delivery shall mean the introduction of such compositions into an individual, without limitation as to the formulation, anatomic site, or route of administration or the use of encapsulation or other devices for such administration.

1.36 "Genetic Material" shall mean a nucleic acid, including DNA, RNA, and nucleic acid complementary and reverse complementary to such nucleotide sequences or nucleic acid, whether coding or noncoding and whether intact or a fragment.

1.37 "GenPharm Cross License Agreement" shall mean that certain Cross License Agreement entered into by and between ABX, JTI, XT, Cell Genesys, Inc., and GenPharm International, Inc., effective as of March 26, 1997, as the same may be amended from time to time.

1.38 "Human Antibody Equivalent" shall mean (i) [**********], or (ii) [**********].

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1.39 "IND" shall mean an Investigational New Drug application filed with the FDA, or any similar filing with any foreign regulatory authority, to commence human clinical testing of any Product in any country.

1.40 "JMC" shall mean the joint management committee comprising representatives of ABX and CuraGen described in Section 3.1 below.

1.41 "JTI" shall mean Japan Tobacco Inc., a Japanese corporation.

1.42 "Licensed Antigens" shall mean, collectively, the ABX Licensed Antigens and CuraGen Licensed Antigens, and "Licensed Antigen" shall mean any one of the Licensed Antigens.

1.43 "Licensed ABX Intellectual Property" shall mean ABX's rights in the ABX Patent Rights, ABX Know-How, Research Program Patent Rights and Research Program Know-How; provided, however, that the Licensed ABX Intellectual Property (a) is all to the extent and only to the extent that ABX has the right to grant (sub)licenses thereunder (including without limitation to the extent permitted under the applicable ABX In-Licenses); (b) is expressly subject to the ABX In-Licenses; and (c) shall exclude the Excluded ABX Technology.

1.44 "Licensed CuraGen Intellectual Property" shall mean CuraGen's rights in the CuraGen Patent Rights, CuraGen Know-How, Research Program Patent Rights and Research Program Know-How; provided, however, that the Licensed CuraGen Intellectual Property (a) is all to the extent and only to the extent that CuraGen has the right to grant (sub)licenses thereunder; and (b) shall exclude the Excluded CuraGen Technology.

1.45 "Licensed Intellectual Property" shall mean, collectively, the Licensed ABX Intellectual Property and the Licensed CuraGen Intellectual Property.

1.46 "Net Sales" shall mean, with respect to a Product, the gross sales price charged by a party, its Sublicensees and their respective Affiliates for sales of such Product to non-Affiliate customers, less (a) [**********]; (b) [**********]; and (c) [**********]. [**********].

1.47 "Optioned Antigens" shall mean, collectively, the ABX Optioned Antigens and CuraGen Optioned Antigens, and "Optioned Antigen" shall mean any one of the Optioned Antigens.

1.48 "Patent Claim" shall mean a claim of a pending patent application (pending for no longer than five (5) years) or issued and unexpired patent included within the Licensed Intellectual Property which has not been held unenforceable or invalid by a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal and which has not been admitted to be invalid or unenforceable through reissue, disclaimer or otherwise.

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1.49 "Person" shall mean an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, pool, syndicate, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

1.50 "Phase I Clinical Trial" shall mean a human clinical trial in any country that is intended to initially evaluate the safety and/or pharmacological effect of a Product in subjects, or that would otherwise satisfy requirements of 21 CFR 312.21(a), or its foreign equivalent.

1.51 "Phase II Clinical Trial" shall mean a human clinical trial in any country that is intended to initially evaluate the effectiveness of a Product for a particular indication or indications in patients with the disease or indication under study, or that would otherwise satisfy requirements of 21 CFR 312.21(b), or its foreign equivalent.

1.52 "Phase III Clinical Trial" shall mean a pivotal human clinical trial in any country the results of which could be used to establish safety and efficacy of a Product as a basis for a marketing approval application submitted to the FDA, or that would otherwise satisfy requirements of 21 CFR 312.21(c), or its foreign equivalent.

1.53 "PMA" shall mean a Pre-Market Approval Application, 510(k) notice or similar application for marketing approval of a product for use in the Diagnostic Field submitted to the FDA, or its foreign equivalent.

1.54 "Products" shall mean, collectively, the ABX Products and the CuraGen Products, and "Product" shall mean any one of the Products.

1.55 "Program Year" shall mean any period commencing on the Effective Date or any anniversary thereof, and continuing through the first anniversary thereof, during the term of the Research Program.

1.56 "Research Antigens" shall mean, collectively, the antigens which are selected by the JMC, ABX or CuraGen pursuant to Section 4.1 below for use in the Research Program, for which ABX and CuraGen have the right to grant the other party the commercial license under Article 7 below, and which are not Optioned Antigens or Licensed Antigens, and "Research Antigen" shall mean any one of the Research Antigens.

1.57 "Research Field" shall mean the use of materials derived from XenoMouse Animals that are immunized with Research Antigens solely for the creation, identification, analysis, research, characterization and preclinical development of potential Products for use in the Commercial Field.

1.58 "Research Program" shall mean the collaborative research program described in Section 4.4 below

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1.59 "Research Program Know-How" shall mean, collectively, all inventions, discoveries, data, information, methods, techniques, technology and other results, whether or not patentable but which are not generally known, regarding Research Program Technology and Information or the use thereof.

1.60 "Research Program Technology and Information" shall mean, with respect to an Antigen, collectively, (a) [**********]; and (b) [**********].

1.61 "Research Program Patent Rights" shall mean, collectively, (a) all patent applications hereafter filed in any country which claim Research Program Technology and Information or the use thereof; (b) all patents that have issued or in the future issue from any of the foregoing patent applications, including without limitation utility models, design patents and certificates of invention; and (c) all divisionals, continuations, continuations-in-part, reissues, renewals, supplemental protection certificates, extensions or additions to any such patents and patent applications.

1.62 "Royalty Commencement Date" shall mean, with respect to each Product in each country, the date of the First Commercial Sale of such Product in such country.

1.63 "Sublicense" shall mean, with respect to a Product, an agreement or arrangement pursuant to which a (sub)license or distribution right regarding such Product has been granted to a Sublicensee.

1.64 "Sublicense Income" shall mean, with respect to a Product, the aggregate cash consideration, and the fair market value of the non-cash consideration, received by a party or its Affiliate in connection with the Sublicense of such Product, excluding consideration received (a) in reimbursement of such party's or its Affiliate's cost to perform research, development or similar services conducted for such Product after the grant of such Sublicense, (b) in reimbursement of patent or other out-of-pocket expenses on such Product, or (c) in consideration for the purchase of any securities of such party or its Affiliates at a price equal to no more than 120% of the then fair market value of such securities).

1.65 "Sublicensee" shall mean a Third Party that is granted (a) a (sub)license under the Licensed Intellectual Property to develop, make, use, offer for sale, sell or import a Product in the Commercial Field; or (b) a right to distribute a Product in the Commercial Field, provided that such Third Party is responsible for marketing and promotion of such Product within the applicable territory.

1.66 "Technology and Information" shall mean, collectively, the ABX Technology and Information, CuraGen Technology and Information and Research Program Technology and Information.

1.67 "Therapeutic Field" shall mean the use of Products for the following human medical purposes: the prevention or treatment of [**********].

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1.68 "Third Party" shall mean any Person other than ABX, CuraGen and their respective Affiliates.

1.69 "XenoMouse Animals" shall mean the transgenic mice capable of producing human antibodies when immunized by ABX with an antigen.

1.70 "XT" shall mean Xenotech, L.P., a California limited partnership.

1.71 "XT Master Research License and Option Agreement" shall mean that certain Master Research License and Option Agreement entered into by and among XT, JTI and Cell Genesys, Inc. effective as of June 28, 1996, and subsequently assigned to ABX by Cell Genesys, Inc., as the same may be amended from time to time.

1.72 "XT/ABX Product License Agreement" shall mean a license agreement between XT and ABX entered into pursuant to the XT Master Research and License Agreement granting to ABX a license (with the right to grant sublicenses) to commercialize Products in one or more territories.

1.73 "Conjugate" shall mean a specific composition, as mutually agreed upon by the parties in writing, which ABX owns or to which ABX otherwise has rights (including the right to grant sublicenses to CuraGen hereunder) to be conjugated to one or more Antibodies hereunder. "DM1", as defined under the ImmunoGen Agreement, is the initial Conjugate.

1.74 "Imaging Peptide" shall mean a peptide that (a) is less than fifty (50) amino acids in length, and (b) is not derived from an Antibody Equivalent.

1.75 "Lambda Antibodies" shall mean Antibodies derived from the Lambda XenoMouse Animals hereunder comprising a human lambda light chain.

1.76 "Lambda Licensed Antigen" shall mean an Optioned Antigen that is designated as a Lambda Licensed Antigen at the time CuraGen exercises an option to take a commercial license to such Optioned Antigen under Article 7.

1.77 "Lambda Optioned Antigen" shall mean an Optioned Antigen for which Lambda XenoMouse Animals will or may be immunized under the Research Program and designated as such pursuant to Section 5.

1.78 "Lambda XenoMouse Animals" shall mean XenoMouse Animals that are transgenic for a portion of the human lambda light chain immunoglobulin locus and produce human lambda light chain-containing immunoglobulin molecules.

1.79 "Specifically Binds" refers to those antibodies that have a minimum affinity (KD value) of [******] (as measured by standard techniques such as the BIAcore) toward a specified antigen and do not bind to related isozymes, proteins or antigens with an affinity of better than 1 uM.

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2. **REPRESENTATIONS AND WARRANTIES**

Each party hereby represents and warrants to the other party as follows:

2.1 Existence. Such party is duly organized, validly existing and in good standing under the laws of the state in which it is organized.

2.2 Authorization and Enforcement of Obligations. Such party: (a) has the requisite power and authority and the legal right to enter into this Agreement and to perform its obligations hereunder; and (b) has taken all requisite action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder. This Agreement has been duly executed and delivered on behalf of such party, and constitutes a legal, valid, binding obligation enforceable against such party in accordance with its terms except as enforcement may be limited by equitable remedies or defenses and applicable bankruptcy laws.

2.3 No Consents. All necessary consents, approvals and authorizations of all governmental authorities and other persons required to be obtained by such party in connection with this Agreement have been obtained.

2.4 No Conflict. The execution and delivery of this Agreement and the performance of such party's obligations hereunder (a) do not conflict with or violate any requirement of applicable laws or regulations; and (b) do not conflict with, or constitute a default under, any contractual obligation of it.

2.5 ABX In-Licenses. ABX has made available to counsel to CuraGen correct copies of ABX In-Licenses, as in effect on the Effective Date.

2.6 Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES OF ANY KIND REGARDING TECHNOLOGY AND INFORMATION, PRODUCTS OR LICENSED INTELLECTUAL PROPERTY EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OR VALIDITY. ALL TECHNOLOGY AND INFORMATION IS PROVIDED "AS IS."

3. **JOINT MANAGEMENT COMMITTEE**

3.1 Composition. The JMC shall comprise three (3) named representatives of CuraGen and three (3) named representatives of ABX. Each party shall notify the other party in writing of its initial representatives to the JMC within ten (10) days after the Effective Date, and may substitute one or more representatives from time to time effective upon written notice to the other party.

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3.2 Responsibilities. The JMC shall be responsible for (a) selecting antigens from the CuraGen Databases as Research Antigens; (b) monitoring and reporting the progress of the Research Program; (c) recommending to the parties any modifications to the Research Program with respect to any or all of the Research Antigens; (d) facilitating open and frequent exchange of information between the parties regarding the Research Program; (e) reviewing the data and information regarding Research Antigens and determining whether a Research Antigen satisfies the criteria set forth in Exhibit B; and (f) making selections of Eligible Antigens under Article 5 below. The JMC shall also be responsible for discussing potential Conjugates that are to be utilized in the Research Program; provided, however, that no Conjugate shall be utilized in the Research Program until the parties have mutually agreed in writing (i) that such Conjugate shall be used in the Research Program, and (ii) those specific one or more Antibodies with which such Conjugate will be utilized.

3.3 Meetings. The JMC shall meet in person (unless otherwise agreed on a meeting-by-meeting basis) not less than once each calendar quarter during the term of the Research Program, on such dates and at such times and places as agreed to by CuraGen and ABX, alternating between Fremont, California and New Haven, Connecticut, or such other locations as the parties mutually agree. For all other meetings, the JMC may meet by telephonic or video conference or in person, as the parties mutually agree. Each party shall have the right to have one (or such greater number as the parties mutually agree) employee or agent who is not a member of the JMC attend each meeting of the JMC as a non-voting observer. Each party shall be responsible for all its own personnel, travel and related expenses relating to JMC meetings. The first meeting of the JMC shall take place at the offices of ABX as soon as practicable after the Effective Date, but in no event later than thirty (30) days after the Effective Date.

3.3.1 Within thirty (30) days following each JMC meeting, the party hosting the meeting (or entitled to host the meeting, if held by telephonic or video conference or at a location other than Fremont, California or New Haven, Connecticut) shall prepare and provide to the other party mutually acceptable, reasonably detailed written minutes describing (a) all matters reviewed or

considered by the JMC; (b) all discussions regarding potential and actual Antigens; and (c) all determinations and actions of the JMC and the reasons therefor. Such minutes shall be the Confidential Information of both ABX and CuraGen; provided, however, that to the extent that such minutes relate to the Optioned Antigens and Licensed Antigens of a party they shall be the Confidential Information solely of such party.

3.3.2 Not less than ten (10) days prior to each regularly scheduled quarterly meeting of the JMC, each party shall provide the other party with all data and information, not previously disclosed to the other party, regarding the activities of such party under the Research Program.

3.3.3 Not less than five (5) days prior to each regularly scheduled meeting of the JMC, each party shall provide the other party with a list of the antigens that such party desires to discuss at such JMC meeting for potential use in the Research Program.

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3.4 Actions. ABX and CuraGen each shall be entitled to cast one vote on matters before the JMC. Decisions of the JMC shall be made by unanimous approval.

3.5 Disagreements. All disagreements within the JMC shall be resolved in the following manner:

3.5.1 Promptly upon receipt of written notice (a "Dispute Notice") from one party to the other of a disagreement to be resolved under this Paragraph 3.5, the JMC representatives of each party promptly shall present the disagreement to the chief executive officer of such party.

3.5.2 The chief executive officers of each party thereafter shall meet to discuss each party's view and to explain the basis for their respective positions of such disagreement, and in good faith shall attempt to resolve such disagreement among themselves.

3.5.3 If, within thirty (30) days after receipt of a Dispute Notice as to whether a Research Antigen satisfies the criteria of Exhibit B, the chief executive officers of each party cannot resolve such disagreement, then upon written notice from one party to the other party, such disagreement shall be settled as follows. Within forty five (45) days after receipt of such Dispute Notice, the parties shall attempt to mutually agree upon a single independent Third Party arbitrator, who shall be a scientific professional in the antibody field, to resolve such disagreement. If the parties are unable to mutually agree upon one such person, then each party shall appoint one independent Third Party scientific professional in the antibody field prior to the expiration of such forty five (45) day period, and within sixty (60) days after receipt of such Dispute Notice, such person(s) shall select a single independent Third Party arbitrator, who shall be a scientific professional in the antibody field, to resolve such disagreement. Each party shall present all information presented to the JMC and all other information as such party reasonably desires regarding such disagreement. Within ninety (90) days after receipt of such Dispute Notice, such arbitrator shall determine whether such Research Antigen satisfies the criteria of Exhibit B and provide written notice to the parties regarding such determination.

4. **RESEARCH ANTIGEN IDENTIFICATION AND RESEARCH**

4.1.1 Searches for Research Antigens. During the term of the Research Program, CuraGen shall have primary responsibility for the screening of the CuraGen Databases and shall conduct searches thereof to identify and recommend to the JMC potential antigens of interest hereunder. CuraGen shall recommend to the JMC all antigens of interest (whether or not the genes encoding such antigens are contained in the CuraGen Databases) that, based on the data and information in the CuraGen Databases and such other data and information as CuraGen may have acquired or developed, (i) CuraGen reasonably believes is not the subject of any Third Party intellectual property rights (or the parties mutually believe, as evidenced by written agreement, that a license to all applicable Third Party intellectual property rights can be

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reasonably obtained), (ii) CuraGen reasonably believes could be subject (or the parties mutually believe, as evidenced by written agreement, that the antibodies to which could be subject) to a proprietary position of CuraGen, (iii) CuraGen reasonably believes would be available hereunder as a Research Antigen, and (iv) CuraGen reasonably believes is reasonably likely to have potential as a target for antibody-based therapeutics. In addition, CuraGen will use its best efforts to recommend to the JMC antigens that would have an IP Score (as defined below) of 1, 2, or 3 and not 4 or 5 in a sufficient number to allow selection of at least [*****] Priority Research Antigens per year from the CuraGen Databases. ABX shall have the right, but not the obligation, to recommend to the JMC antigens of interest from the CuraGen Databases or from other sources that ABX reasonably believes are not the subject of Third Party intellectual property rights and would be available hereunder as Research Antigens and are reasonably likely to have potential as targets for antibody-based therapeutics.

4.1.2 Research Antigen Selection.

During the term of the Research Program, based upon the data and information provided by the parties regarding potential antigens of interest, the JMC shall select at any JMC meeting, from those antigens proposed by the parties under Section 3.3.3 and 4.1, potential antigens of interest for use in the Research Program. With respect to each potential antigen which is selected, by the action of the JMC, for use under the Research Program, within thirty (30) days after the date of such JMC meeting, each party shall notify the other party in writing if such party does not have the right to grant the other party a commercial license under Article 7 below for such antigen. Unless a party timely notifies the other party in writing that it does not have the right to grant the other party a commercial license under Article 7 below for such antigen, such antigen thereafter shall be a Research Antigen.

4.1.3 Notwithstanding anything to the contrary in this Agreement, if a party gives written notice to the other party at any time stating that such party does not have the right to grant the other party a commercial license under Article 7 below for a Research Antigen, then effective thirty (30) days after the receipt by the other party of such notice, such antigen shall cease to be a Research Antigen and both parties shall destroy all Antigen Specific Materials and Information pertaining to such antigen. A party shall give such written notice to the other party promptly upon the occurrence of the event giving rise to such party's not having the right to grant the other party a commercial license under Article 7, to the extent such party has the right to do so.

4.2 Research Program.

4.2.1 Research Responsibilities. During the term of the Research Program, each party shall use its commercially reasonable efforts to perform its obligations set forth in the Work Plan within the time schedules contemplated therein. The JMC may recommend changes to the allocation of responsibilities set forth in Exhibit C, from time to time; provided, however, that such changes shall only be effective if in a written amendment duly executed by both parties. Other than the activities specified in Exhibit C as being the

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responsibility of one party or another, the JMC shall allocate the responsibility for each such activity between the parties, taking into account the skills of each party, in an effort to divide the resources and internal costs reasonably required to be dedicated by each party to the conduct of such activities [**********]. In the event that any activities with respect to Research Antigens (other than CuraGen Exclusive Antigens), other than those specified in Exhibit C as being the responsibility of one party or another, require any payments to a Third Party for goods or services (e.g., specific animal models), such payments shall be [**********], provided that all such goods and services and payments therefor are approved by the JMC prior to incurring any such expense. Notwithstanding anything to the contrary in this Agreement, all activities with respect to Research Antigens that are CuraGen Exclusive Antigens, other than the generation and biochemical characterization of Antibodies as described and allocated to ABX in Exhibit C, shall be the sole and exclusive responsibility of CuraGen, at its sole cost and expense. With respect to each Research Antigen, during the term of the Research Program, each party may conduct, in its sole discretion, such additional preclinical research in the Research Field as such party reasonably desires to evaluate its interest in such Research Antigen, provided that, the preceding right shall not apply to ABX in the case of Research Antigens that are CuraGen Exclusive Antigens, and provided further that prior to commencing such additional preclinical research with respect to Research Antigens that are not CuraGen Exclusive Antigens, such party shall give prior written notice to the other party of the nature and scope of such additional preclinical research regarding such Research Antigen and shall provide the other party with all results of such research, which research shall be deemed to have been part of the Research Program. Each party shall provide the personnel, materials, equipment and other resources required to conduct its obligations hereunder; provided, however, that CuraGen shall transfer to ABX all information and materials available to CuraGen that are useful in the conduct of all assays conducted by or on behalf of CuraGen in connection with the Research Program. ABX shall reimburse CuraGen for all reasonable out-of-pocket expenses incurred in effecting such transfer. CuraGen grants to ABX the nonexclusive, worldwide license (without the right to grant sublicenses) to practice and use all such assays both (a) for use in the Research Program, and (b) for research purposes (unrelated to the Research Program or CuraGen) related to the research and development of antigens and/or antibodies. Each party shall perform its obligations hereunder in accordance with high scientific and professional standards, and in compliance in all material respects with the requirements of applicable laws and regulations. Each party shall provide reasonable assistance required by the other party in connection with the performance of the Research Program. Each party shall have the right, at reasonable times during normal business hours and upon reasonable notice, to visit the facilities of the other party where the other party is conducting its obligations under the Research Program to observe such activities.

4.2.2 Research Antigen Work Plans.

(a) Each year, the JMC will prioritize up to [****] Research Antigens for immunization based on IP Score (as defined below) and biology ("Priority Research Antigens"). The Parties agree that for purposes of this Agreement, an "IP Score" for a Research Antigen shall be determined as follows: (i) if CuraGen has priority for the composition of matter for a full length Research Antigen (that is not a variant) such Research Antigen will be accorded a IP

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Score of 1, (ii) if CuraGen has priority for the composition of matter of a Research Antigen that is a variant and has priority for data demonstrating a novel method of use for such variant or antibodies thereto such Research Antigen shall be accorded an IP Score of 2, (iii) if the composition of matter of a Research Antigen has been publicly disclosed in the literature (other than the patent literature, unless such disclosure does not include a disclosure of antibodies) before CuraGen's priority date and CuraGen has priority for data demonstrating a novel method of use for such variant or antibodies thereto, such Research Antigen shall be accorded an IP Score of 3, (iv), if the composition of matter of a Research Antigen (or antibodies thereto) has been disclosed in patent literature together with a disclosure of antibodies before CuraGen's priority date such Research Antigen shall be accorded an IP Score of 4, and (v) if the composition of matter of a Research Antigen (or antibodies thereto) has been claimed in an issued or granted patent in the patent literature together with a disclosure of antibodies before CuraGen's priority date such Research Antigen shall be accorded an IP Score of 5. Unless agreed as provided herein, neither Party shall have any obligation to undertake any work or continue any work with respect to a Research Antigen accorded an IP Score of 4 or 5 and no Research Antigen accorded an IP Score of 4 or 5 shall be a Priority Research Antigen unless ABX agrees in writing. In the event that CuraGen reasonably believes that, notwithstanding a Research Antigen having an IP Score of 4 or 5, CuraGen has priority for a substantive method of use for the Research Antigen not previously disclosed in the literature, CuraGen shall have the right to propose such Research Antigen for reconsideration by ABX and if ABX agrees to such reconsideration, present information demonstrating such method of use and CuraGen's priority information. Upon a determination by ABX that such a Research Antigen would be acceptable, such Research Antigen shall be accorded an IP Score of "4-MOU" or "5-MOU", as the case may be, and may be designated a Priority Research Antigen. From the pool of Priority Research Antigens, ABX will attempt to raise Antibodies by immunization of Xenomouse Animals and the Parties will attempt to generate and characterize such Antibodies to such Priority Research Antigens. The Parties will use reasonable efforts to analyze or reanalyze, as the case may be, the IP Score of each proposed Priority Research Antigen within ten (10) business days of its becoming a proposed Priority Research Antigen. If the JMC determines to reimmunize a Xenomouse Animal with a Research Antigen, it will be counted as one of the Priority Research Antigens.

(b) For each Priority Research Antigen a Work Plan will be created, including design of the immunogen(s) and specification of all assays required for Eligible Antigen designation pursuant to Exhibit B. For each Research Antigen for which research activities have already begun as of the Revision Date, a Work Plan will be created that summarizes the work already completed and the work that remains for Eligible Antigen designation pursuant to Exhibit B. In each case, the Work Plan will detail the work to be done or remaining to be done and define the responsibility of each party in conducting the work under the Work Plan consistent with Section 4.2.2. It is understood and agreed by the Parties that Exhibit C shall serve as a guide for the creation of the Work Plans of each Research Antigen, however, the Work Plan once created and agreed to by the Parties shall take precedence over Exhibit C with respect to the particular Research Antigen to which the Work Plan applies.

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(c) Failure by ABX to immunize a Xenomouse Animal within thirty (30) days of delivery of an immunogen by CuraGen for a Priority Research Antigen meeting the Work Plan criteria for such Priority Research Antigen will result in that Priority Research Antigen being no longer designated as a Research Antigen. ABX will return all CuraGen Technology and Information to CuraGen related to such Research Antigen and CuraGen will no longer be subject to exclusivity provisions of Section 4.4 with respect to such Research Antigen.

4.2.3 Neither Party is obligated to perform any further research on a Research Antigen outside the scope of the agreed upon Work Plan once such Work Plan is completed unless a new Work Plan is agreed to by the JMC. If either Party unreasonably fails to perform an assigned task under a Work Plan after written request for more than 90 days from the date of the request, unless such delay is due to the failure of the other Party to perform, the other Party can perform it instead and be reimbursed by the originally assigned Party.

4.2.4 The parties shall [**********] all costs incurred by ABX for the provision of the Conjugates prior to the selection of an Eligible Antigen by one of the parties including without limitation (a) fees paid by ABX in consideration for the Conjugate in-licensed technology to the extent such fees are directly related to the use of the Conjugates hereunder and are payable prior to such selection, and (b) costs of scale-up manufacturing of Conjugates incurred by ABX prior to such selection.

4.2.5 Access. Without limiting the generality of Section 4.1, each party shall permit up to three (3) employees of the other party access to such party's facilities, upon reasonable advance notice, at all times during normal business hours during the term of the Research Program Term to work with the employees of such party in the development and use of assays pursuant to the Research Program. Each party shall provide such employees of the other party in person access to one or more employees of such party skilled in the development and use of such assays to enable such employees of such other party to utilize such assays and develop similar assays for use in the Research Program and, in the case of ABX, as contemplated under Section 4.2.2; provided, however, except as otherwise provided in Section 4.2.2, that no license (or sublicense, as the case may be) to any intellectual property relating to such assays is granted hereby, whether expressly or by implication.

4.2.6 Term of the Research Program. Unless this Agreement is earlier terminated, the term of the Research Program shall commence on the Effective Date and shall continue through completion of all Work Plans for Research Antigens for which CuraGen has delivered to ABX for immunization on or prior to June 30, 2005 an immunogen meeting the Work Plan criteria for such Research Antigen (the "Last Immunization Date"). Without limiting the generality of the foregoing, CuraGen will have no obligation to deliver Research Antigens after June 30, 2005 and ABX will have no obligation to immunize Xenomouse Animals with Research Antigens delivered after June 30, 2005 or conduct any further work with respect to such unimmunized antigens.

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4.2.7 Extended Research. Subject to Sections 6.1.4, 6.1.5, 6.1.6, both parties may use Antibody Specific Materials and Information and Research Program Technology and Information relating to Research Antigens (i) for which Xenomouse Immunizations were conducted but that failed to become Eligible Antigens, as listed on Exhibit E and as updated by agreement of the JMC, or (ii) which became Unpicked Eligible Antigens under Section 5.2.12 ("Extended Research Antigens"). At any time during the term of the Extended Research License under Section 6.1.6 (the "Extended Research License Term"), either party can designate such a Research Antigen as an Optioned Antigen by notice to the other and payment of the Section 8.2.1 fee, provided that a commercial license is available from the other party. If a commercial license is not available, the Extended Research License shall terminate for such Antigen and each party shall destroy all Antigen Specific Materials and Information related to such antigen. Further, at any time during the Extended Research License Term, should an antigen subject to the Extended Research License cease to be available for commercial license, the party no longer having the right to grant the exclusive license shall notify the other party and the Extended Research License shall immediately terminate and each party shall destroy all Antigen Specific Materials and Information related to such antigen.

4.3 Research Records and Reports.

4.3.1 Research Records. Each party shall maintain records, in sufficient detail and in good scientific manner appropriate for patent purposes, which shall be complete and accurate and shall fully and properly reflect all work done and results achieved in the performance of the activities under the Research Program. Each party shall have the right, during normal business hours and upon reasonable notice, to inspect and copy all such records of the other party to the extent reasonably required for the performance of its obligations under this Agreement. Each party shall maintain such records and the information of the other party contained therein in confidence in accordance with Article 11 below.

4.3.2 Research Reports and Information. Each party shall keep the other informed of the progress of its own activities under the Research Program. At a minimum, within thirty (30) days following the last day of each calendar quarter during the term of the Research Program, each party shall prepare, and provide to the other party, a reasonably detailed written summary report which shall describe the work performed by such party to date under the Research Program.

4.4 Exclusivity.

4.4.1 Except as otherwise expressly permitted under this Agreement, during the term of the Research Program, CuraGen shall not, [**********]. [**********], (i) [**********]or (ii) [**********]. [**********] (i) [**********] and (ii) [**********]. [**********].

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

4.4.2 For a period commencing on November 27, 2000, and ending on the earlier of (i) the Last Immunization Date, and (ii) the effective date of a termination of the Research Program and the options, licenses and rights of ABX under this Agreement by CuraGen pursuant to Section 14.2.3 upon an uncured material breach of a material obligation by ABX, CuraGen shall not enter into any agreement (other than permitted license and sublicense agreements hereunder) with any other Person under which:

(a) [**********].

(b) [**********].

(c) [**********].

(d) [**********].

(e) [**********]

4.4.3 Except as otherwise expressly permitted under this Agreement, for a period ending on the earlier of (a) the Last Immunization Date, and (b) the effective date of a termination of the Research Program and the options, licenses and rights of ABX under this Agreement by CuraGen pursuant to Section 14.2.3 upon an uncured material breach of a material obligation by ABX, CuraGen shall not, and shall not grant any license (or sublicense, as the case may be), immunity or other right to any Person to, research, develop, make, have made, use, import, offer to sell or sell any Antibody Equivalent to an [**********]. for use in the Commercial Field from and after the date on which a XenoMouse Animal was first immunized with such Antigen; provided, however, that the foregoing limitation shall not apply to antigens as to which ABX has notified CuraGen that it does not have the right to grant CuraGen a commercial license under Article 7 unless ABX has agreed to pay CuraGen the amounts provided hereunder upon the development and commercialization of an antibody product targeting such antigen as if it were an ABX Product hereunder in return for the licenses from CuraGen for such product as if it were an ABX Product hereunder. For the avoidance of doubt, nothing in this Agreement shall preclude CuraGen from granting any license (or sublicense, as the case may be), immunity or other right to any Person to research, develop, make, have made, use, import, offer to sell or sell any Antibody Equivalent to an antigen contained in the CuraGen Databases [**********] for any purpose other than for use in the prevention, treatment, detection, diagnosis or monitoring of, or the determination of a predisposition for, or the selection of a particular patient(s) to receive a particular therapeutic treatment(s) for, [**********], unless and until a XenoMouse Animal has been immunized with such Antigen under this Agreement.

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

4.4.4 Except as otherwise expressly permitted under this Agreement, for a period ending on the earlier of (a) the Last Immunization Date, and (b) the effective date of a termination of the Research Program and the options, licenses and rights of CuraGen under this Agreement by ABX pursuant to Section 14.2.3 upon an uncured material breach of a material obligation by CuraGen, ABX shall not, and shall not grant any license (or sublicense, as the case may be), immunity or other right to any Person to, research, develop, make, have made, use, import, offer to sell or sell any Antibody Equivalent to an [**********] for use in the Commercial Field from and after the date on which a XenoMouse Animal was first immunized with such Antigen. For the avoidance of doubt, nothing in this Agreement shall preclude ABX from granting any license (or sublicense, as the case may be), immunity or other right to any Person to research, develop, make, have made, use, import, offer to sell or sell any Antibody Equivalent to an [**********] for any purpose, unless and until a XenoMouse Animal has been immunized with such Antigen under this Agreement.

4.4.5 Except as otherwise expressly permitted under this Agreement, during the term of this Agreement, ABX shall not, and shall not grant any license (or sublicense, as the case may be), immunity or other right to any Person to, research, develop, make, have made, use, import, offer to sell or sell any Antibody Equivalent to a CuraGen Optioned Antigen [**********], for so long as such antigen remains a CuraGen Exclusive Antigen, CuraGen Optioned Antigen, or a CuraGen Licensed Antigen [**********] for use in the Commercial Field.

4.4.6 Except as otherwise expressly permitted under this Agreement, during the term of this Agreement, CuraGen shall not, and shall not grant any license (or sublicense, as the case may be), immunity or other right to any Person to, research, develop, make, have made, use, import, offer to sell or sell any Antibody Equivalent to an ABX Optioned Antigen [**********], for so long as such antigen remains an ABX Optioned Antigen, or an ABX Licensed Antigen [**********] for use in the Commercial Field.

4.5 Research Program Licenses.

4.5.1 Subject to the terms and conditions of this Agreement, ABX hereby grants to CuraGen a nonexclusive license (or sublicense, as the case may be) under the Licensed ABX Intellectual Property, without right to grant Sublicenses, in the Research Field solely to conduct its obligations under the Research Program and to conduct additional preclinical research as permitted under Sections 4.2 and 4.6. Except as expressly set forth in this Agreement or otherwise expressly agreed in writing by the parties, CuraGen shall not use the Licensed ABX Intellectual Property or any ABX Technology and Information or any Research Program Technology and Information for any use other than those uses expressly licensed under this Section 4.5.1.

4.5.2 Subject to the terms and conditions of this Agreement, CuraGen hereby grants to ABX a nonexclusive license (or sublicense, as the case may be) under the

Licensed CuraGen Intellectual Property, without right to grant Sublicenses, in the Research Field solely to conduct its obligations under the Research Program and to conduct additional preclinical research as permitted under Section 4.2. Except as expressly set forth in this Agreement or otherwise expressly agreed in writing by the parties, ABX shall not use the Licensed CuraGen Intellectual Property or any CuraGen Technology and Information or any Research Program Technology and Information for any use other than those uses expressly licensed under this Section 4.5.2.

4.6 CuraGen Exclusive Antigens.

4.6.1 Designation of CuraGen Exclusive Antigens.

(a) As of the Revision Date, Exhibit E lists the antigens designated as CuraGen Exclusive Antigens. Subject to Section 4.6.3, CuraGen shall have no right to designate any additional CuraGen Exclusive Antigens pursuant to this Agreement.

(b) Each CuraGen Exclusive Antigen shall be a Research Antigen, but shall not be a part of the Pool (as defined in Section 5.2), (i) CuraGen shall have the exclusive right to select such Research Antigen as an Optioned Antigen or Licensed Antigen regardless of whether such Research Antigen is an Eligible Antigen; and (ii) ABX shall have no right to select such Research Antigen as an Optioned Antigen or Licensed Antigen.

4.6.2 Selection of CuraGen Exclusive Antigens as Optioned Antigens. CuraGen shall have the right to select any Research Antigen that is a CuraGen Exclusive Antigen as an Optioned Antigen regardless of whether such CuraGen Exclusive Antigen is an Eligible Antigen. CuraGen shall make any such selection by giving express written notice to ABX at any time during the first eight (8) years after the Effective Date. CuraGen's right to make such selections under this Section 4.6.2 shall be outside, and in addition to, the selection process for Optioned Antigens under Section 5.2.

4.6.3 If ABX notifies CuraGen in writing that ABX does not have the right to grant CuraGen a commercial license under Article 7 below for an antigen that CuraGen has designated as a CuraGen Exclusive Antigen, then CuraGen shall be allowed to replace such antigen with another antigen by amending Exhibit E.

4.7 Material Transfer.

4.7.1 Subject to the reimbursement of costs, each party will use commercially reasonable efforts to support the research activities of the other party under this Section 4.

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4.7.2 ABX will supply CuraGen with Control Antibody Material at commercial prices and subject to the Control Antibody Material Transfer Agreement dated April 4, 2003, (the "Control Antibody MTA").

4.7.3 With respect to Antibody Specific Materials and Information and Research Program Technology and Information regarding any Research Antigen, other than a CuraGen Exclusive Antigen or an Optioned Antigen or Licensed Antigen of a Party, transfer to a Third Party shall be done under the terms of an MTA under which both ABX and CuraGen are parties. The Parties agree they will execute any such MTA if it is in the form of Exhibit F (the "Three-way MTA"). Any change will require the approval of both Parties, not to be unreasonably withheld. The Parties will dedicate sufficient resources to review and comment on Three-way MTAs within ten business days and to execute such Three-way MTAs within one week of receipt of the execution version. A Party will be free to execute a Two-way MTA with respect to Antibody Specific Materials and Information and Research Program Technology and Information regarding any Research Antigen should the other Party fail to reasonably adhere to these timelines with respect to such Research Antigen.

4.7.4 With respect to Optioned Antigens and Licensed Antigens, this Second Restated Collaboration Agreement supercedes Transferred Cell Line Material Transfer Agreement dated April 4, 2003 (the "Transferred Cell Line MTA").

4.7.5 Notwithstanding the provisions of Section 12.6 or any other provisions hereof, CuraGen may transfer to any Third Party (a) CuraGen Optioned Antigens, and Antibody Specific Materials and Information and Research Program Technology and Information regarding any CuraGen Optioned Antigen, (b) any Antibodies to any such CuraGen Optioned Antigens and (c) any Control Antibody Material, provided, that, in each such instance, (a) CuraGen shall use a materials transfer and services agreement substantially in the form attached hereto as Exhibit G (the "Two-way MTA"), (b) such Third Party shall have first executed the Two-way MTA, (c) CuraGen shall diligently enforce, and shall provide prompt written notice to ABX of any breach of, any such Two-way MTA by such Third Party and (d) CuraGen shall have made commercially reasonable efforts to include ABX as a third party beneficiary of any such Two-way MTA as described more fully in Section 15 of the form of Two-way MTA. CuraGen shall provide to ABX copies of any reports provided to CuraGen by a Third Party utilizing the materials covered by a Two-way MTA, shall timely notify ABX of the proposed publication or required disclosure of Confidential Information by any Third Party and shall disclose to ABX any inventions arising under a Two-way MTA. CuraGen agrees to indemnify ABX and hold it harmless from any and all claims, liabilities, and/or losses which arise as a result of any Third Party's use of the materials transferred, and shall not permit a Third Party to undertake an assignment of its rights without the prior consent of ABX. In addition, transfer to a third party of any Control Antibody Materials shall be made only pursuant and subject to the Control Antibody MTA.

4.7.6 Notwithstanding the provisions of Section 12.6 or any other provisions hereof, ABX may transfer to any Third Party (a) ABX Optioned Antigens and

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Antibody Specific Materials and Information and Research Program Technology and Information regarding any ABX Optioned Antigen, and (b) any Antibodies to any such ABX Optioned Antigens, provided, that, in each such instance, (a) ABX shall use a materials transfer and services agreement substantially in the form of the Two-way MTA, (b) such Third Party shall have first executed a Two-way MTA, (c) ABX shall diligently enforce, and shall provide prompt written notice to CuraGen of any breach of, any such Two-way MTA by such Third Party and (d) ABX shall have made commercially reasonable efforts to include CuraGen as a third party beneficiary of any such Two-way MTA as described more fully in Section 15 of the form of MTA. ABX shall provide to CuraGen copies of any reports provided to ABX by a Third Party utilizing the materials covered by a Two-way MTA, shall timely notify CuraGen of the proposed publication or required disclosure of Confidential Information by any Third Party and shall disclose to CuraGen any inventions arising under a Two-way MTA. ABX agrees to indemnify CuraGen and hold it harmless from any and all claims, liabilities, and/or losses which arise as a result of any Third Party's use of the materials transferred, and shall not permit a Third Party to undertake an assignment of its rights without the prior consent of CuraGen.

4.7.7 A Party will be considered to have made commercially reasonable efforts to have the other party included as a third party beneficiary if such language is included in the initial draft Two-way MTA sent to a Third Party.

4.7.8 CuraGen may use and transfer to any Third Party (a) CuraGen Exclusive Antigens and CuraGen Licensed Antigens and Antibody Specific Materials and Information and Research Program Technology and Information regarding any CuraGen Exclusive Antigen or CuraGen Licensed Antigen, and (b) Antibodies (and Antibody Cells thereto) to CuraGen Exclusive Antigens and CuraGen Licensed Antigens, all without the approval of ABX, provided, that, in each such instance, (a) CuraGen shall use a materials transfer and services agreement substantially in the form of the Two-way MTA, (b) such Third Party shall have first executed the Two-way MTA, and (c) CuraGen shall diligently enforce, and shall provide prompt written notice to ABX of any breach of, any such Two-way MTA by such Third Party.

4.7.9 ABX may use and transfer to any Third Party (a) ABX Licensed Antigens and Antibody Specific Materials and Information and Research Program Technology and Information regarding any ABX Licensed Antigen, and (b) Antibodies (and Antibody Cells thereto) to ABX Licensed Antigens, all without the approval of CuraGen, provided, that, in each such instance, (a) ABX shall use a materials transfer and services agreement substantially in the form of the Two-way MTA, (b) such Third Party shall have first executed the Two-way MTA, (c) ABX shall diligently enforce, and shall provide prompt written notice to CuraGen of any breach of, any such Two-way MTA by such Third Party.

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5. **SELECTION OF OPTIONED ANTIGENS**

5.1 Eligible Antigens. Not less than ten (10) days prior to each regularly scheduled meeting of the JMC, each party shall provide the other party with a dossier for each Research Antigen that it proposes to be considered as a potential Eligible Antigen. Such dossier shall contain all information reasonably available to such party demonstrating whether such Research Antigen satisfies the criteria set forth in Exhibit B. At such regularly scheduled meeting of the JMC, the JMC shall consider whether such Research Antigen satisfies the criteria set forth in Exhibit B. A Research Antigen shall be an Eligible Antigen at such time as it is determined to satisfy the criteria set forth in Exhibit B, as determined by the JMC under Section 3.2 above or the arbitrator under Section 3.5 above. Notwithstanding anything to the contrary in this Agreement, if a party gives written notice to the other party at any time stating that such party does not have the right to grant the other party a commercial license under Article 7 below for an Eligible Antigen, then effective thirty (30) days after the receipt by the other party of such notice, such antigen shall cease to be an Eligible Antigen and both parties shall destroy all Antigen Specific Materials and Information pertaining to such Eligible Antigen.

5.2 Selection of Optioned Antigens. During the first eight (8) years after the Effective Date, each party shall have the right, in its sole discretion, to select Optioned Antigens from the list of Eligible Antigens at the time in question (the "Pool") as follows:

5.2.1 [**********].

5.2.2 [**********].

5.2.3 [**********].

5.2.4 [**********].

5.2.5 [**********].

5.2.6 [**********].

5.2.7 [**********].

5.2.8 [**********].

5.2.9 With respect to each Eligible Antigen which is selected by CuraGen as a CuraGen Optioned Antigen pursuant to this Section 5.2, ABX shall notify CuraGen in writing, within thirty (30) days of receipt of the notice of selection from CuraGen, if ABX does not have the right to grant CuraGen a commercial license under Article 7 below for such Eligible Antigen. Unless ABX timely notifies CuraGen in writing that ABX does not have the right to grant CuraGen a commercial license under Article 7 below for such antigen, ABX shall use its good faith efforts to nominate such Eligible Antigen under the XT/ABX Master Research and License Agreement and to obtain the right thereunder to obtain an XT/ABX

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Product License Agreement with respect to CuraGen Products to such Eligible Antigen. If ABX is successful in nominating such Eligible Antigen and in obtaining the right to obtain an XT/ABX Product License Agreement for CuraGen Products to such Eligible Antigen, the ABX shall give prompt written notice to CuraGen. Effective upon such notice, such Eligible Antigen shall be a CuraGen Optioned Antigen. If CuraGen desires that an Eligible Antigen selected by CuraGen as a CuraGen Optioned Antigen is also designated as a Lambda Optioned Antigen, then CuraGen shall so notify ABX in writing at the time CuraGen selects such Eligible Antigen, and subject to this Section 5.2.9, if such an Eligible Antigen becomes a CuraGen Optioned Antigen it shall also be a Lambda Optioned Antigen hereunder.

5.2.10 With respect to each Eligible Antigen which is selected by ABX as an ABX Optioned Antigen pursuant to this Section 5.2, CuraGen shall notify ABX in writing, within thirty (30) days of receipt of the notice of selection from ABX, if CuraGen does not have the right to grant ABX a commercial license under Article 7 below for such Eligible Antigen. Unless CuraGen timely notifies ABX in writing that CuraGen does not have the right to grant ABX a commercial license under Article 7 below for such antigen, such Eligible Antigen thereafter shall be an ABX Optioned Antigen upon the expiration of such thirty (30) day period.

5.2.11 At such time as an Eligible Antigen becomes an Optioned Antigen of one of the parties (the "Optioning Party"), the other party shall deliver to the Optioning Party all Antigen Specific Materials and Information in its possession pertaining to such Optioned Antigen and all related Confidential Information of such other party, and such Antigen Specific Materials and Information and Confidential Information shall thereafter be the Confidential Information of the Optioning Party.

5.2.12 Within sixty (60) days after completion of the Research Program Term, the Parties will meet to select any remaining Eligible Antigens in the Pool, with the Party possessing the next pick selecting first, and then alternating, until all Eligible Antigens are selected or both parties have passed on any remaining Eligible Antigens ("Unpicked Eligible Antigens"). Within thirty (30) days after completion of the Research Program Term, each Party will advise the other as to whether it has the right to grant the other Party a commercial license under Article 7 for each such remaining Eligible Antigen.

## 6. **RESEARCH FIELD LICENSES FOR OPTIONED ANTIBODIES**

6.1 Research Field Licenses.

6.1.1 Subject to the terms and conditions of this Agreement, ABX hereby grants to CuraGen a nonexclusive license (or sublicense, as the case may be) under the Licensed ABX Intellectual Property, without right to grant Sublicenses, (a) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibody Cells that contain, express or secrete Antibodies to the CuraGen Optioned Antigens solely for use in the Research Field, (b) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibodies that bind to the CuraGen Optioned Antigens and Genetic Material that encodes such

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Antibodies, solely for use in the Research Field for the research and development of potential CuraGen Products and (c) with respect to one or more Antibodies that bind to a CuraGen Optioned Antigen, if the parties have mutually agreed in writing to a Conjugate to be conjugated to such one or more Antibodies that bind to such CuraGen Optioned Antigen, to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or interest in) such Conjugates conjugated to such Antibodies that bind to such CuraGen Optioned Antigens, solely for use in the Research Field for the research and development of potential CuraGen Products. Except as expressly agreed in this Agreement or otherwise expressly agreed in writing by the parties, CuraGen shall not use the Licensed ABX Intellectual Property, the ABX Technology and Information or the Research Program Technology and Information for any use other than those uses expressly licensed under this Section 6.1.1.

6.1.2 Subject to the terms and conditions of this Agreement, CuraGen hereby grants to ABX a nonexclusive license (or sublicense, as the case may be) under the Licensed CuraGen Intellectual Property, without right to grant Sublicenses, (a) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibody Cells that contain, express or secrete Antibodies to the ABX Optioned Antigens solely for use in the Research Field, and (b) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibodies that bind to the ABX Optioned Antigens and Genetic Material that encodes such Antibodies, solely for use in the Research Field for the research and development of potential ABX Products. Except as expressly agreed in this Agreement or otherwise expressly agreed in writing by the parties, ABX shall not use the Licensed CuraGen Intellectual Property, the CuraGen Technology and Information or the Research Program Technology and Information for any use other than those uses expressly licensed under this Section 6.1.2.

