As filed with the Securities and Exchange Commission on November 21, 1995

Registration No. 33-64021

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

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AMENDMENT NO. 1 TO

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

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T CELL SCIENCES, 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 Number) |

115 FOURTH AVENUE, NEEDHAM, MASSACHUSETTS 02194 (617) 433-0771
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

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ALAN W. TUCK, PRESIDENT AND CHIEF EXECUTIVE OFFICER
T CELL SCIENCES, INC.
115 FOURTH AVENUE
NEEDHAM, MASSACHUSETTS 02194 (617) 433-0771
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Copies of all communications should be sent to:

STUART M. CABLE, ESQ.
GOODWIN, PROCTER & HOAR
EXCHANGE PLACE, 24TH FLOOR
BOSTON MASSACHUSETTS 02109-2881
(617) 570-1000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. [X]

CALCULATION OF REGISTRATION FEE

| TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED | AMOUNT TO BE REGISTERED | PROPOSED MAXIMUM OFFERING PRICE PER SHARE (1) | PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (1) | AMOUNT OF REGISTRATION FEE (2) |
|---|---|---|---|---|
| Common Stock, par value $.001 per share | 2,761,816 | $3.00 | $8,285,448 | $2,857 |

(1) Estimated solely for the purpose of calculating the registration fee.
(2) Pursuant to Rule 457(c) under the Securities Act of 1933, the registration fee has been calculated based upon the average of the high and low prices per share of Common Stock on the Nasdaq National Market System on November 3, 1995.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1993 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), SHALL DETERMINE.

SUBJECT TO COMPLETION, DATED NOVEMBER 21, 1995

INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUT NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.

# PROSPECTUS

## T CELL SCIENCES

## 2,761,816 Shares Common Stock

This Prospectus relates to 2,761,816 shares ("Shares") of common stock, $.001 par value per share of T Cell Sciences, Inc. (the "Common Stock") to be sold by certain stockholders of the Company (the "Selling Stockholders") from time to time. The Selling Stockholders may sell the Shares from time to time in transactions on the Nasdaq National Market System, in negotiated transactions, or by a combination of these methods, at fixed prices that may be changed, at market prices at the time of sale, at prices related to market prices or at negotiated prices. The Selling Stockholders may effect these transactions by selling the Shares to or through broker-dealers, who may receive compensation in the form of discounts or commissions from the Selling Stockholders or from the purchasers of the Shares for whom the broker- dealers may act as an agent or to whom they may sell as a principal, or both. See "Selling Stockholders" and "Plan of Distribution." The Common Stock of the Company is traded under the symbol "TCEL" on the National Association of Securities Dealers Automated Quotation System ("Nasdaq"), National Market System. On November 3, 1995, the reported closing price for the Common Stock on the Nasdaq National Market System was $3.125.

The Company will not receive any of the proceeds from the sale of the Shares. The Company has agreed to bear all of the expenses in connection with the registration and sale of the Shares (other than underwriting discounts and selling commissions and the fees and expenses of counsel or other advisors to the Selling Stockholders).

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SEE "RISK FACTORS" FOR A DISCUSSION OF CERTAIN SPECIAL FACTORS WHICH SHOULD BE CONSIDERED BY PROSPECTIVE PURCHASERS OF THE SHARES OFFERED HEREBY.

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THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

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NO PERSON HAS BEEN AUTHORIZED IN CONNECTION WITH THE SALE OF ANY SHARES PURSUANT TO THIS PROSPECTUS TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATION OTHER THAN AS CONTAINED IN THIS PROSPECTUS, AND IF GIVEN OR MADE, ANY SUCH INFORMATION OR REPRESENTATION MAY NOT BE RELIED ON AS HAVING BEEN AUTHORIZED BY THE COMPANY.

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NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE PURSUANT TO THIS PROSPECTUS SHALL UNDER ANY CIRCUMSTANCES CREATE ANY IMPLICATION THAT THERE HAS BEEN NO CHANGE IN THE COMPANY'S AFFAIRS SINCE THE DATE OF THIS PROSPECTUS.

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THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SECURITY OTHER THAN THE SECURITIES COVERED BY THIS PROSPECTUS, NOR DOES IT CONSTITUTE AN OFFER TO OR SOLICITATION OF ANY PERSON IN ANY JURISDICTION IN WHICH AN OFFER OR SOLICITATION MAY NOT BE LAWFULLY MADE.

THE DATE OF THIS PROSPECTUS IS NOVEMBER __, 1995.

## AVAILABLE INFORMATION

The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and, in accordance therewith, files proxy statements, reports and other information with the Securities and Exchange Commission (the "Commission"). Such proxy statements, reports and other information filed by the Company may be inspected and copied at the public reference facilities maintained by the Commission at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549 or at the Regional Offices of the Commission at Room 3190, John C. Kluczynski Building, 230 South Dearborn Street, Chicago, Illinois 60604, and Room 1400, 75 Park Place, New York, New York 10007. Copies of such material can be obtained at prescribed rates from the Public Reference Section of the Commission at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549. The Common Stock of the Company is traded on the Nasdaq National Market System. Reports and other information concerning the Company may be inspected at the National Association of Securities Dealers, Inc., 1735 K Street, N.W., Washington, D.C. 20006.