6.1.3 The licenses (or sublicenses, as the case may be) granted under this Section 6.1 shall terminate with respect to each Optioned Antigen on the second anniversary of the date on which such antigen became an Optioned Antigen; provided,

however, if a party has timely exercised its option under Article 7 below to obtain a license (or sublicense, as the case may be) for Products to such Optioned Antigen, such license (or sublicense, as the case may be) shall remain in effect for Products to such Optioned Antigen for the term of the applicable license (or sublicense, as the case may be) under Article 7 below. If a party does not timely exercise its option under Article 7 below to obtain a license (or sublicense, as the case may be) for Products to an Optioned Antigen and the other party does not timely exercise its standby option under Section 7.1.2 or 7.2.2, as the case may be, for Products to such Optioned Antigen, such Antigen shall cease to be an Optioned Antigen but shall be restored as an Eligible Antigen.

Extended Research License

6.1.4 Subject to the terms and conditions of this Agreement, ABX hereby grants to CuraGen a nonexclusive license (or sublicense, as the case may be) under the Licensed ABX Intellectual Property and ABX's interest in Antibody Specific Materials and Information and Research Program Technology and Information relating to Research Antigens,

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without right to grant Sublicenses, (a) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibody Cells that contain, express or secrete Antibodies to the Extended Research Antigens solely for use in the Research Field, (b) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibodies that bind to the Extended Research Antigen and Genetic Material that encodes such Antibodies, solely for use in the Research Field for the research and development of potential CuraGen Products and (c) with respect to one or more Antibodies that bind to an Extended Research Antigen, if the parties have mutually agreed in writing to a Conjugate to be conjugated to such one or more Antibodies that bind to such Extended Research Antigen, to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or interest in) such Conjugates conjugated to such Antibodies that bind to such Extended Research Antigens, solely for use in the Research Field for the research and development of potential CuraGen Products. Except as expressly agreed in this Agreement or otherwise expressly agreed in writing by the parties, CuraGen shall not use the Licensed ABX Intellectual Property, the ABX Technology and Information or the Research Program Technology and Information for any use other than those uses expressly licensed under this Section 6.1.4.

6.1.5 Subject to the terms and conditions of this Agreement, CuraGen hereby grants to ABX a nonexclusive license (or sublicense, as the case may be) under the Licensed CuraGen Intellectual Property and CuraGen's interest in Antibody Specific Materials and Information and Research Program Technology and Information relating to Research Antigens, without right to grant Sublicenses, (a) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibody Cells that contain, express or secrete Antibodies to the Extended Research Antigens solely for use in the Research Field, and (b) to research, develop, make and use (but not to transfer, sell, lease, offer to sell or lease, or otherwise transfer title to or an interest in) Antibodies that bind to the Extended Research Antigens and Genetic Material that encodes such Antibodies, solely for use in the Research Field for the research and development of potential ABX Products. Except as expressly agreed in this Agreement or otherwise expressly agreed in writing by the parties, ABX shall not use the Licensed CuraGen Intellectual Property, the CuraGen Technology and Information or the Research Program Technology and Information for any use other than those uses expressly licensed under this Section 6.1.5.

6.1.6 The licenses (or sublicenses, as the case may be) granted under Sections 6.1.4 and 6.1.5 shall terminate with respect to each Extended Research Antigen on the [********] anniversary of the date on which such antigen became an Extended Research Antigen; provided, however, if a party has timely exercised its option under Article 7 below to obtain a license (or sublicense, as the case may be) for Products to such Extended Research Antigen, such license (or sublicense, as the case may be) shall remain in effect for Products to such Extended Research Antigen for the term of the applicable license (or sublicense, as the case may be) under Article 7 below. If neither Party timely exercise its option under Article 7 below to obtain a license (or sublicense, as the case may be) for Products to an Extended Research Antigen, such Extended Research Antigen shall cease to be an Antigen and all Antigen Specific Materials and Information shall be destroyed by both Parties.

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6.2 Research and Preclinical Development.

6.2.1 As between ABX and CuraGen, ABX shall have the sole right and responsibility, at its sole expense, to conduct research and preclinical development of Antibodies that bind to the ABX Optioned Antigens and Genetic Material that encodes such Antibodies for use in the research and development of potential ABX Products in the Research Field.

6.2.2 As between ABX and CuraGen, CuraGen shall have the sole right and responsibility, at its sole expense, to conduct research and preclinical development of Antibodies that bind to the CuraGen Optioned Antigens and Genetic Material that encodes such Antibodies for use in the research and development of potential CuraGen Products in the Research Field.

6.2.3 Each party shall conduct such research and preclinical development in accordance with high scientific and professional standards, and in compliance in all material respects with the requirements of applicable laws and regulations.

7. **COMMERCIAL FIELD LICENSES FOR LICENSED ANTIGENS**

7.1 CuraGen Products.

7.1.1 Options for CuraGen Optioned Antigens. Subject to the terms and conditions of this Agreement, ABX hereby grants to CuraGen exclusive, non-transferable options to obtain a license (or sublicense, as the case may be) under Section 7.1.3 below for CuraGen Products to each CuraGen Optioned Antigen, with each such option being exercisable in accordance with the provisions of this Section 7.1.1 until the earliest of (a) the second anniversary of the date on which such antigen became a CuraGen Optioned Antigen; (b) such time as ABX no longer would be obligated to grant a license (or sublicense, as the case may be) under Section 7.1.3 below for such CuraGen Products, and (c) the twelfth anniversary of the Effective Date.

(a) If CuraGen desires to exercise its option for CuraGen Products to such CuraGen Optioned Antigen, CuraGen shall so notify ABX in writing. At the time CuraGen exercises its option to obtain a license (or sublicense, as the case may be) under Section 7.1.3 for any CuraGen Optioned Antigen that is a Lambda Optioned Antigen, if CuraGen wishes such license to include rights for CuraGen Products for use in the Therapeutic Field directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody, then CuraGen shall designate such CuraGen Licensed Antigen as a Lambda Licensed Antigen.

(b) Effective upon such notice, such CuraGen Optioned Antigen shall be a CuraGen Licensed Antigen, and the exclusive license (or sublicense, as the case may be) grant under Section 7.1.3 below for CuraGen Products to such CuraGen Licensed Antigen shall then be effective.

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7.1.2 Standby Options for ABX Optioned Antigens. If ABX fails to timely exercise its option under Section 7.2.1 below for any ABX Optioned Antigen, within ten (10) days after the written request by CuraGen, ABX shall provide CuraGen with copies of, or access to, all data and information of ABX regarding such ABX Optioned Antigen and Antibodies thereto. Except as otherwise expressly provided in this Agreement or the parties otherwise expressly agree in writing, CuraGen shall have the right to use such data and information for the sole purpose of evaluating its interest in exercising its option under this Section 7.1.2 for such ABX Optioned Antigen. Subject to the terms and conditions of this Agreement, ABX hereby grants to CuraGen exclusive, non-transferable options to obtain a license (or sublicense, as the case may be) under Section 7.1.3 below for CuraGen Products to each ABX Optioned Antigen for which ABX fails to timely exercise its option under Section 7.2.1 below, with each such option being exercisable in accordance with the provisions of this Section 7.1.2 commencing on the expiration of ABX's option under Section 7.2.1 below until the earliest of (a) the date six (6) months thereafter, (b) such time as ABX no longer would be obligated to grant a license (or sublicense, as the case may be) under Section 7.1.3 below for such CuraGen Products, and (c) the twelfth anniversary of the Effective Date.

(a) If CuraGen desires to exercise its option for CuraGen products to such ABX Optioned Antigen, CuraGen shall so notify ABX in writing. At the time CuraGen exercises its option to obtain a license (or sublicense, as the case may be) under Section 7.1.3 for any ABX Optioned Antigen that is a Lambda Optioned Antigen, if CuraGen wishes such license to include the rights for CuraGen Products for use in the Therapeutic Field directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody, then CuraGen shall designate such CuraGen Licensed Antigen as a Lambda Licensed Antigen.

(b) Within thirty (30) days after receipt of such notice, ABX shall notify CuraGen in writing if ABX does not have the right to grant CuraGen the license (or sublicense, as the case may be) under Section 7.1.3 below for CuraGen products to such ABX Optioned Antigen. If ABX does not have such a right, ABX shall have no obligation to grant CuraGen the license (or sublicense, as the case may be) under Section 7.1.3 below for CuraGen Products to such ABX Optioned Antigen.

(c) Unless ABX timely notifies CuraGen in writing that it does not have such a right, effective upon the expiration of such thirty (30) day period, such antigen shall be a CuraGen Licensed Antigen, and the exclusive license (or sublicense, as the case may be) grant under Section 7.1.3 below for CuraGen Products to such CuraGen Licensed Antigen shall be effective upon the expiration of such thirty (30) day period.

7.1.3 Commercial Field License. Subject to the terms and conditions of this Agreement, ABX hereby grants to CuraGen an exclusive worldwide license (or sublicense,

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as the case may be) (with the right to grant Sublicenses) under Licensed ABX Intellectual Property to research, develop, make, have made, use, import, offer to sell and sell CuraGen Products in the Commercial Field. CuraGen shall provide ABX with a copy of each Sublicense promptly after executing the same; provided, however, that CuraGen shall have the right to redact any confidential financial terms or confidential research, development or commercialization plans from the copy provided to ABX. Any Sublicense shall be subject and subordinate to the terms and conditions of this Agreement, and CuraGen shall remain responsible for all payments due to ABX hereunder.

7.2 ABX Products.

7.2.1 Options for ABX Optioned Antigens. Subject to the terms and conditions of this Agreement, CuraGen hereby grants to ABX exclusive, non-transferable options to obtain a license (or sublicense, as the case may be) under Section 7.2.3 below for ABX Products to each ABX Optioned Antigen, with each such option being exercisable in accordance with the provisions of this Section until the earliest of (a) the second anniversary of the date on which such antigen became a ABX Optioned Antigen, (b) such time as CuraGen no longer would be obligated to grant a license (or sublicense, as the case may be) under Section 7.2.3 below for such ABX Products, and (c) the twelfth anniversary of the Effective Date.

(a) If ABX desires to exercise its option for ABX Products to such ABX Optioned Antigen, ABX shall so notify CuraGen in writing.

(b) Effective upon such notice, such antigen shall be an ABX Licensed Antigen, and the exclusive license (or sublicense, as the case may be) grant under Section 7.2.3 below for ABX Products to such ABX Licensed Antigen shall be effective.

7.2.2 Standby Options for CuraGen Optioned Antigens. If CuraGen fails to timely exercise its option under Section 7.1.1 above for any CuraGen Optioned Antigen that is not a CuraGen Exclusive Antigen, within ten (10) days after the written request by ABX, CuraGen shall provide ABX with copies of, or access to, all data and information of CuraGen regarding such CuraGen Optioned Antigen and Antibodies thereto. Except as otherwise expressly provided in this Agreement or the parties otherwise expressly agree in writing, ABX shall have the right to use such data and information for the sole purpose of evaluating its interest in exercising its option under this Section 7.2.2 for such CuraGen Optioned Antigen. Subject to the terms and conditions of this Agreement, CuraGen hereby grants to ABX non-exclusive, non-transferable options to obtain a license (or sublicense, as the case may be) under Section 7.2.3 below for ABX Products to each CuraGen Optioned Antigen that is not a CuraGen Exclusive Antigen for which CuraGen fails to timely exercise its option under Section 7.1.1 above, with each such option being exercisable in accordance with the provisions of this Section 7.2.2 commencing on the expiration of CuraGen's option under Section 7.1.1 above until the earliest of (a) the date six (6) months thereafter, (b) such time as CuraGen no longer would be obligated to grant a license (or sublicense, as the case may be) under Section 7.2.3 below for such ABX Products, and (c) the twelfth anniversary of the Effective Date.

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(a) If ABX desires to exercise its option for ABX products to such CuraGen Optioned Antigen, ABX shall so notify CuraGen in writing.

(b) Within thirty (30) days after receipt of such notice, CuraGen shall notify ABX in writing if CuraGen does not have the right to grant ABX the license (or sublicense, as the case may be) under Section 7.2.3 below for ABX products to such CuraGen Optioned Antigen. If CuraGen does not have such a right, CuraGen shall have no obligation to grant ABX the license (or sublicense, as the case may be) under Section 7.2.3 below for ABX Products to such CuraGen Optioned Antigen.

(c) Unless CuraGen timely notifies ABX in writing that it does not have such a right, effective upon the expiration of such thirty (30) day period, such antigen shall be an ABX Licensed Antigen, and the exclusive license (or sublicense, as the case may be) grant under Section 7.2.3 below for ABX Products to such ABX Licensed Antigen shall be effective upon the expiration of such thirty (30) day period.

7.2.3 Commercial Field License. Subject to the terms and conditions of this Agreement, CuraGen hereby grants to ABX an exclusive worldwide license (or sublicense, as the case may be) (with the right to grant Sublicenses) under Licensed CuraGen Intellectual Property to research, develop, make, have made, use, import, offer to sell and sell ABX Products in the Commercial Field. ABX shall provide CuraGen with a copy of each Sublicense promptly after executing the same; provided, however, that ABX shall have the right to redact any confidential financial terms or confidential research, development or commercialization plans from the copy provided to CuraGen. Any Sublicense shall be subject and subordinate to the terms and conditions of this Agreement, and ABX shall remain responsible for all payments due to CuraGen hereunder.

7.3 No Other Rights. No rights other than those expressly set forth in this Agreement are granted to either party hereunder, and no additional rights shall be granted to either party by implication, estoppel or otherwise.

7.4 Further Restrictions.

7.4.1 Notwithstanding anything to the contrary in this Agreement, neither a party, nor its Sublicensees hereunder nor their respective Affiliates shall submit an IND for, or otherwise commence human clinical testing of, any Product to any Antigen unless and until such party has obtained a commercial license under this Article 7 for Products to such Antigen.

7.4.2 For purposes of this Agreement, if (a) ABX has otherwise granted exclusive rights to antibodies to an antigen to a Third Party without breach of the-exclusivity provisions of Section 4.4, or (b) ABX has an active research and development program ongoing

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for antibodies to an antigen (that was not provided by CuraGen hereunder) that is independent of its efforts hereunder and does not and did not involve access to, or otherwise make use of, the CuraGen Databases, then ABX shall not have the right to grant CuraGen a license (or sublicense, as the case may be) hereunder to use such antigen in the Research Field or a license (or sublicense, as the case may be) regarding the related CuraGen Products in the Commercial Field.

7.4.3 For purposes of this Agreement, if CuraGen has granted exclusive rights to antibodies to an antigen to a Third Party without breach of the exclusivity provisions of Section 4.4, then CuraGen shall not have the right to grant ABX a license (or sublicense, as the case may be) hereunder to use such antigen in the Research Field or a license (or sublicense, as the case may be) regarding the related ABX Products in the Commercial Field.

8. **PAYMENTS**

8.1 Research Funding.

8.1.1 CuraGen has paid to ABX aggregate research funding of [**********(**********)] to date. CuraGen shall pay to ABX additional research funding of [**********].

8.1.2 CuraGen shall pay ABX [**********(**********)] for each of the first five immunizations of Xenomouse Animals with Research Antigens after the Revision Date, payable [**********].

8.2 Certain Fees.

8.2.1 Each party shall pay to the other party a non-refundable, non-creditable technology access fee of [**********(**********)] for each Eligible Antigen it selects under Article 5 above that becomes an Optioned Antigen within ten (10) days after such Eligible Antigen becomes an Optioned Antigen. CuraGen additionally shall pay to ABX a non-refundable, non-creditable technology access fee of [**********(**********)] for each Eligible Antigen that becomes a Lambda Optioned Antigen hereunder, within ten (10) days after such Eligible Antigen becomes a Lambda Optioned Antigen.

8.2.2 Each party shall pay to the other party a non-refundable, non-creditable exercise fee of [**********(**********)] for each Optioned Antigen for which it exercised an option to obtain a commercial license under Article 7 above within ten (10) days after such Optioned Antigen becomes a Licensed Antigen. CuraGen additionally shall pay to ABX a non-refundable, non-creditable exercise fee of [**********(**********)] for each Lambda Optioned Antigen for which CuraGen exercised an option to obtain a commercial license under Article 7 above within ten (10) days after such Lambda Optioned Antigen becomes a Lambda Licensed Antigen.

8.2.3 With respect to each Licensed Antigen for which a party exercised an option to obtain a commercial license under Article 7 above, but for which it was not required

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to pay an option fee under Section 8.2.1 above because it was not selected as an Optioned Antigen by such party under Article 5 above, such party shall pay to the other party, in lieu of the amounts set forth in Sections 8.2.1 and 8.2.2, a non-refundable, non-creditable exercise fee of [**********(**********)] for such Licensed Antigen within ten (10) days after such antigen becomes a Licensed Antigen. CuraGen additionally shall pay to ABX a non-refundable, non-creditable exercise fee of [**********(**********)] for each CuraGen Licensed Antigen for which CuraGen exercised an option to obtain a commercial license and designated such CuraGen Licensed Antigen as a Lambda Licensed Antigen under Article 7 above, but for which it was not required to pay an option fee under Section 8.2.1 above because it was not selected as an Optioned Antigen by CuraGen under Article 5 above, and within ten (10) days after such antigen becomes a Lambda Licensed Antigen.

8.3 Milestone Payments.

8.3.1 In the Therapeutic Field.

(a) Subject to Section 8.3.1(d), and, in the case of Sublicenses, to Section 8.4.3(c) below, within thirty (30) days following the achievement of each of the following milestones with respect to each CuraGen Product for use in the Therapeutic Field (other than a CuraGen Product directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody), on a CuraGen Product-by-CuraGen Product basis, CuraGen shall give written notice to ABX thereof and shall (i) pay to ABX the corresponding milestone payments described below and (ii) pay to ABX the milestone payments due any Third Party under an ABX In-License arising from use of a Conjugate as part of such CuraGen Product (as permitted under this Agreement), as applicable. Subject, in the case of Sublicenses, to Section 8.4.3(a) below, within thirty (30) days following the achievement of each of the following milestones with respect to each ABX Product for use in the Therapeutic Field, on an ABX Product-by-ABX Product basis, ABX shall give written notice to CuraGen thereof and shall pay to CuraGen the corresponding milestone payments described below.

[*******] [**********]

[*******] [**********]

[*******] [**********]

[*******] [**********]

[*******] [**********]

(b) Subject to Section 8.3.1(d), and, in the case of Sublicenses, to Section 8.4.3(c) below, within thirty (30) days following the achievement of each of the following milestones with respect to each CuraGen Product for use in the Therapeutic Field directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody, on a CuraGen Product-by-CuraGen Product basis, CuraGen shall give

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written notice to ABX thereof and shall (i) pay to ABX the corresponding milestone payments described below, and (ii) pay to ABX the milestone payments due any Third Party under an ABX In-License arising from use of a Conjugate as part of such CuraGen Product (as permitted under this Agreement), as applicable.

[*******] [**********]

[*******] [**********]

[*******] [**********]

[*******] [**********]

[*******] [**********]

(c) If, at the time when any milestone payment listed in this Section 8.3.1, with respect to a Product for use in the Therapeutic Field, is due from a party, such party has not paid all other milestone payments (if any) previously listed in this Section 8.3.1 with respect to such Product, then at such time such party shall pay all such unpaid milestone payments (if any) previously listed in this Section 8.3.1 with respect to such Product. If, at the time of the First Commercial Sale by a party, its Affiliate or their respective Sublicensee of a Product for use in the Therapeutic Field, such party has not paid all milestone payments (if any) listed in this Section 8.3.1 with respect to such Product, then at such time such party shall pay all such unpaid milestone payments (if any) listed in this Section 8.3.1 with respect to such Product. If at any time a party abandons the development of a Product after the payment to the other party of one or more milestone payments under this Section 8.3.1 and subsequently commences or continues the development of another Product directed to the same Licensed Antigen as the abandoned Product, then such party shall have no obligation to pay to the other party a milestone payment upon the occurrence of a milestone event for the subsequent Product for which such party previously has paid to the other party a milestone payment under this Section 8.3.1 for the abandoned Product.

(d) Notwithstanding Sections 8.3.1(a) and (b), CuraGen shall only be required to make the higher payments set forth in Section 8.3.1(b) with respect to a CuraGen Product comprising a Lambda Antibody or Genetic Material that encodes a Lambda Antibody if and to the extent that the additional amounts are owed or paid by ABX to the licensors under the licenses specified in Section 1.2 of Amendment No. 2. If such payments to such licensors are not owed or paid by ABX, CuraGen shall only be required to make the payments set forth in Section 8.1.3(a).

8.3.2 In the Diagnostic Field.

(a) Subject to Section 8.3.2(d), and, in the case of Sublicenses, to Section 8.4.3(d) below, within thirty (30) days following the achievement of each of the following milestones with respect to each CuraGen Product for use in the Diagnostic Field (other than a

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CuraGen Product directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody), on a CuraGen Product-by-CuraGen Product basis, CuraGen shall give written notice to ABX thereof and shall (i) pay to ABX the corresponding milestone payments described below, and (ii) pay to ABX the milestone payments due any Third Party under an ABX In-License arising from use of a Conjugate as part of such CuraGen Product (as permitted under this Agreement), as applicable. Subject, in the case of Sublicenses, to Section 8.4.3(b) below, within thirty (30) days following the achievement of each of the following milestones with respect to each ABX Product for use in the Diagnostic Field, on an ABX Product-by-ABX Product basis, ABX shall give written notice to CuraGen thereof and shall pay to CuraGen the corresponding milestone payments described below.

[*******] [**********]

[*******] [**********]

[*******] [**********]

(b) Subject to Section 8.3.2(d), and, in the case of Sublicenses, to Section 8.4.3(d) below, within thirty (30) days following the achievement of each of the following milestones with respect to each CuraGen Product for use in the Diagnostic Field directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody, on a CuraGen Product-by-CuraGen Product basis, CuraGen shall give written notice to ABX thereof and shall (i) pay to ABX the corresponding milestone payments described below, and (ii) pay to ABX the milestone payments due any Third Party under an ABX In-License arising from use of a Conjugate as part of such CuraGen Product (as permitted under this Agreement), as applicable.

[*******] [**********]

[*******] [**********]

[*******] [**********]

(c) If, at the time when any milestone payment listed in this Section 8.3.2, with respect to a Product for use in the Diagnostic Field, is due from a party, such party has not paid all other milestone payments (if any) previously listed in this Section 8.3.2 with respect to such Product, then at such time such party shall pay all such unpaid milestone payments (if any) previously listed in this Section 8.3.2 with respect to such Product. If, at the time of the First Commercial Sale by a party, its Affiliate or permitted (sub)licensee of a Product for use in the Diagnostic Field, such party has not paid all milestone payments (if any) listed in this Section 8.3.2 with respect to such Product, then at such time such party shall pay all such unpaid milestone payments (if any) listed in this Section 8.3.2 with respect to such Product. If at any time a party abandons the development of a Product after the payment to the other party of one or more milestone payments under this Section 8.3.2 and subsequently commences or continues the development of another Product directed to the same Licensed Antigen as the abandoned

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Product, then such party shall have no obligation to pay to the other party a milestone payment upon the occurrence of a milestone event for the subsequent Product for which such party previously has paid to the other party a milestone payment under this Section 8.3.2 for the abandoned Product.

(d) Notwithstanding Sections 8.3.2(a) and (b), CuraGen shall only be required to make the higher payments set forth in Section 8.3.2(b) with respect to a CuraGen Product comprising a Lambda Antibody or Genetic Material that encodes a Lambda Antibody if and to the extent that the additional amounts are owed or paid by ABX to the licensors under the licenses specified in Section 1.2 of Amendment No. 2. If such payments to such licensors are not owed or paid by ABX, CuraGen shall only be required to make the payments set forth in Section 8.1.3(a).

8.4 Royalties.

8.4.1 Notice of Royalty Commencement Date. Within thirty (30) days following the Royalty Commencement Date for each CuraGen Product in each country, CuraGen shall give written notice to ABX thereof. Within thirty (30) days following the Royalty Commencement Date for each ABX Product in each country, ABX shall give written notice to CuraGen thereof.

8.4.2 Royalties on Net Sales.

(a) Subject, in the case of Sublicenses, to Sections 8.4.3(a) and (b) below, where a CuraGen Patent Claim covers

an ABX Product, ABX shall pay to CuraGen royalties equal to (a) [**********], and (b) [**********]. [**********].

(b) Subject, in the case of Sublicenses, to Sections 8.4.3(a) and (b) below, where no CuraGen Patent Claim covers an ABX Product, ABX shall pay to CuraGen royalties equal to [**********] (i) [**********] and (ii) [**********]; provided, however, [**********] (a) [**********] or (b) [**********].

(c) Subject, in the case of Sublicenses, to Sections 8.4.3(c) and (d) below, where an ABX Patent Claim covers a CuraGen Product, CuraGen shall pay to ABX royalties equal to (a) [**********], (b) [**********] and (c) [**********]. [**********].

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(d) Subject, in the case of Sublicenses, to Sections 8.4.3(a) and (b) below, where no ABX Patent Claim covers a CuraGen Product, CuraGen shall pay to ABX royalties equal to (x) [**********] or (y) [**********].

8.4.3 Royalties on Sublicense Income.

(a) In the event that ABX grants a Sublicense with respect to any ABX Product for use in the Therapeutic Field, ABX shall notify CuraGen in writing, within fifteen (15) days of the grant of such Sublicense, whether ABX elects to pay to CuraGen (i) the milestone payments set forth in Section 8.3.1 upon the occurrence with respect to such ABX Product of the milestone events set forth therein and the royalties set forth in Section 8.4.2 based on Net Sales of such ABX Product or (ii) the following payments and royalties equal to the following percentage of Sublicense Income received by ABX and its Affiliates in connection with such Sublicense for each ABX Product for use in the Therapeutic Field:

[*******] [**********]

[*******] [**********]

[*******] [**********]

Notwithstanding the foregoing, the royalties owing by ABX under this Section 8.4.3(a) in any calendar quarter, with respect to Net Sales by such Sublicensee and its Affiliates of any ABX Product for use in the Therapeutic Field, shall not be less than [********(***)] of Net Sales by such Sublicensee and its Affiliates of such ABX Product in such calendar quarter. Once made, the election of the basis of payment hereunder may not be changed, and ABX shall pay the amounts determined in accordance with its election.

(b) In the event that ABX grants a Sublicense with respect to any ABX Product for use in the Diagnostic Field, ABX shall notify CuraGen in writing, within fifteen (15) days of the grant of such Sublicense, whether ABX elects to pay to CuraGen (i) the milestone payments set forth in Section 8.3.2 upon the occurrence with respect to such ABX Product of the milestone events set forth therein and the royalties set forth in Section 8.4.2 based on Net Sales of such ABX Product or (ii) the following payments and royalties equal to the following percentage of Sublicense Income received by ABX and its Affiliates in connection with such Sublicense for each ABX Product for use in the Diagnostic Field:

[*******] [**********]

[*******] [**********]

[*******] [**********]

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Notwithstanding the foregoing, the royalties owing by ABX under this Section 8.4.3(b) in any calendar quarter, with respect to Net Sales by such Sublicensee and its Affiliates of any ABX Product for use in the Diagnostic Field, shall not be less than [********(***)] of Net Sales by such Sublicensee and its Affiliates of such ABX Product in such calendar quarter. Once made, the election of the basis of payment hereunder may not be changed, and ABX shall pay the amounts determined in accordance with its election.

(c) In the event that CuraGen grants a Sublicense with respect to any CuraGen Product for use in the Therapeutic Field, CuraGen shall notify ABX in writing, within fifteen (15) days of the grant of such Sublicense, whether CuraGen elects to pay to ABX (i) the milestone payments set forth in Section 8.3.1 upon the occurrence with respect to such CuraGen Product of the milestone events set forth therein and the royalties set forth in Section 8.4.2 based on Net Sales of such CuraGen Product or (ii) the following payments and royalties equal to the following percentage of Sublicense Income received by CuraGen and its Affiliates in connection with the Sublicense for each CuraGen Product for use in the Therapeutic Field:

[*******] [**********]

[*******] [**********]

[*******] [**********]

Notwithstanding the foregoing, the royalties owing by CuraGen under this Section 8.4.3(c) in any calendar quarter, with respect to Net Sales by such Sublicensee and its Affiliates of any CuraGen Product for use in the Therapeutic Field, shall not be less than the aggregate of (i) [********(***)] of Net Sales by such Sublicensee and its Affiliates of such CuraGen Product in such calendar quarter, plus (ii) [**********] Once made, the election of the basis of payment hereunder may not be changed, and CuraGen shall pay the amounts determined in accordance with its election.

(d) In the event that CuraGen grants a Sublicense with respect to any CuraGen Product for use in the Diagnostic Field, CuraGen shall notify ABX in writing, within fifteen (15) days of the grant of such Sublicense, whether CuraGen elects to pay to ABX (i) the milestone payments set forth in Section 8.3.2 upon the occurrence with respect to such CuraGen Product of the milestone events set forth therein and the royalties set forth in Section 8.4.2 based on Net Sales of such CuraGen Product or (ii) the following payments and royalties equal to the following percentage of Sublicense Income received by CuraGen and its Affiliates in connection with the Sublicense for such CuraGen Product for use in the Diagnostic Field:

[*******] [**********]

[*******] [**********]

[*******] [**********]

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Notwithstanding the foregoing, the royalties owing by CuraGen under this Section 8.4.3(d) in any calendar quarter, with respect to Net Sales by such Sublicensee and its Affiliates of any CuraGen Product for use in the Diagnostic Field, shall not be less than the aggregate of (i) [********(***)] of Net Sales by such Sublicensee and its Affiliates of such CuraGen Product in such calendar quarter, plus (ii) [**********]. Once made, the election of the basis of payment hereunder may not be changed, and CuraGen shall pay the amounts determined in accordance with its election.

(e) Length of Royalty Obligations. Each party's obligations to pay royalties (including without limitation percentages of Sublicense Income) with respect to each Product in each country shall commence on the Royalty Commencement Date for such Product in such country, and shall continue for such Product in such country until (i) [**********], or (ii) [**********].

8.4.4 Discounting. If a party, its Sublicensees or their respective Affiliates sells a Product to a Third Party who also purchases other products or services from such party, its Sublicensees or their respective Affiliates, and such party, its Sublicensees or their respective Affiliates discounts the purchase price of such Product to a greater degree than it generally discounts the price of its other products or services to such customer, then in such case the Net Sales for the sale of such Product to such Third Party shall equal the arm's length price that Third Parties would generally pay for the Product alone when not purchasing any other product or service from such party, its Sublicensee or their respective Affiliates. For purposes of this provision "discounting" includes establishing the list price at a lower-than-normal level.

9. **ACCOUNTING AND RECORDS**

9.1 Royalty Reports and Payments. Commencing with the first calendar quarter in which the Royalty Commencement Date for a Product occurs, CuraGen in the case of CuraGen Products, and ABX in the case of ABX Products (the "Payor") shall make written reports to the other party (the "Payee") within sixty (60) days after the end of each calendar quarter, stating in each such report (a) the number, description, and aggregate Net Sales of such Product sold during the calendar quarter, (b) the calculation of the royalties and other amounts payable under Article 8 above, and (c) otherwise satisfying the royalty reporting requirements under each ABX In-License applicable to such Product (in the case of CuraGen Products). Concurrently with the making of such reports, the Payor shall pay to the Payee all royalties payable under Article 8 above. With respect to (1) each CuraGen Product directed to a CuraGen Licensed Antigen and comprising a Lambda Antibody or Genetic Material that encodes such Lambda Antibody, and (2) each CuraGen Product comprising a Conjugate, prior to the date any Third Party royalty is due for such CuraGen Products pursuant to Section 8.4, ABX shall provide to CuraGen information from the applicable ABX In-License(s) sufficient for CuraGen to calculate the royalty then owing and to satisfy the royalty reporting obligations under such ABX In-License(s).

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9.2 Records; Inspection. The Payor shall keep (and cause its Affiliates, Sublicensees and Sublicensees' Affiliates to keep) complete, true and accurate books of account and records for the purpose of determining the royalties payable to the Payee under this Agreement. Such books and records shall be kept at the principal place of business of the Payor, its Sublicensee or their respective Affiliates, as the case may be, for at least three years following the end of the calendar quarter to which they pertain. Such records of the Payor and its Affiliates shall be open for inspection during such three-year period by independent accountants chosen by the Payee, and subject to the approval of the Payor, which approval shall not be unreasonably withheld or delayed, (which accountants, in the case of ABX, may also represent XT) for the purpose of verifying the royalty statements. The Payor shall require each of its Sublicensees to maintain similar books and records and to open such records for inspection during the same three-year period by a representative of the Payor reasonably satisfactory to the Payee on behalf of, and as required by, the Payee for the purpose of verifying the royalty statements. All such inspections may be made no more than once each calendar year at reasonable times mutually agreed by the Payor and the Payee. The independent accountants chosen by the Payee will be obliged to execute a reasonable confidentiality agreement prior to commencing any such inspection. Inspections conducted under this Section 9.2 shall be at the expense of the Payee, unless a variation or error producing an increase exceeding five percent (5%) of the amount stated for any period is established in the course of any such inspection, whereupon all costs relating to the audit of such period will be paid by the Payor.

9.3 Payment Method. All payments by the Payor to the Payee hereunder shall be in United States Dollars in immediately available funds and shall be made by wire transfer from a United States bank located in the United States to such bank account as designated by the Payee to the Payor.

9.4 Currency Conversion. If any currency conversion shall be required in connection with the calculation of royalties hereunder, such conversion shall be made using the selling exchange rate for conversion of the foreign currency into United States Dollars, quoted for current transactions reported under the heading "Currency Trading — Exchange Rates" in The Wall Street Journal in the United States for the last business day of the calendar quarter to which such payment pertains. If The Wall Street Journal ceases to be published, then the rate of exchange to be used shall be that reported in such other business publication of national circulation in the United States as the parties reasonably agree.

9.5 Late Payments. Any payments due from the Payor that are not paid on the date such payments are due under this Agreement shall bear interest at the lesser of (i) the Prime Rate as reported under the heading "Money Rates" in The Wall Street Journal in the United States on the date such payment is due, plus an additional two percent (2%), or (ii) the maximum rate permitted by applicable law, in each case calculated on the number of days such payment is delinquent. This Section 9.5 shall in no way limit any other remedies available to any party. If The Wall Street Journal ceases to be published, then the prime rate to be used shall be that reported in such other business publication of national circulation in the United States as the parties reasonably agree.

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9.6 Withholding Taxes. Each party shall be entitled to deduct from the royalties owing to the other party hereunder the amount of any withholding taxes, value-added taxes or other taxes, levies or charges with respect to such amounts, other than United States taxes, payable by such party, or any taxes required to be withheld by such party, to the extent such party pays to the appropriate governmental authority on behalf of the other party such taxes, levies or charges. The withholding party shall use reasonable efforts to minimize any such taxes, levies or charges required to be withheld on behalf of the other party by such party. The withholding party promptly shall deliver to the other party proof of payment of all such taxes, levies and other charges, together with copies of all communications from or with such governmental authority with respect thereto, and shall reasonably assist the other party in obtaining a refund thereof (to the extent permitted under applicable law) or to obtain a foreign tax credit therefor.

10. **DILIGENCE**

10.1 Diligence Obligation of CuraGen.

10.1.1 CuraGen shall use commercially reasonable efforts to actively research, develop and obtain regulatory approvals as expeditiously as reasonably practicable to market in major markets throughout the world at least one CuraGen Product to each CuraGen Licensed Antigen, and following such approval to maximize Net Sales of such CuraGen Product.

10.1.2 Without limiting Section 10.1.1, CuraGen, its Sublicensees or their respective Affiliates shall file an IND with the FDA for at least one CuraGen Product to each CuraGen Licensed Antigen within three (3) years after the effective date of the applicable XT/ABX Product License Agreement. After the filing of an IND for at least one CuraGen Product to a CuraGen Licensed Antigen, CuraGen, its Sublicensees or their respective Affiliates, shall have an active IND and actively and diligently conduct clinical trials in pursuit of regulatory approval for at least one such CuraGen Product in the United States until at least one such CuraGen Product may be sold commercially in the United States.

10.1.3 During the term of this Agreement and for a period of five (5) years thereafter, CuraGen shall keep complete and accurate records of its activities conducted under this Agreement regarding the commercialization of CuraGen Products and the results thereof. Within thirty (30) days after the end of each semi-annual period during the term of this Agreement, CuraGen shall prepare and provide ABX with a reasonably detailed written report of such activities and results, through such date.

10.2 Diligence Obligation of ABX.

10.2.1 ABX shall use commercially reasonable efforts to actively research, develop and obtain regulatory approvals as expeditiously as reasonably practicable to market in major markets throughout the world at least one ABX Product to each ABX Licensed Antigen, and following such approval to maximize Net Sales of such ABX Product.

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10.2.2 Without limiting Section 10.2.1, ABX, its Sublicensees or their respective Affiliates shall file an IND with the FDA for at least one ABX Product to each ABX Licensed Antigen within three (3) years after the effective date of the applicable XT/ABX Product License Agreement. After the filing of an IND for at least one ABX Product to a ABX Licensed Antigen, ABX, its Sublicensees or their respective Affiliates, shall have an active IND and actively and diligently conduct clinical trials in pursuit of regulatory approval for at least one such ABX Product in the United States until at least one such ABX Product may be sold commercially in the United States.

10.2.3 During the term of this Agreement and for a period of five (5) years thereafter, ABX shall keep complete and accurate records of its activities conducted under this Agreement regarding the commercialization of ABX Products and the results thereof. Within thirty (30) days after the end of each semi-annual period during the term of this Agreement, ABX shall prepare and provide CuraGen with a reasonably detailed written report of such activities and results, through such date.

10.3 Standards of Performance. The development and commercialization of a Product hereunder by a party, its Sublicensees and their respective Affiliates shall be performed in accordance with high scientific and professional standards, and in compliance in all material respects with the requirements of applicable laws and regulations. ABX, its Sublicensees and their respective Affiliates shall be solely responsible for providing the personnel, materials, equipment, and other resources for the development and commercialization of ABX Products hereunder. CuraGen, its Sublicensees and their respective Affiliates shall be solely responsible for providing the personnel, materials, equipment, and other resources for the development and commercialization of CuraGen Products hereunder.

10.4 Gene Therapy Applications. Each party's intention as of the Effective Date is to commercialize a Product hereunder for an application other than Gene Therapy before commercializing a Product hereunder for a Gene Therapy application. It is understood, however, that either party may or may not also intend to develop and sell Products for use in Gene Therapy, and that such Gene Therapy application may ultimately be commercialized before a Product is commercialized hereunder for a non-Gene Therapy application.

## 11. **CONFIDENTIALITY**

11.1 Confidential Information. During the term of this Agreement and for a period of five (5) years following the expiration or earlier termination hereof, each party shall maintain in confidence the Confidential Information of the other party, and shall not disclose, use or grant the use of the Confidential Information of the other party except on a need-to-know basis to such party's directors, officers employees, consultants and collaborators, and to the Third Party licensors of the Licensed Intellectual Property, to the extent such disclosure is reasonably necessary or required in connection with such party's activities as expressly authorized by this Agreement. To the extent that disclosure by a party to any Person is authorized by this Agreement, prior to disclosure, a party shall obtain written agreement of such

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Person to hold in confidence and not disclose, use or grant the use of the Confidential Information of the other party except as expressly permitted under this Agreement. Each party shall notify the other promptly upon discovery of any unauthorized use or disclosure of the other party's Confidential Information. Upon the expiration or earlier termination of this Agreement, each party shall return to the other party all tangible items regarding the Confidential Information of the other party and all copies thereof, except for Confidential Information pertaining to any Licensed Antigen and related Products for which, and for so long as, such party retains a license (or sublicense, as the case may be) hereunder; provided, however, that each party shall have the right to retain one (1) copy for its legal files for the sole purpose of determining its obligations hereunder.

11.2 Terms of Agreement. Neither party shall disclose any terms or conditions of this Agreement to any Third Party without the prior consent of the other party; provided, however, that either party may disclose the terms or conditions of this Agreement, (a) on a need-to-know basis to its legal and financial advisors to the extent such disclosure is reasonably necessary in connection with such party's activities as expressly permitted by this Agreement or for the conduct of its business; (b) to the Third Party licensors of the Licensed Intellectual Property; (c) to a Third Party in connection with (i) an equity investment or other form of financing in such party by a Third Party; (ii) a merger, consolidation or similar transaction entered into by such party; or (iii) the sale of all or substantially all of the assets of such party; and (d) as may, in the reasonable opinion of such party's counsel, be required by applicable law, regulation or court order, including without limitation, a disclosure in connection with such party's filing of a registration statement or other filing with the United States Securities and Exchange Commission (in which event such party will first consult with the other party, to the extent reasonably practicable, with respect to such disclosure). Notwithstanding the foregoing, (i) the parties will jointly issue a press release in mutually agreed form promptly after execution hereof and (ii) prior to execution of this Agreement CuraGen and ABX shall agree upon the substance of information that can be used to describe the terms of this transaction, and CuraGen and ABX may disclose such information, as modified by mutual agreement from time to time, without the other party's consent.

12. **TECHNOLOGY, INFORMATION AND INTELLECTUAL PROPERTY**

12.1 Ownership.

12.1.1 ABX shall solely own all right, title and interest in the ABX Technology and Information and in all patent rights and other intellectual property rights therein. CuraGen shall not (and shall not attempt or purport to) file or prosecute any patent application in any country which claims or purports to claim the ABX Technology and Information, unless the parties otherwise expressly agree in writing. ABX shall solely own all right, title and interest in the Excluded ABX Technology and in all patent rights and other intellectual property rights therein. CuraGen shall not (and shall not attempt or purport to) file or prosecute any patent application in any country which claims or purports to claim the Excluded ABX Technology.

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12.1.2 CuraGen shall solely own all right, title and interest in the CuraGen Technology and Information and in all patent rights and other intellectual property rights therein. ABX shall not (and shall not attempt or purport to) file or prosecute any patent application in any country which claims or purports to claim the CuraGen Technology and Information, unless the parties otherwise expressly agree in writing. CuraGen shall solely own all right, title and interest in the Excluded CuraGen Technology and in all patent rights and other intellectual property rights therein. ABX shall not (and shall not attempt or purport to) file or prosecute any patent application in any country which claims or purports to claim the Excluded CuraGen Technology.

12.1.3 ABX shall solely own all right, title and interest in Research Program Technology and Information conceived, reduced to practice or otherwise derived solely by Persons on behalf of ABX, together with all patent rights and other intellectual property rights therein and, subject to the provisions of this Agreement, shall have the right to freely exploit, transfer, license, or encumber its rights thereto. CuraGen shall solely own all right, title and interest in Research Program Technology and Information conceived, reduced to practice or otherwise derived solely by Persons on behalf of CuraGen, together with all patent rights and other intellectual property rights therein and, subject to the provisions of this Agreement, shall have the right to freely exploit, transfer, license, or encumber its rights thereto. The parties jointly shall own all right, title and interest in Research Program Technology and Information conceived, reduced to practice or otherwise derived jointly by Persons on behalf of ABX and by Persons on behalf of CuraGen, together with all patent rights and other intellectual property rights therein. Each party shall have the right, subject to the provisions of this Agreement, to freely exploit, transfer, license or encumber its rights in any jointly-owned Research Program Technology and Information (and all patent rights and other intellectual property rights therein) without the consent of, or payment or accounting to, the other party.

12.1.4 The transfer of physical possession of any Technology and Information owned by, and the physical possession and use of any Technology and Information by, CuraGen or ABX, as the case may be, shall not be (nor be construed as) a sale, lease, offer to sell or lease, or other transfer of title of such Technology and Information to CuraGen or ABX, as the case may be.

12.1.5 During the term of this Agreement, neither party shall (and neither party shall attempt or purport to) assign, sell, have sold, lease, offer to sell or lease, otherwise transfer title to, or otherwise distribute or license, sublicense or otherwise commercialize or exploit, any Research Program Technology and Information, except as otherwise set forth herein or the parties otherwise expressly agree in writing.

12.2 Assignment and Disclosure. Each party shall cause all employees and others conducting work on its behalf under this Agreement to promptly disclose to the other party all Technology and Information in which the other party has an ownership interest, and to assign any and all right, title and interest in all Technology and Information and all patent rights and other intellectual property rights therein in accordance with this Agreement. Each party

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shall maintain records in sufficient detail and in good scientific manner appropriate for patent purposes to properly reflect all work done and results achieved in conducting its work hereunder, and shall respond to reasonable requests of the other party for information regarding Technology and Information in which the other party has an ownership interest.

12.3 Research Program Patent Rights.

12.3.1 Prosecution and Maintenance.

(a) Subject to the provisions of Section 12.3.1(e) and Section 12.3.1(g) below, ABX shall have the right (but not the obligation), at its sole expense, to prepare, file, prosecute and maintain the ABX Patent Rights. ABX will use reasonable efforts to file Antibody composition of matter claims (i) with respect to any ABX Patent Rights arising before the Revision Date, within 6 months of the Revision Date and (ii) with respect to any ABX Patent Rights arising after the Revision Date, within 6 months of characterization of Antibody supernatants resulting from immunizations with Research Antigens. If ABX unreasonably fails to file such claims in such time period, CuraGen may, by written notice to ABX, assume control of the preparation, filing, prosecution and maintenance of the ABX Patent Rights, to the extent and only to the extent, that such ABX Patent Rights claim such Antibodies as a composition of matter, and ABX shall reimburse CuraGen on demand for all expenses of the preparation, filing, prosecution and maintenance of such ABX Patent Rights.

(b) CuraGen shall have the right (but not the obligation), at its sole expense, to prepare, file, prosecute and maintain the CuraGen Patent Rights**.** CuraGen shall have the right to use Antigen Specific Materials and Information and Research Program Technology and Information in preparing, prosecuting, maintaining and defending CuraGen Patent Rights; provided, however, that CuraGen shall not claim any ABX Technology.

(c) Subject to the provisions of Section 12.3(a) above and Section 12.3.1(e) and (f) below, (i) ABX shall have the right (but not the obligation), at its sole expense, to prepare, file, prosecute and maintain the Research Program Patent Rights owned solely by ABX; (ii) CuraGen shall have the right (but not the obligation), at its sole expense, to prepare, file, prosecute and maintain the Research Program Patent Rights owned solely by CuraGen; and (iii) CuraGen shall have the right (but not the obligation) to prepare, file, prosecute and maintain the Research Program Patent Rights owned jointly by the parties, and ABX shall reimburse CuraGen on demand for one-half the reasonable expenses thereof.

(d) Any method of use data arising from the conduct of in-vitro assays or use of in-vivo models in the Research Program will be filed by the responsible party simultaneously in the patent applications claiming Antibodies and Research Antigens, regardless of the category in which such patent applications fall. The parties will coordinate such filings and will use reasonable efforts to file such applications within three months of generating the data.

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(e) Upon the effective date of a research license under Article 6 to a CuraGen Optioned Antigen, and for so long as such license or a commercial license under Article 7 for such Antigen remains in effect, (i) CuraGen shall have the right (but not the obligation) to assume control of the preparation, filing, prosecution and maintenance of the Research Program Patent Rights that specifically and solely claim such CuraGen Licensed or Optioned Antigen or the use thereof; (ii) CuraGen shall have the right (but not the obligation) to assume control of the preparation, filing, prosecution and maintenance of the ABX Patent Rights that specifically and solely claim the use of such CuraGen Antigen or Antibodies to such CuraGen Licensed or Optioned Antigen or the use thereof; (iii) CuraGen shall reimburse ABX on demand for all previously unreimbursed expenses of the preparation, filing, prosecution and maintenance of such ABX Patent Rights and Research Program Patent Rights; and (iv) CuraGen shall be solely responsible for the expenses of the preparation, filing, prosecution and maintenance of such ABX Patent Rights and Research Program Patent Rights thereafter. In the event there are any Research Program Patent Rights or ABX Patent Rights with such claims and other claims, ABX shall file such divisional or other applications, to the extent legally permitted, as may be necessary to separate such claims into a separate application, which CuraGen shall then have the right to control as aforesaid. If the claims cannot be so separated ABX will take no action with respect to any such claim that would materially narrow the scope thereof without CuraGen's express written consent, which consent shall not be unreasonably withheld or delayed. If CuraGen assumes control of any patent application pursuant to this Section and determines to abandon such application, CuraGen shall give written notice of such intention to ABX at least thirty (30) days before taking such action, and ABX shall have the right, by written notice to CuraGen, to assume the prosecution and maintenance thereof.

(f) Upon the effective date of a research license under Article 6 to an ABX Optioned Antigen, and for so long as such license or a commercial license under Article 7 for such Antigen remains in effect, (i) ABX shall have the right (but not the obligation) to assume control of the preparation, filing, prosecution and maintenance of the Research Program Patent Rights that specifically and solely claim such ABX Licensed or Optioned Antigen or the use thereof; (ii) ABX shall have the right (but not the obligation) to assume control of the preparation, filing, prosecution and maintenance of the CuraGen Patent Rights that specifically and solely claim antibodies to such ABX Licensed or Optioned Antigen or the use thereof; (iii) ABX shall reimburse CuraGen on demand for all previously unreimbursed expenses of the preparation, filing, prosecution and maintenance of such Research Program Patent Rights and CuraGen Patent Rights; and (iv) ABX shall be solely responsible for the expenses of the preparation, filing, prosecution and maintenance of such Research Program Patent Rights and CuraGen Patent Rights thereafter. In the event there are any Research Program Patent Rights or CuraGen Patent Rights with such claims and other claims, CuraGen shall file such divisional or other applications, to the extent legally permitted, as may be necessary to separate such claims into a separate application, which ABX shall then have the right to control as aforesaid. If the claims cannot be so separated CuraGen will take no action with respect to any such claim that would materially narrow the scope thereof without ABX's express written consent, which consent shall not be unreasonably withheld or delayed. If ABX assumes control of any patent application pursuant to this Section and determines to abandon such application, ABX shall give

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written notice of such intention to CuraGen at least thirty (30) days before taking such action, and CuraGen shall have the right, by written notice to ABX, to assume the prosecution and maintenance thereof.

(g) CuraGen shall have the right (but not the obligation) to control the preparation, filing, prosecution and maintenance of any Research Program Patent Rights and ABX Patent Rights that specifically and solely claim any CuraGen Exclusive Antigen or the use thereof or Antibodies that Specifically Bind to such CuraGen Exclusive Antigen or the use thereof. In the event there are any Research Program Patent Rights or ABX Patent Rights with such claims and other claims, ABX shall file such divisional or other applications, to the extent legally permitted, as may be necessary to separate such claims into a separate application, which CuraGen shall then have the right to control as aforesaid. If the claims cannot be so separated ABX will take no action with respect to any such claim that would materially narrow the scope thereof without CuraGen's express written consent, which consent shall not be unreasonably withheld or delayed.

(h) With respect to each patent application and patent within the Licensed Intellectual Property Rights or Research Program Patent Rights that specifically and solely claims an Optioned Antigen, a Licensed Antigen, an Antibody that Specifically Binds to an Optioned Antigen, an Antibody to a Licensed Antigen or the use thereof and with respect to each other patent and patent application within the Research Program Patent Rights owned jointly by the parties, the controlling party shall (i) provide the non-controlling party with any patent application filed by the controlling party prior to filing in order to provide the non-controlling party with an opportunity to comment thereon, and consider in good faith reasonable comments by the non-controlling party thereon; (ii) provide the non-controlling party with any patent application filed by the controlling party promptly after such filing; and (iii) provide the non-controlling party promptly with copies of all substantive communications received from or filed in patent office(s) with respect to such filings and consider in good faith reasonable comments by the non-controlling party thereon; and (iv) use commercially reasonable efforts to obtain the broadest reasonable claims**.**

(i) The non-controlling party shall assist the controlling party, upon the controlling party's request, and to the extent commercially reasonable, in preparing, filing or maintaining the patent applications and patents within the Research Program Patent Rights and Licensed Intellectual Property Rights.

12.3.2 Enforcement.

(a) Subject to the provisions of Section 12.3.2(e) below, ABX shall have the right (but not the obligation), at its sole expense, to control the enforcement of the ABX Patent Rights; provided, however, that CuraGen shall have the right (but not the obligation), at its sole expense, to control the enforcement of those ABX Patent Rights (if any) for which CuraGen assumes control of the preparation, filing, prosecution and maintenance under Section 12.3.1(e) and (g) above.

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(b) Subject to the provisions of Section 12.3.2(e) below, CuraGen shall have the right (but not the obligation), at its sole expense, to control the enforcement of the CuraGen Patent Rights; provided, however, that ABX shall have the right (but not the obligation), at its sole expense, to control the enforcement of those CuraGen Patent Rights (if any) for which ABX assumes control of the preparation, filing, prosecution and maintenance under Section 12.3.1(f) above.

(c) Subject to the provisions of Section 12.3.2(e) below, the controlling party identified under Section 12.3.1 above shall have the first right (but not the obligation), at its sole expense, to enforce the Research Program Patent Rights.

(d) With respect to each patent within the Licensed Intellectual Property Rights or Research Program Patent Rights that specifically and solely claims a Licensed Antigen, an Antibody to a Licensed Antigen or the use thereof, the controlling party shall keep the non-controlling party informed and consider in good faith the reasonable comments of the non-controlling party, both prior to and during any such enforcement. The non-controlling party shall assist the controlling party, upon request and at the controlling party's sole expense, and to the extent commercially reasonable, in taking any action to enforce such Licensed Intellectual Property Rights or Research Program Patent Rights to the extent the non-controlling party has the right to do so.

(e) If the controlling party fails to abate an infringement of any patent within the Licensed Intellectual Property Rights or Research Program Patent Rights that specifically and solely claims a Licensed Antigen, an Antibody to a Licensed Antigen or the use thereof, or to file an action to abate such infringement, within ninety (90) days after a written request from the non-controlling party to do so, or if the controlling party discontinues the prosecution of any such action after filing patent, the non-controlling party at its expense may, in its discretion, undertake such action as it determines appropriate to enforce the Research Program Patent Rights. In such case, the controlling party shall assist the non-controlling party, upon request and at the non-controlling party's sole expense, and to the extent commercially reasonable, in taking any action to enforce such patent within the Licensed Intellectual Property Rights or Research Program Patent Rights to the extent the controlling party has the right to do so.

(f) All monies recovered upon the final judgment or settlement of any such action regarding the Licensed Intellectual Property Rights or Research Program Patent Rights that specifically and solely claims a Licensed Antigen, an Antibody to a Licensed Antigen or the use thereof shall be used (i) first, to reimburse the costs and expenses (including reasonable attorneys' fees and costs) of the controlling party and the non-controlling party, and (ii) the remainder, [**********].

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12.4 Patent Marking. Each party shall mark, and shall cause its Sublicensees and their respective Affiliates to mark all Products, sold pursuant to this Agreement by such party, its Sublicensees and their respective Affiliates in accordance with the requirements of applicable laws and regulations in the country or countries of manufacture and sale thereof.

12.5 Limitation. Notwithstanding any other provision in this Article 12, (a) ABX shall not be obligated to prepare, file, prosecute, and maintain patents and patent applications, or to bring or pursue enforcement proceedings or defend declaratory judgment actions regarding the Licensed ABX Intellectual Property if, and to the extent that, ABX is not entitled to do so under one or more ABX In-Licenses, and (b) any rights conveyed under this Article 12 permitting CuraGen to prepare, file, prosecute and maintain certain patents and patent applications, or to bring and pursue enforcement proceedings, or defend declaratory judgment actions, regarding the Licensed ABX Intellectual Property, shall be subject to all applicable ABX In-Licenses, and are conveyed only to the extent permitted under such agreements.

12.6 Use and Transfer Restrictions. Each party shall use the Technology and Information owned by the other party solely for purposes of conducting its obligations or exercising its rights under this Agreement, at its facilities, under commercially and scientifically reasonable containment conditions, and not for any other commercial, business or other use or purpose, without the prior express written consent of the other party. Except as otherwise provided in this Agreement, (a) a party shall not transfer or provide access to the Technology and Information owned by the other party to any Affiliate or Third Party; (b) a party shall not transfer or transport the Technology and Information owned by the other party from its facilities to any other location; (c) a party shall limit access to the Technology and Information owned by the other party to those of its employees working on its premises, to the extent such access is reasonably necessary to conduct its obligations or exercise its rights under this Agreement; and (d) a party shall not (and shall not attempt or purport to) assign, sell, have sold, lease, offer to sell or lease, otherwise transfer title to, or otherwise distribute or license, sublicense or otherwise commercialize or exploit, any Technology and Information owned by the other party or any interest therein.

12.7 Grant Backs.

12.7.1 It is the intent of the parties that this Agreement shall not restrict ABX's freedom to practice and commercialize the Licensed ABX Intellectual Property, the XenoMouse Animals and the ABX Technology and Information, except as expressly set forth herein. CuraGen hereby grants to ABX a royalty-free, perpetual, irrevocable, exclusive, worldwide license (with the right to grant sublicenses) under CuraGen's rights in the Research Program Patent Rights and Research Program Know-How to research, develop, make, have made, use, offer for sale, sell and import Human Antibody Equivalents and products comprising Human Antibody Equivalents (other than CuraGen Products) for all uses. CuraGen hereby grants to ABX a royalty-free, perpetual, irrevocable, nonexclusive worldwide license (with the right to grant sublicenses) under CuraGen's rights in the Research Program Patent Rights and Research Program Know-How to research, develop, make and use Antibody Equivalents (other

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than Human Antibody Equivalents) solely in connection with the research, development, making, having made, using, offering for sale, selling and importing of Human Antibody Equivalents and products comprising Human Antibody Equivalents (other than CuraGen Products) for all uses. CuraGen hereby grants to ABX a royalty-free, perpetual, irrevocable, nonexclusive, worldwide license (with the right to grant sublicenses) under those certain one or more CuraGen Patent Rights, which have a common claim of priority and relate to the same antigen and in which the claims within such CuraGen Patent Rights are supported by information or data derived from the use of the ABX Technology and Information and/or Research Program Technology and Information, solely in connection with the research, development, making, having made, using, offering for sale, selling and importing of Human Antibody Equivalents and products comprising Human Antibody Equivalents (other than CuraGen Products) for all uses.

12.7.2 It is the intent of the parties that this Agreement shall not restrict CuraGen's freedom to practice and commercialize the Licensed CuraGen Intellectual Property, the CuraGen Databases, and the CuraGen Technology and Information, except as expressly set forth herein. ABX hereby grants to CuraGen a royalty-free, perpetual, irrevocable, exclusive, worldwide license (with the right to grant sublicenses) under ABX's rights in the Research Program Patent Rights and Research Program Know-How to research, develop, make, have made, use, offer for sale, sell and import Antibody Equivalents (other than Human Antibody Equivalents) and compositions other than Antibody Equivalents, and products (other than ABX Products) comprising Antibody Equivalents (other than Human Antibody Equivalents) and compositions other than Antibody Equivalents, for all uses; provided, however, that ABX reserves, for itself and its sublicensees, the right under ABX's rights in the Research Program Patent Rights and Research Program Know-How to exercise its license rights granted under Section 12.7.1 above. ABX hereby grants to CuraGen a royalty-free, perpetual, irrevocable, nonexclusive, worldwide license (with the right to grant sublicenses) under those certain one or more ABX Patent Rights, which have a common claim of priority and relate to the same antigen and in which the claims within such ABX Patent Rights are supported by information or data derived from the use of the CuraGen Technology and Information and/or Research Program Technology and Information, solely in connection with the research, development, making, having made, using, offering for sale, selling and importing of Antibody Equivalents (other than Human Antibody Equivalents) and compositions other than Antibody Equivalents, and products (other than ABX Products) comprising Antibody Equivalents (other than Human Antibody Equivalents) and compositions other than Antibody Equivalents, for all uses.

12.8 Imaging Peptides. Nothing in this Agreement shall preclude CuraGen from making, using, offering for sale, selling or importing Imaging Peptides for purposes of in vivo diagnostic imaging use.

13. **INDEMNIFICATION**

13.1 ABX. ABX shall indemnify and hold harmless CuraGen, and its directors, officers, employees and agents, from and against all losses, liabilities, damages and expenses, including reasonable attorneys' fees and costs (collectively, "Liabilities"), resulting from any

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claims, demands, actions or other proceedings by any Third Party arising from (a) the material breach of any representation, warranty or covenant by ABX under this Agreement, (b) any use, handling or storage by ABX, its Sublicensees (other than CuraGen) and their respective Affiliates of the CuraGen Technology and Information or the Research Program Technology and Information, (c) the manufacture, use, sale, handling or storage by ABX, its Sublicensees (other than CuraGen) and their respective Affiliates of ABX Products (without regard to culpable conduct), or (d) any use by ABX, its Sublicensees (other than CuraGen) and their respective Affiliates of the Confidential Information of CuraGen; provided, however, that ABX shall not be obligated to indemnify or hold harmless CuraGen for such Liabilities to the extent that such Liabilities arise from the gross negligence or willful misconduct of CuraGen.

13.2 CuraGen. CuraGen shall indemnify and hold harmless ABX, and its directors, officers, employees and agents, from and against all Liabilities resulting from any claims, demands, actions or other proceedings by any Third Party arising from (a) the material breach of any representation, warranty or covenant by CuraGen under this Agreement, (b) any use, handling or storage by CuraGen, its Sublicensees (other than ABX) and their respective Affiliates of the ABX Technology and Information or the Research Program Technology and Information, (c) the manufacture, use, sale, handling or storage by CuraGen, its Sublicensees (other than ABX) and their respective Affiliates of CuraGen Products (without regard to culpable conduct), or (d) any use by CuraGen, its Sublicensees (other than ABX) and their respective Affiliates of the Confidential Information of ABX; provided, however, that CuraGen shall not be obligated to indemnify or hold harmless ABX for such Liabilities to the extent that such Liabilities arise from the gross negligence or willful misconduct of ABX.

13.3 Procedure. If a party (an "Indemnitee") intends to claim indemnification under this Article 13, it shall promptly notify the indemnifying party (the "Indemnitor") in writing of any claim, demand, action or other proceeding for which the Indemnitee intends to claim such indemnification, and the Indemnitor shall have the right to participate in, and, to the extent the Indemnitor so desires, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an Indemnitee shall have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnitor, if representation of such Indemnitee by the counsel retained by the Indemnitor would be inappropriate due to actual or potential differing interests between such Indemnitee and any other party represented by such counsel in such proceeding. The indemnity agreement in this Article 13 shall not apply to amounts paid in settlement of any claim, demand, action or other proceeding if such settlement is effected without the consent of the Indemnitor, which consent shall not be withheld or delayed unreasonably. The failure to deliver written notice to the Indemnitor within a reasonable time after the commencement of any such action, if prejudicial to its ability to defend such action, shall relieve such Indemnitor of any liability to the Indemnitee under this Article 13, but the omission so to deliver written notice to the Indemnitor shall not relieve it of any liability that it may have to any party claiming indemnification otherwise than under this Article 13. The party claiming indemnification under this Article 13, its employees and agents, shall reasonably cooperate with the Indemnitor and its legal representatives in the investigation of any claim, demand, action or other proceeding covered by this indemnification.

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13.4 Insurance. Each party shall maintain insurance, including product liability insurance, with respect to the research, development, manufacture and sale of Products hereunder by such party, its Sublicensees and their respective Affiliates in such amount as such party customarily maintains with respect to the research, development, manufacture and sale of its other products. Each party shall maintain such insurance for so long as such party, its Sublicensees and their respective Affiliates continues to research, develop, manufacture or sell any Products hereunder, and thereafter for so long as such party customarily maintains insurance covering the research, development, manufacture and sale of its other products.

14. **TERM AND TERMINATION**

14.1 Term. The term of this Agreement shall commence on the Effective Date and, unless earlier terminated, shall continue in full force and effect until the expiration of the parties' respective royalty obligations pursuant to this Agreement.

14.2 Termination.

14.2.1 If CuraGen breaches its obligations under Section 8.2, 8.3 or 8.4 above, or materially breaches its obligations under Section 10.1 above, with respect to any Antigen or to CuraGen Products to any CuraGen Licensed Antigen, and such breach shall have continued for ten (10) days, in the case of breaches under Section 8.2, 8.3, or 8.4, or for thirty (30) days, in the case of material breaches under Section 10.1, after written notice of such breach was provided to CuraGen by ABX, ABX shall have the right at its option to terminate the licenses (or sublicenses, as the case may be) under this Agreement with respect to such Antigen or to CuraGen Products to such CuraGen Licensed Antigen (as applicable) effective at the end of such ten (10) day or thirty (30) day period, as the case may be, without otherwise affecting the other licenses (or sublicenses, as the case may be) granted under this Agreement or the other remaining provisions of this Agreement. In the event of such termination by ABX, the Antigen which was the subject of the termination shall be subject to ABX's standby option under Section 7.2.2, CuraGen's obligation to provide data and information under Section 7.2.2 shall apply to all data and information in existence at the time of the termination, the six-month period in which to exercise such option shall commence on the date of termination, and no payment shall be due under Section 8.2.3 upon the exercise by ABX of such option.

14.2.2 If ABX breaches its obligations under Section 8.2, 8.3 or 8.4 above, or materially breaches its obligations under Section 10.2 above, with respect to any Antigen or to ABX Products to any ABX Licensed Antigen, and such breach shall have continued for ten (10) days, in the case of breaches under Section 8.2, 8.3, or 8.4, or for thirty (30) days, in the case of material breaches under Section 10.2, after written notice of such breach was provided to ABX by CuraGen, CuraGen shall have the right at its option to terminate the licenses (or sublicenses, as the case may be) under this Agreement with respect to such Antigen or to ABX Products to such ABX Licensed Antigen (as applicable) effective at the end of such ten (10) day or thirty (30) day period, as the case may be, without otherwise affecting the other licenses (or sublicenses, as the case may be) granted under this Agreement or the other remaining

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provisions of this Agreement. In the event of such termination by CuraGen, the Antigen which was the subject of the termination shall be subject to CuraGen's standby option under Section 7.1.2, ABX's obligation to provide data and information under Section 7.1.2 shall apply to all data and information in existence at the time of the termination, the six-month period in which to exercise such option shall commence on the date of termination, and no payment shall be due under Section 8.2.3 upon the exercise by CuraGen of such option.

14.2.3 If a party shall have materially breached any of its material obligations hereunder (other than under Sections 8.2, 8.3, 8.4, 10.1 and 10.2 above), and such breach shall have continued for thirty (30) days after written notice of such breach was provided to the breaching party by the nonbreaching party, the nonbreaching party shall have the right (at its option), effective at the end of such thirty (30) day period, to terminate the Research Program and all options, licenses, and rights to obtain additional options and licenses granted to the breaching party under this Agreement; provided, however, that any commercial licenses previously granted to the breaching party under Article 7 above (and any related continuing research licenses to the breaching party under Section 6.1 above), all licenses granted to the breaching party under Section 12.7 above, and all options, licenses, and rights to obtain additional options and licenses granted to the nonbreaching party under this Agreement shall survive any such termination by the nonbreaching party under this Section 14.2.3.

14.3 Effect of Expiration or Termination.

14.3.1 Expiration or termination of this Agreement shall be without prejudice to any rights which shall have accrued to the benefit of a party prior to such expiration or termination. Without limiting the foregoing, the license rights granted under Section 4.2.7, Section 4.2.2 and the provisions of Sections 4.4.4 and 8.1 and Articles 9, 11, 12, 13, 14 and 15 shall survive any expiration or termination of this Agreement.

14.3.2 Following the expiration under Section 8.4.3(e) of CuraGen's obligation to pay royalties to ABX hereunder with respect to a CuraGen Product (provided that CuraGen's option, license or other rights with respect to such CuraGen Product have not been previously terminated), CuraGen shall have a fully-paid up, non-exclusive license (or sublicense, as the case may be) (with the right to grant sublicenses) under the ABX Know-How and Research Program Know-How solely to make, have made, use, offer for sale, sell and import such CuraGen Product for use in the Commercial Field. Following the expiration under Section 8.4.3(e) of ABX's obligation to pay royalties to CuraGen hereunder with respect to an ABX Product (provided that ABX's option, license or other rights with respect to such ABX Product have not been previously terminated), ABX shall have a fully-paid up, non-exclusive license (or sublicense, as the case may be) (with the right to grant sublicenses) under the CuraGen Know-How and Research Program Know-How solely to make, have made, use, offer for sale, sell and import such ABX Product for use in the Commercial Field.

14.3.3 Upon termination of this Agreement, or upon termination of the licenses (or sublicenses, as the case may be) hereunder for any CuraGen Product, CuraGen, its

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Sublicensees and their respective Affiliates shall have the right to sell or otherwise dispose (consistent with all applicable laws and regulations and subject to Articles 8 and 9 above) of the stock of any CuraGen Product then on hand. Upon termination of this Agreement, or upon termination of the licenses (or sublicenses, as the case may be) hereunder for any ABX Product, ABX, its Sublicensees and their respective Affiliates shall have the right to sell or otherwise dispose (consistent with all applicable laws and regulations and subject to Articles 8 and 9 above) of the stock of any ABX Product then on hand.

14.3.4 Upon termination of this Agreement by ABX, or upon termination by ABX of the licenses (or sublicenses, as the case may be) hereunder for any CuraGen Product, any Sublicense granted by CuraGen hereunder shall survive, provided that upon request by ABX, such Sublicensee promptly agrees in writing that such Sublicensee shall be bound by the terms of such Sublicense for the benefit of ABX and ABX shall have all of the rights of CuraGen under such Sublicense, but ABX shall not be bound by any obligation of CuraGen thereunder except to the extent it is already bound to an equivalent obligation hereunder. Upon termination of this Agreement by CuraGen, or upon termination by CuraGen of the licenses (or sublicenses, as the case may be) hereunder for any ABX Product, any Sublicense granted by ABX hereunder shall survive, provided that upon request by CuraGen, such Sublicensee promptly agrees in writing that such Sublicensee shall be bound by the terms of such Sublicense for the benefit of CuraGen and CuraGen shall have all of the rights of ABX under such Sublicense, but CuraGen shall not be bound by any obligation of ABX thereunder except to the extent it is already bound to an equivalent obligation hereunder.

14.3.5 Except as otherwise expressly agreed in writing by the parties, promptly upon the expiration of the Extended Research License Term, each party shall destroy all remaining Research Program Technology and Information and Antigen Specific Materials and Information; in each case except to the extent such party retains an option or license (or sublicense, as the case may be) thereto hereunder; that survives such expiration or termination.

14.3.6 Except as otherwise expressly agreed in writing by the parties, promptly upon the expiration or earlier termination of this Agreement, (a) CuraGen shall destroy or return to ABX (as ABX shall direct) all remaining ABX Technology and Information; (b) ABX shall destroy or return to CuraGen (as CuraGen shall direct) all remaining CuraGen Technology and Information; and (c) each party shall destroy all remaining Research Program Technology and Information and Antigen Specific Materials and Information; in each case except to the extent such party retains a license (or sublicense, as the case may be) thereto hereunder; that survives such expiration or termination.

14.3.7 Except as otherwise expressly agreed in writing by the parties, promptly upon the termination of the license (or sublicense, as the case may be)s granted to CuraGen hereunder regarding any Antigen, CuraGen shall destroy or return to ABX (as ABX shall direct) all remaining ABX Technology and Information regarding such Antigen, Antibodies to such Antigens and Products to such Antigen, and shall destroy all remaining Research Program Technology and Information and Antigen Specific Materials and Information regarding such Antigen, Antibodies to such Antigens and Products to such Antigen.

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14.3.8 Except as otherwise expressly agreed in writing by the parties, promptly upon the termination of the license (or sublicense, as the case may be)s granted to ABX hereunder regarding any Antigen, ABX shall destroy or return to CuraGen (as CuraGen shall direct) all remaining CuraGen Technology and Information regarding such Antigen, Antibodies to such Antigens and Products to such Antigen, and shall destroy all remaining Research Program Technology and Information and Antigen Specific Materials and Information regarding such Antigen, Antibodies to such Antigens and Products to such Antigen.

15. **MISCELLANEOUS**

15.1 Governing Laws. This Agreement shall be governed by, interpreted and construed in accordance with the laws of the State of Delaware, without regard to conflicts of law principles.

15.2 Waiver. No waiver by any party hereto of any breach or default of any of the covenants or agreements herein set forth shall be deemed a waiver as to any subsequent and/or similar breach or default.

15.3 Assignments. Neither this Agreement nor any right or obligation hereunder may be assigned or delegated, in whole or part, by either party without the prior express written consent of the other; provided, however, that either party may, without the written consent of the other, assign this Agreement and its rights and delegate its obligations hereunder in connection with the transfer or sale of all or substantially all of its business, or in the event of its merger, consolidation, change in control or similar transaction. Any permitted assignee shall assume all obligations of its assignor under this Agreement. Any purported assignment in violation of this Section 15.3 shall be void.

15.4 Independent Contractors. The relationship of the parties hereto is that of independent contractors. The parties hereto shall not be deemed to be agents, partners or joint venturers of the others for any purpose as a result of this Agreement or the

transactions contemplated thereby.

15.5 Further Actions. Each party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

15.6 Notices. All requests and notices required or permitted to be given to the parties hereto shall be given in writing, shall expressly reference the section(s) of this Agreement to which they pertain, and shall be delivered to the other party, effective on receipt, at the appropriate address as set forth below or to such other addresses as may be designated in writing by the parties from time to time during the term of this Agreement.

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If to ABX:

Abgenix, Inc.
7601 Dumbarton Circle
Fremont, California 94555
Attn: President

with a copy to:

Gray Cary Ware & Freidenrich LLP
4365 Executive Drive, Suite 1600
San Diego, California 92121-2189
Attn: Mark R. Wicker

If to CuraGen:

CuraGen Corporation
555 Long Wharf Drive
New Haven, Connecticut 06511
Attn: President

with a copy to:

Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.
One Financial Center
Boston, Massachusetts 02111
Attn: Jeffrey M. Wiesen

15.7 No Implied Licenses. Only licenses (or sublicenses, as the case may be) and rights granted expressly herein shall be of legal force and effect. No license (or sublicense, as the case may be) or other right shall be created hereunder by implication, estoppel or otherwise. By way of clarification and not limitation, no license (or sublicense, as the case may be) is granted hereunder to CuraGen to have in its possession any XenoMouse Animals or to conduct immunizations thereof.

15.8 Compliance with Laws. Each party shall use the Technology and Information of the other party and the Research Program Technology and Information in compliance in all material respects with all applicable laws, guidelines and regulations which are applicable to such Technology and Information or the use thereof, including without limitation any biosafety procedures and all safety precautions accompanying such Technology and Information. Except as otherwise expressly agreed in this Agreement or otherwise expressly agreed in writing by the parties, neither party shall administer the Technology and Information of the other party or the Research Program Technology and Information to humans under any circumstances.

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15.9 Export Laws. Notwithstanding anything to the contrary contained herein, all obligations of ABX and CuraGen are subject to prior compliance with United States export regulations and such other United States laws and regulations as may be applicable, and to obtaining all necessary approvals required by the applicable agencies of the government of the United States. Each party shall be responsible for obtaining such approvals as required of it, and shall use efforts consistent with prudent business judgment to obtain such approvals. Each party shall cooperate reasonably with the other party and provide reasonable assistance to the other party as may be reasonably necessary to obtain any required approvals.

15.10 Force Majeure. Nonperformance of a party (other than for the payment of money) shall be excused to the extent that performance is rendered impossible by strike, fire, earthquake, flood, governmental acts or orders or restrictions, failure of suppliers, or any other reason where failure to perform, is beyond the reasonable control and not caused by the negligence, intentional conduct or misconduct of the nonperforming party.

15.11 No Consequential Damages. IN NO EVENT SHALL A PARTY HERETO BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT OR THE EXERCISE OF ITS RIGHTS HEREUNDER, INCLUDING WITHOUT LIMITATION LOST PROFITS ARISING FROM OR RELATING TO ANY BREACH OF THIS AGREEMENT, REGARDLESS OF ANY NOTICE OF SUCH DAMAGES. NOTHING IN THIS SECTION 15.11 IS INTENDED TO LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF EITHER PARTY.

15.12 Third Party Rights. Notwithstanding anything to the contrary in this Agreement, the grant of rights by ABX under this Agreement shall be subject to and limited in all respects by the terms of the applicable ABX In-License(s) pursuant to which ABX acquired any Licensed ABX Intellectual Property, and all rights or sublicenses granted under this Agreement shall be limited to the extent that ABX may grant such rights and sublicenses under such ABX In-Licenses. Additionally, and without limiting the foregoing, the rights granted to CuraGen hereunder, including without limitation any grant of "exclusive" rights, shall be subject to the rights granted to or retained by GenPharm under the GenPharm Cross License Agreement.

15.13 Complete Agreement. This Agreement constitutes the entire agreement between the parties regarding the subject matter hereof, and all prior representations, understandings and agreements regarding the subject matter hereof (including without limitation, the Original Agreement and the letter dated July 5, 2000, from Christopher McLeod to Raymond Withy) either written or oral, expressed or implied, are superseded and of no effect.

15.14 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original and both together shall be deemed to be one and the same agreement.

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15.15 Headings. The captions to the several Articles and Sections hereof are not a part of this Agreement, but are included merely for convenience of reference only and shall not affect its meaning or interpretation.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective duly authorized officers as of the day and year first above written.

ABGENIX, INC.

By:

(Signature)

(Printed Name)

(Title)

CURAGEN CORPORATION

By:

(Signature)

Christopher K. McLeod
(Printed Name)

Executive Vice President
(Title)

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

**EXHIBIT A**

**ABX PATENT RIGHTS**

I. Pursuant to the MRLOA

A. Any of the patent applications listed in the following Table:

| [*******] | [*******] | [*******] | [*******] | [*******] |
|---|---|---|---|---|
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |
| [**********] | [**********] | [**********] | [**********] | [**********] |

B. [**********]:

[**********].

D. [**********]:

[**********].

E. [**********]:

[**********].

II. [**********]

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

A. [**********].

B. [**********].

C. [**********]:

[**********].

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

**EXHIBIT B**

**ELIGIBLE ANTIGEN CRITERIA**

A Research Antigen shall become an Eligible Antigen if it meets the following criteria:

1. [**********]

2. [**********]

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

**EXHIBIT C**

**RESEARCH PLAN**

**CuraGen/ABX Research Plan**

[ATTACHED]

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

**EXHIBIT D**

**THIRD PARTY AGREEMENTS**

Collaboration Agreements between CuraGen and

[**********]

[**********]

[**********]

[**********]

[**********]

[**********]

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**EXHIBIT E**

**RESEARCH ANTIGEN DESIGNATION**

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**EXHIBIT F**

**FORM OF THREE-WAY MTA**

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

**EXHIBIT G**

**FORM OF TWO-WAY MTA**

**Portions of this Exhibit were omitted and have been filed separately with the Secretary of the Commission pursuant to the Company's application requesting confidential Investment under Rule 24b-2 under the Securities Exchange Act of 1934.**

**Exhibit 10.29**

[LOGO]

322 East Main Street
Branford, CT 06405
(203) 481-1104
(203) 315-3300 Fax
www.curagen.com

May 2, 2009

Tom Boone
Vice President, Protein Sciences
Amgen Fremont Inc.
One Amgen Center Drive
Thousand Oaks, CA 91320-1799

Dear Mr. Boone:

Reference is made to that certain Second Restated Collaboration Agreement between Amgen Fremont Inc. (successor in interest to Abgenix, Inc.) ("AFI") and CuraGen Corporation ("CuraGen") dated as of April 12, 2004 and amended October 19, 2004 ("Collaboration Agreement"). AFI and CuraGen each may be referred to herein as a "Party" and the two collectively as the "Parties," and capitalized terms used herein but not otherwise defined shall have the meanings ascribed to them in the Collaboration Agreement.

Under the Collaboration Agreement, (A) AFI granted to CuraGen certain licenses relating to CuraGen Products, CuraGen Optioned Antigens and CuraGen Licensed Antigens, and (B) CuraGen granted to AFI certain licenses to ABX Products, ABX Optioned Antigens and ABX Licensed Antigens. The Parties now desire to grant to each other such irrevocable licenses as may be necessary or useful to permit each to fully develop and commercialize Products targeted to such Party's Optioned Antigens and Licensed Antigens as described more fully below, and otherwise to terminate the Collaboration Agreement. Accordingly, this letter agreement records the agreement between the Parties relating to such grants of rights and termination of the Collaboration Agreement.

**1)** **Licensed Antigens** — The Parties hereby agree that each Optioned Antigen of either Party under the Collaboration Agreement immediately prior to the date this letter is acknowledged by AFI (the "Effective Date") shall be deemed a Licensed Antigen for purposes of this letter agreement. The Parties further agree that as of the Effective Date the CuraGen Licensed Antigens consist of those antigens set forth on Schedule 1, and the ABX Licensed Antigens consist of those antigens set forth on Schedule 2.

**2)** **Termination** — By mutual agreement of the Parties, as of the Effective Date, the Collaboration Agreement will be irrevocably terminated and will be of no further force or effect; provided, however that Sections 8, 9, 11, 12.1, 12.3, 12.4, 12.5, 12.6, 12.7, 13 and 15 of the Collaboration Agreement, together with any definitions necessary to give effect to the terms of this letter agreement, shall survive such termination; and provided further that each reference to a Party's Licensed Antigen or Optioned Antigen in any such surviving provision shall be deemed to refer to all of such Party's Licensed Antigens as listed in Schedule 1 or 2 hereto, as applicable. The Parties expressly acknowledge and agree that this termination is by mutual agreement of the Parties.

**3)** **Royalties Payable by CuraGen** — By mutual agreement of the Parties, as of the Effective Date, the Collaboration Agreement will be amended such that Article 8 of the Collaboration Agreement shall be deleted in its entirety and replaced with the following:

> "Curagen shall pay Amgen any payments that Amgen reasonably believes are required to be made under the Third Party License Agreements, including but not limited to any royalty and/or milestone payment thereunder. For the purposes of this Agreement, "Third Party License Agreements" shall mean (a) that certain License Agreement dated May 14, 2002 between Babraham Bioscience Technologies Limited and Amgen Fremont Inc. (successor in interest to Abgenix, Inc.); (b) that certain License Agreement with effective date of December 14, 1998, between Amgen Fremont Inc. (successor in interest to Abgenix, Inc.) and Medical Research Council; and (c) that certain License Agreement dated March 29, 1994, by and between Medical Research Council, Agricultural and Food Research Council Institute of Animal Physiology and Genetics Research of Babraham Hall, Marianne Bruggeman c/o Institute of Animal Physiology and Genetics Research and Cell Genesys, Inc."

**4)** **Grant of Rights**

a) Upon the Effective Date, CuraGen hereby grants to AFI an exclusive worldwide license (or sublicense, as the case may be) (with the right to grant sublicenses) under Licensed CuraGen Intellectual Property to research, develop, make, have made, use, import, offer to sell and sell ABX Products. "ABX Products" shall mean, with respect to any ABX Licensed Antigen, any product comprising (a) an Antibody which binds to such ABX Licensed Antigen; or (b) Genetic Material that encodes such Antibody, wherein, in respect of each ABX Product, said Genetic Material does not encode multiple antibodies.

b) Upon the Effective Date, AFI:

i) shall deliver to CuraGen (a) all Antigen Specific Materials and Information in its possession pertaining to CuraGen Licensed Antigens, (b) all patent filings pertaining to or claiming CuraGen Licensed Antigens, and (c) all related Confidential Information of ABX or of CuraGen in AFI's possession, and such Antigen Specific Materials and Information, patent filings and Confidential Information shall thereafter be the Confidential Information of CuraGen;

ii) hereby grants to CuraGen an exclusive worldwide license (or sublicense, as the case may be) (with the right to grant sublicenses) under Licensed ABX Intellectual Property Controlled by AFI to research, develop, make, have made, use, import, offer to sell and sell CuraGen Products. "CuraGen Products" shall mean, with respect to any CuraGen Licensed Antigen, any product comprising (a) an Antibody which binds to such CuraGen Licensed Antigen; or (b) Genetic Material that encodes such Antibody, wherein, in respect of each CuraGen Product, said Genetic Material does not encode multiple antibodies. For the purposes of this Agreement, "Control" shall mean with respect to any intellectual property rights to which AFI has or obtains rights, possession by AFI or its Affiliate of the ability (whether by ownership, license or otherwise) to grant access, a license or a sublicense to such intellectual property right as provided for in this Agreement (i) without violating the terms of any agreement with any Third Party and (ii) without requiring any further payment (whether or not then due and payable) under any agreement with any Third Party (unless CuraGen elects in writing to pay any amounts owed to such Third Party under any such agreement by reason of CuraGen's exploitation of CuraGen Products). For the sake of clarity, CuraGen has specifically elected to pay any amounts owing under the Third Party License Agreements referenced in Paragraph 3 (Royalties Payable by CuraGen).

**4)** **Release** — In consideration of the mutual promises contained herein, each Party, for itself and for each of its Affiliates, hereby generally, irrevocably, unconditionally and completely releases and forever discharges the other Party, such other Party's Affiliates, and its and their officers, directors, stockholders, agents, employees, heirs, administrators, executors, predecessors, successors and assigns (hereinafter, the "Released Parties") from, and hereby irrevocably, unconditionally and completely waives and relinquishes, each of such Party's Released Claims. The Parties acknowledge they are aware that they may hereafter discover facts in addition to or different from those now known or believed to be true with respect to the subject matter of this release, but that it is their intention to hereby fully, finally and forever settle and release all such claims, disputes and differences, known or unknown, suspected or unsuspected, that now exist or heretofore have existed between the Parties and that in furtherance of such intention, this release shall remain in effect as a full and complete release notwithstanding the discovery or existence of any such additional or different facts. The term "Released Claims," when used herein with respect to a Party, shall mean and include each and every claim, charge, complaint, demand, action, cause of action, suit, right, debt, sum of money, cost, reckoning, covenant, contract, agreement, promise, doing, omission, damage, execution, obligation, liability, and expense (including attorneys' fees and costs), of every kind and nature, whether at law or in equity, that such Party may have had in the past, may now have or may have in the future against the Released Parties, and which has arisen or arises directly or indirectly out of, or relates directly or indirectly to, any circumstance, agreement, activity, action, omission, event or matter occurring or

existing on or prior to the Effective Date to the extent such claim relates to or arises under the Collaboration Agreement; provided, however, that the Released Claims shall exclude: (1) any and all rights to seek and obtain indemnification under this letter agreement and the Collaboration; and (2) any and all rights to seek and obtain enforcement of, or a remedy arising out of the breach of, any obligation provided for in this letter agreement.

**5) Miscellaneous**

a) This letter agreement shall be binding upon the Parties and may not be modified in any manner, except by an instrument in writing of concurrent or subsequent date signed by duly authorized representatives of the Parties hereto. This letter agreement is binding upon and shall inure to the benefit of the Parties and their respective agents, assigns, heirs, executors, successors and administrators.

b) No delay or omission by either Party in exercising any right under this letter agreement shall operate as a waiver of that or any other right. A waiver or consent given by a Party on any one occasion shall be effective only in that instance and shall not be construed as a bar or waiver of any right on any other occasion.

c) Should any provision of this letter agreement be declared or be determined by any court of competent jurisdiction to be illegal or invalid, the validity of the remaining parts, terms or provisions shall not be affected thereby and said illegal or invalid part, term or provision shall be deemed not to be a part of this letter agreement.

d) This letter agreement shall be interpreted and construed by the laws of the State of Delaware without regard to its choice of law principles.

e) This letter agreement contains and constitutes the entire understanding and agreement between the Parties hereto with respect to the subject matter hereof and cancels all previous oral and written negotiations, agreements, commitments, writings in connection therewith.

Please sign and date this letter agreement in the space provided below to confirm our mutual understandings and agreements as set forth in this letter agreement and return a signed copy to the undersigned.

Sincerely,

CuraGen Corporation

By: /s/ Tim Shannon
Name: Tim Shannon
Title: President and CEO

ACKNOWLEDGED AND AGREED

AMGEN FREMONT INC.

By: /s/ Thomas Boone
Name: Thomas Boone
Title: Vice President, Protein Sciences

5/1/09
Date

**Schedule 1**
**CuraGen Licensed Antigens**

**CR002**
**CR005**
**CR007**
**CR010**
**CR011**
**CR012**
**CR014**
**CR017**
**CR032**
**CR064**
**CR074**
**CR105**

**Schedule 2**
**ABX Licensed Antigens**

**CR026**
**CR031**
**CR039**
**CR106**
**CR109**
**CR110**

**Exhibit 10.30**

**EXECUTION COPY**

Confidential Materials omitted and filed separately with the
Securities and Exchange Commission. Asterisks denote omissions.

# TRANSFER AND TERMINATION AGREEMENT

**DATED AS OF APRIL 21, 2008**

**BY AND BETWEEN**

**TOPOTARGET A/S**

**AND**

**CURAGEN CORPORATION**

---

**TRANSFER AND TERMINATION AGREEMENT**

THIS TRANSFER AND TERMINATION AGREEMENT (this "Agreement") is dated as of April 21, 2008 (the "Effective Date"), by and between TopoTarget A/S, a company duly organized and existing under the laws of Denmark and having offices at Symbion Science Park, Fruebjergvej 3, 2100 Copenhagen, Denmark ("TopoTarget"), and CuraGen Corporation, a company duly organized and existing under the laws of the State of Delaware and having offices at 555 Long Wharf Drive, New Haven, Connecticut 06511, USA ("CuraGen"). As used herein, TopoTarget and CuraGen are referred to as the "Parties".

RECITALS

WHEREAS, the Parties previously entered into a License and Collaboration Agreement dated as of June 3, 2004 (as amended from time to time, the "License and Collaboration Agreement"), pursuant to which the Parties collaborated in connection with the research, development and commercialization of HDAC Inhibitors (as defined herein); and

WHEREAS, the Parties desire to terminate the License and Collaboration Agreement, and further desire that TopoTarget and its Affiliates (as defined herein) be enabled to carry on alone the research, development and commercialization of HDAC Inhibitors, and in such connection CuraGen desires to sell, transfer, convey and assign to TopoTarget, and TopoTarget desires to purchase from CuraGen, all of CuraGen's and its Affiliates' interests in HDAC Inhibitors, and in certain other rights and assets relating to HDAC Inhibitors and CuraGen desires to grant and TopoTarget desires to receive certain other licenses and rights related to HDAC Inhibitors, all upon the terms, and subject to the conditions, set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants, representations, warranties and agreements contained in this Agreement and intending to be legally bound hereby, the parties agree as follows:

ARTICLE I.

DEFINITIONS

Section 1.1 Specific Definitions.

As used in this Agreement, the following terms shall have the meanings set forth below:

"Acquiror" has the meaning set forth in Section 10.7(b).

"Affiliate" means, in relation to any Person, any other Person which directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, that first Person. As used in this Agreement, "control" (including, with correlative meanings, "controlled by" and "under common control with") shall mean possession, directly or indirectly, of (a) the power to direct or cause the direction of the management or policies of any

other Person (whether through ownership of securities or partnership or other ownership interests, by contract or otherwise) or (b) at least fifty percent (50%) of the issued share capital (whether directly or pursuant to any option, warrant or other similar arrangement) or other applicable profit interests of any other Person.

"Agreement" has the meaning set forth in the recitals.

"Allocation" has the meaning set forth in 3.5.

"Assignment of Patents" means the assignment of Patents between the Parties to be executed by the Parties on the Effective Date, substantially in the form of Exhibit B hereto.

"Assumed Liabilities" means any Liabilities of, arising out of or related to the Transferred Assets (including post-Effective Date performance or breaches of performance of any Contracts described on Schedule 2.1(h) (but excluding any such Contract for which Section 2.2 applies until such time as such Contract is assigned to TopoTarget)) with respect to all periods after Effective Date; it being understood and agreed that "Assumed Liabilities" shall exclude all Retained Liabilities.

"Authorizations" means all investigational new drug applications, NDAs, clinical trial exemptions and similar regulatory filings, licenses and permits owned or controlled by CuraGen or its Affiliates and specific to the Regulatory Trials involving HDAC Inhibitors or the Products.

"Business Day" means a day other than a Saturday, Sunday or other day on which banking institutions in Copenhagen, Denmark or New York, New York are authorized or required by Legal Requirement to close.

"Combination Product" has the meaning set forth within the definition of "Net Sales."

"Common Stock Equivalents" has the meaning set forth in Section 9.6.

"Competing Product" has the meaning set forth in Section 10.7(a).

"Confidential Information" means all confidential data, Know-How and other information related to HDAC Inhibitors and/or the Products, including all regulatory approvals and related filings, applications and data, the content of any unpublished patent applications, manufacturing and technical data, operating methods and procedures, marketing, distribution and sales methods and systems, sales figures, clinical trial data and other business information relating thereto, either marked as confidential or that by its nature or manner of disclosure would reasonably be understood in the industry to be confidential, and whether disclosed or maintained in tangible, electronic or other form.

"Contract" means any contract, agreement, or other arrangement to which CuraGen or any of its Affiliates is a party as of the Effective Date, including any license agreement, supply agreement and agreement with any contract research and testing organization, and which is solely (a) related to HDAC Inhibitors or the Products, (b) related to the Regulatory Trials or (c) related to the development, registration or commercialization of HDAC Inhibitors or the Products, including clinical trials.

"Control" means, with respect to any intellectual property right, the possession (whether by ownership or license) by a Party or an Affiliate of a Party of the ability to transfer such right or to grant a sublicense under such right without violating the terms of any agreement with any Third Party. Otherwise, "Control" shall have the meaning set forth within the definition of "Affiliate."

"Covered Patents" has the meaning set forth in Section 3.1(c).

"CuraGen" has the meaning set forth in the recitals.

"CuraGen Collaboration Technology" means, to the extent Controlled by CuraGen or any of its Affiliates as of the Effective Date, (a) all Inventions and Know-How first conceived and/or reduced to practice by employees of CuraGen or of any Third Party working on behalf of or for the benefit of CuraGen and/or in whose Inventions and Know-How CuraGen and its Affiliates shall have secured rights, in each case in the course of or in connection with the Research Program or with the product candidate having the designation PX106491, as well as any and all Patents and other intellectual property rights covering the same; and (b) all CuraGen Licensed Technology (as defined in the License and Collaboration Agreement).

"CuraGen Material Adverse Effect" has the meaning set forth in Section 8.11.

"Effective Date" has the meaning set forth in the introductory paragraph hereof.

"Encumbrance" means any mortgage or deed of trust, charge, pledge, lien (statutory or otherwise), privilege, security interest, hypothecation, assignment for security, claim, option, license, sublicense, covenant not to sue, or preference or priority or other encumbrance upon or with respect to any property of any kind.

"Exchange Act" means the U.S. Securities and Exchange Act of 1934, as amended.

"FDA" means the United States Food and Drug Administration and any successor agency thereto.

"Field" has the meaning set forth in Section 3.1(a).

"First Commercial Sale" means, with respect to any Product, the first sale for use or consumption by the general public of such Product in an country in the world after all required marketing and pricing approvals have been granted, or otherwise permitted, by the governing health authority of such country; it being understood and agreed that "First Commercial Sale" shall not include the sale of any Product for use in clinical trials or for compassionate use prior to the approval of an NDA or other comparable regulatory approval.

"GAAP" means United States generally accepted accounting principles.

"Governmental Authority" means any court, tribunal, arbitrator, agency, commission, authority, department, official or other instrumentality of any country (including any political subdivision thereof) or association of countries or any quasi-governmental body exercising any regulatory, governmental or administrative authority, including any Regulatory Authority.

"HDAC Inhibitor" means any small molecule that inhibits the activity of histone deacetylase.

"Improvements" has the meaning set forth in Section 3.1(b).

"Indemnified Party" has the meaning set forth in Section 12.4(a).

"Indemnifying Party" has the meaning set forth in Section 12.4(a).

"Initial Period" has the meaning set forth in Section 3.4(b).

"Inventions" means any new or useful method, process, manufacture, compound or composition of matter, whether or not patentable or copyrightable, or any improvement thereof.

"Joint Collaboration Technology" means, to the extent Controlled by CuraGen or any of its Affiliates as of the Effective Date, all Inventions and Know-How first conceived jointly and/or reduced to practice jointly by one or more employees of CuraGen or its Affiliates (or of any Third Party working on behalf of or for the benefit of CuraGen or its Affiliates and/or in whose Inventions and Know-How CuraGen or its Affiliates otherwise has rights) and one or more employees of TopoTarget or its Affiliates (or of any Third Party working on behalf of or for the benefit of TopoTarget or its Affiliates and/or in whose Inventions and Know-How TopoTarget or its Affiliates otherwise has rights), or first conceived by such employees of one Party and reduced to practice by such employees of the other Party, in all cases in the course of or in connection with the Research Program or with the product candidate having the designation PX106491, as well as any and all Patents and other intellectual property rights covering the same, including WO06/082428, "Combination therapies using HDAC inhibitors" and WO07/054719, "Histone deacetylase (HDAC) inhibitors (PXD101) for the treatment of cancer alone or in combination with chemotherapeutic agent". It is understood, however, that no compounds in TopoTarget's library of HDAC Inhibitors at the outset of the Research Program were brought within the "Joint Collaboration Technology" by virtue of CuraGen and TopoTarget employees or Third Parties working on their behalf jointly reducing to practice or demonstrating utility of such compound in any medical or clinical application or indication

"Know-How" means any and all information, ideas, inventions, data, files, plans, operating records, instructions, processes, formulas, formulation information, manufacturing technology, validations, package specifications, chemical specifications, chemical and finished goods analytical test methods, stability data, all clinical data, product specifications, information with respect to expert opinion, drawings, formulae, reports and information (whether or not patented or patentable), technology, techniques, and other intellectual property, in any form including paper, electronically stored data, magnetic media, film and microfilm.

"Legal Requirement" means any statute, law, ordinance, regulation, order or rule of any Governmental Authority.

"Liability" means any and all debt, liabilities and obligations, due or owing to Third Parties, whether accrued or fixed, absolute or contingent, matured or unmatured or determined or determinable, including those arising under any Legal Requirement, legal proceeding or action of any Governmental Authority and those arising under any contract, agreement, arrangement, commitment or undertaking.

"License and Collaboration Agreement" has the meaning set forth in the recitals.

"Licensed CuraGen Rights" means (a) all rights of CuraGen and its Affiliates to Product Technical Information; (b) all Patents Controlled by CuraGen or its Affiliates which contain any claims which relate to HDAC Inhibitors or the Products; (c) all rights of CuraGen and its Affiliates in and to the CuraGen Collaboration Technology and Joint Collaboration Technology; in each case that are Controlled by CuraGen or any of its Affiliates as of the Effective Date and that are not included in the Transferred Assets.

"Litigation Conditions" has the meaning set forth in Section 12.4(a).

"Losses" has the meaning set forth in Section 12.2(a).

"NDA" means (s) in the United States, a new drug application as defined in the U.S. Federal Food, Drug and Cosmetic Act of 1938, as amended, and applicable regulations promulgated thereunder and submitted to the FDA to obtain regulatory approval of a product in the United States, and all subsequent amendments and supplements to such NDA, and (b) in regulatory jurisdictions outside the United States, such submissions filed with the applicable Regulatory Authority in such regulatory jurisdiction to obtain Regulatory Approval of such product in such regulatory jurisdiction, and any amendments and supplements thereto.

"Net Sales" means, with respect to any Product, the net cash amount received from Third Parties by TopoTarget or its Affiliates (which in no case includes any Sublicensee), as the case may be, for such Product, commencing with the First Commercial Sale of such Product; it being understood that invoiced amounts may include deductions for: (a) trade, quantity and/or cash discounts actually granted to the extent consistently applied by TopoTarget to its products; (b) credits, refunds and allowances (including, without limitation, cash, credit and free goods allowances) actually allowed or given for chargebacks but only to the extent it is a sales related deduction which is accounted for within TopoTarget on a product-by-product basis, (c) retroactive price reductions, billing errors and rebates (including, without limitation, government-mandated and managed healthcare negotiated rebates), credits and refunds for Product that is rejected, spoiled, damaged, outdated or returned, to the extent each was actually allowed or given and as consistently applied by TopoTarget to its products; (d) freight, postage, shipping, insurance and other transportation costs actually incurred in transporting Product to a Third Party; and (e) Taxes, tariffs, customs duties, surcharges and other governmental charges incurred in connection with the sale, exportation or importation of Product. The books and records of TopoTarget or its Affiliates, as the case may be, shall be maintained in accordance with International Financial Reporting Standards. In the event that TopoTarget, or its Affiliates

sell any Product which contains any pharmaceutically active agents in addition to an HDAC Inhibitor (any such pharmaceutical product, a "Combination Product"): (i) if there is a stand alone Product on the market in a given country which corresponds to the HDAC Inhibitor within the Combination Product, the adjustment to Net Sales for such country shall equal the Net Sales of the Combination Product multiplied by a fraction, the numerator of which is the current price of the Product and the denominator of which is the reasonable fair market value, in the aggregate, of all pharmaceutically active agents contained in the Combination Product in each case in the same country as the country in which the Combination Product is to be sold, and (ii) if no such Product is on the market in a given country, Net Sales for such country shall equal Net Sales of the Combination Product multiplied by a fraction, the numerator of which is the reasonable fair market value of the Product and the denominator of which is the reasonable fair market value, in the aggregate, of all pharmaceutically active agents contained in the Combination Product. If CuraGen objects to any calculation referred to in the immediately preceding sentence and the Parties cannot agree on the "fair market value" of either the Product or any of the pharmaceutically active agents within ninety (90) days following notice of any objection, the Parties shall retain a panel of three valuation experts to make such a determination, the costs for which shall be shared equally by the Parties. Each Party shall select one expert, who shall not be an employee of either and who shall have at least at least a university degree in economics and five (5) years experience in conducting such valuations. The two experts shall promptly select a mutually agreeable third expert with like qualifications. The experts shall render a written opinion binding on the Parties for the relevant countries within thirty (30) days, which shall be binding, with no right of appeal, on both Parties. For the avoidance of doubt, the disposition of Product for, or the use of Product in, pre-clinical or clinical (Phase I — III) trials or other market-focused (Phase IV or V) trials or free samples shall not result in any Net Sales, unless TopoTarget, its Affiliate or Sublicensee is permitted to receive payment for Product used in clinical trials which includes a reasonable profit.

"Open Payables" has the meaning set forth in Section 3.3(c).

"Parties" has the meaning set forth in the preamble.

"Patents" means all patents, patent applications and statutory invention registrations (which, for the purposes of this Agreement, shall be deemed to include provisional applications, invention disclosures, certificates of invention and applications for certificates of invention), including reissues, divisions, continuations, continuations-in-part, supplementary protection certificates, extensions and reexaminations thereof, all inventions disclosed therein, all rights therein provided by international treaties and conventions, including priority patents, and all rights to obtain and file for patents and registrations thereto.

"Person" means any individual, firm, corporation, partnership, limited liability company, association, trust, unincorporated organization, joint venture or other entity.

"Prepaid Expenses" has the meaning set forth in Section 3.3(a).

"Proceeding" has the meaning set forth in Section 13.7.

"Product" means any pharmaceutical product containing an HDAC Inhibitor with respect to which CuraGen or any of its Affiliates conducted, sponsored or directed research or development prior to the date hereof, including the First Product (commonly referred to as PXD101 (belinostat)), all Future Products and all Backup Products (each as defined in the License and Collaboration Agreement).

"Product Technical Information" means all biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, clinical, safety and quality control data, information or Know-How (including all files, reports, plans and operating records, including extracts thereof, in any form to the extent transmissible, including paper, electronically stored data, magnetic media, film or microfilm) which are under the Control of CuraGen or any Affiliate as of the Effective Date and that relate to the development, registration or manufacturing of HDAC Inhibitors or Products, including all data, information and Know-How related to the Regulatory Trials (including reports and case report forms), all correspondence with the FDA or any other Regulatory Authority relating to the development, registration or manufacturing of HDAC Inhibitors or Products and all other documents pertaining to communications with the FDA or any other Regulatory Authority relating to the development, registration or manufacturing of HDAC Inhibitors or Products (including minutes or summaries of any FDA or any other Regulatory Authority and communications regarding HDAC Inhibitors and Products and applications for any regulatory approval of HDAC Inhibitors and Products).

"Public Reports" has the meaning set forth in Section 9.7.

"Purchase Price" has the meaning set forth in Section 3.4(a).

"Regulatory Authority" means any Governmental Authority with responsibility for granting any licenses or approvals necessary for the manufacturing, marketing and sale of pharmaceutical products, including any drug regulatory authority, and where the context admits any ethics committee or any equivalent review board.

"Regulatory Trials" means each of the clinical and other regulatory trials initiated, sponsored, conducted or funded by CuraGen or any of its Affiliates with respect to HDAC Inhibitors or the Products.

"Released Claims" has the meaning set forth in Section 10.8.

"Released Parties" has the meaning set forth in Section 10.8.

"Research Program" means the research program that was at any time conducted by the Parties and their Affiliates pursuant to Section 5 of the License and Collaboration Agreement.

"Restricted Period" has the meaning set forth in Section 10.7(a).

"Retained Liabilities" means (a) any Liabilities (including any Liabilities related to performance or breaches of performance of any Contracts on or prior to the Effective Date) of, arising out of or related to the Transferred Assets or the Licensed CuraGen Rights with respect to all periods on or prior to the Effective Date and, in the case of all Contracts (including so-called CRO agreements), all Liabilities involving any treatment or monitoring or administrative activity

as and to the extent any such treatment or monitoring or administrative activity relates to any patient activity on or prior to the Effective Date, (b) any Liabilities of CuraGen and its Affiliates associated with any assets or rights not transferred or licensed hereunder, (c) all Liabilities relating to all Regulatory Trials arising prior to the Effective Date, including claims arising out of or resulting from a claim by a Third Party for death or bodily injury arising (whether before, on or after the Effective Date) in connection with the development, testing, manufacture or commercialization of Products prior to the Effective Date, and (d) Taxes (other than VAT) of CuraGen and its Affiliates with respect to all periods prior to the Effective Date.

"SEC" means the U.S. Securities and Exchange Commission.

"SEC Documents" means all forms, documents, certifications, statements and reports, including any amendments thereto filed, or required to be filed, with the SEC.

"Securities Act" means the U.S. Securities Act of 1933, as amended.

"Sublicense" has the meaning set forth within the definition of "Sublicensee."

"Sublicensee" means any licensee of TopoTarget who (a) is not an Affiliate and (b) has obtained from TopoTarget a license of intellectual property rights Controlled by TopoTarget (a "Sublicense") to make, have made, use, sell and import the Product in any country in the world.

"Sublicense Income" means any and all royalties and all upfront, event and performance milestone payments and other payments received by TopoTarget from any Sublicensee pursuant to any Sublicense in connection with the sale of Products anywhere in the world; it being understood and agreed that "Sublicense Income" specifically excludes the following payments: (a) funding or reimbursement for research activities performed by TopoTarget after the effective date of the respective Sublicense; (b) payments or reimbursements for materials made for or transferred to a Sublicensee after the effective date of the respective Sublicense; (c) payments or reimbursements for other expenses incurred by TopoTarget on behalf of and for the benefit of a Sublicensee after the effective date of the respective sublicense; (d) reimbursement for TopoTarget's patent prosecution expenses incurred before or after the effective date of the Sublicense; (e) payments for any debt or equity securities or loan instruments of TopoTarget (based upon then-prevailing capital markets circumstances); and (f) payments or reimbursements for the cost of clinical trials conducted by TopoTarget on behalf of Sublicensee after the effective date of the Sublicense, in each of cases (a) through (f) above only to the extent such payments or reimbursements do not exceed the fair market value of the applicable materials, services or instruments with respect to which such payments or reimbursements were made.

"Tax" or "Taxes" means any taxes or similar assessments imposed by a federal, state, local or foreign Governmental Authority anywhere in the world, whether direct or indirect, including income, franchise, trade, capital, withholding, payroll, unemployment insurance, social security, gross receipts, sales and use, value added taxes ("VAT"), excise, real property, personal property, real estate and property transfer taxes, statutory, governmental, state, provincial, local governmental or municipal impositions, duties, contributions, rates and levies, together with all interest, penalties and additions imposed with respect to any such taxes.

"Termination" shall refer to the termination of the License and Collaboration Agreement, together with survival of rights, as provided in Section 2.4 below.

"Third Party" means any Person other than the Parties to this Agreement and their respective Affiliates.

"Third Party Claim" has the meaning set forth in Section 12.4(a).

"TopoTarget" has the meaning set forth in the introductory paragraph hereof.

"TopoTarget Material Adverse Effect" has the meaning set forth in Section 9.8.

"TopoTarget Shares" means common shares of TopoTarget, with a nominal value of 1.00 Danish krone per share.

"Transaction Document" means each agreement, document, certificate or instrument being executed pursuant to this Agreement.

"Transferred Assets" has the meaning set forth in Section 2.1.

"Transition Services Agreement" means the transition services agreement between the Parties to be executed on the Effective Date, substantially in the form of Exhibit A hereto.

"VAT" has the meaning set forth within the definition of "Taxes."

Section 1.2 Interpretation and Rules of Construction. In this Agreement, except to the extent otherwise provided or that the context otherwise requires:

(a) except where expressly provided otherwise, when a reference is made in this Agreement to an Article, Section, Exhibit or Schedule, such reference is to an Article or Section of, or an Exhibit or Schedule to, this Agreement;

(b) the headings for this Agreement are for reference purposes only and do not affect in any way the meaning or interpretation of this Agreement;

(c) whenever the words "include," "includes" or "including" are used in this Agreement, they are deemed to be followed by the words "without limitation;"

(d) the words "hereof," "herein" and "hereunder" and words of similar import, when used in this Agreement, refer to this Agreement as a whole and not to any particular provision of this Agreement;

(e) all terms defined in this Agreement have the defined meanings when used in any certificate or other document made or delivered pursuant hereto, unless otherwise defined therein;

(f) the definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms;

(g) references to a Person are also to its successors and permitted assigns; and

(h) the use of "or" is not intended to be exclusive unless expressly indicated otherwise.

ARTICLE II.

PURCHASE AND SALE OF ASSETS AND TERMINATION OF THE LICENSE AND COLLABORATION AGREEMENT

Section 2.1 Purchase and Sale of Assets. Upon the terms and subject to the conditions set forth herein, on the Effective Date, CuraGen shall (and shall cause its Affiliates to) sell, assign, transfer, convey and deliver to TopoTarget or its designees (as specified by TopoTarget) all of CuraGen's and each of its Affiliate's right, title and interest to the assets specified below (the "Transferred Assets"), free and clear of all Encumbrances, and TopoTarget shall purchase from CuraGen and its Affiliates all of their respective right, title and interest in and to the Transferred Assets:

(a) All CuraGen Collaboration Technology exclusively related to HDAC Inhibitors or the Products;

(b) All Joint Collaboration Technology exclusively related to HDAC Inhibitors or the Products, including patent applications WO06/082428, "Combination therapies using HDAC inhibitors" and WO07/054719, "Histone deacetylase (HDAC) inhibitors (PXD101);

(c) All Product Technical Information exclusively related to HDAC Inhibitors or the Products;

(d) the Authorizations, including those described on Schedule 2.1(d) hereto;

(e) all tangible embodiments of Products containing HDAC Inhibitors Controlled by CuraGen or its Affiliates as of the Effective Date, including those described on Schedule 2.1(e) hereto;

(f) all documentation and data relating to the Regulatory Trials, including all case reports forms, safety databases, interim reports and final study reports;

(g) all laboratory notebooks in the Control of CuraGen and its Affiliates relating to Patents contained in the CuraGen Collaboration Technology or the Joint Collaboration Technology listed in clauses (a) and (b) above, and all patent prosecution files (including all correspondence with prosecution counsel and patent offices) relating to such Patents; and

(h) subject to the retention of the Retained Liabilities as provided in Section 3.5 below, the Contracts described on Schedule 2.1(h) hereto.

Section 2.2 Consents.

(a) There shall be excluded from the Transferred Assets contemplated by this Agreement, any agreement, license or asset and right, tangible or intangible, which is not assignable or transferable without the consent of any Third Person to the extent that such consent shall not have been obtained prior to the Effective Date; provided, however, that CuraGen shall have the continuing obligation after the Effective Date to use commercially reasonable efforts to obtain all necessary consents to the assignment or license thereof; provided further, however, neither CuraGen nor any of its Affiliates shall be required to commence any litigation or offer or grant any accommodation, financial or otherwise, and that, upon obtaining the requisite Third Party consents thereto, such agreement, license, asset or right, if otherwise includable in the Transferred Assets, shall be transferred and assigned to TopoTarget hereunder.

(b) With respect to any agreement, license, asset or right, tangible or intangible, that is not assigned to TopoTarget at the Effective Date by reason of this Section 2.2, after the Effective Date and until any requisite consent is obtained and the foregoing sold and assigned to TopoTarget, the Parties hereto shall cooperate with each other, upon written request, in endeavoring to obtain for TopoTarget, at no out-of-pocket cost to CuraGen or its Affiliates (unless such failure to obtain such consent from any Third Party involves a breach of any of CuraGen's representations, warranties, covenants or agreements hereunder) an arrangement which TopoTarget reasonably shall desire designed to provide for TopoTarget the same net benefits thereof as if such agreement, license, asset or right were included in the Transferred Assets.

Section 2.3 Excluded Assets.

Notwithstanding anything to the contrary herein, Transferred Assets shall exclude:

(a) the "CuraGen" name and logo in any form; and

(b) general books of account and books of original entry that comprise any CuraGen's or its Affiliate's permanent accounting, financial or Tax records.

Section 2.4 Termination of Rights Under the License and Collaboration Agreement.

(a) Upon the terms and conditions set forth herein, at the Effective Date: TopoTarget and CuraGen shall irrevocably terminate (and shall cause their respective Affiliates to terminate irrevocably), and do hereby terminate effective as of the Effective Date, the License and Collaboration Agreement so that the Parties effective as of the Effective Date shall have no obligation to or rights from one another pursuant to the License and Collaboration Agreement and such that the License and Collaboration Agreement will have no further force or effect; provided, however, that Sections 5.6 (solely with respect to the final sentence), 5.7, 6.2, 8.9, 12, 14, 17.12, 17.14, 17.15, 17.16 and 17.17 of the License and Collaboration Agreement, together with any definitions referenced by such Sections shall continue and survive without limitation.

(b) The Parties understand and agree that, effective as of Effective Date, and notwithstanding anything to the contrary in the License and Collaboration Agreement, all



licenses and other rights granted to CuraGen under the License and Collaboration Agreement, and all sublicenses and other rights granted by CuraGen to any Affiliate or Third Party under or with respect to such licenses and other rights, shall be terminated and CuraGen will have no further right or obligation to develop or commercialize any Products, and TopoTarget will be solely responsible for the development and commercialization of Products from and after the Effective Date in its sole discretion. Within thirty (30) days following the Effective Date, as part of the services to be provided by CuraGen pursuant to the Transition Services Agreement, CuraGen shall return to TopoTarget all relevant records and materials, whether in written or electronic form, in CuraGen's possession or control containing Confidential Information (as defined in the Collaboration and License Agreement) of TopoTarget or its Affiliates, TopoTarget Collaboration Technology or TopoTarget Licensed Technology (each as defined in the Collaboration and License Agreement and to the extent not already delivered pursuant to Section 2.1 above). The Parties expressly acknowledge and agree that the termination of the License and Collaboration Agreement contained in this Section 2.4 is by mutual agreement of the Parties and that, notwithstanding anything to the contrary in the Collaboration and License Agreement, all effects and consequences of such termination are set forth in this Agreement.

## ARTICLE III.

## LICENSE TO TOPOTARGET; TRANSITION SERVICES; PURCHASE PRICE

Section 3.1 Licenses to TopoTarget.

Subject to the terms and conditions of this Agreement and only effective as of the Effective Date:

(a) CuraGen hereby grants to TopoTarget a fully paid-up, royalty-free (except as set forth in Section 3.4), irrevocable, perpetual, transferable, exclusive (including as to CuraGen and its Affiliates) and worldwide license, with right of sublicense, under the Licensed CuraGen Rights to develop, make, have made, use, offer to sell, sell, import, export and otherwise exploit and commercialize HDAC Inhibitors and Products (the "Field").

(b) TopoTarget shall solely own all developments, Inventions and improvements relating to the Licensed CuraGen Rights that are conceived of or authored by or on behalf of TopoTarget, its licensees and their respective Affiliates on and after Effective Date, and all intellectual property rights relating thereto (the "Improvements").

(c) CuraGen agrees to cooperate with all reasonable requests of TopoTarget in the filing and prosecution of any Patents relating to or arising out of the CuraGen Collaboration Technology or Joint Collaboration Technology assigned to TopoTarget pursuant to Section 2.1 (the "Covered Patents"), including making its records and personnel available on a reasonable basis. TopoTarget, at its sole discretion and cost, shall have the right to prepare, file, prosecute, file and maintain the Covered Patents, and to defend and to institute all claims, causes of actions and other legal proceedings with respect to the Covered Patents and to recover all damages in connection therewith.

(d) CuraGen shall keep TopoTarget apprised of the continuing prosecution, maintenance and defense of the Licensed CuraGen Rights. Payment of all fees and costs relating to the filing, prosecution, maintenance and defense of the Licensed CuraGen Rights shall be the sole responsibility of CuraGen. CuraGen promptly shall provide to TopoTarget copies of all patent-related documents that it files with any patent office with respect to the Licensed CuraGen Rights. In the event CuraGen decides not to continue prosecution of a patent application comprised within the Licensed CuraGen Rights to issuance, or to maintain any United States or foreign patent comprised within the Licensed CuraGen Rights, or to defend any Licensed CuraGen Rights, CuraGen timely shall notify TopoTarget in writing of such decision so that TopoTarget may continue said prosecution, maintenance or defense of such Licensed CuraGen Rights at its own expense. Prior to undertaking such prosecution, maintenance or defense, TopoTarget shall consult with CuraGen in good faith to discuss any issues or concerns identified by CuraGen with respect to such prosecution, maintenance or defense by TopoTarget.

(e) TopoTarget shall have the initial right, but not the obligation, to prosecute, at its own expense and utilizing counsel of its choice, any infringement of the Licensed CuraGen Rights within the Field. TopoTarget shall notify CuraGen within one hundred and eighty (180) days after learning of such infringement whether it will elect to undertake the prosecution of such infringement. Prior to undertaking such prosecution, TopoTarget shall consult with CuraGen in good faith to discuss any issues or concerns CuraGen may have with respect to such prosecution. If TopoTarget elects to undertake such prosecution, CuraGen agrees that TopoTarget may (i) bring any related suit, action or proceeding in the name of CuraGen and, (ii) if necessary or desirable in TopoTarget's reasonable discretion, join CuraGen as a party to such suit, action or proceeding. In the event that TopoTarget elects not to enforce the Licensed CuraGen Rights within the Field as contemplated above, then CuraGen shall have the second right, but not the obligation, to prosecute, at its own expense and utilizing counsel of its choice, any infringement of the Licensed CuraGen Rights within the Field. Unless the Parties otherwise agree, the total cost of any such action commenced solely by one Party, shall be borne by such Party. Except as the Parties may otherwise agree in writing, any damages or settlement payments resulting from such any action commenced as set forth above, whether in an out-of-court settlement or through legal adjudication of such action, shall be retained by the Party bringing the prosecution of such action, provided that any damages or settlement payouts received by TopoTarget or its Affiliates shall be deemed to constitute Net Sales for purposes of Section 3.4(c). In any infringement action either Party may institute pursuant to this Section 3.1(e), the other Party hereto shall, at the request of the Party initiating such action, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information, samples, specimens, and the like. The Party making such request shall reimburse the other Party for its reasonable costs and expenses incurred in providing such cooperation.

Section 3.2 Transition Services Agreement. On the Effective Date, the Parties shall execute the Transition Services Agreement, which Transition Services Agreement shall be effective as of the Effective Date in accordance with the terms thereof.

Section 3.3 Reimbursement of Prepaid Amounts; Retained Liabilities.

(a) Attached as Schedule 3.3(a) is a list of prepaid amounts previously paid by CuraGen in cash (a) for services not yet performed prior to the Effective Date from any of CuraGen's subcontractors related to CuraGen's development activities with respect to the Products and (b) to TopoTarget or any Third Party for supply of any Product not yet delivered to clinics on or prior to the Effective Date (all such amounts, the "Prepaid Expenses").

(b) **[Intentionally Omitted]**

(c) Attached as Schedule 3.3(c) is a list of estimated amounts due as of the date hereof to TopoTarget or any Third Party for the development or supply of any HDAC Inhibitor or Product on or prior to the Effective Date (all such amounts, the "Open Payables").

(d) On or before April 25, 2008, CuraGen shall pay to TopoTarget a non-refundable cash advance in respect of Open Payables in an amount equal to [**] United States Dollars ($[**]). For a period of one hundred eighty (180) days following the Effective Date, the Parties shall cooperate with each other to provide and review documentation regarding the Prepaid Expenses and Open Payables and resolve any questions relating to the accounting thereof. On the one hundred eightieth (180th) day after the Effective Date, if Open Payables designated as payable by or to TopoTarget are greater than Prepaid Expenses by an amount greater than the amount advanced in accordance with the first sentence of this Section 3.3(d), then CuraGen shall pay to TopoTarget the amount above such advance; it being understood and agreed that CuraGen shall pay in full all Open Payables owed to Third Parties for the development or supply of any HDAC Inhibitor or Product that is released for clinical use on or prior to the Effective Date (including in the manner set forth on Exhibit C) and for which TopoTarget obtains a bona fide invoice or other comparable certification. CuraGen shall pay, be solely responsible for, retain and hold TopoTarget harmless from all Retained Liabilities.

Section 3.4 Purchase Price.

(a) Subject to the terms and conditions of this Agreement, the aggregate purchase price (the "Purchase Price") for the Transferred Assets and Licensed CuraGen Rights (and which shall also include payment for the Termination as provided for herein) shall be as follows: (i) Twenty Six Million United States Dollars ($26,000,000), together with such adjustments calculated in accordance with Section 3.3(d) above, which total adjusted amount shall be payable by TopoTarget to CuraGen on the Effective Date in cash by wire transfer of immediately available funds to such account or accounts designated by CuraGen prior to the Effective Date (the "Cash Purchase Price"), (ii) an obligation to deliver 5,000,000 TopoTarget Shares, which shares shall be subscribed to by CuraGen and issued by TopoTarget to CuraGen as soon as practicable after the Effective Date but in no event later than thirty (30) days following the Effective Date and (c) the contingent payment obligations, in an amount not to exceed Six Million United States Dollars ($6,000,000) in the aggregate, pursuant to Section 3.4(c) and Section 3.4(d) below.

(b) TopoTarget shall use commercially reasonable efforts to, and shall request that its financial advisors use commercially reasonable efforts to, during the period commencing

on the Effective Date and ending on July 7, 2008 (the "Initial Period"), assist CuraGen, at CuraGen's expense, in procuring placements for the 5,000,000 TopoTarget Shares comprising part of the Purchase Price on terms and conditions (including price) agreed upon by CuraGen in its sole discretion, provided that CuraGen agrees it shall sell any TopoTarget Shares for which (i) TopoTarget's financial advisors are able to procure one or more placees for at least [**] or more TopoTarget Shares and (ii) the price per share (net of any expenses paid by CuraGen) is greater than or equal to the average closing price of TopoTarget Shares on Nasdaq OMX Nordic Exchange Copenhagen over the [**] trading day period ending on the Effective Date. Notwithstanding the foregoing, should TopoTarget notify CuraGen that it intends to engage in any rights offering of more than [**] TopoTarget Shares: (x) TopoTarget shall use its commercially reasonable efforts to include all of the 5,000,000 TopoTarget Shares held by CuraGen in such offering up to the maximum amount deemed prudent by TopoTarget's financial advisors, in which event CuraGen shall share in the reasonable and customary expenses of the offering in proportion to the total number of TopoTarget Shares sold by CuraGen and TopoTarget in such offering, (y) CuraGen shall refrain from selling or otherwise transferring any of its TopoTarget Shares during the Initial Period until the earliest to occur of the end of the Initial Period and the completion and/or abandonment of such rights offering and (z) CuraGen shall commit to sell in such rights offering any TopoTarget Shares it holds, provided that the price per share (net of any expenses paid by TopoTarget) is greater than or equal to the average closing price of TopoTarget Shares on Nasdaq OMX Nordic Exchange Copenhagen over the [**] trading day period ending on the Effective Date. Notwithstanding the foregoing, should TopoTarget notify CuraGen that it intends to engage in any public offering (other than a rights offering) or private placement of equity securities representing more than [**] TopoTarget Shares: (x) CuraGen shall refrain from selling or otherwise transferring any of its TopoTarget Shares during the Initial Period until the earliest to occur of the end of the Initial Period and the completion and/or abandonment of such public offering or private placement, (y) TopoTarget shall offer to use the net proceeds of such offering to repurchase at a price per share (net of any expenses paid by TopoTarget) equal to the average closing price of TopoTarget Shares on Nasdaq OMX Nordic Exchange Copenhagen over the [**] trading day period ending on the Effective Date, provided that the offering is completed at a price per share (net of any expenses paid by TopoTarget) greater than or equal to the average closing price of TopoTarget Shares on Nasdaq OMX Nordic Exchange Copenhagen over the [**] trading day period ending on the Effective Date, and (z) CuraGen shall commit to sell to TopoTarget at such price any TopoTarget Shares it holds. In the event any such TopoTarget Shares have not been placed or otherwise sold in accordance with the first three (3) sentences of this Section 3.4(b) during the Initial Period, CuraGen shall be free to trade such TopoTarget Shares, provided such trades are in compliance in all cases with the requirements of the Securities Act and other applicable laws. In furtherance of the foregoing, TopoTarget shall take all steps necessary to ensure that the TopoTarget Shares delivered as part of the Purchase Price shall be freely tradeable under Danish law (but not the Securities Act) on Nasdaq OMX Nordic Exchange Copenhagen as soon as practicable but in no event later than thirty (30) days after the Effective Date. In the event any such TopoTarget Shares have not been placed or otherwise sold in accordance with the first two sentences of this Section 3.4(b) during the Initial Period and are not then freely tradeable under Danish law (but not the Securities Act) on Nasdaq OMX Nordic Exchange Copenhagen as July 8, 2008 (and CuraGen has not withheld any reasonable assistance requested by TopoTarget in connection with such freely tradeable obligation), TopoTarget shall pay to CuraGen on a

monthly basis in arrears an amount equal to (i) the number of such unplaced and unsold TopoTarget Shares multiplied by (ii) [**]% of the average closing price of TopoTarget Shares on Nasdaq OMX Nordic Exchange Copenhagen over the [**] trading day period ending on the Effective Date multiplied by (iii) the number of days elapsed since the later of (a) July 8, 2008 and (b) the last payment made pursuant to this sentence of this Section 3.4(b). With respect solely to the question of whether the TopoTarget Shares are freely tradeable prior to the expiration of the Initial Period (and not including any other default relating to the issuance of the TopoTarget Shares), such payment shall be TopoTarget's sole liability and CuraGen's sole remedy. CuraGen acknowledges that the TopoTarget Shares have not been registered under the Securities Act, and therefore all transactions in such TopoTarget Shares shall be conducted in transactions exempt from, or not subject to the registration requirements of, the Securities Act.

(c) For Net Sales of Products by TopoTarget and its Affiliates (but not for Net Sales by any Sublicensee), TopoTarget shall pay to CuraGen a royalty equal to [**] percent ([**]%) of the total Net Sales of Products received by TopoTarget or any Affiliate until such time as the amounts paid to CuraGen under this Section 3.4(c) and Section 3.4(d) below equal Six Million Dollars ($6,000,000) in the aggregate.

(d) With respect to any Sublicense to any Sublicensee, TopoTarget shall pay to CuraGen an amount equal to [**] percent ([**]%) of the Sublicense Income actually received in cash by TopoTarget until such time as the amounts paid to CuraGen under Section 3.4(c) above and this Section 3.4(d) equal Six Million United States Dollars ($6,000,000) in the aggregate.

(e) Notwithstanding anything to the contrary contained herein, only one royalty or other payment shall be paid to CuraGen for each unit of Product sold regardless of how many transactions may occur between manufacture of the unit of Product and purchase by the final end user, it being understood and agreed that (i) any royalty under Section 3.4(c) will be based upon the first arms length transaction between TopoTarget (or any Affiliate) and any Third Party, (ii) any payment under Section 3.4(d) shall only arise at the time of receipt in cash by TopoTarget of Sublicense Income and (iii) for the avoidance of doubt, sale of any specific unit of Product may only be eligible for a potential payment under either Section 3.4(c) or Section 3.4(d) but not both such Sections.

Section 3.5 Allocation of Purchase Price.

(a) CuraGen and TopoTarget agree that the Purchase Price and related consideration and reimbursement of expenses provided herein shall be allocated among the Transferred Assets on the basis of an allocation attached hereto as Schedule 3.5 (the "Allocation"). Each of CuraGen and TopoTarget agree to report, as and when required, the allocation of the Purchase Price, as adjusted, in a manner entirely consistent with the Allocation in the preparation and filing of all Tax Returns. None of the CuraGen or TopoTarget will take any action that would call into question the *bona fides* of the Allocation. Each of TopoTarget and CuraGen, on behalf of itself and its respective Affiliates, agrees that it will not take any position on a Tax Return that is inconsistent with the Allocation. Any subsequent adjustment to the Purchase Price shall be reflected in an allocation statement as revised by the Parties hereunder in a manner consistent with the allocation statement as originally prepared, except as

otherwise required by applicable Legal Requirement. CuraGen and TopoTarget shall jointly allocate the purchase price among the Transferred Assets and Licensed Rights and the termination of the License and Collaboration Agreement in a manner that is mutually acceptable and in accordance with applicable Tax and accounting rules.

ARTICLE IV.

SHIPMENT

CuraGen shall cause all of the Transferred Assets consisting of books and records to be shipped within two (2) days following the Effective Date to TopoTarget's US offices located at 100 Enterprise Drive, Rockaway, New Jersey 07866, USA.

ARTICLE V.

DELIVERIES

Section 5.1 Effective Date Deliveries. Contemporaneously with the Effective Date, each Party agrees on its own behalf, as applicable, that the deliveries of such instruments of conveyance, assignment and transfer, in form and substance reasonably satisfactory to TopoTarget and CuraGen, as shall be appropriate, to convey, transfer and assign to, and vest in, TopoTarget all of the right, title and interest to the Transferred Assets free and clear of all Encumbrances as specified below, will have been made by the respective Parties to this Agreement and their Affiliates in order to consummate the transactions contemplated hereby.

(a) Effective Date Deliveries by TopoTarget and CuraGen. CuraGen and TopoTarget shall deliver on the Effective Date:

(i) a duly executed Assignment of Patents in substantially the form set forth on Exhibit B; and

(ii) a duly executed Transition Services Agreement.

(b) Effective Date Deliveries by CuraGen. CuraGen shall deliver to TopoTarget on the Effective Date at a location designated by TopoTarget, all originals or, where applicable, CuraGen's copy of the following items, documents and information, it being understood that such delivery may be made in electronic form:

(i) all Product Technical Information set forth on Schedule 5.1(b)(i);

(ii) all documentation and data relating to the Regulatory Trials, including all case reports forms, safety databases, interim reports and final study reports, and data formats, structures and dependencies for such data relating to the Regulatory Trials, provided that any such documentation or data that is contained in a database provided by a Third Party licensor of CuraGen prior to the Effective Date may be delivered in a form that requires a licensed copy of the applicable database, which database shall not be assigned by CuraGen to TopoTarget;

(iii) all laboratory notebooks in the Control of CuraGen and its Affiliates relating to Patents contained in the CuraGen Collaboration Technology and the Joint Collaboration Technology, and all patent prosecution files (including all correspondence with prosecution counsel and patent offices) relating to such Patents;

(iv) all tangible embodiments of Products containing HDAC Inhibitors Controlled by CuraGen or its Affiliates as of the Effective Date, including those described on Schedule 2.1(e) hereto

(v) the Authorizations described on Schedule 2.1(d); and

(vi) the Contracts described on Schedule 2.1(h).

Notwithstanding the foregoing, in the event that information described above relates both to HDAC Inhibitors, on the one hand, and to other products or businesses of CuraGen and its Affiliates, on the other hand, and cannot be segregated in a reasonable manner that preserves the usefulness of the information as it relates to HDAC Inhibitors or other products or businesses, CuraGen shall not be required to deliver original documents or other materials but shall be required (and shall be required to cause its Affiliates) to provide copies of such documents and other materials containing this information to TopoTarget on the Effective Date. In instances where copies are provided to TopoTarget, TopoTarget and their Affiliates shall have reasonable access to the original documents and other materials under circumstances where copies of documents are insufficient for evidentiary or regulatory purposes and CuraGen covenants and agrees, on behalf of itself and its Affiliates to provide TopoTarget with a true and accurate list of all the original documents retained by CuraGen and its respective Affiliates.

(c) Effective Date Deliveries by TopoTarget. TopoTarget shall deliver to CuraGen on the Effective Date the cash portion of the Purchase Price as contemplated by Section 3.4.

(d) Post-Effective Date Deliveries by TopoTarget. TopoTarget shall deliver to CuraGen as soon as practicable after the Effective Date but in no event later than thirty (30) days following the Effective Date the TopoTarget Share portion of the Purchase Price as contemplated by Section 3.4(a)(ii).

## ARTICLE VI.

## TAXES AND FEES

Notwithstanding any other provision herein, the following shall apply with respect to Taxes:

Section 6.1 Transfer and Conveyance Taxes.

(a) All amounts payable by TopoTarget to CuraGen under this Agreement are stated inclusive of VAT as the Parties do not anticipate any application of VAT; provided that in the event that any VAT is applicable, the Parties agree to the provisions contained in this Section 6.1 below.

(b) If and to the extent that VAT on the sale of the Transferred Assets as provided for under this Agreement is payable by CuraGen to the tax authorities, TopoTarget shall pay to CuraGen any applicable VAT payable by CuraGen on the sale of Transferred Assets five (5) days prior to the date that CuraGen's VAT liability falls due for payment to the tax authorities, but not earlier than thirty (30) days after receipt by TopoTarget from CuraGen of a proper invoice for such VAT. If and to the extent that TopoTarget is not able to recover such VAT as input VAT from the tax authorities or the tax authorities reject or cancel in writing by way of a Tax assessment or otherwise the recovery of such VAT, such VAT shall be borne by TopoTarget.

(c) If and to the extent that VAT on the sale of the Transferred Assets as provided for under this Agreement is payable by TopoTarget to the tax authorities (so-called reverse charge VAT), TopoTarget shall remit such reverse charge VAT to the relevant taxing authority and shall be entitled to any refund of such amount available under applicable Legal Requirement. If and to the extent that TopoTarget is not able to recover such reverse charge VAT from the tax authorities or if after such recovery the tax authorities reject or cancel in writing the recovery of such VAT by way of a Tax assessment or otherwise, such VAT shall be borne by TopoTarget.

(d) Any interest charged or credited by the tax authorities to CuraGen or TopoTarget shall be for the account of TopoTarget.

(e) All transfer, excise and similar Taxes, other than VAT, shall be paid by the Party legally liable therefor.

(f) CuraGen shall retain all VAT records relevant to TopoTarget for a period of ten (10) years following Effective Date and shall allow TopoTarget and their agents access to and to take copies of the VAT records relevant to TopoTarget on reasonable notice during normal business hours. TopoTarget and CuraGen shall each co-operate to limit the other's liability to all VAT, transfer and similar Taxes.

ARTICLE VII.

**[INTENTIONALLY OMITTED]**

ARTICLE VIII.

REPRESENTATIONS AND WARRANTIES OF CURAGEN

CuraGen hereby represents and warrants to TopoTarget as follows as of the Effective Date:

Section 8.1 Organization and Authority. CuraGen is validly existing and in good standing under the laws of Delaware. Each of CuraGen and any of its Affiliates party to any Transaction Documents have full power and authority to execute and deliver this Agreement and any Transaction Documents to which it is a party and to perform its obligations hereunder and thereunder.

Section 8.2 Corporate Authority; Validity of Agreement; No Violation. The execution and delivery of this Agreement and the other agreements contemplated hereunder and the performance of CuraGen's obligations hereunder and thereunder have been duly and validly authorized by all necessary corporate action by CuraGen, and no other corporate proceedings on the part of CuraGen are necessary to authorize such execution, delivery and performance. This Agreement has been, and the other agreements to be executed by CuraGen in connection with this Agreement will be, duly and validly executed and delivered by CuraGen and constitute or will constitute, as the case may be, the valid and binding obligations of CuraGen enforceable against CuraGen in accordance with its or their terms. Execution of this Agreement and the other agreements to be executed by CuraGen in connection with this Agreement and consummation of the transactions contemplated hereby and thereby will not (i) result in the violation of or conflict with any of the terms and provisions of any of the organizational or governing documents of CuraGen, (ii) result in a violation or breach of, or constitute (with or without due notice or lapse of time or both) a default (or give rise to any right of termination, modification, cancellation or acceleration or loss of material benefits) under, any of the terms, conditions or provisions of any note, bond, mortgage, indenture, contract, agreement, permit, license, lease, agreement or other obligation to which CuraGen is a party or may be subject or (iii) violate any order, writ, injunction, decree, statute, treaty, rule or regulation applicable to any CuraGen or the Transferred Assets or the Licensed CuraGen Rights, except such violations, breaches or defaults with respect to clauses (ii) and (iii) above which would not adversely affect CuraGen's ability to perform its obligations hereunder or TopoTarget's use of the Transferred Assets and Licensed CuraGen Rights.

Section 8.3 Government Approvals. Except as set forth on Schedule 8.3, no authorization, consent, approval, license, exemption from or filing or registration with any Governmental Authority under any applicable Legal Requirements, is necessary for the execution and delivery by CuraGen of this Agreement or any other agreement or instrument executed in connection herewith, the consummation by CuraGen of the transactions contemplated hereby or thereby, or the performance by CuraGen of its obligations under this Agreement and such other agreements, except as relates solely to TopoTarget.

Section 8.4 Good Title; Absence of Encumbrances. CuraGen has good and valid title to the Transferred Assets, all of which are free and clear of all Encumbrances as of the Effective Date.

Section 8.5 Third Party Rights; Patents. Neither CuraGen nor any of its Affiliates has received any notice, claim or assertion from any Third Party (a) to the effect that the manufacture, use, sale, offer for sale or import of Products infringes, or would infringe, the Patents or other intellectual property rights of any Third Party; or (b) that questions the validity, ownership or enforceability of any CuraGen Collaboration Technology or Joint Collaboration Technology; and in each case, to CuraGen's knowledge, there does not exist any basis for any such notice, claim or assertion. The CuraGen Collaboration Technology and Joint Collaboration Technology included in the Transferred Assets, together with the Licensed CuraGen Rights, contain all Patents and other intellectual property rights owned or Controlled by CuraGen or any

Affiliate relating to or necessary for the development, manufacture, use, or sale of HDAC Inhibitors and Product. CuraGen and/or its Affiliates are the sole owner of, or have the exclusive rights to, all of the CuraGen Collaboration Technology and Licensed CuraGen Rights and (except for TopoTarget) the Joint Collaboration Technology in existence as of the Effective Date, and have the exclusive right to grant the licenses granted under this Agreement free and clear of any Encumbrances. CuraGen has not entered into any licenses, sublicenses, options or any other agreement or commitment with respect to any of the CuraGen Collaboration Technology, Joint Collaboration Technology or Licensed CuraGen Rights. To CuraGen's knowledge and belief, none of the Inventions claimed in the CuraGen Collaboration Technology, Joint Collaboration Technology and the Licensed CuraGen Rights were obtained by CuraGen in violation of any contractual or fiduciary obligation to which CuraGen, or any of its employees or staff members are or were bound, or by the misappropriation of the trade secrets of any Third Party; and CuraGen has not entered into any agreement with a Third Party for a license or other rights to such Third Party's Patents or other intellectual property with respect to any HDAC Inhibitor or Product. To CuraGen's knowledge and belief, all of the data and information contained in the Product Technical Information, the rights of which to use are included in the Transferred Assets or the Licensed CuraGen Rights, are accurate and complete, and to CuraGen's knowledge and belief, CuraGen has not omitted therefrom any material data or information in CuraGen's possession or control. Neither CuraGen nor any of its Affiliates has taken any action or failed to take any action in connection with the License and Collaboration Agreement that has resulted in or could result in the impairment of the validity, enforceability or ownership of any of the CuraGen Collaboration Technology, Joint Collaboration Technology or Licensed CuraGen Rights.

Section 8.6 Contracts. Schedule 2.1(h) sets forth a list of all Contracts in existence as of the date hereof, full and complete written copies of which have been made available to TopoTarget. Each of the Contracts is in full force and effect, is valid and enforceable in accordance with its terms and, to the knowledge of CuraGen, is not subject to any claims, charges, setoffs or defenses. Neither CuraGen is, nor to CuraGen's knowledge is any other person, in default, nor has any event occurred which, with the giving of notice or the passage of time or both, would constitute a default, under the License and Collaboration Agreement or any of the Contracts.

Section 8.7 Litigation. Neither CuraGen nor any of its Affiliates has received any notice of any claim, suit, investigation, arbitration or other legal proceedings against CuraGen or any Affiliate of CuraGen (which claim, suit, investigation, arbitration or other legal proceeding has not been conclusively resolved as of the date of this Agreement) the adverse resolution of which could reasonably be expected to adversely affect CuraGen's ability to perform its obligations hereunder or TopoTarget's use of the Transferred Assets and Licensed CuraGen Rights.

Section 8.8 SEC Reports; Financials. CuraGen has filed or otherwise transmitted all SEC Documents required to be filed prior to the date hereof by it with the SEC since January 1, 2006. As of their respective dates, or, if amended, as of the date of the last such amendment prior to the date hereof, the SEC Documents complied as to form, in all respects, with the requirements of the Exchange Act and the applicable rules and regulations promulgated thereunder. None of the SEC Documents so filed contained any untrue statement of a material

fact or omitted to state any material fact required to be stated therein or necessary in order make the statements therein, in the light of the circumstances under which they were made, not misleading under the Exchange Act. To the knowledge of the Company, none of the SEC Documents is the subject of ongoing SEC review, investigation or enforcement action. The consolidated financial statements (including any related notes thereto) of the Company included in the SEC Documents fairly present in all material respects the consolidated financial position of the Company and its subsidiaries, as of the date thereof, and the consolidated statements of operations, cash flows and changes in stockholders' equity for the respective periods indicated and have been prepared in accordance with GAAP applied on a consistent basis during the periods involved (except as may be indicated therein or in the notes thereto). On the Effective Date, after giving effect to the transactions contemplated hereby, (i) the aggregate value of CuraGen's assets will exceed its total liabilities (including contingent, subordinated, unmatured and unliquidated liabilities) at a fair valuation and at fair saleable value; (ii) CuraGen will have the ability to pay its total debts and liabilities (including contingent, subordinated, unmatured and unliquidated liabilities) as they become due in the usual course of its business; and (iii) CuraGen will not have an unreasonably small amount of capital with which to conduct its business.

Section 8.9 Clinical Product Inventory. All Products containing HDAC Inhibitors described on Schedule 2.1(e) hereto has been and is, as of the Effective Date, in good condition and properly stored and maintained, consistent with past practice of CuraGen.

Section 8.10 Compliance with Laws. CuraGen and each of its Affiliates have complied with all Legal Requirements applicable to their respective performance under the License and Collaboration Agreement, the failure of which compliance could reasonably be expected to adversely affect CuraGen's ability to perform its obligations hereunder or TopoTarget's use of the Transferred Assets and Licensed CuraGen Rights.

Section 8.11 Material Changes. Except as set forth on Schedule 8.11 hereto, since December 31, 2007, (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a material adverse effect on the results of operations, assets, business or financial condition of CuraGen, taken as a whole ("CuraGen Material Adverse Effect"), (ii) CuraGen has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in CuraGen's financial statements pursuant to GAAP or required to be disclosed in filings made with the SEC, (iii) CuraGen has not altered its method of accounting, (iv) CuraGen has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock; (v) CuraGen has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing employee benefit plans; and (vi) CuraGen has not had any disagreement with its independent auditors that would require public disclosure.

Section 8.12 Compliance. CuraGen (i) is not in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by CuraGen under), nor has CuraGen received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is

bound (whether or not such default or violation has been waived), (ii) is not in violation of any order of any court, arbitrator or governmental body, or (iii) is not and has not been in violation of any statute, rule or regulation of any governmental authority, except in the case of clauses (i), (ii) and (iii) as would not have or reasonably be expected to result in a CuraGen Material Adverse Effect.

Section 8.13 Brokers and Finders. Except for the investment banking firm of The Goldman Sachs Group, Inc., CuraGen has not employed any broker, finder, consultant or intermediary in connection with the transactions contemplated by this Agreement who would be entitled to a broker's, finder's or similar fee or commission from TopoTarget in connection therewith or upon the consummation thereof. All expenses, fees and commissions due to The Goldman Sachs Group, Inc. in connection with the transactions contemplated herein shall be paid by CuraGen.

Section 8.14 Disclaimer of CuraGen. EXCEPT AS SET FORTH IN THIS ARTICLE VIII OR ANY TRANSACTION DOCUMENT, NONE OF CURAGEN, ITS AFFILIATES OR ANY OF THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES OR REPRESENTATIVES MAKES OR HAS MADE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AT LAW OR IN EQUITY, IN RESPECT OF THE TRANSFERRED ASSETS OR THE LICENSED CURAGEN RIGHTS OR OTHERWISE, INCLUDING WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

## ARTICLE IX.

## REPRESENTATIONS AND WARRANTIES OF TOPOTARGET

Buyer hereby represents and warrants to CuraGen as follows:

Section 9.1 Organization and Authority of TopoTarget. TopoTarget is validly existing under the laws of Denmark. TopoTarget and any of its Affiliates party to any Transaction Document have full corporate power and authority to execute and deliver this Agreement and any Transaction Documents to which it is a party and to perform its obligations hereunder and thereunder.

Section 9.2 Corporate Authority; Validity of Agreement; No Violation. Except for the preparation of appraisal valuation reports required under Danish law, the execution and delivery of this Agreement and the other agreements contemplated hereunder and the performance of TopoTarget's obligations hereunder and thereunder have been duly and validly authorized by all necessary corporate action by TopoTarget, and no other corporate proceedings on the part of TopoTarget are necessary to authorize such execution, delivery and performance. This Agreement has been, and the other agreements to be executed by TopoTarget in connection with this Agreement will be, duly and validly executed and delivered by TopoTarget and constitute or will constitute, as the case may be, the valid and binding obligations of TopoTarget enforceable against TopoTarget in accordance with its or their terms. Execution of this Agreement and the other agreements to be executed by TopoTarget in connection with this Agreement and consummation of the transactions contemplated hereby and

thereby will not (i) result in the violation of or conflict with any of the terms and provisions of any of the organizational or governing documents of TopoTarget, (ii) result in a violation or breach of, or constitute (with or without due notice or lapse of time or both) a default (or give rise to any right of termination, modification, cancellation or acceleration or loss of material benefits) under, any of the terms, conditions or provisions of any note, bond, mortgage, indenture, contract, agreement, permit, license, lease, agreement or other obligation to which TopoTarget is a party or may be subject or (iii) violate any order, writ, injunction, decree, statute, treaty, rule or regulation applicable to TopoTarget, except such violations, breaches or defaults with respect to clauses (ii) and (iii) above which would not adversely affect TopoTarget's ability to perform its obligations hereunder.

Section 9.3 Governmental Approvals. Except as set forth on Schedule 9.3, no authorization, consent, approval, license, exemption from, or filing or registration with any Governmental Authority under any applicable Legal Requirements, is necessary for, or in connection with, the purchase of the Transferred Assets, the execution and delivery by TopoTarget of this Agreement and any other agreement or instrument executed in connection herewith, the consummation by TopoTarget of the transactions contemplated hereby and thereby, or the performance by TopoTarget of its obligations under this Agreement and such other agreements, except as relates solely to CuraGen.

Section 9.4 Purchase Price. TopoTarget has available all of the funds described in Section 3.4(a)(i) above as of the Effective Date that are necessary to consummate the transactions and to perform its obligations under this Agreement on the date that TopoTarget becomes obligated to pay such amount.

Section 9.5 Issuance of the TopoTarget Shares. The TopoTarget Shares are duly authorized and, when issued and delivered to CuraGen in accordance with the terms and conditions of this Agreement, will be duly and validly issued, fully paid, free and clear of all Encumbrances.

Section 9.6 Capitalization. The capitalization of TopoTarget is as described in TopoTarget's most recent publicly filed periodic report as updated by any current report filed with the Nasdaq OMX Nordic Exchange Copenhagen thereafter. TopoTarget has not issued any capital stock since such filings other than pursuant to the exercise of employee stock options/warrants under TopoTarget's stock option/warrant plans, pursuant to the conversion or exercise of any outstanding securities of TopoTarget which would entitle the holder thereof to acquire at any time TopoTarget Shares, including without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, TopoTarget Shares ("Common Stock Equivalents") and pursuant to publicly-disclosed equity financings. Except as a result of the purchase and sale of TopoTarget Shares or as described in the Public Reports (defined below), there are no outstanding options, warrants, script rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exchangeable for, or giving any Person any right to subscribe for or acquire, any TopoTarget Shares, or contracts, commitments, understandings or arrangements by which TopoTarget is or may become bound to issue additional TopoTarget Shares, or securities or rights convertible or exchangeable into TopoTarget Shares. The issue and delivery of TopoTarget Shares to CuraGen



as part of the Purchase Price will not obligate TopoTarget to issue TopoTarget Shares or other securities to any Person (other than CuraGen) and will not result in a right of any holder of TopoTarget securities to adjust the exercise, conversion, exchange or reset price under such securities.

Section 9.7 Public Reports; Financial Statements. The Company has filed all reports required to be filed by it under the Danish Annual Accounts Act for the three years preceding the date hereof (or such shorter period as TopoTarget was required by law to file such material) (the foregoing materials, including the financial statements and footnotes thereto, exhibits thereto and incorporated by reference therein, being collectively referred to herein as the "Public Reports") on a timely basis or has received a valid extension of such time of filing and has filed any such Public Reports prior to the expiration of any such extension. As of their respective dates, the Public Reports complied in all material respects with the requirements of the Danish Annual Accounts Act, and none of the Public Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The financial statements of the Company included in the Public Reports comply in all material respects with applicable accounting requirements and rules and regulations with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with International Financial Reporting Standards applied on a consistent basis during the periods involved, except as may be otherwise specified in such financial statements or the footnotes thereto, and fairly present in all material respects the financial position of TopoTarget as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal year-end audit adjustments.

Section 9.8 Material Changes. Except as set forth on Schedule 9.8 hereto, since December 31, 2007, (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a material adverse effect on the results of operations, assets, business or financial condition of TopoTarget, taken as a whole ("TopoTarget Material Adverse Effect"),

(ii) TopoTarget has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in TopoTarget's financial statements pursuant to International Financial Reporting Standards or required to be disclosed in filings made with Nasdaq OMX Nordic Exchange Copenhagen, (iii) TopoTarget has not altered its method of accounting, (iv) TopoTarget has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock; (v) TopoTarget has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing TopoTarget stock option/warrant plans; and (vi) TopoTarget has not had any disagreement with its independent auditors that would require public disclosure.

Section 9.9 Compliance. TopoTarget (i) is not in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by TopoTarget under), nor has TopoTarget received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is

bound (whether or not such default or violation has been waived), (ii) is not in violation of any order of any court, arbitrator or governmental body, or (iii) is not and has not been in violation of any statute, rule or regulation of any governmental authority, except in the case of clauses (i), (ii) and (iii) as would not have or reasonably be expected to result in a TopoTarget Material Adverse Effect.

Section 9.10 Brokers and Finders. Except for the investment banking firm of JP Morgan Chase & Co., TopoTarget has not employed any broker, finder, consultant or intermediary in connection with the transactions contemplated by this Agreement who would be entitled to a broker's, finder's or similar fee or commission from CuraGen in connection therewith or upon the consummation thereof. All expenses, fees and commissions due to JP Morgan Chase & Co. in connection with the transactions contemplated herein shall be paid by TopoTarget.

Section 9.11 No Other Warranties. EXCEPT AS SET FORTH IN THIS ARTICLE IX OR ANY TRANSACTION DOCUMENT, NONE OF TOPOTARGET, ITS AFFILIATES OR ANY OF THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES OR REPRESENTATIVES MAKES OR HAS MADE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AT LAW OR IN EQUITY.

## ARTICLE X.

## COVENANTS

Section 10.1 Additions to Product Technical Information. The Parties acknowledge that in connection with the prosecution of regulatory approval of HDAC Inhibitors and/or Products from the FDA or similar bodies or the compliance with legal and regulatory requirements to which HDAC Inhibitors and/or Products may be subject before or after receipt of such regulatory approval, TopoTarget may identify, or may request CuraGen to identify, particular documents, reports, files and records (whether in paper, electronically-stored, magnetic media, film or microfilm or other tangible form) containing biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, clinical, safety, manufacturing and quality control data, information or Know-How relating to the development or manufacturing of HDAC Inhibitors and/or Products constituting or pertaining to correspondence or communications with the FDA or any other Regulatory Authority (including, but not limited to, minutes or summaries of any correspondence or communications with the FDA or any other Regulatory Authority), and applications for regulatory approval of any Product, which documents, reports, files and records are reasonably required to be accessible to TopoTarget in connection with such prosecution of regulatory approval or compliance with such legal or Regulatory Authority. At any time after the Effective Date, at TopoTarget's request as part of the services to be provided pursuant to the Transition Services Agreement, CuraGen agrees to take all reasonable steps to identify any such documents, reports, files and records and to furnish a copy thereof to TopoTarget. The Parties acknowledge that in certain cases such documents, reports, files and records may be required by Regulatory Authorities to be accessible within specific and inflexible deadlines, and in such cases CuraGen shall take all reasonable steps to furnish such documents, reports, files and records so as to enable TopoTarget to meet such deadlines.

Section 10.2 Consents; Filings. Upon the terms and subject to the conditions hereof, each of the Parties hereto shall, and shall cause their respective Affiliates to, use all reasonable efforts, to obtain from the requisite Governmental Authorities any consents, licenses, permits, waivers, approvals, authorizations or orders required to be obtained or made in connection with the authorization, execution and delivery of this Agreement and the consummation of the transactions contemplated by this Agreement.

Section 10.3 Efforts of the Parties. Each of CuraGen and TopoTarget shall, and shall cause their respective Affiliates to do, or cause to be done, all things necessary to consummate the transactions contemplated hereby and by the Transaction Documents (save as otherwise provided herein).

Section 10.4 Further Assurances. CuraGen, on one hand, and TopoTarget, on the other hand, agree that subsequent to the Effective Date, at the request of the other Party, they will execute and deliver, or cause to be delivered, to the other Party, such further instruments and take such other action as may be reasonably necessary to carry out the transactions contemplated by this Agreement.

Section 10.5 Data; Books; Records. For a period of seven (7) years after the Effective Date, (a) TopoTarget and their Affiliates agree to retain and make available all books and records received from CuraGen and their respective Affiliates after the Effective Date for inspection and copying by CuraGen or their agents at CuraGen's expense, upon reasonable request and upon reasonable notice; provided, that such books and records shall be made available only to the extent such availability is required for CuraGen or its Affiliates to comply with a Legal Requirement, this Agreement, the Transaction Documents or to enable CuraGen or its Affiliates to defend against, respond to, or otherwise participate in any Third Party litigation, investigation, audit, process, subpoena or other proceeding related to HDAC Inhibitors or to enforce its rights hereunder or under any Transaction Document, and (b) no such books and records shall be destroyed by TopoTarget without first advising CuraGen in writing and giving CuraGen a reasonable opportunity to obtain possession thereof. In addition, to the extent they are obligated by Legal Requirement to do so, CuraGen and/or its Affiliates shall have the right to retain books and records for legal, regulatory, tax or accounting purposes, so long as CuraGen and/or its Affiliates provide at least one copy of such books and records to TopoTarget.

Section 10.6 Confidentiality. Except as expressly provided in this Agreement or in any Transaction Document, CuraGen agrees with TopoTarget, and TopoTarget agrees with CuraGen, and CuraGen and TopoTarget undertake to cause their respective Affiliates, to keep confidential at all times after the date of this Agreement, and not directly or indirectly reveal, disclose or use for its own or any purpose not contemplated by this Agreement, any Confidential Information of the other Party delivered, received or obtained as a result of entering into or performing, or supplied by or on behalf of a Party in the negotiations leading to, the License and Collaboration Agreement or this Agreement and which relates to: (i) the negotiations relating to this Agreement; (ii) the subject matter or provisions of this Agreement or the License and Collaboration Agreement; or (iii) the matters disclosed pursuant to this Agreement. The

Transferred Assets shall be deemed Confidential Information of TopoTarget, whether or not marked as confidential. Notwithstanding anything to the contrary contained herein, CuraGen covenants and agrees that it and its Affiliates, their successors and any of their agents shall not use for any purpose any Confidential Information, or material of a technical, medical or scientific nature, exclusively relating to HDAC Inhibitors, including any Product Technical Information exclusively relating to HDAC Inhibitors, or any Confidential Information comprised within the Licensed CuraGen Rights for any purpose within the Field, in each case whether or not received from TopoTarget or any of their Affiliates or developed by CuraGen or any of their Affiliates, which is not otherwise publicly available at the Effective Date or becomes thereafter publicly available pursuant to actions of TopoTarget or its Affiliates as contemplated by this Section 10.6.

The prohibitions in this Section 10.6 do not apply if: (i) the Confidential Information was in the public domain before it was furnished to the relevant Party or, after it was furnished to that Party, entered the public domain otherwise than as a result of (A) a breach by that Party of this Section 10.6 or any written confidentiality agreement to which any of CuraGen or TopoTarget is a party or (B) a disclosure by the receiving Party in violation of a confidentiality obligation; (ii) information was received by the receiving Party on a non-confidential basis from a Third Party who, as far as the receiving Party is aware, is not prohibited from disclosing such information to the receiving Party by a legal, contractual or fiduciary obligation to the disclosing Party; (iii) the information was independently developed by CuraGen, TopoTarget or any of their Affiliates, as applicable, after the Effective Date without reliance on the information disclosed by the disclosing Party; or (iv) disclosure is necessary in order to comply with applicable legislation, regulatory requirements, legal process, stock exchange rules or to obtain tax or other clearances or consents from a taxation authority, provided that any such information disclosable pursuant to this Section 10.6(b)(iv) shall be disclosed only to the extent required by applicable Legal Requirement or regulatory requirements and (unless such consultation is prohibited by applicable Legal Requirement or regulatory requirements or is not reasonably practicable) only after consultation with TopoTarget or CuraGen (as the case may be).

Section 10.7 Noncompetition Covenant.

(a) Subject to the terms and conditions of this Section 10.7, during the Period commencing on the Effective Date and ending on the [**] anniversary of the Effective Date (the "Restricted Period"), CuraGen hereby agrees, on behalf of itself and its Affiliates, that none of CuraGen or its Affiliates shall, or shall enable a Third Party, to directly or indirectly, whether through license or otherwise, develop, market, sell, detail, promote, co-promote or distribute any pharmaceutical product containing an HDAC Inhibitor as an active ingredient ("Competing Product") anywhere in the world.

(b) The restrictions set forth in Section 10.7(a) above shall not apply to the development or commercialization of a Competing Product owned or controlled by any Person (an "Acquiror") who directly or indirectly acquires a majority of the outstanding common stock of CuraGen or any Affiliate of such Acquiror; provided that (i) such Acquiror or any Affiliate of such Acquiror was not an Affiliate of CuraGen prior to the Effective Date, (ii) such Competing Product was in existence immediately prior to the time that such Third Party (or its Affiliate) became an Acquiror and (iii) in all cases neither such Acquiror nor any Affiliate uses any CuraGen Collaboration Technology, Joint Collaboration Technology or Licensed CuraGen Rights in connection with such Competing Product.

(c) Notwithstanding the provisions of this Section 10.7(a), none of CuraGen or any Affiliate shall be deemed to be in violation of Section 10.7(a) or to have enabled, directly or indirectly, a Third Party to market, sell, detail, promote or distribute a Competing Product by virtue of an acquisition and subsequent divestiture of a Competing Product that was acquired in connection with the acquisition of other rights or interests in an entity (for purposes other than the acquisition of the Competing Product as the primary purpose), provided that such divestiture (i) is completed within 365 days of the initial acquisition of such rights or interests, (ii) such divestiture occurs by either (x) an outright sale of all such Competing Product rights to a Third Party or (y) an out-license (exclusive as to CuraGen and its Affiliates) to a Third Party of all such rights to develop and commercialize such Competing Product and (iii) after such divestiture none of CuraGen or its Affiliates exercises or has the ability to exercise any role or to influence in any manner the development or commercialization of such Competing Product that has been divested during the Restricted Period.

(d) If CuraGen breaches any of the provisions of Sections 10.7, TopoTarget shall have the following rights and remedies, each of which shall be independent of the others and severally enforceable, and each of which is in addition to, and not in lieu of, any other rights and remedies available to TopoTarget at law or in equity, the right and remedy to have this Section 10.7 specifically enforced by any court of competent jurisdiction, it being agreed that any breach of this Section 10.7 would cause irreparable injury to TopoTarget and that money damages would not provide an adequate remedy to TopoTarget.

(e) Each Party acknowledges and agrees that provisions of this Section 10.7 are reasonable in temporal scope and in other respects. If any court determines that any of the provisions of this Section 10.7, or any part thereof, is invalid or unenforceable, the remainder of the provisions of this Section 10.7 shall not thereby be affected and shall be given full force and effect, without regard to the invalid portions. If any court determines that any of the provisions of this Section 10.7, or any part thereof, is unenforceable because of the duration or geographic scope of such provision, such court shall have the power to reduce the duration or scope, as the case may be, of such provision, and, in its reduced form, such provision shall then be enforceable.

Section 10.8 Mutual Release.

In consideration of the mutual promises contained herein, each Party, for itself and for each of its Affiliates, hereby generally, irrevocably, unconditionally and completely releases and forever discharges the other Party, such other Party's Affiliates, and its and their officers, directors, stockholders, agents, employees, heirs, administrators, executors, predecessors, successors and assigns (hereinafter, the "Released Parties") from, and hereby irrevocably, unconditionally and completely waives and relinquishes, each of such Party's Released Claims. The Parties acknowledge they are aware that they may hereafter discover facts in addition to or different from those now known or believed to be true with respect to the subject matter of this release, but that it is their intention to hereby fully, finally and forever settle and release all such claims, disputes and differences, known or unknown, suspected or unsuspected, that now exist or heretofore have existed between the Parties and that in furtherance of such intention, this release

shall remain in effect as a full and complete release notwithstanding the discovery or existence of any such additional or different facts. The term "Released Claims," when used herein with respect to a Party, shall mean and include each and every claim, charge, complaint, demand, action, cause of action, suit, right, debt, sum of money, cost, reckoning, covenant, contract, agreement, promise, doing, omission, damage, execution, obligation, liability and expense (including attorneys' fees and costs), of every kind and nature, whether at law or in equity, that such Party may have had in the past, may now have or may have in the future against the Released Parties, and which has arisen or arises directly or indirectly out of, or relates directly or indirectly to, any circumstance, agreement, activity, action, omission, event or matter occurring or existing on or prior to the Effective Date to the extent such claim relates to or arises under the License and Collaboration Agreement; provided, however, that the Released Claims shall exclude: (1) any and all rights to seek and obtain indemnification for any breach of any representation, warranty, covenant or agreement under this Agreement (or, as provided herein, under the License and Collaboration Agreement); and (2) any and all rights to seek and obtain enforcement of, or a remedy arising out of the breach of, any obligation provided for in this Agreement.

ARTICLE XI.

CERTAIN ADDITIONAL AGREEMENTS

Section 11.1 Costs and Expenses. Except as otherwise expressly provided herein, the parties shall bear their own respective expenses (including, but not limited to, all compensation and expenses of counsel, financial advisors, consultants and independent accountants) incurred in connection with the preparation and execution of this Agreement and consummation of the transactions contemplated hereby.

Section 11.2 Notification of Certain Matters. CuraGen shall give prompt notice to TopoTarget of any of the following of which it becomes aware: (i) any notice of, or other communication relating to, a default or event that, with notice or lapse of time or both, would become a default under any Contract; and (ii) any notice or other communication from any Third Party alleging that the consent of such Third Party is or may be required in connection with the transactions contemplated by this Agreement.

ARTICLE XII.

SURVIVAL AND INDEMNIFICATION

Section 12.1 Survival.

(a) Subject to applicable Legal Requirements, the covenants and representations and warranties in this Agreement shall survive until the second anniversary of the Effective Date; provided that the representations and warranties set forth in Sections 8.1, 8.2, 8.4, 8.7, 8.8 (last sentence), 8.13, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7 (last sentence), 9.8 and 9.10 shall survive indefinitely.

Section 12.2 Indemnification.

(a) From and after the Effective Date and subject to the provisions of this Article XII, CuraGen agrees to indemnify and hold harmless TopoTarget and its Affiliates and each of their respective officers, directors, employees, agents, successors and assigns against and in respect of any and all losses, claims, damages (including special and consequential damages, including lost profits) ("Losses"), resulting or arising from or otherwise relating to any Retained Liability, any breaches by CuraGen of any representations, warranties, covenants or other agreements contained in this Agreement or in any Transaction Document.

(b) From and after the Effective Date and subject to the provisions of this Article XII, TopoTarget agrees to indemnify and hold harmless CuraGen and its Affiliates and each of their respective officers, directors, employees, agents, successors and assigns against and in respect of any and all Losses resulting or arising from or otherwise relating to any Assumed Liability or to any breaches of TopoTarget' representations, warranties, covenants or other agreements contained herein or in any Transaction Document.

Section 12.3 Limitations. CuraGen shall not have liability under Section 12.2(a) with respect to any breach of any of its representations and warranties under this Agreement: (i) for any individual item (or series of related items) where the Loss relating thereto is less than $10,000 (Ten Thousand United States Dollars) and (ii) in respect of each individual item (or series of related items) where the Loss relating thereto is equal to or greater than $10,000 (Ten Thousand United States Dollars), unless and until the aggregate amount of such Losses exceeds $500,000 (Five Hundred Thousand United States Dollars) in the aggregate, in which case CuraGen shall be liable for the entire amount of the Losses described in this clause (ii) in excess of $500,000 (Five Hundred Thousand United States Dollars). CuraGen's maximum liability for all Losses under Section 12.2 solely with respect to any breaches of representations and warranties shall not exceed $6.5 million (Six Million Five Hundred Thousand United States Dollars). Notwithstanding the foregoing, the limitations set forth in this Section 12.3 shall not apply to indemnification obligations with respect to (x) breaches of the warranties set forth in Sections 8.1, 8.2, 8.4, 8.8 (final sentence) and 8.11 hereof, (y) willful or knowing breaches of any representations, warranties or covenants of CuraGen or (z) any fraud or deliberate misrepresentation of CuraGen or any gross negligence or willful misconduct of CuraGen.

Section 12.4 Method of Asserting Claims.

(a) A Party seeking indemnification pursuant to Section 12.2 (an "Indemnified Party") shall give prompt notice to the Party from whom such indemnification is sought (the "Indemnifying Party") of the assertion of any claim, or the commencement of any action, suit or proceeding, in respect of which indemnity may be sought hereunder and will give the Indemnifying Party such information with respect thereto as the Indemnifying Party may reasonably request, but failure to give such notice shall relieve the Indemnifying Party of any liability hereunder only to the extent that the Indemnifying Party has suffered actual prejudice thereby. The Indemnifying Party shall have the right, exercisable by written notice to the Indemnified Party within thirty (30) days (unless a shorter period is required by the circumstances) of receipt of notice from the Indemnified Party of the commencement of or

assertion of any claim or action, suit or proceeding by a Third Party in respect of which indemnity may be sought hereunder (a "Third Party Claim"), to assume and control the defense of such Third Party Claim which involves (and continues to involve) solely monetary damages; provided, that the Indemnifying Party expressly agrees in such notice that, as between the Indemnifying Party and the Indemnified Party, the Indemnifying Party shall be solely obligated to satisfy and discharge the Third Party Claim (all of the foregoing, the "Litigation Conditions"). For the purpose of the foregoing, the Indemnified Party shall promptly provide the Indemnifying Party with all supporting evidence of the Third Party Claim available to the Indemnified Party as well as any arguments identified by the Indemnified Party to oppose such Third Party Claim and comply with all reasonable requests for information from the Indemnifying Party so as to allow the Indemnifying Party to make to the extent possible an informed judgment as to its potential liability under this Article XII.

(b) In the event the Indemnifying Party assumes the defense in respect of any Third Party Claim (subject to the Litigation Condition), the Indemnifying Party shall conduct the defense of each Third Party Claim diligently and in good faith using all reasonable means and defenses available to it (and the Indemnified Party shall relinquish the conduct of the defense of the Third Party Claim). The Indemnified Party shall have the right, if it so notifies the Indemnifying Party, to be consulted in such defense of the Third Party Claim and to participate at its own expense and with counsel of its choice. In such event, the Indemnifying Party shall afford the Indemnified Party and its counsel the opportunity to comment and the right to object (which comments shall be taken into account to the extent reasonable and such right to object shall not be unreasonably exercised) with respect to the conduct of the defense of such Third Party Claim.

(c) In the event the Indemnifying Party does not assume the defense in respect of the Third Party Claim, the Indemnified Party shall conduct the defense of each Third Party Claim diligently and in good faith using all reasonable means and defenses available to it, and the Indemnifying Party shall promptly reimburse the Indemnified Party for its reasonable attorneys' fees. The Indemnifying Party shall have the right, if it so notifies the Indemnified Party, to be consulted in such defense of the Third Party Claim and to participate at its own expense and with counsel of its choice. In such event, the Indemnified Party shall afford the Indemnifying Party and its counsel the opportunity to comment with respect to the conduct of the defense of such Third Party Claim.

(d) The Party conducting the defense of the Third Party Claim shall keep the other Party fully informed of the progress of any Third Party Claim and its defense, and shall with reasonable promptness provide such Party with copies all material notices, written communications and filings (including court papers) made by or on behalf of any of the parties to the underlying claim.

(e) From and after the delivery of a notice of a Third Party Claim under Section 12.4(a), at the reasonable request of the Indemnifying Party, the Indemnified Party shall grant the Indemnifying Party and its representatives all reasonable access to the books, records and properties of the Indemnified Party to the extent reasonably related to the matters to which the Third Party Claim relates. The Indemnifying Party will not, and shall require that its representatives do not, use (except in connection with such Third Party Claim) or disclose to any

Third Party other than the Indemnifying Party's representatives (except as may be required by applicable Legal Requirements and legal process) any information obtained pursuant to this Section which is designated confidential by the Indemnified Party. All such access shall be granted during normal business hours and shall be granted under conditions which will not interfere with the business and operations of the Indemnified Party.

(f) The Indemnifying Party, if it shall have assumed the defense of any Third Party Claim as provided in this Agreement, may consent to a settlement of, or the entry of any judgment arising from, any such Third Party Claim without the prior written consent of the Indemnified Party so long as such settlement or judgment does not commit the Indemnified Party to take, or to forbear to take, any action. The Indemnified Party shall have the sole and exclusive right to settle any Third Party Claim, on such terms and conditions as it deems reasonably appropriate, to the extent that such Third Party Claim involves equitable or other non-monetary relief and such settlement does not involve the payment by the Indemnifying Party of monies to the Indemnified Party or a Third Party.

(g) Whether or not the Indemnifying Party chooses to defend any claim involving a Third Party, all the parties hereto shall cooperate in the defense or prosecution thereof and shall furnish such records, information and testimony, and attend such conferences, discovery proceedings, hearings, trials and appeals, as may be reasonably requested in connection therewith.

(h) The Indemnified Party shall take all reasonable steps to avoid or mitigate any Losses in respect of which it might be entitled to indemnification (other than seeking recovery under insurance policies with Third Parties) which would reduce the Loss recoverable by the Indemnified Party from the Indemnifying Party under this Article XII.

(i) No claim of the Indemnified Party or any of its Affiliates under this Agreement or the Transaction Documents may be indemnified more than once in respect of the same Loss suffered.

## ARTICLE XIII.

## MISCELLANEOUS

Section 13.1 Notices. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given (i) by personal delivery, (ii) upon transmission by facsimile machine if a confirmation sheet is emitted from such machine or (iii) upon delivery by an internationally recognized overnight courier service, each to the other Party at the following address (or at such other address as shall be given in writing by any Party to the other in accordance with this Section 13.1):

(a) If to CuraGen:

322 East Main Street
Branford, Connecticut 06405
United States of America
Attention:
Facsimile No.: +1.203.483.2552

With a copy to:

WilmerHale
399 Park Avenue
New York, New York 10022
United States of America
Attention: Steven D. Singer, Esq.
Facsimile No.: +1.212.230.8888

(b) If to TopoTarget:

Symbion Science Park
Fruebjergvej 3, 2100
Copenhagen
Denmark
Attention: Chief Executive Officer
Facsimile No.: +45.39.179.492

With a copy to:

David E. Schulman, Esq.
Dechert LLP
1775 I Street, N.W.
Washington, D.C. 20006-2401
United States of America
Facsimile No.: +1.202.261.3333

Section 13.2 Conflict; Construction of Documents. In the event of any conflict between the provisions of this Agreement and the provisions or any other agreements delivered hereunder, the provisions of this Agreement shall prevail.

Section 13.3 Assignability; Successors and Assigns. Neither this Agreement nor any Transaction Document nor any of the rights or obligations of the parties hereunder or thereunder may be assigned by any Party without the prior written consent of the other Party to this Agreement. Notwithstanding the foregoing, TopoTarget, may, without such consent, assign any or all of its rights and obligations under this Agreement or any Transaction Document (a) to any one or more of its Affiliates (provided TopoTarget remains responsible in full for the Purchase Price hereunder); (b) in connection with the transfer or sale of all or substantially all of its assets or stock, or in the event of the merger or consolidation or similar transaction; (c) in the event of the sale or transfer by TopoTarget to any Third Party as part of the sale of substantially all of their rights to HDAC Inhibitors and Products. In the event of any such assignment permitted by the foregoing, the assigning Party shall remain liable to CuraGen with respect to the obligations so assigned. It is further understood that in the event of any assignment of the Patent rights included within the Licensed CuraGen Rights, CuraGen shall require the assignee to acknowledge and agree in writing that such Patent rights are subject to the license and other

rights granted to TopoTarget hereunder. Any attempted assignment or delegation in contravention hereof shall be null and void. Subject to the foregoing, this Agreement and any Transaction Documents and all rights and powers granted and obligations created hereby will bind and inure to the benefit of the parties hereto and their respective successors and assigns.

Section 13.4 Specific Performance. Each of the parties hereto acknowledges and agrees that the other Party would be damaged irreparably in the event that Sections 2, 3.1, 3.4, 10.6, 10.7, 10.8, 12 of this Agreement are not performed in accordance with their specific terms or otherwise breached. Accordingly, each of the parties agrees that the other Party shall be entitled to an injunction or injunctions to prevent breaches of such provisions and to enforce specifically such provisions in any action instituted in any court or tribunal having jurisdiction over the parties and the matter in addition to any other remedy to which it might be entitled, at law or equity.

Section 13.5 Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York without regard to its choice of law rules. With respect to any suit, action or proceeding arising out of or relating to this Agreement (each, a "Proceeding"), each Party hereto irrevocably (i) agrees and consents to submit to the non-exclusive jurisdiction of the United States District Court for the Southern District of New York, United States of America, and (ii) waives, and agrees not to assert by way of motion, defense, or otherwise, in any such Proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the Proceeding is brought in an inconvenient forum, that the venue of the Proceeding is improper, or that this Agreement or the transactions contemplated by this Agreement may not be enforced in or by any of the above-named courts. Notwithstanding the immediately preceding sentence, either Party may seek injunctive or similar equitable relief as to any matter arising out of or relating to this Agreement in any court of competent jurisdiction.

Section 13.6 Headings. The headings preceding the text of the Articles, Sections and subsections hereof are inserted solely for convenience of reference, and shall not constitute a part of this Agreement, nor shall they affect its meaning, construction or effect. All words used in this Agreement will be construed to be of such gender or number as the context may require.

Section 13.7 Amendment and Waiver. The parties may by mutual agreement amend this Agreement in any respect, and any Party, as to such Party, may (a) extend the time for the performance of any of the obligations of any other Party; and (b) waive (i) any inaccuracies in representations and warranties by any other Party, (ii) compliance by any other Party with any of the agreements contained herein and performance of any obligations by such other Party and (iii) the fulfillment of any condition that is precedent to the performance by such Party of any of its obligations under this Agreement. To be effective, any such amendment or waiver must be in writing and be signed by the Party against whom enforcement of the same is sought.

Section 13.8 Entire Agreement. This Agreement and the Transaction Documents shall constitute the entire understanding and agreement among the parties hereto in



relation to the subject matter of this Agreement and shall together supersede all previous agreements among the parties in relation to the same subject matter. It is further agreed that none of the parties has entered into this Agreement in reliance upon any warranty or undertaking of the other Party which is not expressly set out or referred to in this Agreement.

Section 13.9 Publicity. A copy of any public announcement or similar publicity released in connection with the announcement of this Agreement and the transactions contemplated herein shall be provided by the disclosing Party to the non-disclosing Party, to the extent practicable, prior to the dissemination of such announcement or publicity, and the parties shall coordinate with one another regarding the timing, form and content of such disclosure.

Section 13.10 Counterparts. This Agreement and any amendments hereto may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by telecopier shall be as effective as delivery of a manually executed counterpart of this Agreement.

Section 13.11 No Third Party Beneficiary Rights. This Agreement is not intended to and shall not be construed to give any Person or entity other than the parties signatory hereto any interest or rights (including any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby.

Section 13.12 Severability. Each of the agreements, undertakings, covenants, warranties, indemnities and other obligations of the parties entered pursuant to this Agreement are considered reasonable by the parties hereto. If any provision of this Agreement or an Transaction Document or any part thereof is held void or unenforceable or in conflict with the Legal Requirements of any relevant jurisdiction, the parties hereto shall negotiate in good faith to modify this Agreement or Transaction Document, as applicable, so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

**[Remainder of Page Intentionally Left Blank]**

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed this on the day and year first above written.

**CURAGEN CORPORATION**

By: /s/ Timothy M. Shannon
Name: Timothy M. Shannon
Title: President and CEO

**TOPOTARGET A/S**

| | | |
|---|---|---|
| By: | /s/ Peter Buhl | /s/ Hakan Astrom |
| Name: | Peter Buhl | Hakan Astrom |
| Title: | CEO | Chairman |

**LIST OF SCHEDULES AND EXHIBITS**

| | |
|---|---|
| Schedule 2.1(d) | Authorizations |
| Schedule 2.1(e) | Products |
| Schedule 2.1(h) | Contracts |
| Schedule 3.3(a) | Approved Prepaid Expenses |
| Schedule 3.3(c) | Approved Open Payables |
| Schedule 3.5 | Allocation |
| Schedule 5.1(b)(i) | Product Technical Information |
| Schedule 8.3 | Required Government Approvals |
| Schedule 8.11 | Material Changes |
| Schedule 9.3 | Required Government Approvals |
| Schedule 9.8 | Material Changes |
| Exhibit A | Transition Services Agreement |
| Exhibit B | Assignment of Patents |
| Exhibit C | Sample Release of HDAC Inhibitor or Product for Clinical Use |

**Schedule 2.1(d)**

**Authorizations**

All Authorizations managed by CuraGen have been managed fully electronically; those electronic files shall be included on a DVD with closing deliverables. The organizational stucture, index and navigation instructions for the DVD are as noted below.

Table of Contents:

## Schedule 2.1(e)

## Products

| Study/Protocol Number | CTM | Lot/Job Number | ID Number | Inventory | Expiration Date | Comments |
|---|---|---|---|---|---|---|
| **CuraGen PXD101** | PXD101 10mL vial | 07E24 | R071837 | 1261 | 24-May-09 | |
| | PXD101 10mL vial | 06K08 | R070430 | 3 | 08 Nov 2008 | |
| | PXD101 10mL vial | 07A27 | R071062 | 2500 | 27 Jan 2009 | |
| | PXD101 250mg capsules, 7 per bottle | 238491 | R070078 | 5 | 15 Jun 2008 | |
| | PXD101 250mg capsules, 7 per bottle | 245371 | R070079 | 17 | 29 Aug 2008 | |
| | Filter Extension Set | 2H5660 | R071794 | 73 | NA | |
| | 20-Hole Foam Insert | C300170 | R060337 | 45 | NA | |
| | 20 Hole Box | C300169 | R060313 | 62 | NA | |
| **CuraGen PXD101-CLN-16** | Filter Extension Set | 2H5660 | R071024 | 20 | NA | |
| **CuraGen PXD101-CLN-6** | PXD101 10 mL vial, 20 per box | (06K08) PXD0005 | NA | 14 | 8-Nov-08 | |
| | 20 Hole Foam Insert | C300170 | R072028 | 6 | NA | |
| | Filter Extension Set | 2H5660 | R071026 | 110 | NA | |
| | Pharmacy Manual | NA | R060014 | 1 | NA | |
| **CuraGen PXD101-CLN-8** | PXD101 10 mL vial, 20 per box | (06K08) PXD0005 | NA | 13 | 8-Nov-08 | |
| | Filter Extension Set | 2H5660 | R071846 | 130 | NA | |
| | Pharmacy Manual | NA | R060503 | 8 | NA | |
| **CuraGen PXD101-CLN-9** | 8x Kit Box | C075923 | R060590 | 174 | NA | |
| | 8x Divider | C075924 | R060591 | 176 | NA | |
| | 20x Kit Box | C075925 | R060588 | 184 | NA | |
| | 20x Divider | C075926 | R060589 | 183 | NA | |
| | PXD101 250mg capsules, 7 per bottle | 252777 | R070638 | 18 | 05 Dec 2008 | |
| | WARMMARK 30degreeC | 51020 | R060632 | 103 | NA | |
| | Pharmacy Manual | NA | R060681 | 3 | NA | |
| | PXD101 Capsules 250 mg, 20 bottles per box | CLN0003 (238491) | NA | 1 | 15 Jun 2008 | |
| | PXD101 Capsules 250 mg, 20 bottles per box | CLN0004 (245371) | NA | 3 | 29 Aug 2008 | |
| | PXD101 Capsules 250 mg, 20 bottles per box | CLN0005 (252777) | NA | 27 | 05 Dec 2008 | |
| | PXD101 Patient box | CLB0001 | NA | 34 | NA | **QUARANTINE** |
| | PXD101 Patient box | CLB0002 | NA | 57 | NA | **QUARANTINE** |
| **NCI studies** | PXD101 vials | 06H10 | | 5038 vials | | |
| | PXD101 vials | 2720(reserved for Canada) | | 2720 vials | | |

**Schedule 2.1(h)**

**Contracts**

### 1.1 Clinical Contracts

Master Trial Agreements (MTA) with specific contract research organizations will be provided as copies (not as originals) as these agreements are not project specific. The work orders developed under the MTA are provided in original form. Attachment 1 to this Schedule lists the clinical contracts and work orders.

### 1.2 Quality Contracts

Contract between Almac and CuraGen will be provided in electronic format (not as the original) as the contract is not project specific.

### 1.3 Regulatory Contracts

Contracts between CuraGen and Technical Research Institute (TRI) and EDJ Associates.

**Attachment 1**
(to Schedule 2.1(h))

**CONTRACT INDEX**

| Year | Organization/Consultant | Collaborator or Contact | Project | Antibody or CuraGen Protein ID | Agreement | Full Agreement Name |
|---|---|---|---|---|---|---|
| [**] | [**] | [**] | [**] | [**] | [**] | [**] |

Confidential Materials omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.

A total of five pages were omitted.

## Schedule 3.3(a)

## Estimated Prepaid Expenses

| Description | Project Code # | Prepaid Balance at April 21, 2008 |
|---|---|---|
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | [**] | [**] |
| [**] | | [**] |
| | | |
| | | [**] |

**Schedule 3.3(c)**

**Estimated Open Payables**

[**]

Confidential Materials omitted and filed separately with the Securities and Exchange Commission pursuant to request for confidential treatment.

A total of two pages were omitted.

**Schedule 3.5**

**Allocation**

| Description | Allocated Amount |
|---|---|
| Inventory of belinostat at April 21, 2008 | 750,000 |
| All other "Transferred Assets" | 37,847,147 |
| Total | 38,597,147^ |

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| | |
|---|---|
| ^ Total purchase price calculated as follows: | |
| Closing price of Topo Common Shares, April 17th | 11.80 |
| Exchange rate DKK to USD April 17th | 4.6836 |
| In USD | 2.5194295 |
| Number of shares | 5,000,000 |
| Value of shares | 12,597,147 |
| Cash consideration | 26,000,000 |
| Total Consideration | 38,597,147 |

**Schedule 5.1(b)(i)**

**Product Technical Information**

The following is the Table of Contents for the Product Technical Information provided to TopoTarget on the Effective Date.

1.6.2 CLN 8 Disc 2

1.6.3 CLN 8 Disc 3

1.6.4 CLN 8 Disc 4

1.6.5 CLN-8 Disc 5

1.6.6 CLN 4, CLN , CLN 9, CLN 16, CLN 17, CLN 6, TT20 and TT30

1.7 Index of Supportive Documents CD-ROM

1.8 Index of Future Products CD-ROM

1.9 Index of Recent 3 Months of Data to Archive

1.10 Index of Asian Discussions CD-ROM

1.11 Mapping of Paper Clinical Study Files

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**Schedule 8.3**

**Required Government Approvals**

**None**

**Schedule 8.11**

**Material Changes**

**None**

**Schedule 9.3**

**Required Government Approvals**

**None**

**Schedule 9.8**

**Material Changes**

**None**

**Exhibit A**

**Transition Services Agreement**
[See attached]

**EXECUTION COPY**

# TRANSITION SERVICES AGREEMENT

This Transition Services Agreement (this "Agreement") is entered into as of April 21, 2008 by and between TopoTarget A/S, a company duly organized and existing under the laws of Denmark and having offices at Symbion Science Park, Fruebjergvej 3, 2100 Copenhagen, Denmark ("TopoTarget"), and CuraGen Corporation, a company duly organized and existing under the laws of the State of Delaware and having offices at 322 East Main Street, Branford, Connecticut 06405, USA ("CuraGen"). As used herein, TopoTarget and CuraGen are referred to as the "Parties."

**W I T N E S S E T H :**

WHEREAS, the Parties have entered into a Transfer and Termination Agreement (the "Transfer and Termination Agreement") of even date herewith, pursuant to which, among other things, TopoTarget will acquire substantially all of CuraGen's interests in HDAC Inhibitors and in certain other related rights and assets, all on the terms and conditions set forth in the Transfer and Termination Agreement;

WHEREAS, capitalized terms used in this Agreement but not defined herein shall have the meanings given to them in the Transfer and Termination Agreement and the rules of construction set forth in the Transfer and Termination Agreement shall apply to this Agreement; and

WHEREAS, pursuant to the terms of the Transfer and Termination Agreement, CuraGen has agreed to provide to TopoTarget certain transition services.

NOW, THEREFORE, in consideration of the mutual covenants and agreements of the parties contained herein, the parties agree as follows:

1. Services Provided.

1.1 Commencing on the Effective Date, subject to the terms hereof, CuraGen shall provide to TopoTarget those services set forth on Exhibit A with respect to the HDAC Inhibitor development program (the "Services") and allocating resources as set forth in Section 1.2 below, until such Services are terminated in accordance with the terms hereof.

1.2 CuraGen shall allocate the following resources to performance of Services hereunder: (a) for the period beginning on the Effective Date and ending May 31, 2008, [**] FTEs; (b) for the period beginning on June 1, 2008 and ending June 30, 2008, [**] FTEs; and (c) for the period beginning July 1, 2008 and ending on the Termination Date, [**] of an FTE. For purposes of this Agreement, an "FTE" shall mean the full-time equivalent of one person performing scientific, technical, project management and/or managerial work for the specified period.

1.3 The Services shall be consistent with CuraGen's standard processes, shall not include any Services that would be unlawful for CuraGen to provide, and shall not include the making of strategic business decisions for or general management of TopoTarget.

1.4 On the Effective Date, CuraGen and TopoTarget will each designate an appropriate point of contact for all questions and issues relating to the Services during the term of this Agreement ("Transition Managers"). The Transition Managers may meet from time to time at CuraGen's facilities to discuss issues relating to the Services.

1.5 TopoTarget shall assume performance of all activities with respect to the HDAC Inhibitor development program other than the Services as of the Effective Date, and shall further assume performance of the Services on or prior to the Termination Date (as defined below). CuraGen shall have no obligation to perform any services other than the Services after the Effective Date, and shall have no obligation to perform the Services after the Termination Date. In furtherance of the foregoing, TopoTarget shall use reasonable efforts to make or obtain any approvals, permits and licenses and implement any systems as may be necessary for it to provide the Services independently as soon as reasonably practicable following the Effective Date, but in no event later than the Termination Date.

1.6 Without limiting Section 1.5 above, all activities related to the HDAC Inhibitor development program (including but not limited to communications, clinical, regulatory, drug safety, chemistry, manufacturing and controls, QA, project management, pharmacokinetics, financial management, and intellectual property) being performed by CuraGen immediately prior the Effective Date will be transferred from CuraGen to TopoTarget, after discussion and agreement by the Transition Managers, according to the following schedule:

1.6.1 [**]% of such program activity shall be transferred on or before five (5) business days after the Effective Date;

1.6.2 [**]% of such program activity shall be transferred on or before May 31, 2008; and

1.6.3 [**]% of such program activity shall be transferred on or before June 30, 2008.

1.7 TopoTarget shall provide CuraGen with such information and documentation in TopoTarget's possession or control, and provide any other assistance, as is reasonably necessary for CuraGen to perform the Services.

1.8 CuraGen shall operate and maintain until May 21, 2008, in the same manner as operated and maintained as of the Effective Date, all software and databases used by CuraGen as of the Effective Date (including without limitation the Oracle software) to collect, store and manage any and all data generated by or on behalf



of CuraGen with respect to HDAC Inhibitors, including without limitation all data resulting from clinical trials relating thereto. CuraGen shall provide TopoTarget with reasonable access to such software and databases (including remote access), upon TopoTarget's request.

1.9 CuraGen hereby agrees to submit to the FDA and the Canadian Bureau of Pharmaceutical Sciences, as applicable, letters attached hereto as Exhibits B1, B2 and B3 requesting transfer and assignment of the authorizations and files referenced therein from CuraGen to TopoTarget, and TopoTarget hereby agrees to submit to the FDA and the Canadian Bureau of Pharmaceutical Sciences, as applicable, the letters attached hereto as Exhibits C1, C2 and C3 accepting such transfers and assignments, in all cases within five (5) Business Days following the Effective Date. CuraGen and TopoTarget shall cooperate regarding the transfer and assignment from CuraGen to TopoTarget of all investigational new drug applications and other comparable permits and authorizations with regulatory authorities outside the United States relating to the HDAC Inhibitor development program as soon as reasonably practicable. In addition, CuraGen agrees to use its commercially reasonable efforts to assist TopoTarget in the transfer and continuation of the clinical development program related to the Product with minimal interruption to ongoing clinical trials in progress as of the Effective Date.

1.10 Subject to the terms and conditions of this Agreement, all Services provided hereunder will be terminated on or before the Termination Date. CuraGen shall be under no obligation to provide any Services to TopoTarget after the Termination Date, except to the extent agreed in writing by CuraGen and TopoTarget pursuant to Section 7 below.

1.11 CuraGen hereby agrees to file with the FDA, within five (5) Business Days following the Effective Date, the Request for Special Protocol Assessment letter, a form of which is attached hereto as Exhibit D, in such form and with such changes as TopoTarget shall reasonably request.

2. Performance Standard.

2.1 In performing the Services, CuraGen shall use reasonable efforts to provide, or ensure that any applicable Third Party will provide, a similar level of service and use the same degree of care and skill as it exercises in providing similar services for itself from the Effective Date until the Termination Date. All Services shall be performed in substantial compliance

with applicable law. The foregoing is subject to Section 2.2 below.

2.2 CuraGen has disclosed to TopoTarget and TopoTarget hereby acknowledges that CuraGen has outsourcing relationships with Third Parties ("Service Providers") who may, subject to Section 17 and in accordance with Section 1.1 hereof, in furtherance of CuraGen's obligations under this Agreement, be delivering Services to TopoTarget. To the extent required under any such Service Provider

agreements governing such Services, or otherwise as requested by CuraGen in its reasonable discretion and subject to Section 17 hereof, TopoTarget agrees to cooperate with CuraGen and will assist CuraGen in obtaining Third Party consents, licenses, sublicenses, or approvals necessary to permit CuraGen or the applicable Service Provider to perform or otherwise make the Services available to TopoTarget. Without limitation to the foregoing, CuraGen shall make available to TopoTarget as part of the Services those services CuraGen receives pursuant to the Clinical Trial Agreement by and between CuraGen and the Division of Cancer Treatment and Diagnosis of the National Cancer Institute (NCI) dated as of August 1, 2004 ("NCI Agreement"). During the term hereof the Parties shall cooperate to obtain for TopoTarget an arrangement whereby TopoTarget may continue to receive the benefits of the NCI Agreement after the Termination Date, either via assignment of the NCI Agreement to TopoTarget or otherwise.

2.3 EXCEPT AS PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ANY SERVICES PROVIDED HEREUNDER.

3. Fees.

3.1 TopoTarget shall pay to CuraGen as consideration for the Services an amount equal to (a) the FTE Rate multiplied by (b) the number of FTEs (or fraction thereof) allocated to the performance of Services in accordance with Section 2.2 for the applicable period multiplied by (c) a fraction, the numerator of which is the number of days in the applicable period and the denominator of which is 365. For purposes of this Agreement, the FTE Rate shall mean [**] Dollars ($[**]).

3.2 CuraGen shall invoice TopoTarget for the Services provided hereunder in arrears on a monthly basis. TopoTarget shall pay any invoice for Services promptly but in no event later than thirty (30) days after the date of invoice. Late payments due hereunder shall bear interest at the prime rate then in effect, plus five percent (5%) per annum or the maximum amount allowed by law, whichever is less.

4. Confidentiality. The Parties agree that information disclosed in connection with this Agreement shall be governed by the terms and conditions of Section 10.6 of the Transfer and Termination Agreement.

5. Ownership. This Agreement and the performance of the Services hereunder will not affect the ownership of any of the Transferred Assets or Excluded Assets allocated in the Transfer and Termination Agreement. All Inventions and Know-How that are conceived and/or reduced to practice by or on behalf of CuraGen or its Affiliates, whether alone or with others, that (i) result from its performance of the Services, including the conduct of the HDAC Inhibitor program, or (ii) relate to the Transferred Assets disclosed to or

accessed by CuraGen in connection with this Agreement, whether during or after the Term, and all Patents and other intellectual property rights relating thereto (collectively, the "TopoTarget Property"), shall be disclosed promptly to TopoTarget and shall be considered a "work made for hire" (as that term is defined under Section 101 of the U.S. Copyright Act, 17 U.S.C. § 101) with TopoTarget being the person for whom the work was prepared and the TopoTarget Property shall be the sole and exclusive property of TopoTarget. In the event that any TopoTarget Property is deemed not to be a "work made for hire", CuraGen agrees to assign, and hereby does assign, unconditionally and irrevocably to TopoTarget, all of CuraGen's right, title and interest in and to the TopoTarget Property. No compensation or other payments in addition to the charges for the Services payable pursuant to Section 3 shall be payable in respect of the ownership by, or assignment to, TopoTarget of TopoTarget Property. CuraGen has entered into a binding agreement with each of its employees and agents assigning to CuraGen any and all rights of such employees and agents in any intellectual property conceived of or reduced to practice by such employees and agents. Without limiting the foregoing, neither party will gain, by virtue of this Agreement or the Services hereunder, by implication or otherwise, any rights of ownership of any property or intellectual property rights owned by the other.

6. Limitation of Liabilities.

6.1 Disclaimer. IN NO EVENT SHALL EITHER PARTY OR CURAGEN'S SERVICE PROVIDERS BE LIABLE FOR ANY LOST PROFITS OR CONSEQUENTIAL, PUNITIVE, SPECIAL OR OTHER INDIRECT DAMAGES EXCEPT FOR THOSE CAUSED BY GROSS NEGLIGENCE, WILFUL MISCONDUCT OR ANY BREACH OF SECTION 4.

6.2 Limitation. IN NO EVENT SHALL CURAGEN'S OR ITS SERVICE PROVIDERS' LIABILITY FOR ANY ACTION, REGARDLESS OF THE FORM OF ACTION, WHETHER IN TORT OR CONTRACT, ARISING UNDER THIS AGREEMENT EXCEED SEVENTY-FIVE PERCENT (75%) OF THE AMOUNT INVOICED TO TOPOTARGET BY CURAGEN FOR SERVICES HEREUNDER IN THE TWELVE (12) MONTH PERIOD IMMEDIATELY PRECEDING THE CIRCUMSTANCE THAT GAVE RISE TO SUCH LIABILITY EXCEPT FOR LIABILITIES CAUSED BY GROSS NEGLIGENCE, WILFUL MISCONDUCT OR ANY BREACH OF SECTION 4.

7. Term, Extension and Termination.

7.1 Term. This Agreement shall become effective on the Effective Date and, unless sooner terminated in accordance with the terms hereof, shall continue in effect until December 31, 2008 (the "Term"). The date of expiration of the Term, or of termination in accordance with Section 7.2 below, shall be the "Termination Date."

7.2 Termination. This Agreement may be terminated earlier in accordance with any of the following provisions:

7.2.1 By mutual written consent of both CuraGen and TopoTarget;

7.2.2 By TopoTarget on thirty (30) days written notice to CuraGen;

7.2.3 By either party entitled to the benefit of the performance of any of the obligations under this Agreement (the "Non-Defaulting Party"), if the other party (the "Defaulting Party") shall fail to perform or default in such performance. The Non-Defaulting Party must give written notice to the Defaulting Party specifying the nature of such failure or default and stating that the Non-Defaulting Party intends to terminate this Agreement with respect to the Defaulting Party if such failure or default is not cured within thirty (30) days after such written notice. If any failure or default so specified is not cured within such thirty (30) day period, the Non-Defaulting Party may elect to immediately terminate this Agreement with respect to the Defaulting Party; provided, however, that if the failure or default relates to a dispute contested in good faith by the Defaulting Party, the Non-Defaulting Party may not terminate this Agreement pending the resolution of such dispute. Such termination shall be effective upon provision of written notice of termination from the Non-Defaulting Party to the Defaulting Party and shall be without prejudice to any other remedy which may be available to the Non-Defaulting Party against the Defaulting Party.

7.3 Effect of Termination. TopoTarget specifically agrees and acknowledges that all obligations of CuraGen to provide Services hereunder shall immediately cease on the Termination Date, or such earlier date of termination pursuant to Section 7.2, and CuraGen's obligations to provide all of the Services shall immediately cease upon the termination of this Agreement.

7.4 Survival. Notwithstanding the expiration or early termination of this Agreement or any Services hereunder, Sections 1.8, 2.3, 3, 4, 5, 5, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19 and 20 will survive the expiration or termination of this Agreement for any reason. The expiration or termination of this Agreement for any reason will not release either party from any liabilities or obligations set forth herein which (a) the parties have expressly agreed will survive any such expiration or termination or (b) remain to be performed or by their nature would be intended to be applicable following any such expiration or termination.

8. Independent Contractors. The parties hereto understand and agree that this Agreement does not make either of them an agent or legal representative of the other for any purpose whatsoever. Neither party is granted, by this Agreement or otherwise, any right or authority to assume or create any obligation or responsibilities, express or implied, on behalf of or in the name of the other party, or to bind the other party in any manner

whatsoever. The parties expressly acknowledge that (a) CuraGen is an independent contractor with respect to TopoTarget in all respects, including the provision of the Services, and (b) that the parties are not partners, joint venturers, employees or agents of or with each other.

9. Beneficiary of Services; No Third Party Beneficiaries. This Agreement is for the sole benefit of the parties hereto, and nothing expressed or implied shall give or be construed to give any person any legal or equitable rights hereunder, whether as a Third Party beneficiary or otherwise. CuraGen and TopoTarget agree, and TopoTarget represents and warrants, that the Services will be provided solely to, and will be used solely by, TopoTarget, in each case only in connection with the Contributed Assets and the Assumed Liabilities. TopoTarget shall not resell or provide the Services to any other Person, or permit the use of the Services by any Person other than TopoTarget.

10. Force Majeure. Neither party will be held liable to the other for any delay or failure of performance where such delay or failure results from events beyond that party's control, including acts of God, earthquakes, fires, floods, civil disturbance, strikes, labor disputes, and lawful governmental action.

11. Entire Agreement. This Agreement and the Transfer and Termination Agreement constitute the entire agreement of the parties with respect to the subject matter hereof, and supersede all prior agreements, understandings and negotiations, both written and oral, between the parties with respect to the subject matter hereof.

12. Amendment; Waiver. This Agreement may be amended, and any provision of this Agreement may be waived, if but only if such amendment or waiver is in writing and signed, in the case of an amendment, by CuraGen and TopoTarget, or in the case of a waiver, by the party against whom the waiver is effective. No failure or delay by any party in exercising any right, power or privilege under this Agreement shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

13. Notices. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given (i) by personal delivery, (ii) upon transmission by facsimile machine if a confirmation sheet is emitted from such machine or (iii) upon delivery by an internationally recognized overnight courier service, each to the other Party at the following address (or at such other address as shall be given in writing by any Party to the other in accordance with this Section 13):

(a) if to TopoTarget: Symbion Science Park
Fruebjergvej 3, 2100
2100 Copenhagen
Denmark
Attention: Chief Executive Officer
Facsimile No.: +45-39-179-492

| | |
|---|---|
| with a copy to: | David E. Schulman, Esq.<br>Dechert LLP<br>1775 I Street, N.W.<br>Washington, D.C. 20006-2401<br>United States of America<br>Facsimile No.: +1 202-261-3333 |
| (b) if to CuraGen: | 322 East Main Street<br>Branford, Connecticut 06405<br>United States of America<br>Attention:<br>Facsimile No.: +1-203-483-2552 |
| with a copy to: | WilmerHale<br>399 Park Avenue<br>New York, New York 10022<br>United States of America<br>Attention: Steven D. Singer, Esq.<br>Facsimile No.: +1 617-526-5000 |

14. Non Assignability. Neither party may, directly or indirectly, in whole or in part, either by operation of law or otherwise, assign or transfer this Agreement without the other party's prior written consent. Any attempted assignment, transfer or delegation without such prior written consent will be void.

15. Counterparts; Effectiveness. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original and all of which together shall be deemed to be one and the same instrument. Copies of executed counterparts transmitted by telecopy, telefax or other electronic transmission service shall be considered original executed counterparts for purposes hereof, provided that receipt of copies of such counterparts is confirmed. This Agreement shall become effective when each party has received a counterpart hereof signed by the other party hereto.

16. Severability. If any provision of this Agreement shall be declared by any court of competent jurisdiction to be illegal, void or unenforceable, all other provisions of this Agreement shall not be affected and shall remain in full force and effect, and CuraGen and TopoTarget shall negotiate in good faith to replace such illegal, void or unenforceable provision with a provision that corresponds as closely as possible to the intentions of the parties as expressed by such illegal, void, or unenforceable provision.

17. Subcontractors and Outsourcing. Except with respect to Third Parties that are counterparties to any Contracts included in the Transferred Assets, CuraGen shall not have the right to subcontract or outsource any of its obligations hereunder without the express written consent of TopoTarget.

18. Other Agreements. This Agreement is not intended to amend or modify, and should not be interpreted to amend or modify in any respect the rights and obligations of CuraGen and TopoTarget under the Transfer and Termination Agreement.

19. Taxes. The fees described in Section 3 are exclusive of value added taxes, sales taxes and any other similar taxes. TopoTarget will be responsible for all taxes (other than taxes based on net income or net profits) imposed by applicable taxing authorities on the provision of Services to TopoTarget hereunder. If CuraGen is required to pay such taxes, TopoTarget shall promptly reimburse CuraGen therefor.

20. Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York without regard to its choice of law rules. With respect to any suit, action or proceeding arising out of or relating to this Agreement (each, a "Proceeding"), each Party hereto irrevocably (i) agrees and consents to submit to the non-exclusive jurisdiction of the United States District Court for the Southern District of New York, United States of America, and (ii) waives, and agrees not to assert by way of motion, defense, or otherwise, in any such Proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the Proceeding is brought in an inconvenient forum, that the venue of the Proceeding is improper, or that this Agreement or the transactions contemplated by this Agreement may not be enforced in or by any of the above-named courts. Notwithstanding the immediately preceding sentence, either Party may seek injunctive or similar equitable relief as to any matter arising out of or relating to this Agreement in any court of competent jurisdiction.

IN WITNESS WHEREOF, the parties hereto have executed this Transition Services Agreement as of the day and year first above written.

CURAGEN CORPORATION

By: /s/ Timothy M. Shannon
Name: Timothy M. Shannon
Title: President & CEO

TOPOTARGET A/S

| | | |
|---|---|---|
| By: | /s/ Peter Buhl | /s/ Hakan Astrom |
| Name: | Peter Buhl | Hakan Astrom |
| Title: | CEO | Chairman |

*[Signature page to Transition Services Agreement]*

**EXHIBIT A**
**SERVICES**

1. **For the period 4/21/08-5/31/08**

   a) **Continued medical management and preparation for transition of CLN6, CLN8, CLN-9**
   b) **Submission of CLN 19 SPA and facilitation of response to issues and feedback from FDA with completion of transfer of support by end of period**
   c) **Continued active regulatory support of belinostat in the US and CDN and preparation for transfer of regulatory activities regarding belinostat in the US and CDN**
   d) **Continued drug safety support and reporting for belinostat in the US and preparation for transfer**
   e) **Continued QA support of belinostat in US and preparation for transfer**
   f) **Continued alliance management with NCI and transfer of NCI agreement to TopoTarget; similar with MTAs in the US**

2. **For the period 6/1/08-6/30/08**

   a) **Complete transition of all CLN6, CLN8, CLN-9 support to TopoTarget**
   b) **Complete transfer of regulatory activities regarding belinostat in the US and CDN to TopoTarget**
   c) **Complete transfer of drug safety in the US to TopoTarget**
   d) **Complete QA support of belinostat in US to TopoTarget**
   e) **Continued alliance management with NCI and transfer of NCI agreement to TopoTarget; similar with MTAs in the US**

3. **For the period 7/1/08-12/31/08**

   a) **Continued alliance management with NCI and transfer of NCI agreement to TopoTarget; similar with MTAs in the US**
   b) **Point person for resolution of any issues post transfer**

**EXHIBIT B-1**

[LOGO]

322 East Main Street, 3rd Floor
Branford, CT 06405
(203) 481-1104
(203) 315-2668 Fax
www.curagen.com

Robert Justice, MD
Food and Drug Administration
Center for Drug Evaluation and Research
Division of Drug Oncology Products
5901-B Ammendale Road
Beltsville, MD 20705-1266

15 Apr 2008

**IND 70,789, Serial #0**
**General Correspondence: Change in ownership**

Dear Dr. Justice:

Reference is made to our IND 70,789 for belinostat (PXD101)

CuraGen notifies the Agency that all rights to the application / IND have been transferred from CuraGen Corporation to TopoTarget as new owner, effective <date>. A complete copy of the IND, protocols, reports and amendments, regulatory correspondence and of the data in support of the application was provided to TopoTarget.

The name of the authorized representative and the address of the new owner are:

> <Name of TopoTarget official representative (CuraGen Head of Regulatory Affairs? or other U.S. representative? ), and TopoTarget address>

Per line 13 of the 1571 form, updated statements containing the name and address of the contract research organizations, identification of the clinical study, and a list of the sponsor obligations transferred to the contract research organization were previously submitted on 27 Nov 2007 (SN 0107).

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If you have any questions regarding this submission, please contact me by phone (203) 871-4339, facsimile (203) 315-2668 or email hscholl@curagen.com; or alternatively contact Kimberly Fabrizio by phone (203) 871-4251, facsimile (203) 315-2668 or e-mail kfabrizio@curagen.com.

Sincerely,

Hans Scholl, PhD
Vice President, Regulatory Affairs and Quality Assurance
CuraGen Corporation

---

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**
FOOD AND DRUG ADMINISTRATION

**INVESTIGATIONAL NEW DRUG APPLICATION (IND)**
***(TITLE 21, CODE OF FEDERAL REGULATIONS (CFR) PART 312)***

*Form Approved: OMB No. 0910-0014.*
*Expiration Date: May 31, 2009*
*See OMB Statement on Reverse.*
**NOTE:** No drug may be shipped or clinical investigation begun until an IND for that investigation is in effect (21 CFR 312.40).

1. NAME OF SPONSOR
CuraGen Corporation

2. DATE OF SUBMISSION
04/15/2008

3. ADDRESS *(Number, Street, City, State and Zip Code)*
322 East Main Street, Branford, CT 06405

4. TELEPHONE NUMBER *(Include Area Code)*
(203) 871-4339

5. NAME(S) OF DRUG *(Include all available names: Trade, Generic, Chemical, Code)*
belinostat (PXD101)

6. IND NUMBER *(If previously assigned)*
70,789

7. INDICATION(S) *(Covered by this submission)*
multiple cancer indications

8. PHASE(S) OF CLINICAL INVESTIGATION TO BE CONDUCTED:
☐ PHASE 1 ☒ PHASE 2 ☐ PHASE 3 ☐ OTHER
*(Specify)*

9. LIST NUMBERS OF ALL INVESTIGATIONAL NEW DRUG APPLICATIONS *(21 CFR Part 312),* NEW DRUG OR ANTIBIOTIC APPLICATIONS *(21 CFR Part 314)*, DRUG MASTER FILES *(21 CFR Part 314.420),* AND PRODUCT LICENSE APPLICATIONS *(21 CFR Part 601)* REFERRED TO IN THIS APPLICATION.
72,862
72,990
74,532

10. ***IND submission should be consecutively numbered. The initial IND should be numbered "Serial number: 0000." The next submission (e.g., amendment, report, or correspondence) should be numbered "Serial Number: 0001." Subsequent submissions should be numbered consecutively in the order in which they are submitted.***

SERIAL NUMBER
0 1 2 0

11. THIS SUBMISSION CONTAINS THE FOLLOWING: ***(Check all that apply)***

☐ INITIAL INVESTIGATIONAL NEW DRUG APPLICATION (IND)

☐ RESPONSE TO CLINICAL HOLD

| PROTOCOL AMENDMENT(S): | INFORMATION AMENDMENT(S): | IND SAFETY REPORT(S): |
|---|---|---|
| ☐ NEW PROTOCOL | ☐ CHEMISTRY/MICROBIOLOGY | ☐ INITIAL WRITTEN REPORT |
| ☐ CHANGE IN PROTOCOL | ☐ PHARMACOLOGY/TOXICOLOGY | ☐ FOLLOW-UP TO A WRITTEN REPORT |
| ☐ NEW INVESTIGATOR | ☐ CLINICAL | |
| ☐ RESPONSE TO FDA REQUEST FOR INFORMATION | ☐ ANNUAL REPORT | ☒ GENERAL CORRESPONDENCE |
| ☐ REQUEST FOR REINSTATEMENT OF IND THAT IS WITHDRAWN, INACTIVATED, TERMINATED OR DISCONTINUED | ☒ OTHER | Change in ownership *(Specify)* |

**CHECK ONLY IF APPLICABLE**

**JUSTIFICATION STATEMENT MUST BE SUBMITTED WITH APPLICATION FOR ANY CHECKED BELOW. REFER TO THE CITED CFR SECTION FOR FURTHER INFORMATION.**

☐ **TREATMENT IND 21 CFR 312.35(b)** ☐ **TREATMENT PROTOCOL 21 CFR 312.35(a)** ☐ **CHARGE REQUEST/NOTIFICATION 21 CFR312.7(d)**

**FOR FDA USE ONLY**

CDR/DBIND/DGD RECEIPT STAMP | DDR RECEIPT STAMP | DIVISION ASSIGNMENT:

IND NUMBER ASSIGNED:

## CONTENTS OF APPLICATION

This application contains the following items: *(Check all that apply)*

- ☒ 1. Form FDA 1571 *[21 CFR 312.23(a)(1)]*
- ☐ 2. Table of Contents *[21 CFR 312.23(a)(2)]*
- ☐ 3. Introductory statement *[21 CFR 312.23(a)(3)]*
- ☐ 4. General Investigational plan *[21 CFR 312.23(a)(3)]*
- ☐ 5. Investigator's brochure *[21 CFR 312.23(a)(5)]*
- ☐ 6. Protocol(s) *[21 CFR 312.23(a)(6)]*
  - ☐ a. Study protocol(s) *[21 CFR 312.23(a)(6)]*
  - ☐ b. Investigator data *[21 CFR 312.23(a)(6)(iii)(b)]* or completed Form(s) FDA 1572
  - ☐ c. Facilities data *[21 CFR 312.23(a)(6)(iii)(b)]* or completed Form(s) FDA 1572
  - ☐ d. Institutional Review Board data *[21 CFR 312.23(a)(6)(iii)(b)]* or completed Form(s) FDA 1572
- ☐ 7. Chemistry, manufacturing, and control data *[21 CFR 312.23(a)(7)]*
  - ☐ Environmental assessment or claim for exclusion *[21 CFR 312.23(a)(7)(iv)(e)]*
- ☐ 8. Pharmacology and toxicology data *[21 CFR 312.23(a)(8)]*
- ☐ 9. Previous human experience *[21 CFR 312.23(a)(9)]*
- ☐ 10. Additional information *[21 CFR 312.23(a)(10)]*

13. IS ANY PART OF THE CLINICAL STUDY TO BE CONDUCTED BY A CONTRACT RESEARCH ORGANIZATION? ☒ YES ☐ NO

    IF YES, WILL ANY SPONSOR OBLIGATIONS BE TRANSFERRED TO THE CONTRACT RESEARCH ORGANIZATION? ☒ YES ☐ NO

    IF YES, ATTACH A STATEMENT CONTAINING THE NAME AND ADDRESS OF THE CONTRACT RESEARCH ORGANIZATION, IDENTIFICATION OF THE CLINICAL STUDY, AND A LISTING OF THE OBLIGATIONS TRANSFERRED.

14. NAME AND TITLE OF THE PERSON RESPONSIBLE FOR MONITORING THE CONDUCT AND PROGRESS OF THE CLINICAL INVESTIGATIONS
    Timothy M. Shannon, MD
    President and Chief Executive Officer, CuraGen Corporation

15. NAME(S) AND TITLE(S) OF THE PERSON(S) RESPONSIBLE FOR REVIEW AND EVALUATION OF INFORMATION RELEVANT TO THE SAFETY OF THE DRUG
    Timothy M. Shannon, MD
    President and Chief Executive Officer, CuraGen Corporation

**I agree not to begin clinical investigations until 30 days after FDA's receipt of the IND unless I receive earlier notification by FDA that the studies may begin. I also agree not to begin or continue clinical investigations covered by the IND if those studies are placed on clinical hold. I agree that an Institutional Review Board (IRB) that complies with the requirements set fourth in 21 CFR Part 56 will be responsible for initial and continuing review and approval of each of the studies in the proposed clinical investigation. I agree to conduct the investigation in accordance with all other applicable regulatory requirements.**

16. NAME OF SPONSOR OR SPONSOR'S AUTHORIZED REPRESENTATIVE
    Hans Scholl, PhD
    Vice President, Regulatory Affairs and QA CuraGen Corporation

17. SIGNATURE OF SPONSOR OR SPONSOR'S AUTHORIZED REPRESENTATIVE

| 18. | ADDRESS *(Number, Street, City, State and Zip Code)* | 19. | TELEPHONE NUMBER *(Include Area Code)* | 20. | DATE |
|---|---|---|---|---|---|
| | 322 East Main Street<br>Branford, CT 06405 | | (203) 871-4339 | | 04/15/2008 |

**(WARNING:** A willfully false statement is a criminal offense. U.S.C. Title 18, Sec. 1001.)

Public reporting burden for this collection of information is estimated to average 100 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to:

Department of Health and Human Services
Food and Drug Administration
Center for Drug Evaluation and Research
Central Document Room
5901-B Ammendale Road
Beltsville, MD 20705-1266

Department of Health and Human Services
Food and Drug Administration
Center for Biologics Evaluation and Research (HFM-99)
1401 Rockville Pike
Rockville, MD 20852-1448

"An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number."

**Please DO NOT RETURN this application to this address.**

[LOGO]

**EXHIBIT B-2**

322 East Main Street, 3rd Floor
Branford, CT 06405
(203) 481-1104
(203) 315-2668 Fax
www.curagen.com

08 Nov 2007

DMF Administrator
Bureau of Pharmaceutical Sciences
Therapeutic Products Directorate
Health Canada Finance Building
Tunney's Pasture (A.L. 0201D)
Ottawa, Ontario
Canada
K1A 0K9

**Subject Matter: DMF 2006-008 - Type I - PXD101 — Change in ownership**

Dear Sir or Madam:

CuraGen notifies the Agency that DMF Administrator have been transferred from CuraGen Corporation to TopoTarget as new owner, effective <date>. A complete copy of the DMF, amendments, regulatory correspondence and of the data in support of the DMF was provided to TopoTarget.

The name of the official representative and the address of the new owner are:

<address>

If there are questions or comments regarding this submission, please contact me by phone (203) 871-4339, facsimile (203) 315-2668, or e-mail hscholl@curagen.com or Kimberly Fabrizio. by phone (203) 871-4251, facsimile (203) 315-2668, or e-mail kfabrizio@curagen.com.

Sincerely,

Hans Scholl
Vice President, Regulatory Affairs and Quality Assurance
CuraGen Corporation

cc: Sherry S. Ansher, Ph.D., Coordinator, National Cancer Institute
Cheryl A. Grandinetti, Pharm.D., Senior Clinical Research Pharmacist, National Cancer Institute
Pamela Degendorfer, MA, CCRP, Program Manager Drug Development, Princess Margaret Hospital

---

**EXHIBIT B-3**

322 East Main Street, 3rd Floor
Branford, CT 06405
(203) 481-1104
(203) 315-2668 Fax
www.curagen.com

08 Nov 2007

DMF Administrator
Bureau of Pharmaceutical Sciences
Therapeutic Products Directorate
Health Canada Finance Building
Tunney's Pasture (A.L. 0201D)
Ottawa, Ontario
Canada
K1A 0K9

**Subject Matter: DMF 2006-009 - Type IV - PXD101 Injection — Change in ownership**

Dear Sir or Madam:

CuraGen notifies the Agency that all rights to the DMF have been transferred from CuraGen Corporation to TopoTarget as new owner, effective <date>. A complete copy of the DMF, amendments, regulatory correspondence and of the data in support of the DMF was provided to TopoTarget.

The name of the official representative and the address of the new owner are:

<address>

If there are questions or comments regarding this submission, please contact me by phone (203) 871-4339, facsimile (203) 315-2668, or e-mail hscholl@curagen.com or Kimberly Fabrizio. by phone (203) 871-4251, facsimile (203) 315-2668, or e-mail kfabrizio@curagen.com.

Sincerely,

Hans Scholl
Vice President, Regulatory Affairs and Quality Assurance
CuraGen Corporation

---

cc: Sherry S. Ansher, Ph.D., Coordinator, National Cancer Institute
Cheryl A. Grandinetti, Pharm.D., Senior Clinical Research Pharmacist, National Cancer Institute
Pamela Degendorfer, MA, CCRP, Program Manager Drug Development, Princess Margaret Hospital

**EXHIBIT C-1**

**TopoTarget Logo and Address**

Robert Justice, MD
Food and Drug Administration
Center for Drug Evaluation and Research
Division of Drug Oncology Products
5901-B Ammendale Road
Beltsville, MD 20705-1266

15 Apr 2008

**IND 70,789**
**General Correspondence: Change in ownership**

Dear Dr. Justice:

Reference is made to IND 70,789 for belinostat (PXD101)

TopoTarget notifies the Agency that all rights to the application / IND have been transferred from CuraGen Corporation to TopoTarget as new owner, effective <date>.

TopoTarget, as new owner, commits to all agreements, promises, and conditions contained in the application and made by CuraGen Corporation as former owner. A complete copy of the IND, protocols, reports and amendments, regulatory correspondence and of the data in support of the application was provided to TopoTarget.

*Either:*

> TopoTarget will use the previous owner CuraGen Corporation for submitting information to the IND on behalf of TopoTarget, and will file updated Transfer of Obligations statements for the various studies under the IND to reflect this.

*Or:*

> TopoTarget will use <name of U.S. representative> for submitting information to the IND on behalf of TopoTarget, and will file updated Transfer of Obligations statements for the various studies under the IND to reflect this.

If you have any questions regarding this submission, please contact …

Sincerely,

TopoTarget

Attachments
Form 1571

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**
FOOD AND DRUG ADMINISTRATION

*Form Approved: OMB No. 0910-0014.*
*Expiration Date: May 31, 2009*
*See OMB Statement on Reverse.*

**INVESTIGATIONAL NEW DRUG APPLICATION (IND)**
***(TITLE 21, CODE OF FEDERAL REGULATIONS (CFR) PART 312)***

**NOTE:** No drug may be shipped or clinical investigation begun until an IND for that investigation is in effect (21 CFR 312.40).

1. NAME OF SPONSOR
TopoTarget

2. DATE OF SUBMISSION
04/15/2008

3. ADDRESS *(Number, Street, City, State and Zip Code)*
Address TopoTarget

4. TELEPHONE NUMBER *(Include Area Code)*
Phone TopoTarget

5. NAME(S) OF DRUG *(Include all available names: Trade, Generic, Chemical, Code)*
belinostat (PXD101)

6. IND NUMBER *(If previously assigned)*
70,789

7. INDICATION(S) *(Covered by this submission)*
multiple cancer indications

8. PHASE(S) OF CLINICAL INVESTIGATION TO BE CONDUCTED:
☐ PHASE 1 ☒ PHASE 2 ☐ PHASE 3 ☐ OTHER
*(Specify)*

9. LIST NUMBERS OF ALL INVESTIGATIONAL NEW DRUG APPLICATIONS *(21 CFR Part 312),* NEW DRUG OR ANTIBIOTIC APPLICATIONS *(21 CFR Part 314)*, DRUG MASTER FILES *(21 CFR Part 314.420),* AND PRODUCT LICENSE APPLICATIONS *(21 CFR Part 601)* REFERRED TO IN THIS APPLICATION.
72,862
72,990
74,532

10. ***IND submission should be consecutively numbered. The initial IND should be numbered "Serial number: 0000." The next submission (e.g., amendment, report, or correspondence) should be numbered "Serial Number: 0001." Subsequent submissions should be numbered consecutively in the order in which they are submitted.***

SERIAL NUMBER
0 1 2 0

11. THIS SUBMISSION CONTAINS THE FOLLOWING: ***(Check all that apply)***

☐ INITIAL INVESTIGATIONAL NEW DRUG APPLICATION (IND)

☐ RESPONSE TO CLINICAL HOLD

| PROTOCOL AMENDMENT(S): | | INFORMATION AMENDMENT(S): | | IND SAFETY REPORT(S): | |
|---|---|---|---|---|---|
| ☐ | NEW PROTOCOL | ☐ | CHEMISTRY/MICROBIOLOGY | ☐ | INITIAL WRITTEN REPORT |
| ☐ | CHANGE IN PROTOCOL | ☐ | PHARMACOLOGY/TOXICOLOGY | ☐ | FOLLOW-UP TO A WRITTEN REPORT |
| ☐ | NEW INVESTIGATOR | ☐ | CLINICAL | | |
| ☐ | RESPONSE TO FDA REQUEST FOR INFORMATION | ☐ | ANNUAL REPORT | ☒ | GENERAL CORRESPONDENCE |
| ☐ | REQUEST FOR REINSTATEMENT OF IND THAT IS WITHDRAWN, INACTIVATED, TERMINATED OR DISCONTINUED | ☒ | OTHER<br>Change in ownership<br>*(Specify)* | | |

**CHECK ONLY IF APPLICABLE**

**JUSTIFICATION STATEMENT MUST BE SUBMITTED WITH APPLICATION FOR ANY CHECKED BELOW. REFER TO THE CITED CFR SECTION FOR FURTHER INFORMATION.**

**☐ TREATMENT IND 21 CFR 312.35(b) ☐ TREATMENT PROTOCOL 21 CFR 312.35(a) ☐ CHARGE**

**FOR FDA USE ONLY**

CDR/DBIND/DGD RECEIPT STAMP | DDR RECEIPT STAMP | DIVISION ASSIGNMENT:

IND NUMBER ASSIGNED:

**12. CONTENTS OF APPLICATION**

This application contains the following items: *(Check all that apply)*

- ☒ 1. Form FDA 1571 *[21 CFR 312.23(a)(1)]*
- ☐ 2. Table of Contents *[21 CFR 312.23(a)(2)]*
- ☐ 3. Introductory statement *[21 CFR 312.23(a)(3)]*
- ☐ 4. General Investigational plan *[21 CFR 312.23(a)(3)]*
- ☐ 5. Investigator's brochure *[21 CFR 312.23(a)(5)]*
- ☐ 6. Protocol(s) *[21 CFR 312.23(a)(6)]*
  - ☐ a. Study protocol(s) *[21 CFR 312.23(a)(6)]*
  - ☐ b. Investigator data *[21 CFR 312.23(a)(6)(iii)(b)]* or completed Form(s) FDA 1572
  - ☐ c. Facilities data *[21 CFR 312.23(a)(6)(iii)(b)]* or completed Form(s) FDA 1572
  - ☐ d. Institutional Review Board data *[21 CFR 312.23(a)(6)(iii)(b)]* or completed Form(s) FDA 1572
- ☐ 7. Chemistry, manufacturing, and control data *[21 CFR 312.23(a)(7)]*
  - ☐ Environmental assessment or claim for exclusion *[21 CFR 312.23(a)(7)(iv)(e)]*
- ☐ 8. Pharmacology and toxicology data *[21 CFR 312.23(a)(8)]*
- ☐ 9. Previous human experience *[21 CFR 312.23(a)(9)]*
- ☐ 10. Additional information *[21 CFR 312.23(a)(10)]*

13. IS ANY PART OF THE CLINICAL STUDY TO BE CONDUCTED BY A CONTRACT RESEARCH ORGANIZATION? ☒ YES ☐ NO

    IF YES, WILL ANY SPONSOR OBLIGATIONS BE TRANSFERRED TO THE CONTRACT RESEARCH ORGANIZATION? ☒ YES ☐ NO

    IF YES, ATTACH A STATEMENT CONTAINING THE NAME AND ADDRESS OF THE CONTRACT RESEARCH ORGANIZATION, IDENTIFICATION OF THE CLINICAL STUDY, AND A LISTING OF THE OBLIGATIONS TRANSFERRED.

14. NAME AND TITLE OF THE PERSON RESPONSIBLE FOR MONITORING THE CONDUCT AND PROGRESS OF THE CLINICAL INVESTIGATIONS
    TopoTarget Responsible Person

15. NAME(S) AND TITLE(S) OF THE PERSON(S) RESPONSIBLE FOR REVIEW AND EVALUATION OF INFORMATION RELEVANT TO THE SAFETY OF THE DRUG
    TopoTarget Responsible Person

**I agree not to begin clinical investigations until 30 days after FDA's receipt of the IND unless I receive earlier notification by FDA that the studies may begin. I also agree not to begin or continue clinical investigations covered by the IND if those studies are placed on clinical hold. I agree that an Institutional Review Board (IRB) that complies with the requirements set fourth in 21 CFR Part 56 will be responsible for initial and continuing review and approval of each of the studies in the proposed clinical investigation. I agree to conduct the investigation in accordance with all other applicable regulatory requirements.**

16. NAME OF SPONSOR OR SPONSOR'S AUTHORIZED REPRESENTATIVE
    Hans Scholl, PhD (or other TopoTarget Rep)
    Vice President, Regulatory Affairs and QA CuraGen Corporation

17. SIGNATURE OF SPONSOR OR SPONSOR'S AUTHORIZED REPRESENTATIVE

| | | | | | |
|---|---|---|---|---|---|
| 18. | ADDRESS *(Number, Street, City, State and Zip Code)*<br>322 East Main Street<br>Branford, CT 06405 | 19. | TELEPHONE NUMBER *(Include Area Code)*<br>(203) 871-4339 | 20. | DATE<br>04/15/2008 |

**(WARNING:** A willfully false statement is a criminal offense. U.S.C. Title 18, Sec. 1001.)

Public reporting burden for this collection of information is estimated to average 100 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to:

| | | |
|---|---|---|
| Department of Health and Human Services<br>Food and Drug Administration<br>Center for Drug Evaluation and Research<br>Central Document Room<br>5901-B Ammendale Road<br>Beltsville, MD 20705-1266 | Department of Health and Human Services<br>Food and Drug Administration<br>Center for Biologics Evaluation and Research<br>(HFM-99)<br>1401 Rockville Pike<br>Rockville, MD 20852-1448 | "An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number." |

**Please DO NOT RETURN this application to this address.**

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**EXHIBIT C-2**

**TopoTarget Logo and Address**

DMF Administrator
Bureau of Pharmaceutical Sciences
Therapeutic Products Directorate
Health Canada Finance Building
Tunney's Pasture (A.L. 0201D)
Ottawa, Ontario
Canada
K1A 0K9

08 Nov 2007

**Subject Matter: DMF 2006-008 - Type I - PXD101 — Change in ownership**

Dear Sir or Madam:

TopoTarget notifies the Agency that the DMF have been transferred from CuraGen Corporation to TopoTarget as new owner, effective <date>. A complete copy of the DMF, amendments, regulatory correspondence and of the data in support of the DMF was provided to TopoTarget.

TopoTarget will maintain the Letters of Access and inform the involved parties of the change.

The name of the authorized representative and the address of the new owner are:

<Name of TopoTarget official representative (CuraGen Head of Regulatory Affairs? or other representative?), and TopoTarget address>

If there are questions or comments regarding this submission, please contact me by phone (203) 871-4339, facsimile (203) 315-2668, or e-mail hscholl@curagen.com or Kimberly Fabrizio. by phone (203) 871-4251, facsimile (203) 315-2668, or e-mail kfabrizio@curagen.com.

Sincerely,

Hans Scholl
Vice President, Regulatory Affairs and Quality Assurance
CuraGen Corporation

cc: Sherry S. Ansher, Ph.D., Coordinator, National Cancer Institute
Cheryl A. Grandinetti, Pharm.D., Senior Clinical Research Pharmacist, National Cancer Institute
Pamela Degendorfer, MA, CCRP, Program Manager Drug Development, Princess Margaret Hospital

**EXHIBIT C-3**

**TopoTarget Logo and Address**

DMF Administrator
Bureau of Pharmaceutical Sciences
Therapeutic Products Directorate
Health Canada Finance Building
Tunney's Pasture (A.L. 0201D)
Ottawa, Ontario
Canada
K1A 0K9

08 Nov 2007

**Subject Matter: DMF 2006-009 - Type IV - PXD101 Injection — Change in ownership**

Dear Sir or Madam:

TopoTarget notifies the Agency that all rights to the DMF have been transferred from CuraGen Corporation to TopoTarget as new owner, effective <date>. A complete copy of the DMF, amendments, regulatory correspondence and of the data in support of the DMF was provided to TopoTarget.

TopoTarget will maintain the Letters of Access and inform the involved parties of the change.

The name of the authorized representative and the address of the new owner are:

<Name of TopoTarget official representative (CuraGen Head of Regulatory Affairs? or other representative?), and TopoTarget address>

If there are questions or comments regarding this submission, please contact me by phone (203) 871-4339, facsimile (203) 315-2668, or e-mail hscholl@curagen.com or Kimberly Fabrizio. by phone (203) 871-4251, facsimile (203) 315-2668, or e-mail kfabrizio@curagen.com.

Sincerely,

Hans Scholl
Vice President, Regulatory Affairs and Quality Assurance
CuraGen Corporation

cc: Sherry S. Ansher, Ph.D., Coordinator, National Cancer Institute
Cheryl A. Grandinetti, Pharm.D., Senior Clinical Research Pharmacist, National Cancer Institute
Pamela Degendorfer, MA, CCRP, Program Manager Drug Development, Princess Margaret Hospital

**EXHIBIT D**

**REQUEST FOR SPECIAL PROTOCOL ASSESSMENT**

322 East Main Street, 3rd Floor
Branford, CT 06405
(203) 481-1104
(203) 315-2668 Fax
www.curagen.com

Robert Justice, MD
Food and Drug Administration
Center for Drug Evaluation and Research
Division of Drug Oncology Products
5901-B Ammendale Road
Beltsville, MD 20705-1266

XX Apr 2008

**IND 70,789, Serial #0XXX**
**REQUEST FOR SPECIAL PROTOCOL ASSESSMENT: CLINICAL**

Dear Dr. Justice:

Reference is made to our IND 70,789 for belinostat (PXD101), a histone deacetylase (HDAC) inhibitor being developed in collaboration with TopoTarget A/S as a potential therapeutic for peripheral T-cell lymphoma (PTCL) and other indications.

Please find enclosed a Special Protocol Assessment (SPA) submission where we have incorporated your comments regarding the Phase 3 clinical study discussed in our End-of-Phase 2 meeting held on 29 Nov 2007. We have considered all feedback given to us by the Agency and posed any additional questions in Appendix 5 for your attention.

Please note that the clinical study number has been changed from the original Protocol Synopsis (PXD101-CLN-18) submitted in the EOP2 meeting brief on 31 Oct 2007, SN 0104 to the current clinical study number of PXD101-CLN-19 which will be used from this date forward.

Regarding all other development aspects concerning the registration of belinostat please refer to all correspondence regarding the two End-of-Phase 2 meetings held between CuraGen Corporation and the FDA (see Attachment 1).

In accordance with the Guidance for Industry — Special Protocol Assessment, and as requested in your comments to our Phase 3 protocol at the End-of-Phase 2 meeting, attached are the following documents:

(1) Clinical trial Protocol PXD101-CLN-19, "*A Multicenter, Open-Label Trial of Belinostat in Patients with Relapsed or Refractory Peripheral T-Cell Lymphoma*".—Appendix 1

(2) Statistical Analysis Plan — Appendix 2

(3) Independent Radiology Review Charter for PXD101-CLN-19 — Appendix 3

(4) Sample Case Report Form — Appendix 4

(5) Clinical Summary and List of Questions to FDA — Appendix 5

(6) FDA Minutes of the 29 Nov 2007 End-of-Phase 2 meeting — Appendix 6

A copy of this cover letter will be sent today via facsimile to Dorothy Pease, Supervisor, Consumer Safety Officer.

If you have any questions regarding this submission, please contact me by phone (203) 871-44251, facsimile (203) 315-2668 or email kfabrizio@curagen.com or alternatively contact Hans Scholl by phone (203) 871-4339 or e-mail hscholl@curagen.com.

Sincerely,

Kimberly Fabrizio
Assistant Director Regulatory Affairs
CuraGen Corporation

cc: Dorothy Pease, Supervisor, Consumer Safety Office
XX Desk Copies sent to Brenda Atkins, Project Manager

**ATTACHMENT 1: Regulatory History:**

CuraGen has currently held two End-of-Phase 2 meetings with the FDA in conjunction with PXD101 (belinostat) for the treatment of Peripheral T-Cell Lymphoma (PTCL) and Cancer of Unknown Primary (CUP). Both meetings have yielded input into our clinical development plan and protocol designs. The following documentation and meetings should be referenced in association with the clinical development of belinostat.

End-of-Phase 2 PTCL Meeting Minutes Received (11 Jan 2008)

End-of-Phase 2 PTCL Meeting (29 Nov 2007)

Supplemental PTCL Briefing Document Request (15 Nov 2007, SN 0106)

End-of-Phase 2 PTCL Meeting Brief (31 Oct 2007, SN 0104)

End-of-Phase 2 CUP Meeting Minutes Received (11 Apr 2007)

End-of-Phase 2 CUP Meeting (27 Mar 2007)

End-of-Phase 2 CUP Meeting Brief (23 Feb 2007, SN 0068)

**Exhibit B**

**Assignment of Patents**

CuraGen Corporation, a Delaware corporation, hereby assigns to TopoTarget A/S, a company organized and existing under the laws of Denmark, the entire right, title and interest for the United States of America and its territorial possessions and all foreign countries, including all rights of priority, in all inventions disclosed in the patents and patent applications identified on Schedule A, and in and to such patents and patent applications and all Letters Patents of the United States and all foreign countries which may or shall be granted on said inventions or in respect of such patents and patent applications identified on Schedule A, or any parts thereof, or any divisional, continuing, reissue or other applications or patents based in whole or in part thereon including the right to recover for past, present and future infringement.

CuraGen Corporation agrees to execute all applications, amended specifications, deeds or other instruments, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to TopoTarget A/S to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

Each of CuraGen Corporation and TopoTarget A/S does hereby authorize and request the competent authorities to grant and issue any and all such Letters Patent as shall be granted upon said inventions or applications based thereon in the United States and throughout the world to said TopoTarget A/S, its successors and assigns.

Witness my hand and seal this 21st day of April, 2008.

CURAGEN CORPORATION

/s/ Timothy M. Shannon
Name: Timothy M. Shannon
Title: President & CEO

**STATE OF**

County of )

On this day of , 2008, before me, the undersigned notary public, personally appeared , proved to me through satisfactory evidence of identification, which was , to be the person whose name is signed on the preceding document, and acknowledged to me that he signed it voluntarily for its stated purpose.

[affix seal]

Notary Public
My commission expires:

**Schedule A**
**Assignment of Patents**
**from CuraGen Corporation to TopoTarget A/S**

**Patent Applications**

| Filing Date | Appl. No. /Serial No. | Title |
|---|---|---|
| February 3, 2006 | PCT/GB2006/000391 (WO 2006/082428) | Combination therapies using HDAC inhibitors |
| November 10, 2006 | PCT/GB2006/004215 (WO 2007/054719) | Histone deacetylase (HDAC) inhibitors (PXD101) for the treatment of cancer alone or in combination with chemotherapeutic |
| | | Agents |
| November 10, 2005 | U.S. 60/735,701 | |
| November 10, 2005 | U.S. 60/735,662 | |
| February 3, 2005 | U.S. 60/649,991 | |

**Exhibit 10.34**

**CELLDEX THERAPEUTICS, INC.**

**2008 STOCK OPTION AND INCENTIVE PLAN**

**as amended and restated effective as of February 24, 2010**

SECTION 1. *GENERAL PURPOSE OF THE PLAN; DEFINITIONS*

The name of the plan is the Celldex Therapeutics, Inc. 2008 Stock Option and Incentive Plan (the "Plan"). The purpose of the Plan is to encourage and enable the officers, employees, Non-Employee Directors and other key persons (including consultants and prospective employees) of Celldex Therapeutics, Inc. (the "Company") and its Subsidiaries upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business to acquire a proprietary interest in the Company. It is anticipated that providing such persons with a direct stake in the Company's welfare will assure a closer identification of their interests with those of the Company and its stockholders, thereby stimulating their efforts on the Company's behalf and strengthening their desire to remain with the Company.

The following terms shall be defined as set forth below:

"*Act"* means the Securities Act of 1933, as amended, and the rules and regulations thereunder.

"*Administrator"* means either the Board or the compensation committee of the Board or a similar committee performing the functions of the compensation committee and which is comprised of not less than two Non-Employee Directors who are independent.

"*Award"* or *"Awards,"* except where referring to a particular category of grant under the Plan, shall include Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Deferred Stock Awards, Restricted Stock Awards, Unrestricted Stock Awards, Cash-Based Awards, Performance Share Awards and Dividend Equivalent Rights.

"*Award Agreement"* means a written or electronic agreement setting forth the terms and provisions applicable to an Award granted under the Plan. Each Award Agreement is subject to the terms and conditions of the Plan.

"*Board"* means the Board of Directors of the Company.

"*Cash-Based Award"* means an Award entitling the recipient to receive a cash-denominated payment.

"*Change of Control"* is defined in Section 20.

"*Code"* means the Internal Revenue Code of 1986, as amended, and any successor Code, and related rules, regulations and interpretations.

"*Covered Employee"* means an employee who is a "Covered Employee" within the meaning of Section 162(m) of the Code.

"*Deferred Stock Award"* means an Award of phantom stock units to a grantee.

"*Dividend Equivalent Right"* means an Award entitling the grantee to receive credits based on cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other award to which it relates) if such shares had been issued to and held by the grantee.

"*Effective Date"* means the date on which the Plan is approved by stockholders as set forth in Section 22.

"*Exchange Act"* means the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

"*Fair Market Value"* of the Stock on any given date means the fair market value of the Stock determined in good faith by the Administrator; provided, however, that if the Stock is admitted to quotation on the National Association of Securities Dealers Automated Quotation System ("NASDAQ"), NASDAQ Capital Market or another national securities exchange, the determination shall be made by reference to market quotations. If there are no market quotations for such date, the determination shall be made by reference to the last date preceding such date for which there are market quotations.

"*Incentive Stock Option"* means any Stock Option designated and qualified as an "incentive stock option" as defined in Section 422 of the Code.

"*Non-Employee Director"* means a member of the Board who is not also an employee of the Company or any Subsidiary.

"*Non-Qualified Stock Option"* means any Stock Option that is not an Incentive Stock Option.

"*Option"* or *"Stock Option"* means any option to purchase shares of Stock granted pursuant to Section 5.

"*Performance-Based Award"* means any Restricted Stock Award, Deferred Stock Award, Performance Share Award or Cash-Based Award granted to a Covered Employee that is intended to qualify as "performance-based compensation" under Section 162(m) of the Code and the regulations promulgated thereunder.

"*Performance Criteria"* means the performance criteria used in performance goals governing Performance-based Awards granted to Covered Employees which may include any or all of the following: (i) the Company's return on equity, assets, capital or investment, (ii) pre-tax or after-tax profit levels of the Company or any Subsidiary, a division, an operating unit or a business segment of the Company, or any combination of the foregoing; (iii) cash flow, funds

from operations, year-end cash and equivalents balance or similar measure; (iv) total shareholder return; (v) changes in the market price of the Stock; (vi) sales or market share; (vii) earnings per share; (viii) partnerships, collaborations, joint ventures, alliances and similar arrangements involving the Company; (ix) mergers, acquisitions and business combinations of or by the Company; or (x) the Company's rights to intellectual property and scientific discoveries.

"*Performance Cycle"* means one or more periods of time, which may be of varying and overlapping durations, as the Administrator may select, over which the attainment of one or more Performance Criteria will be measured for the purpose of determining a grantee's right to and the payment of a Restricted Stock Award, Deferred Stock Award, Performance Share Award or Cash-Based Award.

"*Performance Goals"* means, for a Performance Cycle, the specific goals established in writing by the Administrator for a Performance Cycle based upon the Performance Criteria.

"*Performance Share Award"* means an Award entitling the recipient to acquire shares of Stock upon the attainment of specified Performance Goals.

"*Restricted Stock Award"* means an Award entitling the recipient to acquire, at such purchase price (which may be zero) as determined by the Administrator, shares of Stock subject to such restrictions and conditions as the Administrator may determine at the time of grant.

"*Sale Event"* shall mean (i) the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity, (ii) a merger, reorganization or consolidation in which the outstanding shares of Stock are converted into or exchanged for securities of the successor entity and the holders of the Company's outstanding voting power immediately prior to such transaction do not own a majority of the outstanding voting power of the successor entity immediately upon completion of such transaction, or (iii) the sale of all of the Stock of the Company to an unrelated person or entity.

"*Sale Price*" means the value as determined by the Administrator of the consideration payable, or otherwise to be received by stockholders, per share of Stock pursuant to a Sale Event.

"*Section 409A"* means Section 409A of the Code and the regulations and other guidance promulgated thereunder.

"*Stock"* means the Common Stock, par value $.01 per share, of the Company, subject to adjustments pursuant to Section 3.

"*Stock Appreciation Right"* means an Award entitling the recipient to receive shares of Stock having a value equal to the excess of the Fair Market Value of the Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.

"*Subsidiary"* means any corporation or other entity (other than the Company) in which the Company has at least a 50 percent interest, either directly or indirectly.

"*Ten Percent Owner"* means an employee who owns or is deemed to own (by reason of the attribution rules of Section 424(d) of the Code) more than 10 percent of the combined voting power of all classes of stock of the Company or any parent or subsidiary corporation.

"*Unrestricted Stock Award"* means an Award of shares of Stock free of any restrictions.

SECTION 2. *ADMINISTRATION OF PLAN; ADMINISTRATOR AUTHORITY TO SELECT GRANTEES AND DETERMINE AWARDS*

(a) *Administration of Plan.* The Plan shall be administered by the Administrator.

(b) *Powers of Administrator.* The Administrator shall have the power and authority to grant Awards consistent with the terms of the Plan, including the power and authority:

(i) to select the individuals to whom Awards may from time to time be granted;

(ii) to determine the time or times of grant, and the extent, if any, of Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Awards, Deferred Stock Awards, Unrestricted Stock Awards, Cash-Based Awards, Performance Share Awards and Dividend Equivalent Rights, or any combination of the foregoing, granted to any one or more grantees;

(iii) to determine the number of shares of Stock to be covered by any Award;

(iv) to determine and modify from time to time the terms and conditions, including restrictions, not inconsistent with the terms of the Plan, of any Award, which terms and conditions may differ among individual Awards and grantees, and to approve the form of written instruments evidencing the Awards;

(v) to accelerate at any time the exercisability or vesting of all or any portion of any Award;

(vi) subject to the provisions of Section 5(a)(ii), to extend at any time the period in which Stock Options may be exercised; and

(vii) at any time to adopt, alter and repeal such rules, guidelines and practices for administration of the Plan and for its own acts and proceedings as it shall deem advisable; to interpret the terms and provisions of the Plan and any Award (including related written instruments); to make all determinations it deems advisable for the administration of the Plan; to decide all disputes arising in connection with the Plan; and to otherwise supervise the administration of the Plan.

All decisions and interpretations of the Administrator shall be binding on all persons, including the Company and Plan grantees.

(c) *Delegation of Authority to Grant Options*. Subject to applicable law, the Administrator, in its discretion, may delegate to the Chief Executive Officer of the Company all or part of the Administrator's authority and duties with respect to the granting of Options, to individuals who are (i) not subject to the reporting and other provisions of Section 16 of the Exchange Act and (ii) not Covered Employees. Any such delegation by the Administrator shall include a limitation as to the amount of Options that may be granted during the period of the delegation and shall contain guidelines as to the determination of the exercise price and the vesting criteria. The Administrator may revoke or amend the terms of a delegation at any time but such action shall not invalidate any prior actions of the Administrator's delegate or delegates that were consistent with the terms of the Plan.

(d) *Award Agreement.* Awards under the Plan shall be evidenced by Award Agreements that set forth the terms, conditions and limitations for each Award which may include, without limitation, the term of an Award, the provisions applicable in the event employment or service terminates, and the Company's authority to unilaterally or bilaterally amend, modify, suspend, cancel or rescind an Award.

(e) *Indemnification.* Neither the Board nor the Administrator, nor any member of either or any delegate thereof, shall be liable for any act, omission, interpretation, construction or determination made in good faith in connection with the Plan, and the members of the Board and the Administrator (and any delegate thereof) shall be entitled in all cases to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including, without limitation, reasonable attorneys' fees) arising or resulting therefrom to the fullest extent permitted by law and/or under the Company's articles or bylaws or any directors' and officers' liability insurance coverage which may be in effect from time to time and/or any indemnification agreement between such individual and the Company.

SECTION 3. *STOCK ISSUABLE UNDER THE PLAN; MERGERS; SUBSTITUTION*

(a) *Stock Issuable.* The maximum number of shares of Stock reserved and available for issuance under the Plan shall be 3,900,000 *shares*, subject to adjustment as provided in Section 3(b); provided that not more than 375,000 shares shall be issued in the form of Unrestricted Stock Awards, Restricted Stock Awards, Deferred Stock Awards or Performance Share Awards. For purposes of this limitation, the shares of Stock underlying the Awards granted under the Plan that are forfeited, canceled or otherwise terminated (other than by exercise) shall be added back to the shares of Stock available for issuance under the Plan. Subject to such overall limitations, shares of Stock may be issued up to such maximum number pursuant to any type or types of Award; provided, however, that Stock Options or Stock Appreciation Rights with respect to no more than 333,333 shares of Stock may be granted to any one individual grantee during any one calendar year period. The shares available for issuance under the Plan may be authorized but unissued shares of Stock or shares of Stock reacquired by the Company.

(b) *Changes in Stock.* Subject to Section 3(c) hereof, if, as a result of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Company's capital stock, the outstanding shares of Stock are increased or decreased or are exchanged for a different number or kind of shares or other securities of the

Company, or additional shares or new or different shares or other securities of the Company or other non-cash assets are distributed with respect to such shares of Stock or other securities, or, if, as a result of any merger or consolidation, sale of all or substantially all of the assets of the Company, the outstanding shares of Stock are converted into or exchanged for securities of the Company or any successor entity (or a parent or subsidiary thereof), the Administrator shall make an appropriate or proportionate adjustment in (i) the maximum number of shares reserved for issuance under the Plan, including the maximum number of shares that may be issued in the form of Unrestricted Stock Awards, Restricted Stock Awards, Deferred Stock Awards or Performance Share Awards, (ii) the number of Stock Options or Stock Appreciation Rights that can be granted to any one individual grantee and the maximum number of shares that may be granted under a Performance-Based Award, (iii) the number and kind of shares or other securities subject to any then outstanding Awards under the Plan, (iv) the repurchase price, if any, per share subject to each outstanding Restricted Stock Award, and (v) the price for each share subject to any then outstanding Stock Options and Stock Appreciation Rights under the Plan, without changing the aggregate exercise price (i.e., the exercise price multiplied by the number of Stock Options and Stock Appreciation Rights) as to which such Stock Options and Stock Appreciation Rights remain exercisable. The Administrator shall also make equitable or proportionate adjustments in the number of shares subject to outstanding Awards and the exercise price and the terms of outstanding Awards to take into consideration cash dividends paid other than in the ordinary course or any other extraordinary corporate event. The adjustment by the Administrator shall be final, binding and conclusive. No fractional shares of Stock shall be issued under the Plan resulting from any such adjustment, but the Administrator in its discretion may make a cash payment in lieu of fractional shares.

(c) *Mergers and Other Transactions.* Upon the effective time of the Sale Event, the Plan and all outstanding Awards granted hereunder shall terminate, unless provision is made in connection with the Sale Event in the sole discretion of the parties thereto for the assumption or continuation of Awards theretofore granted by the successor entity, or the substitution of such Awards with new Awards of the successor entity or parent thereof, with appropriate adjustment as to the number and kind of shares and, if appropriate, the per share exercise prices, as such parties shall agree (after taking into account any acceleration hereunder). In the event of such termination, (i) the Company shall have the option (in its sole discretion) to make or provide for a cash payment to the grantees holding Options and Stock Appreciation Rights, in exchange for the cancellation thereof, in an amount equal to the difference between (A) the Sale Price multiplied by the number of shares of Stock subject to outstanding Options and Stock Appreciation Rights (to the extent then exercisable (after taking into account any acceleration hereunder) at prices not in excess of the Sale Price) and (B) the aggregate exercise price of all such outstanding Options and Stock Appreciation Rights; or (ii) each grantee shall be permitted, within a specified period of time prior to the consummation of the Sale Event as determined by the Administrator, to exercise all outstanding Options and Stock Appreciation Rights held by such grantee.

(d) *Substitute Awards.* The Administrator may grant Awards under the Plan in substitution for stock and stock based awards held by employees, directors or other key persons of another corporation in connection with the merger or consolidation of the employing corporation with the Company or a Subsidiary or the acquisition by the Company or a Subsidiary

of property or stock of the employing corporation. The Administrator may direct that the substitute awards be granted on such terms and conditions as the Administrator considers appropriate in the circumstances. Any substitute Awards granted under the Plan shall not count against the share limitation set forth in Section 3(a).

SECTION 4. *ELIGIBILITY*

Grantees under the Plan will be such full or part-time officers and other employees, Non-Employee Directors and key persons (including consultants and prospective employees) of the Company and its Subsidiaries as are selected from time to time by the Administrator in its sole discretion.

SECTION 5. *STOCK OPTIONS*

Any Stock Option granted under the Plan shall be in such form as the Administrator may from time to time approve.

Stock Options granted under the Plan may be either Incentive Stock Options or Non-Qualified Stock Options. Incentive Stock Options may be granted only to employees of the Company or any Subsidiary that is a "subsidiary corporation" within the meaning of Section 424(f) of the Code. To the extent that any Option does not qualify as an Incentive Stock Option, it shall be deemed a Non-Qualified Stock Option.

Stock Options granted pursuant to this Section 5 shall be subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the terms of the Plan, as the Administrator shall deem desirable.

(a) *Exercise Price.* The exercise price per share for the Stock covered by a Stock Option granted pursuant to this Section 5 shall be determined by the Administrator at the time of grant but shall not be less than 100 percent of the Fair Market Value on the date of grant. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the option price of such Incentive Stock Option shall be not less than 110 percent of the Fair Market Value on the grant date.

(b) *Option Term.* The term of each Stock Option shall be fixed by the Administrator, but no Stock Option shall be exercisable more than ten years after the date the Stock Option is granted. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the term of such Stock Option shall be no more than five years from the date of grant.

(c) *Exercisability; Rights of a Stockholder.* Stock Options shall become exercisable at such time or times, whether or not in installments, as shall be determined by the Administrator at or after the grant date. The Administrator may at any time accelerate the exercisability of all or any portion of any Stock Option. An optionee shall have the rights of a stockholder only as to shares acquired upon the exercise of a Stock Option and not as to unexercised Stock Options.

(d) *Method of Exercise.* Stock Options may be exercised in whole or in part, by giving written notice of exercise to the Company, specifying the number of shares to be purchased. Payment of the purchase price may be made by one or more of the following methods to the extent provided in the Option Award Agreement:

(i) In cash, by certified or bank check or other instrument acceptable to the Administrator;

(ii) Through the delivery (or attestation to the ownership) of shares of Stock that have been purchased by the optionee on the open market or that are beneficially owned by the optionee and are not then subject to restrictions under any Company plan. Such surrendered shares shall be valued at Fair Market Value on the exercise date. To the extent required to avoid variable accounting treatment under FAS 123R or other applicable accounting rules, such surrendered shares shall have been owned by the optionee for at least six months; or

(iii) By the optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company for the purchase price; provided that in the event the optionee chooses to pay the purchase price as so provided, the optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Administrator shall prescribe as a condition of such payment procedure.

Payment instruments will be received subject to collection. The transfer to the optionee on the records of the Company or of the transfer agent of the shares of Stock to be purchased pursuant to the exercise of a Stock Option will be contingent upon receipt from the optionee (or a purchaser acting in his stead in accordance with the provisions of the Stock Option) by the Company of the full purchase price for such shares and the fulfillment of any other requirements contained in the Option Award Agreement or applicable provisions of laws (including the satisfaction of any withholding taxes that the Company is obligated to withhold with respect to the optionee). In the event an optionee chooses to pay the purchase price by previously-owned shares of Stock through the attestation method, the number of shares of Stock transferred to the optionee upon the exercise of the Stock Option shall be net of the number of attested shares. In the event that the Company establishes, for itself or using the services of a third party, an automated system for the exercise of Stock Options, such as a system using an internet website or interactive voice response, then the paperless exercise of Stock Options may be permitted through the use of such an automated system.

(iv) *Annual Limit on Incentive Stock Options*. To the extent required for "incentive stock option" treatment under Section 422 of the Code, the aggregate Fair Market Value (determined as of the time of grant) of the shares of Stock with respect to which Incentive Stock Options granted under this Plan and any other plan of the Company or its parent and subsidiary corporations become exercisable for the first time

by an optionee during any calendar year shall not exceed $100,000. To the extent that any Stock Option exceeds this limit, it shall constitute a Non-Qualified Stock Option.

SECTION 6. *STOCK APPRECIATION RIGHTS*

(a) *Exercise Price of Stock Appreciation Rights.* The exercise price of a Stock Appreciation Right shall not be less than 100 percent of the Fair Market Value of the Stock on the date of grant.

(b) *Grant and Exercise of Stock Appreciation Rights.* Stock Appreciation Rights may be granted by the Administrator independently of any Stock Option granted pursuant to Section 5 of the Plan.

(c) *Terms and Conditions of Stock Appreciation Rights.* Stock Appreciation Rights shall be subject to such terms and conditions as shall be determined from time to time by the Administrator.

SECTION 7. *RESTRICTED STOCK AWARDS*

(a) *Nature of Restricted Stock Awards.* The Administrator shall determine the restrictions and conditions applicable to each Restricted Stock Award at the time of grant. Conditions may be based on continuing employment (or other service relationship) and/or achievement of pre-established performance goals and objectives. The grant of a Restricted Stock Award is contingent on the grantee executing the Restricted Stock Award Agreement. The terms and conditions of each such Award Agreement shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees.

(b) *Rights as a Stockholder.* Upon execution of the Restricted Stock Award Agreement and payment of any applicable purchase price, a grantee shall have the rights of a stockholder with respect to the voting of the Restricted Stock, subject to such conditions contained in the Restricted Stock Award Agreement. Unless the Administrator shall otherwise determine, (i) uncertificated Restricted Stock shall be accompanied by a notation on the records of the Company or the transfer agent to the effect that they are subject to forfeiture until such Restricted Stock are vested as provided in Section 7(d) below, and (ii) certificated Restricted Stock shall remain in the possession of the Company until such Restricted Stock is vested as provided in Section 7(d) below, and the grantee shall be required, as a condition of the grant, to deliver to the Company such instruments of transfer as the Administrator may prescribe.

(c) *Restrictions.* Restricted Stock may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of except as specifically provided herein or in the Restricted Stock Award Agreement. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 18 below, in writing after the Award Agreement is issued if a grantee's employment (or other service relationship) with the Company and its Subsidiaries terminates for any reason, any Restricted Stock that has not vested at the time of termination shall automatically and without any requirement of notice to such grantee from or other action by or on behalf of, the Company be deemed to have been reacquired by the

Company at its original purchase price (if any) from such grantee or such grantee's legal representative simultaneously with such termination of employment (or other service relationship), and thereafter shall cease to represent any ownership of the Company by the grantee or rights of the grantee as a stockholder. Following such deemed reacquisition of unvested Restricted Stock that are represented by physical certificates, a grantee shall surrender such certificates to the Company upon request without consideration.

(d) *Vesting of Restricted Stock.* The Administrator at the time of grant shall specify the date or dates and/or the attainment of pre-established performance goals, objectives and other conditions on which the non-transferability of the Restricted Stock and the Company's right of repurchase or forfeiture shall lapse. Notwithstanding the foregoing, in the event that any such Restricted Stock granted to employees shall have a performance-based goal, the restriction period with respect to such shares shall not be less than one year, and in the event any such Restricted Stock granted to employees shall have a time-based restriction, the total restriction period with respect to such shares shall not be less than three years; provided, however, that Restricted Stock with a time-based restriction may become vested incrementally over such three-year period. Subsequent to such date or dates and/or the attainment of such pre-established performance goals, objectives and other conditions, the shares on which all restrictions have lapsed shall no longer be Restricted Stock and shall be deemed "vested." Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 18 below, in writing after the Award Agreement is issued, a grantee's rights in any shares of Restricted Stock that have not vested shall automatically terminate upon the grantee's termination of employment (or other service relationship) with the Company and its Subsidiaries and such shares shall be subject to the provisions of Section 7(c) above.

SECTION 8. *DEFERRED STOCK AWARDS*

(a) *Nature of Deferred Stock Awards.* The Administrator shall determine the restrictions and conditions applicable to each Deferred Stock Award at the time of grant. Conditions may be based on continuing employment (or other service relationship) and/or achievement of pre-established performance goals and objectives. The grant of a Deferred Stock Award is contingent on the grantee executing the Deferred Stock Award Agreement. The terms and conditions of each such Award Agreement shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees. Notwithstanding the foregoing, in the event that any such Deferred Stock Award granted to employees shall have a performance-based goal, the restriction period with respect to such Award shall not be less than one year, and in the event any such Deferred Stock Award granted to employees shall have a time-based restriction, the total restriction period with respect to such Award shall not be less than three years; provided, however, that any Deferred Stock Award with a time-based restriction may become vested incrementally over such three-year period. At the end of the deferral period, the Deferred Stock Award, to the extent vested, shall be settled in the form of shares of Stock. To the extent that a Deferred Stock Award is subject to Section 409A, it may contain such additional terms and conditions as the Administrator shall determine in its sole discretion in order for such Award to comply with the requirements of Section 409A..



(b) *Election to Receive Deferred Stock Awards in Lieu of Compensation.* The Administrator may, in its sole discretion, permit a grantee to elect to receive a portion of future cash compensation otherwise due to such grantee in the form of a Deferred Stock Award. Any such election shall be made in writing and shall be delivered to the Company no later than the date specified by the Administrator and in accordance with Section 409A and such other rules and procedures established by the Administrator. Any such future cash compensation that the grantee elects to defer shall be converted to a fixed number of phantom stock units based on the Fair Market Value of Stock on the date the compensation would otherwise have been paid to the grantee if such payment had not been deferred as provided herein. The Administrator shall have the sole right to determine whether and under what circumstances to permit such elections and to impose such limitations and other terms and conditions thereon as the Administrator deems appropriate.

(c) *Rights as a Stockholder.* A grantee shall have the rights as a stockholder only as to shares of Stock acquired by the grantee upon settlement of a Deferred Stock Award; provided, however, that the grantee may be credited with Dividend Equivalent Rights with respect to the phantom stock units underlying his Deferred Stock Award, subject to such terms and conditions as the Administrator may determine.

(d) *Termination.* Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 18 below, in writing after the Award Agreement is issued, a grantee's right in all Deferred Stock Awards that have not vested shall automatically terminate upon the grantee's termination of employment (or cessation of service relationship) with the Company and its Subsidiaries for any reason.

SECTION 9. *UNRESTRICTED STOCK AWARDS*

*Grant or Sale of Unrestricted Stock.* The Administrator may, in its sole discretion, grant (or sell at par value or such higher purchase price determined by the Administrator) an Unrestricted Stock Award under the Plan. Unrestricted Stock Awards may be granted in respect of past services or other valid consideration, or in lieu of cash compensation due to such grantee.

SECTION 10. *CASH-BASED AWARDS*

*Grant of Cash-Based Awards.* The Administrator may, in its sole discretion, grant Cash-Based Awards to any grantee in such

number or amount and upon such terms, and subject to such conditions, as the Administrator shall determine at the time of grant. The Administrator shall determine the maximum duration of the Cash-Based Award, the amount of cash to which the Cash-Based Award pertains, the conditions upon which the Cash-Based Award shall become vested or payable, and such other provisions as the Administrator shall determine. Each Cash-Based Award shall specify a cash-denominated payment amount, formula or payment ranges as determined by the Administrator. Payment, if any, with respect to a Cash-Based Award shall be made in accordance with the terms of the Award and may be made in cash or in shares of Stock, as the Administrator determines.

SECTION 11. *PERFORMANCE SHARE AWARDS*

(a) *Nature of Performance Share Awards.* The Administrator may, in its sole discretion, grant Performance Share Awards independent of, or in connection with, the granting of any other Award under the Plan. The Administrator shall determine whether and to whom Performance Share Awards shall be granted, the Performance Goals, the periods during which performance is to be measured, and such other limitations and conditions as the Administrator shall determine.

(b) *Rights as a Stockholder.* A grantee receiving a Performance Share Award shall have the rights of a stockholder only as to shares actually received by the grantee under the Plan and not with respect to shares subject to the Award but not actually received by the grantee. A grantee shall be entitled to receive shares of Stock under a Performance Share Award only upon satisfaction of all conditions specified in the Performance Share Award agreement (or in a performance plan adopted by the Administrator).

(c) *Termination.* Except as may otherwise be provided by the Administrator either in the Award agreement or, subject to Section 18 below, in writing after the Award agreement is issued, a grantee's rights in all Performance Share Awards shall automatically terminate upon the grantee's termination of employment (or cessation of service relationship) with the Company and its Subsidiaries for any reason.

SECTION 12. *PERFORMANCE-BASED AWARDS TO COVERED EMPLOYEES*

(a) *Performance-Based Awards.* Any employee or other key person providing services to the Company and who is selected by the Administrator may be granted one or more Performance-Based Awards in the form of a Restricted Stock Award, Deferred Stock Award, Performance Share Awards or Cash-Based Award payable upon the attainment of Performance Goals that are established by the Administrator and relate to one or more of the Performance Criteria, in each case on a specified date or dates or over any period or periods determined by the Administrator. The Administrator shall define in an objective fashion the manner of calculating the Performance Criteria it selects to use for any Performance Period. Depending on the Performance Criteria used to establish such Performance Goals, the Performance Goals may be expressed in terms of overall Company performance or the performance of a division, business unit, or an individual. The Administrator, in its discretion, may adjust or modify the calculation of Performance Goals for such Performance Period in order to prevent the dilution or enlargement of the rights of an individual (i) in the event of, or in anticipation of, any unusual or extraordinary corporate item, transaction, event or development, (ii) in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting the Company, or the financial statements of the Company, or (iii) in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles, or business conditions provided however, that the Administrator may not exercise such discretion in a manner that would increase the Performance-Based Award granted to a Covered Employee. Each Performance-Based Award shall comply with the provisions set forth below.

(b) *Grant of Performance-Based Awards.* With respect to each Performance-Based Award granted to a Covered Employee, the Administrator shall select, within the first 90 days of

a Performance Cycle (or, if shorter, within the maximum period allowed under Section 162(m) of the Code) the Performance Criteria for such grant, and the Performance Goals with respect to each Performance Criterion (including a threshold level of performance below which no amount will become payable with respect to such Award). Each Performance-Based Award will specify the amount payable, or the formula for determining the amount payable, upon achievement of the various applicable performance targets. The Performance Criteria established by the Administrator may be (but need not be) different for each Performance Cycle and different Performance Goals may be applicable to Performance-Based Awards to different Covered Employees.

(c) *Payment of Performance-Based Awards.* Following the completion of a Performance Cycle, the Administrator shall meet to review and certify in writing whether, and to what extent, the Performance Goals for the Performance Cycle have been achieved and, if so, to also calculate and certify in writing the amount of the Performance-Based Awards earned for the Performance Cycle. The Administrator shall then determine the actual size of each Covered Employee's Performance-Based Award, and, in doing so, may reduce or eliminate the amount of the Performance-Based Award for a Covered Employee if, in its sole judgment, such reduction or elimination is appropriate.

(d) *Maximum Award Payable.* The maximum Performance-Based Award payable to any one Covered Employee under the Plan for a Performance Cycle is 250,000 Shares (subject to adjustment as provided in Section 3(b) hereof).

SECTION 13. *DIVIDEND EQUIVALENT RIGHTS*

(a) *Dividend Equivalent Rights.* A Dividend Equivalent Right may be granted hereunder to any grantee as a component of a Deferred Stock Award, Restricted Stock Award or Performance Share Award or as a freestanding award. The terms and conditions of Dividend Equivalent Rights shall be specified in the Award Agreement. Dividend equivalents credited to the holder of a Dividend Equivalent Right may be paid currently or may be deemed to be reinvested in additional shares of Stock, which may thereafter accrue additional equivalents. Any such reinvestment shall be at Fair Market Value on the date of reinvestment or such other price as may then apply under a dividend reinvestment plan sponsored by the Company, if any. Dividend Equivalent Rights may be settled in cash or shares of Stock or a combination thereof, in a single installment or installments. A Dividend Equivalent Right granted as a component of a Deferred Stock Award, Restricted Stock Award or Performance Share Award may provide that such Dividend Equivalent Right shall be settled upon settlement or payment of, or lapse of restrictions on, such other Award, and that such Dividend Equivalent Right shall expire or be forfeited or annulled under the same conditions as such other Award. A Dividend Equivalent Right granted as a component of a Deferred Stock Award, Restricted Stock Award or Performance Share Award may also contain terms and conditions different from such other Award.

(b) *Interest Equivalents.* Any Award under this Plan that is settled in whole or in part in cash on a deferred basis may provide in the grant for interest equivalents to be credited with

respect to such cash payment. Interest equivalents may be compounded and shall be paid upon such terms and conditions as may be specified by the grant.

(c) *Termination.* Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 18 below, in writing after the Award Agreement is issued, a grantee's rights in all Dividend Equivalent Rights or interest equivalents granted as a component of a Deferred Stock Award, Restricted Stock Award or Performance Share Award that has not vested shall automatically terminate upon the grantee's termination of employment (or cessation of service relationship) with the Company and its Subsidiaries for any reason.

SECTION 14. *TRANSFERABILITY OF AWARDS*

(a) *Transferability.* Except as provided in Section 14(b) below, during a grantee's lifetime, his or her Awards shall be exercisable only by the grantee, or by the grantee's legal representative or guardian in the event of the grantee's incapacity. No Awards shall be sold, assigned, transferred or otherwise encumbered or disposed of by a grantee other than by will or by the laws of descent and distribution. No Awards shall be subject, in whole or in part, to attachment, execution, or levy of any kind, and any purported transfer in violation hereof shall be null and void.

(b) *Administrator Action.* Notwithstanding Section 14(a), the Administrator, in its discretion, may provide either in the Award Agreement regarding a given Award or by subsequent written approval that the grantee (who is an employee or director) may transfer his or her Awards (other than any Incentive Stock Options) to his or her immediate family members, to trusts for the benefit of such family members, or to partnerships in which such family members are the only partners, provided that the transferee agrees in writing with the Company to be bound by all of the terms and conditions of this Plan and the applicable Award.

(c) *Family Member.* For purposes of Section 14(b), "family member" shall mean a grantee's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships, any person sharing the grantee's household (other than a tenant of the grantee), a trust in which these persons (or the grantee) have more than 50 percent of the beneficial interest, a foundation in which these persons (or the grantee) control the management of assets, and any other entity in which these persons (or the grantee) own more than 50 percent of the voting interests.

(d) *Designation of Beneficiary.* Each grantee to whom an Award has been made under the Plan may designate a beneficiary or beneficiaries to exercise any Award or receive any payment under any Award payable on or after the grantee's death. Any such designation shall be on a form provided for that purpose by the Administrator and shall not be effective until received by the Administrator. If no beneficiary has been designated by a deceased grantee, or if the designated beneficiaries have predeceased the grantee, the beneficiary shall be the grantee's estate.

SECTION 15. *TAX WITHHOLDING*

(a) *Payment by Grantee.* Each grantee shall, no later than the date as of which the value of an Award or of any Stock or other amounts received thereunder first becomes includable in the gross income of the grantee for Federal income tax purposes, pay to the Company, or make arrangements satisfactory to the Administrator regarding payment of, any Federal, state, or local taxes of any kind required by law to be withheld by the Company with respect to such income. The Company and its Subsidiaries shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the grantee. The Company's obligation to deliver evidence of book entry (or stock certificates) to any grantee is subject to and conditioned on tax withholding obligations being satisfied by the grantee.

(b) *Payment in Stock.* Subject to approval by the Administrator, a grantee may elect to have the Company's minimum required tax withholding obligation satisfied, in whole or in part, by authorizing the Company to withhold from shares of Stock to be issued pursuant to any Award a number of shares with an aggregate Fair Market Value (as of the date the withholding is effected) that would satisfy the withholding amount due.

SECTION 16. *SECTION 409A AWARDS.*

To the extent that any Award is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A (a "409A Award"), the Award shall be subject to such additional rules and requirements as specified by the Administrator from time to time in order to comply with Section 409A. In this regard, if any amount under a 409A Award is payable upon a "separation from service" (within the meaning of Section 409A) to a grantee who is then considered a "specified employee" (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the grantee's separation from service, or (ii) the grantee's death, but only to the extent such delay is necessary to prevent such payment from being subject to interest, penalties and/or additional tax imposed pursuant to Section 409A. Further, the settlement of any such Award may not be accelerated except to the extent permitted by Section 409A.

SECTION 17. *TRANSFER, LEAVE OF ABSENCE, ETC.*

For purposes of the Plan, the following events shall not be deemed a termination of employment:

(a) a transfer to the employment of the Company from a Subsidiary or from the Company to a Subsidiary, or from one Subsidiary to another; or

(b) an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the employee's right to re-employment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Administrator otherwise so provides in writing.

SECTION 18. *AMENDMENTS AND TERMINATION*

The Board may, at any time, amend or discontinue the Plan and the Administrator may, at any time, amend or cancel any outstanding Award for the purpose of satisfying changes in law or for any other lawful purpose, but no such action shall (a) adversely affect rights under any outstanding Award without the holder's consent or (b) except as provided in Section 3(b) or 3(c), without the prior approval of the Company's stockholders, reduce the exercise price of or otherwise reprice, including through replacement grants, any outstanding Stock Option or Stock Appreciation Right. To the extent required under the rules of any securities exchange or market system on which the Stock is listed, to the extent determined by the Administrator to be required by the Code to ensure that Incentive Stock Options granted under the Plan are qualified under Section 422 of the Code or to ensure that compensation earned under Awards qualifies as performance-based compensation under Section 162(m) of the Code, Plan amendments shall be subject to approval by the Company stockholders entitled to vote at a meeting of stockholders. Nothing in this Section 18 shall limit the Administrator's authority to take any action permitted pursuant to Section 3(c).

SECTION 19. *STATUS OF PLAN*

With respect to the portion of any Award that has not been exercised and any payments in cash, Stock or other consideration not received by a grantee, a grantee shall have no rights greater than those of a general creditor of the Company unless the Administrator shall otherwise expressly determine in connection with any Award or Awards. In its sole discretion, the Administrator may authorize the creation of trusts or other arrangements to meet the Company's obligations to deliver Stock or make payments with respect to Awards hereunder, provided that the existence of such trusts or other arrangements is consistent with the foregoing sentence.

SECTION 20. *CHANGE OF CONTROL PROVISIONS*

Upon the occurrence of a Change of Control as defined in this Section 20:

(a) Except as otherwise provided in the applicable Award agreement, each outstanding Stock Option, Stock Appreciation Right and Dividend Equivalent Right shall automatically become fully exercisable.

(b) Except as otherwise provided in the applicable Award Agreement, conditions and restrictions on each outstanding Restricted Stock Award, Deferred Stock Award and Performance Share Award which relate solely to the passage of time and continued employment will be removed. Performance or other conditions (other than conditions and restrictions relating solely to the passage of time and continued employment) will continue to apply unless otherwise provided in the applicable Award Agreement.

(c) "Change of Control" shall mean the occurrence of any one of the following events:

(i) any "*Person*," as such term is used in Sections 13(d) and 14(d) of the Act (other than the Company, any of its Subsidiaries, or any trustee, fiduciary or other person or entity holding securities under any employee benefit plan or trust of the Company or any of its Subsidiaries), together with all "affiliates" and "associates" (as such terms are defined in Rule 12b-2 under the Act) of such person, shall become the "beneficial owner" (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, of securities of the Company representing 25 percent or more of the combined voting power of the Company's then outstanding securities having the right to vote in an election of the Company's Board of Directors ("Voting Securities") (in such case other than as a result of an acquisition of securities directly from the Company); or

(ii) persons who, as of the Effective Date, constitute the Company's Board of Directors (the "Incumbent Directors") cease for any reason, including, without limitation, as a result of a tender offer, proxy contest, merger or similar transaction, to constitute at least a majority of the Board, provided that any person becoming a director of the Company subsequent to the Effective Date shall be considered an Incumbent Director if such person's election was approved by or such person was nominated for election by either (A) a vote of at least a majority of the Incumbent Directors or (B) a vote of at least a majority of the Incumbent Directors who are members of a nominating committee comprised, in the majority, of Incumbent Directors; but provided further, that any such person whose initial assumption of office is in connection with an actual or threatened election contest relating to the election of members of the Board of Directors or other actual or threatened solicitation of proxies or consents by or on behalf of a *Person* other than the Board, including by reason of agreement intended to avoid or settle any such actual or threatened contest or solicitation, shall not be considered an Incumbent Director; or

(iii) the consummation of (A) any consolidation or merger of the Company where the stockholders of the Company, immediately prior to the consolidation or merger, would not, immediately after the consolidation or merger, beneficially own (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, shares representing in the aggregate more than 50 percent of the voting shares of the corporation issuing cash or securities in the consolidation or merger (or of its ultimate parent corporation, if any), (B) any sale, lease, exchange or other transfer (in one transaction or a series of transactions contemplated or arranged by any party as a single plan) of all or substantially all of the assets of the Company; or

(iv) the shareholders of the Company shall approve any plan or proposal for the liquidation or dissolution of the Company.

Notwithstanding the foregoing, a "Change of Control" shall not be deemed to have occurred for purposes of the foregoing clause (i) solely as the result of an acquisition of securities by the Company which, by reducing the number of shares of Voting Securities outstanding, increases the proportionate number of shares of Voting Securities beneficially owned by any person to

25 percent or more of the combined voting power of all then outstanding Voting Securities; *provided*, *however*, that if any person referred to in this sentence shall thereafter become the beneficial owner of any additional shares of Voting Securities (other than pursuant to a stock split, stock dividend, or similar transaction or as a result of an acquisition of securities directly from the Company), then a *"Change of Control"* shall be deemed to have occurred for purposes of the foregoing clause (i).

SECTION 21. *GENERAL PROVISIONS*

(a) *No Distribution.* The Administrator may require each person acquiring Stock pursuant to an Award to represent to and agree with the Company in writing that such person is acquiring the shares without a view to distribution thereof.

(b) *Delivery of Stock Certificates.* Stock certificates to grantees under this Plan shall be deemed delivered for all purposes when the Company or a stock transfer agent of the Company shall have mailed such certificates in the United States mail, addressed to the grantee, at the grantee's last known address on file with the Company. Uncertificated Stock shall be deemed delivered for all purposes when the Company or a Stock transfer agent of the Company shall have given to the grantee by electronic mail (with proof of receipt) or by United States mail, addressed to the grantee, at the grantee's last known address on file with the Company, notice of issuance and recorded the issuance in its records (which may include electronic "book entry" records). Notwithstanding anything herein to the contrary, the Company shall not be required to issue or deliver any certificates evidencing shares of Stock pursuant to the exercise of any Award, unless and until the Administrator has determined, with advice of counsel (to the extent the Administrator deems such advice necessary or advisable), that the issuance and delivery of such certificates is in compliance with all applicable laws, regulations of governmental authorities and, if applicable, the requirements of any exchange on which the shares of Stock are listed, quoted or traded. All Stock certificates delivered pursuant to the Plan shall be subject to any stop-transfer orders and other restrictions as the Administrator deems necessary or advisable to comply with federal, state or foreign jurisdiction, securities or other laws, rules and quotation system on which the Stock is listed, quoted or traded. The Administrator may place legends on any Stock certificate to reference restrictions applicable to the Stock. In addition to the terms and conditions provided herein, the Administrator may require that an individual make such reasonable covenants, agreements, and representations as the Administrator, in its discretion, deems necessary or advisable in order to comply with any such laws, regulations, or requirements. The Administrator shall have the right to require any individual to comply with any timing or other restrictions with respect to the settlement or exercise of any Award, including a window-period limitation, as may be imposed in the discretion of the Administrator.

(c) *Stockholder Rights.* Until Stock is deemed delivered in accordance with Section 21(b), no right to vote or receive dividends or any other rights of a stockholder will exist with respect to shares of Stock to be issued in connection with an Award, notwithstanding the exercise of a Stock Option or any other action by the grantee with respect to an Award.

(d) *Other Compensation Arrangements; No Employment Rights.* Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements,

including trusts, and such arrangements may be either generally applicable or applicable only in specific cases. The adoption of this Plan and the grant of Awards do not confer upon any employee any right to continued employment with the Company or any Subsidiary.

(e) *Trading Policy Restrictions.* Option exercises and other Awards under the Plan shall be subject to such Company's insider trading policy and procedures, as in effect from time to time.

(f) *Forfeiture of Awards under Sarbanes-Oxley Act.* If the Company is required to prepare an accounting restatement due to the material noncompliance of the Company, as a result of misconduct, with any financial reporting requirement under the securities laws, then any grantee who is one of the individuals subject to automatic forfeiture under Section 304 of the Sarbanes-Oxley Act of 2002 shall reimburse the Company for the amount of any Award received by such individual under the Plan during the 12-month period following the first public issuance or filing with the United States Securities and Exchange Commission, as the case may be, of the financial document embodying such financial reporting requirement.

SECTION 22. *EFFECTIVE DATE OF PLAN*

This Plan shall become effective upon approval by the holders of a majority of the votes cast at a meeting of stockholders at which a quorum is present. No grants of Stock Options and other Awards may be made hereunder after the tenth anniversary of the Effective Date and no grants of Incentive Stock Options may be made hereunder after the tenth anniversary of the date the Plan is approved by the Board.

SECTION 23. *GOVERNING LAW*

This Plan and all Awards and actions taken thereunder shall be governed by, and construed in accordance with, the laws of the State of Delaware, applied without regard to conflict of law principles.

**Exhibit 10.35**

**CELLDEX THERAPEUTICS, INC.**

**2004 EMPLOYEE STOCK PURCHASE PLAN**

**as amended and restated effective as of February 24, 2010**

1. *Purpose.* The purpose of the Celldex Therapeutics, Inc. 2004 Employee Stock Purchase Plan (the "Plan") is to provide eligible employees of Celldex Therapeutics, Inc. (the "Company") and certain of its subsidiaries with opportunities to purchase shares of the Company's common stock, par value $.01 per share (the "Common Stock"). Sixty-two thousand five hundred (62,500) shares of Common Stock in the aggregate have been approved and reserved for this purpose. The Plan is intended to constitute an "employee stock purchase plan" within the meaning of Section 423(b) of the Internal Revenue Code of 1986, as amended (the "Code"), and shall be interpreted in accordance with that intent.

2. *Administration.* The Plan will be administered by the person or persons (the "Administrator") appointed by the Company's Board of Directors (the "*Board*") for such purpose. The Administrator has authority to make rules and regulations for the administration of the Plan, and its interpretations and decisions with regard thereto shall be final and conclusive. No member of the Board or individual exercising administrative authority with respect to the Plan shall be liable for any action or determination made in good faith with respect to the Plan or any option granted hereunder.

3. *Offerings.* The Company will make one or more offerings to eligible employees to purchase Common Stock under the Plan ("Offerings"). Unless otherwise determined by the Administrator, each Offering will begin on the first business day occurring on or after each January 1 and July 1 and will end on the last business day occurring on or before the following June 30 and December 31, respectively. The Administrator may, in its discretion, designate a different period for any Offering, provided that no Offering shall exceed 27 months in duration or overlap any other Offering.

4. *Eligibility.* Each individual classified as an employee (within the meaning of Section 3401(c) of the Code and the regulations thereunder) by the Company or a Designated Subsidiary (as defined in Section 12) on the Company's or the Designated Subsidiary's payroll records during the relevant participation period are eligible to participate in any one or more of the Offerings under the Plan, provided that as of the first day of the applicable Offering (the "Offering Date") they are customarily employed by the Company or a Designated Subsidiary for more than 20 hours a week and more than five months in the calendar year during which the Offering Date occurs or in the calendar year immediately preceding such year, and have completed at least 60 days of employment.

5. *Participation.* An employee eligible on any Offering Date may participate in such Offering by submitting an enrollment form to his appropriate payroll location at least 15 business days before the Offering Date (or by such other deadline as shall be established for the Offering). The form will (a) state a whole percentage to be deducted from his Compensation (as defined in Section 12) per pay period, (b) authorize the purchase of Common Stock for him in each

Offering in accordance with the terms of the Plan and (c) specify the exact name or names in which shares of Common Stock purchased for him are to be issued pursuant to Section 11. An employee who does not enroll in accordance with these procedures will be deemed to have waived his right to participate. Unless an employee files a new enrollment form or withdraws from the Plan, his deductions and purchases will continue at the same percentage of Compensation for future Offerings, provided he remains eligible. Notwithstanding the foregoing, participation in the Plan will neither be permitted nor be denied contrary to the requirements of the Code.

6. *Employee Contributions.* Each eligible employee may authorize payroll deductions at a minimum of one percent (1%) up to a maximum of fifteen percent (15%) of his Compensation for each pay period. The Company will maintain book accounts showing the amount of payroll deductions made by each participating employee for each Offering. No interest will accrue or be paid on payroll deductions.

7. *Deduction Changes.* Except as may be determined by the Administrator in advance of an Offering, an employee may not increase or decrease his payroll deduction during any Offering, but may increase or decrease his payroll deduction with respect to the next Offering (subject to the limitations of Section 6) by filing a new enrollment form at least 15 business days before the next Offering Date (or by such other deadline as shall be established for the Offering). The Administrator may, in advance of any Offering, establish rules permitting an employee to increase, decrease or terminate his payroll deduction during an Offering.

8. *Withdrawal.* An employee may withdraw from participation in the Plan by delivering a written notice of withdrawal to his appropriate payroll location. The employee's withdrawal will be effective as of the next business day. Following an employee's withdrawal, the Company will promptly refund to him his entire account balance under the Plan (after payment for any Common Stock purchased before the effective date of withdrawal). Partial withdrawals are not permitted. The employee may not begin participation again during the remainder of the Offering, but may enroll in a subsequent Offering in accordance with Section 5.

9. *Grant of Options.* On each Offering Date, the Company will grant to each eligible employee who is then a participant in the Plan an option ("Option") to purchase on the last day of such Offering (the "Exercise Date"), at the Option Price hereinafter provided for, (a) a number of shares of Common Stock determined by dividing such employee's accumulated payroll deductions on such Exercise Date by the lower of (i) 85% of the Fair Market Value of the Common Stock on the Offering Date, or (ii) 85% of the Fair Market Value of the Common Stock on the Exercise Date, or (b) such other lesser maximum number of shares as shall have been established by the Administrator in advance of the Offering; provided, however, that such Option shall be subject to the limitations set forth below. Each employee's Option shall be exercisable only to the extent of such employee's accumulated payroll deductions on the Exercise Date. The purchase price for each share purchased under each Option (the "Option Price") will be 85% of the Fair Market Value of the Common Stock on the Offering Date or the Exercise Date, whichever is less. In addition, no Participant may purchase more than 250 shares of Common Stock pursuant to the Plan in any calendar year, unless otherwise determined by the Committee.

Notwithstanding the foregoing, no employee may be granted an option hereunder if such employee, immediately after the option was granted, would be treated as owning stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any Parent or Subsidiary (as defined in Section 12). For purposes of the preceding sentence, the attribution rules of Section 424(d) of the Code shall apply in determining the stock ownership of an employee, and all stock which the employee has a contractual right to purchase shall be treated as stock owned by the employee. In addition, no employee may be granted an Option which permits his rights to purchase stock under the Plan, and any other employee stock purchase plan of the Company and its Parents and Subsidiaries, to accrue at a rate which exceeds $25,000 of the fair market value of such stock (determined on the option grant date or dates) for each calendar year in which the Option is outstanding at any time. The purpose of the limitation in the preceding sentence is to comply with Section 423(b)(8) of the Code and shall be applied taking Options into account in the order in which they were granted.

10. *Exercise of Option and Purchase of Shares.* Each employee who continues to be a participant in the Plan on the Exercise Date shall be deemed to have exercised his Option on such date and shall acquire from the Company such number of whole shares of Common Stock reserved for the purpose of the Plan as his accumulated payroll deductions on such date will purchase at the Option Price, subject to any other limitations contained in the Plan. Any amount remaining in an employee's account at the end of an Offering will be refunded to the employee promptly.

11. *Issuance of Certificates.* Certificates representing shares of Common Stock purchased under the Plan may be issued only in the name of the employee, in the name of the employee and another person of legal age as joint tenants with rights of survivorship, or in the name of a broker authorized by the employee to be his, or their, nominee for such purpose.

12. *Definitions.*

a) The term "Compensation" means the amount of base pay, prior to salary reduction pursuant to either Sections 125, 132(f) or 401(k) of the Code, but excluding overtime, commissions, incentive or bonus awards, allowances and reimbursements for expenses such as relocation allowances or travel expenses, income or gains on the exercise of Company stock options, and similar items.

b) The term "Designated Subsidiary" means any present or future Subsidiary (as defined below) that has been designated by the Board to participate in the Plan. The Board may so designate any Subsidiary, or revoke any such designation, at any time and from time to time, either before or after the Plan is approved by stockholders.

c) The term "Fair Market Value of the Common Stock" on any given date means the fair market value of the Common Stock determined in good faith by the Administrator; provided, however, that if the Common Stock is admitted to quotation on the National Association of Securities Dealers Automated Quotation System ("NASDAQ"), NASDAQ National System or national securities exchange, the

determination shall be made by averaging the high and the low asked price on such date. If there are no market quotations for such date, the determination shall be made by reference to the last date preceding such date for which there are market quotations.

d) The term "Parent" means a "parent corporation" with respect to the Company, as defined in Section 424(e) of the Code.

e) The term "Subsidiary" means a "subsidiary corporation" with respect to the Company, as defined in Section 424(f) of the Code.

13. *Rights on Termination of Employment.* If a participating employee's employment terminates for any reason before the Exercise Date for any Offering, no payroll deduction will be taken from any pay due and owing to the employee and the balance in his account will be paid to him or, in the case of his death, to his designated beneficiary as if he had withdrawn from the Plan under Section 8. An employee will be deemed to have terminated employment, for this purpose, if the corporation that employs him, having been a Designated Subsidiary, ceases to be a Subsidiary, or if the employee is transferred to any corporation other than the Company or a Designated Subsidiary. An employee will not be deemed to have terminated employment, for this purpose, if the employee is on an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the employee's right to reemployment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Administrator otherwise provides in writing.

14. *Special Rules.* Notwithstanding anything herein to the contrary, the Administrator may adopt special rules applicable to the employees of a particular Designated Subsidiary, whenever the Administrator determines that such rules are necessary or appropriate for the implementation of the Plan in a jurisdiction where such Designated Subsidiary has employees; provided that such rules are consistent with the requirements of Section 423(b) of the Code. Such special rules may include (by way of example, but not by way of limitation) the establishment of a method for employees of a given Designated Subsidiary to fund the purchase of shares other than by payroll deduction, if the payroll deduction method is prohibited by local law or is otherwise impracticable. Any special rules established pursuant to this Section 14 shall, to the extent possible, result in the employees subject to such rules having substantially the same rights as other participants in the Plan.

15. *Optionees Not Stockholders.* Neither the granting of an Option to an employee nor the deductions from his pay shall constitute such employee a holder of the shares of Common Stock covered by an Option under the Plan until such shares have been purchased by and issued to him.

16. *Rights Not Transferable.* Rights under the Plan are not transferable by a participating employee other than by will or the laws of descent and distribution, and are exercisable during the employee's lifetime only by the employee.

17. *Application of Funds.* All funds received or held by the Company under the Plan may be combined with other corporate funds and may be used for any corporate purpose.

18. *Adjustment in Case of Changes Affecting Common Stock.* In the event of a subdivision of outstanding shares of Common Stock, or the payment of a dividend in Common Stock, the number of shares approved for the Plan, and the share limitation set forth in Section 9, shall be increased proportionately, and such other adjustment shall be made as may be deemed equitable by the Administrator. In the event of any other change affecting the Common Stock, such adjustment shall be made as may be deemed equitable by the Administrator to give proper effect to such event.

19. *Amendment of the Plan.* The Board may at any time, and from time to time, amend the Plan in any respect, except that without the approval, within 12 months of such Board action, by the stockholders, no amendment shall be made increasing the number of shares approved for the Plan or making any other change that would require stockholder approval in order for the Plan, as amended, to qualify as an "employee stock purchase plan" under Section 423(b) of the Code.

20. *Insufficient Shares.* If the total number of shares of Common Stock that would otherwise be purchased on any Exercise Date plus the number of shares purchased under previous Offerings under the Plan exceeds the maximum number of shares issuable under the Plan, the shares then available shall be apportioned among participants in proportion to the amount of payroll deductions accumulated on behalf of each participant that would otherwise be used to purchase Common Stock on such Exercise Date.

21. *Termination of the Plan.* The Plan may be terminated at any time by the Board. Upon termination of the Plan, all amounts in the accounts of participating employees shall be promptly refunded.

22. *Governmental Regulations.* The Company's obligation to sell and deliver Common Stock under the Plan is subject to obtaining all governmental approvals required in connection with the authorization, issuance, or sale of such stock.

The Plan shall be governed by Massachusetts law except to the extent that such law is preempted by federal law.

23. *Issuance of Shares.* Shares may be issued upon exercise of an Option from authorized but unissued Common Stock, from shares held in the treasury of the Company, or from any other proper source.

24. *Tax Withholding.* Participation in the Plan is subject to any minimum required tax withholding on income of the participant in connection with the Plan. Each employee agrees, by entering the Plan, that the Company and its Subsidiaries shall have the right to deduct any such taxes from any payment of any kind otherwise due to the employee, including shares issuable under the Plan.

25. *Notification Upon Sale of Shares.* Each employee agrees, by entering the Plan, to give the Company prompt notice of any disposition of shares purchased under the Plan where

such disposition occurs within two years after the date of grant of the Option pursuant to which such shares were purchased.

26. *Effective Date and Approval of Shareholders.* The Plan was adopted by the Board of Directors on March 31, 2004 and shall take effect on the date that it is approved by the holders of a majority of the votes cast at a meeting of stockholders at which a quorum is present.

**Exhibit 10.41**

**CURAGEN CORPORATION**

2007 STOCK INCENTIVE PLAN

**AMENDED and RESTATED**
(effective May 21, 2008)

1. Purpose

The purpose of this 2007 Stock Incentive Plan (the "Plan") of CuraGen Corporation, a Delaware corporation (the "Company"), is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of the Company's stockholders. Except where the context otherwise requires, the term "Company" shall include any of the Company's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the "Code") and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a controlling interest, as determined by the Board of Directors of the Company (the "Board").

2. Eligibility

All of the Company's employees, officers, directors, consultants and advisors are eligible to be granted options, stock appreciation rights, restricted stock, restricted stock units and other stock-based awards (each, an "Award") under the Plan. Each person who receives an Award under the Plan is deemed a "Participant".

3. Administration and Delegation

(a) Administration by Board of Directors. The Plan will be administered by the Board. The Board shall have authority to grant Awards and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Board may construe and interpret the terms of the Plan and any Award agreements entered into under the Plan. The Board may correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. All decisions by the Board shall be made in the Board's sole discretion and shall be final and binding on all persons having or claiming any interest in the Plan or in any Award. No director or person acting pursuant to the authority delegated by the Board shall be liable for any action or determination relating to or under the Plan made in good faith.

(b) Appointment of Committees. To the extent permitted by applicable law, the Board may delegate any or all of its powers under the Plan to one or more committees or subcommittees of the Board (a "Committee"). All references in the Plan to the "Board" shall

mean the Board or a Committee of the Board or the officers referred to in Section 3(c) to the extent that the Board's powers or authority under the Plan have been delegated to such Committee or officers.

(c) Delegation to Officers. To the extent permitted by applicable law, the Board may delegate to one or more officers of the Company the power to grant Awards (subject to any limitations under the Plan) to employees or officers of the Company or any of its present or future subsidiary corporations and to exercise such other powers under the Plan as the Board may determine, provided that the Board shall fix the terms of the Awards to be granted by such officers (including the exercise price of such Awards, which may include a formula by which the exercise price will be determined) and the maximum number of shares subject to Awards that the officers may grant; provided further, however, that no officer shall be authorized to grant Awards to any "executive officer" of the Company (as defined by Rule 3b-7 under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) or to any "officer" of the Company (as defined by Rule 16a-1 under the Exchange Act).

4. Stock Available for Awards

(a) Number of Shares. Subject to adjustment under Section 10, Awards may be made under the Plan for up to 6,000,000 shares of common stock, $0.01 par value per share, of the Company (the "Common Stock"). For purposes of counting the number of shares available for the grant of Awards under the Plan, (i) shares of Common Stock covered by independent SARs shall be counted against the number of shares available for the grant of Awards under the Plan; provided, however, that independent SARs that may be settled in cash only shall not be so counted; (ii) if any Award (A) expires or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at the original issuance price pursuant to a contractual repurchase right) or (B) results in any Common Stock not being issued (including as a result of an independent SAR that was settleable either in cash or in stock actually being settled in cash), the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan; provided, however, in the case of Incentive Stock Options (as hereinafter defined), the foregoing shall be subject to any limitations under the Code; and (iii) shares of Common Stock tendered to the Company by a Participant to (A) purchase shares of Common Stock upon the exercise of an Award or (B) satisfy tax withholding obligations (including shares retained from the Award creating the tax obligation) shall not be added back to the number of shares available for the future grant of Awards under the Plan. However, in the case of Incentive Stock Options (as hereinafter defined), the foregoing provisions shall be subject to any limitations under the Code. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

(b) Sub-limits. Subject to adjustment under Section 10, the following sub-limits on the number of shares subject to Awards shall apply:

(1) Section 162(m) Per-Participant Limit. The maximum number of shares of Common Stock with respect to which Awards may be granted to any Participant under the Plan

shall be 750,000 per calendar year. For purposes of the foregoing limit, the combination of an Option in tandem with an SAR (as each is hereafter defined) shall be treated as a single Award. The per-Participant limit described in this Section 4(b)(1) shall be construed and applied consistently with Section 162(m) of the Code or any successor provision thereto, and the regulations thereunder ("Section 162(m)").

(c) Limit on Awards other than Options and SARS. The maximum number of shares with respect to which Awards other than Options and SARs may be granted (determined net of any Awards that have returned to the pool of shares available for grant in accordance with Section 4(a)) shall be 50% of the maximum number of shares available for Awards under the Plan as set forth in Section 4(a).

(d) Substitute Awards. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Board may grant Awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Board deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4(a), except as may be required by reason of Section 422 and related provisions of the Code.

5. Stock Options

(a) General. The Board may grant options to purchase Common Stock (each, an "Option") and determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable. An Option that is not intended to be an Incentive Stock Option (as hereinafter defined) shall be designated a "Nonstatutory Stock Option."

(b) Incentive Stock Options. An Option that the Board intends to be an "incentive stock option" as defined in Section 422 of the Code (an "Incentive Stock Option") shall only be granted to employees of CuraGen Corporation, any of CuraGen Corporation's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code, and shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. The Company shall have no liability to a Participant, or any other party, if an Option (or any part thereof) that is intended to be an Incentive Stock Option is not an Incentive Stock Option or for any action taken by the Board, including without limitation the conversion of an Incentive Stock Option to a Nonstatutory Stock Option.

(c) Exercise Price. The Board shall establish the exercise price of each Option and specify such exercise price in the applicable option agreement. The exercise price shall be not less than 100% of the Fair Market Value (as defined below) on the date the Option is granted; provided that if the Board approves the grant of an Option with an exercise price to be determined on a future date, the exercise price shall be not less than 100% of the Fair Market Value on such future date.

(d) Duration of Options. Each Option shall be exercisable at such times and subject to such terms and conditions as the Board may specify in the applicable option agreement, provided, however, that no Option will be granted for a term in excess of 10 years.

(e) Exercise of Option. Options may be exercised by delivery to the Company of a written notice of exercise signed by the proper person or by any other form of notice (including electronic notice) approved by the Board, together with payment in full as specified in Section 5(f) for the number of shares for which the Option is exercised. Shares of Common Stock subject to the Option will be delivered by the Company following exercise either as soon as practicable or, subject to such conditions as the Board shall specify, on a deferred basis (with the Company's obligation to be evidenced by an instrument providing for future delivery of the deferred shares at the time or times specified by the Board).

(f) Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for as follows:

(1) in cash or by check, payable to the order of the Company;

(2) except as may otherwise be provided in the applicable option agreement, by (i) delivery of an irrevocable and unconditional undertaking by a creditworthy broker to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding or (ii) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a creditworthy broker to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(3) to the extent provided for in the applicable option agreement or approved by the Board, in its sole discretion, by delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their fair market value as determined by (or in a manner approved by) the Board ("Fair Market Value"), provided (i) such method of payment is then permitted under applicable law, (ii) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Board in its discretion and (iii) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(4) to the extent permitted by applicable law and provided for in the applicable option agreement or approved by the Board, in its sole discretion, by (i) delivery of a promissory note of the Participant to the Company on terms determined by the Board, or (ii) payment of such other lawful consideration as the Board may determine; or

(5) by any combination of the above permitted forms of payment.

6. Limitation on Repricing. Unless such action is approved by the Company's stockholders: (i) no outstanding Option granted under the Plan may be amended to provide an exercise price per share that is lower than the then-current exercise price per share of such outstanding Option (other than adjustments pursuant to Section 10) and (ii) the Board may not cancel any outstanding option (whether or not granted under the Plan) and grant in substitution therefore new Awards under the Plan covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled option.

7. Stock Appreciation Rights.

(a) General. The Board may grant Awards consisting of a stock appreciation right ("SAR") entitling the holder, upon exercise, to receive an amount of Common Stock or cash or a combination thereof (such form to be determined by the Board) determined in whole or in part by reference to appreciation, from and after the date of grant, in the fair market value of a share of Common Stock. The date as of which such appreciation or other measure is determined shall be the exercise date.

(b) Grants. SARs may be granted in tandem with, or independently of, Options granted under the Plan.

(1) Tandem Awards. When SARs are expressly granted in tandem with Options, (i) the SAR will be exercisable only at such time or times, and to the extent, that the related Option is exercisable (except to the extent designated by the Board in connection with a Reorganization Event and will be exercisable in accordance with the procedure required for exercise of the related Option; (ii) the SAR will terminate and no longer be exercisable upon the termination or exercise of the related Option, except to the extent designated by the Board in connection with a Reorganization Event and except that an SAR granted with respect to less than the full number of shares covered by an Option will not be reduced until the number of shares as to which the related Option has been exercised or has terminated exceeds the number of shares not covered by the SAR; (iii) the Option will terminate and no longer be exercisable upon the exercise of the related SAR; and (iv) the SAR will be transferable only with the related Option.

(2) Independent SARs. An SAR not expressly granted in tandem with an Option will become exercisable at such time or times, and on such conditions, as the Board may specify in the SAR Award.

(c) Grant Price. The grant price or exercise price of an SAR shall not be less than 100% of the Fair Market Value per share of Common Stock on the date of grant of the SAR; provided that if the Board approves the grant of an SAR with an exercise price to be determined on a future date, the exercise price shall be not less than 100% of the Fair Market Value on such future date.

(d) Term. The term of an SAR shall not be more than 10 years from the date of grant.

(e) Exercise. SARs may be exercised by delivery to the Company of a written notice of exercise signed by the proper person or by any other form of notice (including electronic notice) approved by the Board, together with any other documents required by the Board.

8. Restricted Stock; Restricted Stock Units.

(a) General. The Board may grant Awards entitling recipients to acquire shares of Common Stock ("Restricted Stock"), subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Board in the applicable Award are not satisfied prior to the end of the applicable restriction period or periods established by the Board for such Award. Instead of granting Awards for Restricted Stock, the Board may grant Awards entitling the recipient to receive shares of Common Stock to be delivered at the time such shares of Common Stock vest ("Restricted Stock Units") (Restricted Stock and Restricted Stock Units are each referred to herein as a "Restricted Stock Award").

(b) Terms and Conditions. The Board shall determine the terms and conditions of a Restricted Stock Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, if any.

(c) Additional Provisions Relating to Restricted Stock.

(1) Dividends. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such shares, unless otherwise provided by the Board. If any such dividends or distributions are paid in shares, or consist of a dividend or distribution to holders of Common Stock other than an ordinary cash dividend, the shares, cash or other property will be subject to the same restrictions on transferability and forfeitability as the shares of Restricted Stock with respect to which they were paid. Each dividend payment will be made no later than the end of the calendar year in which the dividends are paid to shareholders of that class of stock or, if later, the 15th day of the third month following the date the dividends are paid to shareholders of that class of stock.

(2) Stock Certificates. The Company may require that any stock certificates issued in respect of shares of Restricted Stock shall be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the Participant or if the Participant has died, to the beneficiary designated, in a manner determined by the Board, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death (the "Designated Beneficiary"). In the absence of an effective designation by a Participant, "Designated Beneficiary" shall mean the Participant's estate.

(d) Additional Provisions Relating to Restricted Stock Units.

(1) Settlement. Upon the vesting of and/or lapsing of any other restrictions (i.e., settlement) with respect to each Restricted Stock Unit, the Participant shall be entitled to receive from the Company one share of Common Stock or an amount of cash equal to the Fair Market Value of one share of Common Stock, as provided in the applicable Award agreement. The Board may, in its discretion, provide that settlement of Restricted Stock Units shall be deferred, on a mandatory basis or at the election of the Participant.

(2) Voting Rights. A Participant shall have no voting rights with respect to any Restricted Stock Units.

(3) Dividend Equivalents. To the extent provided by the Board, in its sole discretion, a grant of Restricted Stock Units may provide Participants with the right to receive an amount equal to any dividends or other distributions declared and paid on an equal number of outstanding shares of Common Stock ("Dividend Equivalents"). Dividend Equivalents may be paid currently or credited to an account for the Participants, may be settled in cash and/or shares of Common Stock and may be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which paid, as determined by the Board in its sole discretion, subject in each case to such terms and conditions as the Board shall establish, in each case to be set forth in the applicable Award agreement.

9. Other Stock-Based Awards.

Other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property, may be granted hereunder to Participants ("Other Stock-Based-Awards"), including without limitation Awards entitling recipients to receive shares of Common Stock to be delivered in the future. Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock or cash, as the Board shall determine. Subject to the provisions of the Plan, the Board shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price applicable thereto.

10. Adjustments for Changes in Common Stock and Certain Other Events.

(a) Changes in Capitalization. In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of Common Stock other than an ordinary cash dividend, (i) the number and class of securities available under this Plan, (ii) the sub-limits set forth in Section 4(b), (iii) the number and class of securities and exercise price per share of each outstanding Option, (iv) the share- and per-share provisions and the exercise price of each SAR, (v) the number of shares subject to and the repurchase price per share subject to each outstanding Restricted Stock Award and (vi) the share- and per-share-related provisions and the purchase price, if any, of each outstanding Other Stock-Based Award, shall be equitably adjusted by the Company (or substituted Awards may be made,

if applicable) in the manner determined by the Board. Without limiting the generality of the foregoing, in the event the Company effects a split of the Common Stock by means of a stock dividend and the exercise price of and the number of shares subject to an outstanding Option are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), then an optionee who exercises an Option between the record date and the distribution date for such stock dividend shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such Option exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

(b) Reorganization Events.

(1) Definition. A "Reorganization Event" shall mean: (a) any merger or consolidation of the Company with or into another entity as a result of which all of the Common Stock of the Company is converted into or exchanged for the right to receive cash, securities or other property or is cancelled, (b) any exchange of all of the Common Stock of the Company for cash, securities or other property pursuant to a share exchange transaction or (c) any liquidation or dissolution of the Company.

(2) Consequences of a Reorganization Event on Awards Other than Restricted Stock Awards. In connection with a Reorganization Event, the Board may take any one or more of the following actions as to all or any (or any portion of) outstanding Awards other than Restricted Stock Awards on such terms as the Board determines: (i) provide that Awards shall be assumed, or substantially equivalent Awards shall be substituted, by the acquiring or succeeding corporation (or an affiliate thereof), (ii) upon written notice to a Participant, provide that the Participant's unexercised Options or other unexercised Awards will terminate immediately prior to the consummation of such Reorganization Event unless exercised by the Participant within a specified period following the date of such notice, (iii) provide that outstanding Awards shall become exercisable, realizable, or deliverable, or restrictions applicable to an Award shall lapse, in whole or in part prior to or upon such Reorganization Event, (iv) in the event of a Reorganization Event under the terms of which holders of Common Stock will receive upon consummation thereof a cash payment for each share surrendered in the Reorganization Event (the "Acquisition Price"), make or provide for a cash payment to a Participant equal to the excess, if any, of (A) the Acquisition Price times the number of shares of Common Stock subject to the Participant's Options or other Awards (to the extent the exercise price does not exceed the Acquisition Price) over (B) the aggregate exercise price of all such outstanding Options or other Awards and any applicable tax withholdings, in exchange for the termination of such Options or other Awards, (v) provide that, in connection with a liquidation or dissolution of the Company, Awards shall convert into the right to receive liquidation proceeds (if applicable, net of the exercise price thereof and any applicable tax withholdings) and (vi) any combination of the foregoing. In taking any of the actions permitted under this Section 10(b), the Board shall not be obligated by the Plan to treat all Awards, or all Awards of the same type, identically.

For purposes of clause (i) above, an Option shall be considered assumed if, following consummation of the Reorganization Event, the Option confers the right to purchase, for each share of Common Stock subject to the Option immediately prior to the consummation of the Reorganization Event, the consideration (whether cash, securities or other property) received as a result of the Reorganization Event by holders of Common Stock for each share of Common Stock held immediately prior to the consummation of the Reorganization Event (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Common Stock); provided, however, that if the consideration received as a result of the Reorganization Event is not solely common stock of the acquiring or succeeding corporation (or an affiliate thereof), the Company may, with the consent of the acquiring or succeeding corporation, provide for the consideration to be received upon the exercise of Options to consist solely of common stock of the acquiring or succeeding corporation (or an affiliate thereof) equivalent in value (as determined by the Board) to the per share consideration received by holders of outstanding shares of Common Stock as a result of the Reorganization Event.

(3) Consequences of a Reorganization Event on Restricted Stock Awards. Upon the occurrence of a Reorganization Event other than a liquidation or dissolution of the Company, the repurchase and other rights of the Company under each outstanding Restricted Stock Award shall inure to the benefit of the Company's successor and shall, unless the Board determines otherwise, apply to the cash, securities or other property which the Common Stock was converted into or exchanged for pursuant to such Reorganization Event in the same manner and to the same extent as they applied to the Common Stock subject to such Restricted Stock Award. Upon the occurrence of a Reorganization Event involving the liquidation or dissolution of the Company, except to the extent specifically provided to the contrary in the instrument evidencing any Restricted Stock Award or any other agreement between a Participant and the Company, all restrictions and conditions on all Restricted Stock Awards then outstanding shall automatically be deemed terminated or satisfied.

11. General Provisions Applicable to Awards

(a) Transferability of Awards. Awards shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an Incentive Stock Option, pursuant to a qualified domestic relations order, and, during the life of the Participant, shall be exercisable only by the Participant; provided, however, that the Board may permit or provide in an Award for the gratuitous transfer of the Award by the Participant to or for the benefit of any immediate family member, family trust or other entity established for the benefit of the Participant and/or an immediate family member thereof if, with respect to such proposed transferee, the Company would be eligible to use a Form S-8 for the registration of the sale of the Common Stock subject to such Award under the Securities Act of 1933, as amended; provided, further, that the Company shall not be required to recognize any such transfer until such time as the Participant and such permitted transferee shall, as a condition to such transfer, deliver to the Company a written instrument in form and substance satisfactory to the Company confirming that such transferee shall be bound by all of the terms and conditions of the Award. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees.

(b) Documentation. Each Award shall be evidenced in such form (written, electronic or otherwise) as the Board shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

(c) Board Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award need not be identical, and the Board need not treat Participants uniformly.

(d) Termination of Status. The Board shall determine the effect on an Award of the disability, death, termination of employment, authorized leave of absence or other change in the employment or other status of a Participant and the extent to which, and the period during which, the Participant, or the Participant's legal representative, conservator, guardian or Designated Beneficiary, may exercise rights under the Award.

(e) Withholding. The Participant must satisfy all applicable federal, state, and local or other income and employment tax withholding obligations before the Company will deliver stock certificates or otherwise recognize ownership of Common Stock under an Award. The Company may decide to satisfy the withholding obligations through additional withholding on salary or wages. If the Company elects not to or cannot withhold from other compensation, the Participant must pay the Company the full amount, if any, required for withholding or have a broker tender to the Company cash equal to the withholding obligations. Payment of withholding obligations is due before the Company will issue any shares on exercise or release from forfeiture of an Award or, if the Company so requires, at the same time as is payment of the exercise price unless the Company determines otherwise. If provided for in an Award or approved by the Board in its sole discretion, a Participant may satisfy such tax obligations in whole or in part by delivery of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value; provided, however, except as otherwise provided by the Board, that the total tax withholding where stock is being used to satisfy such tax obligations cannot exceed the Company's minimum statutory withholding obligations (based on minimum statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income). Shares surrendered to satisfy tax withholding requirements cannot be subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(f) Amendment of Award. Except as otherwise provided in Section 11(i) with respect to Performance Awards, the Board may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or realization, and converting an Incentive Stock Option to a Nonstatutory Stock Option, provided that the Participant's consent to such action shall be required unless (i) the Board determines that the action, taking into account any related action, would not materially and adversely affect the Participant's rights under the Plan or (ii) the change is permitted under Section 11 hereof.

(g) Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and any applicable stock exchange or stock market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Company may consider appropriate to satisfy the requirements of any applicable laws, rules or regulations.

(h) Acceleration. Except as otherwise provided in Section 11(i), the Board may at any time provide that any Award shall become immediately exercisable in full or in part, free of some or all restrictions or conditions, or otherwise realizable in full or in part, as the case may be.

(i) Performance Awards.

(1) Grants. Restricted Stock Awards and Other Stock-Based Awards under the Plan may be made subject to the achievement of performance goals pursuant to this Section 11(i) ("Performance Awards"), subject to the limit in Section 4(b)(1) on shares covered by such grants. Performance Awards can also provide for cash payments of up to $1,000,000 per calendar year per individual.

(2) Committee. Grants of Performance Awards to any Covered Employee intended to qualify as "performance-based compensation" under Section 162(m) ("Performance-Based Compensation") shall be made only by a Committee (or subcommittee of a Committee) comprised solely of two or more directors eligible to serve on a committee making Awards qualifying as "performance-based compensation" under Section 162(m). In the case of such Awards granted to Covered Employees, references to the Board or to a Committee shall be deemed to be references to such Committee or subcommittee. "Covered Employee" shall mean any person who is a "covered employee" under Section 162(m)(3) of the Code.

(3) Performance Measures. For any Award that is intended to qualify as Performance-Based Compensation, the Committee shall specify that the degree of granting, vesting and/or payout shall be subject to the achievement of one or more objective performance measures established by the Committee, which shall be based on the relative or absolute attainment of specified levels of one or any combination of the following: (a) net income, (b) earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, (c) operating profit before or after discontinued operations and/or taxes, (d) sales, (e) sales growth, (f) earnings growth, (g) cash flow or cash position, (h) gross margins, (i) stock price, (j) market share, (k) return on sales, assets, equity or investment, (l) improvement of financial ratings, (m) achievement of balance sheet or income statement objectives, (n) total shareholder return, and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated, or (o) outcome of clinical trials. Such performance measures may be adjusted to exclude any one or more of (i) extraordinary items, (ii)

gains or losses on the dispositions of discontinued operations, (iii) the cumulative effects of changes in accounting principles, (iv) the writedown of any asset, and (v) charges for restructuring and rationalization programs. Such performance measures: (i) may vary by Participant and may be different for different Awards; (ii) may be particular to a Participant or the department, branch, line of business, subsidiary or other unit in which the Participant works and may cover such period as may be specified by the Committee; and (iii) shall be set by the Committee within the time period prescribed by, and shall otherwise comply with the requirements of, Section 162(m). Awards that are not intended to qualify as Performance-Based Compensation may be based on these or such other performance measures as the Board may determine.

(4) Adjustments. Notwithstanding any provision of the Plan, with respect to any Performance Award that is intended to qualify as Performance-Based Compensation, the Committee may adjust downwards, but not upwards, the cash or number of Shares payable pursuant to such Award, and the Committee may not waive the achievement of the applicable performance measures except in the case of the death or disability of the Participant or a change in control of the Company.

(5) Other. The Committee shall have the power to impose such other restrictions on Performance Awards as it may deem necessary or appropriate to ensure that such Awards satisfy all requirements for Performance-Based Compensation.

12. Miscellaneous

(a) No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.

(b) No Rights As Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares.

(c) Effective Date and Term of Plan. The Plan shall become effective on the date the Plan is approved by the Company's stockholders (the "Effective Date"). No Awards shall be granted under the Plan after the expiration of 10 years from the Effective Date, but Awards previously granted may extend beyond that date.

(d) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time provided that (i) to the extent required by Section 162(m), no Award granted to a Participant that is intended to comply with Section 162(m) after the date of such amendment shall become exercisable, realizable or vested, as applicable to such Award,

unless and until such amendment shall have been approved by the Company's stockholders if required by Section 162(m) (including the vote required under Section 162(m)); (ii) no amendment that would require stockholder approval under the rules of the NASDAQ Stock Market ("NASDAQ") may be made effective unless and until such amendment shall have been approved by the Company's stockholders; and (iii) if the NASDAQ amends its corporate governance rules so that such rules no longer require stockholder approval of material amendments to equity compensation plans, then, from and after the effective date of such amendment to the NASDAQ rules, no amendment to the Plan (A) materially increasing the number of shares authorized under the Plan (other than pursuant to Section 4(c) or 10), (B) expanding the types of Awards that may be granted under the Plan, or (C) materially expanding the class of participants eligible to participate in the Plan shall be effective unless stockholder approval is obtained. In addition, if at any time the approval of the Company's stockholders is required as to any other modification or amendment under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, the Board may not effect such modification or amendment without such approval. Unless otherwise specified in the amendment, any amendment to the Plan adopted in accordance with this Section 12(d) shall apply to, and be binding on the holders of, all Awards outstanding under the Plan at the time the amendment is adopted, provided the Board determines that such amendment does not materially and adversely affect the rights of Participants under the Plan. No Award shall be made that is conditioned upon stockholder approval of any amendment to the Plan.

(e) Provisions for Foreign Participants. The Board may modify Awards or Options granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

(f) Compliance with Code Section 409A. No Award shall provide for deferral of compensation that does not comply with Section 409A of the Code, unless the Board, at the time of grant, specifically provides that the Award is not intended to comply with Section 409A of the Code. The Company shall have no liability to a Participant, or any other party, if an Award that is intended to be exempt from, or compliant with, Section 409A is not so exempt or compliant or for any action taken by the Board.

(g) Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, excluding choice-of-law principles of the law of such state that would require the application of the laws of a jurisdiction other than such state.

**CELLDEX THERAPEUTICS, INC.**

**RESTRICTED STOCK AWARD AGREEMENT**

This Restricted Stock Award Agreement (the "Agreement"), dated as of the "Award Date" set forth in the attached Exhibit A, is entered into between Celldex Therapeutics, Inc., a Delaware corporation (the "Company"), and the individual identified in Exhibit A (the "Awardee").

WHEREAS, the Company desires to provide the Awardee an incentive to participate in the success and growth of the Company through the holding of a proprietatry interest in the Company; and

WHEREAS, to give effect to the foregoing intentions, the Company desires to grant the Awardee a restricted stock award of shares of the Company's common stock, par value $0.001 (the "Common Stock") pursuant to the Celldex Therapeutics, Inc. 2008 Stock Option and Incentive Plan (the "Plan");

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth and for other good and valuable consideration, the parties hereto agree as follows:

1. Grant. The Company hereby grants the Awardee a restricted stock award (the "Award") with respect to the number of shares of Common Stock set forth in Exhibit A (such shares being referred to herein as the "Restricted Shares"). The Award and the Restricted Shares shall be subject to the terms and conditions set forth in this Agreement and the provisions of the Plan, the terms of which are incorporated herein by reference. Capitalized terms used but not otherwise defined herein shall have the meanings as set forth in the Plan.

2. Lapsing Forfeiture Provisions. Subject to the terms of this Agreement, the Awardee shall forfeit the Restricted Shares to the extent that the Awardee does not satisfy the applicable vesting requirements set forth in Exhibit A.

3. Transfer Restrictions. Prior to the satisfaction of the conditions set forth in Exhibit A, the Awardee shall not sell, assign, pledge or otherwise transfer (voluntarily or involuntarily) any of the Restricted Shares. Upon satisfaction of the conditions set forth in Exhibit A with respect to Restricted Shares, the transfer restrictions set forth in this Section shall lapse with respect to the Restricted Shares for which such conditions are satisfied. As a condition of the grant of this award, Awardee may be required to execute a stock power in blank in the form of Exhibit B hereto with respect to any shares issued pursuant to this Agreement.

4. Adjustment of Shares. Notwithstanding anything contained herein to the contrary, in the event of any change in the Company's Common Stock resulting from a corporate transaction including, but not limited to, a subdivision or consolidation, reorganization, recapitalization, merger, share split, reverse share split, share distribution, combination of shares or the payment of a share dividend, the Restricted Shares shall be treated in the same manner in any such transaction as other Common Stock. Any Common Stock or other securities received by the Awardee as a result of such transaction with respect to the

Restricted Shares shall be subject to the restrictions and conditions set forth herein and in the attached Exhibit A.

5. Rights as Stockholder. Except as provided by Section 3 hereof, the Awardee shall be entitled to all of the rights of a stockholder with respect to the Restricted Shares as of the Award Date, including, but not limited to, the right to vote such shares and receive dividends and other distributions payable with respect to same.

6. Recording; Escrow of Share Certificates. As soon as reasonably practicable after the Award Date, the Company shall issue stock certificates in the Awardee's name that correspond to the Restricted Shares (the "Certificates"), and shall hold such Certificates in escrow for the Awardee's benefit, properly endorsed for transfer, until such time as the Restricted Shares are forfeited to the Company or all restrictions thereon lapse, or, rather, arrange for the recording of such grant on its (or its delegate's) books, with such Certificates to be issued upon the lapsing of restrictions on such Restricted Shares. The Company shall not be liable for any act it may do or fail to do with respect to the holding of the Certificates in escrow hereunder or the recording of such Restricted Shares on its (or its delegate's) books, provided it acts or fails to act in good faith and in the exercise of its sound judgment.

7. Legend. To the extent the Company issues Certificates prior to the lapse of the restrictions on an Awardee's Restricted Shares, the Certificates shall bear the following legend:

> THE SHARES OF STOCK REPRESENTED HEREBY ARE SUBJECT TO THE TERMS AND CONDITIONS (INCLUDING FORFEITURE CONDITIONS AND TRANSFER RESTRICTIONS) CONTAINED IN A RESTRICTED STOCK AWARD AGREEMENT BETWEEN CELLDEX THERAPEUTICS, INC. AND THE HOLDER AND THE TERMS OF THE CELLDEX THERAPEUTICS, INC. 2008 STOCK OPTION AND INCENTIVE PLAN, AS EACH MAY BE AMENDED FROM TIME TO TIME. A COPY OF SUCH AGREEMENT IS ON FILE IN THE OFFICE OF THE SECRETARY OF CELLDEX THERAPEUTICS, INC.

8. Section 83(b) Election. The Awardee hereby acknowledges that the Awardee has been informed that, with respect to the Restricted Shares, the Awardee may file an election with the Internal Revenue Service, within 30 days of the Award Date, electing pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended, (the "Code") to be taxed currently on any difference between the purchase price of the Restricted Shares and their fair market value on the date of purchase. Absent such an election, taxable income will be measured and recognized by the Awardee at the time or times at which the forfeiture restrictions on the Restricted Shares lapse. The Awardee is strongly encouraged to seek the advice of Awardee's own tax consultants in connection with the issuance of the Restricted Shares and the advisability of filing of the election under Section 83(b) of the Code. A form of Election under Section 83(b) is attached hereto as Exhibit C for reference.

THE AWARDEE ACKNOWLEDGES THAT IT IS NOT THE COMPANY'S, BUT RATHER THE AWARDEE'S SOLE RESPONSIBILITY TO FILE THE ELECTION UNDER SECTION 83(b) TIMELY.

**Circular 230 Disclaimer:** Nothing contained in this discussion of certain federal income tax considerations is intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) promoting, marketing, or recommending to another party any transactions or tax-related matters addressed herein.

9. Government Regulations. Notwithstanding anything contained herein to the contrary, the Company's obligation to issue or deliver certificates evidencing the Restricted Shares and/or recording of the grant of such Restricted Shares shall be subject to the terms of all applicable laws, rules and regulations and to such approvals by any governmental agencies or national securities exchanges as may be required; provided that the Company shall use commercially reasonable best efforts to ensure that the terms of all applicable laws, rules and regulations and approvals by any governmental agencies or national securities exchanges as may be required are timely satisfied or obtained, as applicable.

10. Withholding Taxes. The Company shall have the right to require the Awardee to remit to the Company, or to withhold from amounts payable to the Awardee, as compensation or otherwise, an amount sufficient to satisfy all federal, state and local withholding tax requirements (including, without limitation, any tax resulting from (i) the expiration of restrictions set forth hereunder that are applicable to any particular Restricted Shares or (ii) an election made by the Awardee under Section 83(b) of the Code).

11. Investment Purpose. The Awardee agrees not to sell, transfer or otherwise dispose of such shares unless they are either (1) registered under the Securities Act of 1933 and all applicable state securities laws, or (2) exempt from such registration in the opinion of Company counsel, and consents to the Company's placing of the legend set forth in Section 7 above on the certificates, if any, summarizing such securities law restrictions; provided that the Company shall use commercially reasonable best efforts to ensure that the requirements of either (1) or (2) above are timely satisfied.

12. Awardee Representations. The Awardee has reviewed with the Awardee's own tax advisors the federal, state, local and foreign tax consequences of the transactions contemplated by this Agreement. The Awardee is relying solely on such advisors and not on any statements or representations of the Company or any of its agents, if any, made to the Awardee. The Awardee understands that the Awardee (and not the Company) shall be responsible for the Awardee's own tax liability arising as a result of the transactions contemplated by this Agreement.

13. Service. Neither this Agreement nor any action taken hereunder shall be construed as giving the Awardee any right of continuing service with the Company.

14. Notices. Notices or communications to be made hereunder shall be in writing and shall be delivered in person, by registered mail, by confirmed facsimile or by a reputable overnight courier service to the Company at its principal office or to the Awardee at Awardee's address contained in the records of the Company.

15. Governing Law. This Agreement shall be construed under the laws of the State of Delaware, without regard to conflict of laws principles.

16. Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof, and supersedes all prior agreements and understandings relating to the subject matter of this Agreement.

17. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Company and the Awardee and their respective permitted successors, assigns, heirs, beneficiaries and representatives. This Agreement is personal to the Awardee and may not be assigned by the Awardee without the prior consent of the Company. Any attempted assignment in violation of this Section shall be null and void.

18. Amendment. This Agreement may be amended or modified only by a written instrument executed by both the Company and the Awardee.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement or caused their duly authorized officer to execute this Agreement as of the date first written above.

CELLDEX THERAPEUTICS, INC.

By:
Name:
Title:

AWARDEE

Name:

**EXHIBIT A**

1. (a). **Awardee's Name**:

   (b). **Awardee's Social Security Number**:

   (c). **Award Date**:

   (d). **Number of Restricted Shares Granted**:

   (e). **Vesting Requirements**:

**EXHIBIT B**

**STOCK POWER**

FOR VALUE RECEIVED, , hereby sells, assigns, and transfers unto Celldex Therapeutics, Inc. shares of Common Stock of Celldex Therapeutics, Inc. issued pursuant to, and subject to the terms of, that certain Restricted Stock Award Agreement by and between the Company and dated , 20 standing in his/her name on the books of said corporation **[**represented by Certificate No. herewith**]**, and does hereby irrevocably constitute and appoint as his/her attorney to transfer the said stock on the books of said corporation with full power of substitution in the premises.

Dated:

In the presence of:

**EXHIBIT C**

**ELECTION UNDER SECTION 83(b)**

**OF THE INTERNAL REVENUE CODE OF 1986**

The undersigned taxpayer hereby makes an election pursuant to section 83(b) of the Internal Revenue Code of 1986, as amended, and the regulations thereunder (the "Regulations"), and in connection with this election supplies the following information:

1. The name, address and taxpayer identification number of the undersigned are:

**[Name]**
**[Address]**
Social Security Number: - -

2. The election is being made with respect to shares of common stock, $ par value per share (the "Stock"), of , a corporation (the "Company").

3. The date on which the Stock was transferred to the undersigned was . The taxable year for which this election is being made is calendar year .

4. The property is subject to the following restrictions:

The above-mentioned shares may not be transferred and are subject to forfeiture under the terms of . These restrictions lapse .

Disposition of the Stock is also subject to restrictions imposed under applicable federal and state securities laws regulating the transfer of unregistered securities.

5. The fair market value of the Stock at the time of transfer (determined without regard to any lapse restriction, as defined in §1.83-3(i) of the Regulations) was $ per share, for an aggregate fair market value of $ .

6. The undersigned paid $ for the Stock. Therefore, $ (the difference between the full fair market value of the Stock stated above and the amount paid by the undersigned, if any) is includible in the undersigned's gross income as compensation for services.

7. A copy of this election has been furnished to the Company as required by §1.83-2(d) of the Regulations.

Dated:

[taxpayer signature]

**INSTRUCTIONS FOR FILING SECTION 83(B) ELECTION**

Attached is a form of election under section 83(b) of the Internal Revenue Code. You should consult your tax advisor to determine whether you wish to make an election under section 83(b). If, after consultation with your tax advisor, you wish to make such an election, you should complete, sign and date the election and then proceed as follows:

1. Execute three counterparts of your completed election (plus one extra counterpart for each person other than you, if any, who receives property that is the subject of your election), retaining at least one photocopy for your records.

2. Send one counterpart to the Internal Revenue Service Center with which you will file your federal income tax return for the current year via certified mail, return receipt requested. THE ELECTION SHOULD BE SENT IMMEDIATELY, AS YOU ONLY HAVE 30 DAYS FROM THE GRANT DATE WITHIN WHICH TO MAKE THE ELECTION — NO WAIVERS, LATE FILINGS, OR EXTENSIONS ARE PERMITTED.

3. Deliver one counterpart of the completed election to the Company for its files.

4. If anyone other than you (*e.g.*, one of your family members) will receive property that is the subject of your election, deliver one counterpart of the completed election to each such person.

5. Attach one counterpart of the completed election to your federal income tax return for this year when you file that return next year.

**Exhibit 21.0**

**LIST OF SUBSIDIARIES**

| Name | State of Incorporation |
|---|---|
| Celldex Research Corporation | Delaware |
| Celldex Therapeutics, Ltd. | United Kingdom |

QuickLinks

**Exhibit 23.1**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-151728, 333-117602 and 333-162423) and on Form S-3 (File No. 333-143112 and 333-162613) of Celldex Therapeutics, Inc. of our report dated March 12, 2010 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 12, 2010

QuickLinks

**Exhibit 23.2**

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in this Annual Report (Form 10-K) of Celldex Therapeutics, Inc. of our report dated May 7, 2008, with respect to the consolidated financial statement of Celldex Therapeutics, Inc., included in the 2009 Annual Report to Shareholders of Celldex Therapeutics, Inc. We consent to the incorporation by reference in the following Registration Statements:

*(1)* Registration Statement (Form S-3 No. 333-143112) of Celldex Therapeutics, Inc.,

*(2)* Registration Statement (Form S-3 No. 333-162613) of Celldex Therapeutics, Inc.,

*(3)* Registration Statement (Form S-8 No. 333-151728) pertaining to the 2008 Stock Option and Incentive Plan of Celldex Therapeutics, Inc.,

*(4)* Registration Statement (Form S-8 No. 333-162423) pertaining to the CuraGen Corporation 2007 Stock Incentive Plan, and

*(5)* Registration Statement (Form S-8 No. 333-117602) pertaining to the 2004 Employee Stock Purchase Plan

/s/ ERNST & YOUNG LLP

MetroPark, New Jersey
March 12, 2010

QuickLinks

**Exhibit 31.1**

**CERTIFICATION**

I, Anthony S. Marucci, certify that:

1. I have reviewed this annual report on Form 10-K of Celldex Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in the Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2010

By: /s/ ANTHONY S. MARUCCI

Name: Anthony S. Marucci

Title: *President and Chief Executive Officer*

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**Exhibit 31.2**

**CERTIFICATION**

I, Avery W. Catlin, certify that:

1. I have reviewed this annual report on Form 10-K of Celldex Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in the Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2010

By: /s/ AVERY W. CATLIN

Name: Avery W. Catlin

Title: *Senior Vice President and Chief Financial Officer*

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**Exhibit 32**

The undersigned officers of Celldex Therapeutics, Inc. (the "Company") hereby certify to our knowledge that the Company's annual report on Form 10-K to which this certification is attached (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

| | | |
|---|---|---|
| Date: March 12, 2010 | By: | /s/ ANTHONY S. MARUCCI |
| | Name: | Anthony S. Marucci |
| | Title: | *President and Chief Executive Officer* |
| Date: March 12, 2010 | By: | /s/ AVERY W. CATLIN |
| | Name: | Avery W. Catlin |
| | Title: | *Senior Vice President and Chief Financial Officer* |

This certification shall be not be deemed "filed" for any purpose, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act.

QuickLinks

Exhibit 32

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