The Company has filed with the Commission a Registration Statement on Form S-3 under the Securities Act of 1933, as amended (the "Securities Act"), with respect to the securities offered hereby. This Prospectus does not contain all the information set forth in the Registration Statement, certain parts of which are omitted in accordance with the rules and regulations of the Commission. For further information with respect to the Company and the securities covered hereby, reference is made to the Registration Statement and to the exhibits thereto filed as a part thereof.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The Company will furnish without charge to each person, including any beneficial owner, to whom this Prospectus is delivered, upon request, a copy of any or all of the documents that have been incorporated by reference to the Registration Statement of which this Prospectus is a part, other than exhibits to such documents. Requests should be addressed to: T Cell Sciences, Inc., 115 Fourth Avenue, Needham, Massachusetts 02194, Attention: Investor Relations (telephone number (617) 433-0771).

The following documents filed by the Company with the Commission are incorporated in, and made a part of, this Prospectus by reference as of their respective dates: (1) the Company's Annual Report to Stockholders on Form 10-K for the fiscal year ended December 31, 1994; (2) the Company's Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 1995, June 30, 1995 and September 30, 1995; (3) the Company's Current Reports on Form 8-K, filed on May 18, 1995 and April 7, 1995; and (4) the definitive Proxy Statement of the Company for the Annual Meeting of Stockholders held May 18, 1995.

Each document filed subsequent to the date of this Prospectus pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering shall be deemed to be incorporated by reference in this Prospectus and shall be a part hereof from the date of filing of such document.

## RISK FACTORS

In addition to the other information in this Prospectus, the following factors should be considered carefully in evaluating an investment in the shares of Common Stock offered by this Prospectus.

Early Stage of Product Development. All of the Company's therapeutic products are in various stages of research and development, and no revenues have been generated from the commercialization of those products. The Company currently sells products to the laboratory reagent and medical diagnostic markets. The Company's therapeutic and new diagnostic products will require substantial additional development, including in the areas of preclinical and clinical testing, regulatory approvals and manufacturing processes prior to their commercialization. There can be no assurance that any of the Company's therapeutic and diagnostic products which are under development will prove to be safe or effective in clinical trials, will be approved by regulatory authorities, can be manufactured at acceptable cost with appropriate quality, or can be successfully marketed.

History of Losses; Uncertainty of Future Profitability. The Company has incurred operating losses since its inception and had accumulated net losses of approximately $43.1 million as of June 30, 1995. The continued development of the Company's products will require the commitment of substantial resources to conduct research and preclinical and clinical programs, to establish manufacturing capabilities and sales and marketing capabilities, and to establish additional quality control, regulatory and administrative capabilities. The Company may incur substantial and increasing operating losses over the next several years as its product development programs and clinical testing expand. The amount of net losses and the time required by the Company to reach sustained profitability are highly uncertain and to achieve profitability the Company must, among other things, successfully complete development of its products, obtain regulatory approvals and establish manufacturing and marketing capabilities. There can be no assurance that the Company will be able to achieve profitability at all or on a sustained basis.

Need for Additional Funds. The Company has funded its operations and capital expenditures to date primarily through equity financing, strategic alliances with commercial partners, and sales of reagent and diagnostic products. Since inception, the Company has raised proceeds, net of expenses, of approximately $57 million through equity financings. The Company anticipates that it will need to raise substantial additional funds, through additional equity or debt financings, research and development financings, collaborative relationships or otherwise, prior to the commercialization of its products. There can be no assurance that any such additional funding will be available to the Company or, if available, that it will be on reasonable terms. Any such additional funding may result in significant dilution to existing stockholders. If adequate funds are not available, the Company may be required to significantly curtail its research and development programs or obtain funds through arrangements with collaborative partners that may require the Company to relinquish certain material rights to its products.

Dependence on Third Parties for Clinical Supplies. The Company is dependent on its former commercial partner, SmithKline Beecham p.l.c., to produce quantities of its first therapeutic product candidate, sCR1, suitable for Phase II clinical trials, and is dependent on sourcing from a third party manufacturer for additional suitable quantities of sCR1 for additional clinical trials. There can be no assurance at this time that the Company will be able to utilize any of the material produced by its former partner or new manufacturing source in the clinical trials. The inability to have suitable quality and quantities of material produced would result in significant delays in the clinical development of sCR1.

No Assurance of FDA Approval; Comprehensive Government Regulation. The Company's research, development and clinical programs, as well as its manufacturing and marketing operations, are subject to extensive regulation by numerous governmental authorities in the United States and other countries. Most of the Company's products require governmental approvals for commercialization which have not yet been obtained and are not expected to be obtained for several years. Preclinical and clinical trials and manufacturing and marketing of many of the Company's products will be subject to the rigorous testing and approval processes of the FDA and corresponding foreign regulatory authorities. The regulatory process, which includes preclinical, clinical and post-clinical testing of many of the Company's products to establish their safety and efficacy, can take many years and requires the expenditure of substantial resources. Data obtained from preclinical and clinical activities are susceptible to varying interpretations which could delay, limit or prevent regulatory approval. In addition, delays or rejection may be

encountered based upon changes in, or additions to, regulatory policies for drug approval during the period of product development and regulatory review. Delays in obtaining such approvals could adversely affect the marketing of products developed by the Company and the Company's ability to generate commercial product revenues. There can be no assurance that requisite regulatory approvals will be obtained within a reasonable period of time, if at all. Moreover, if regulatory approval of a product is granted, such approval may impose limitations on the indicated uses for which such product may be marketed. Further, even if such regulatory approval is obtained, a marketed product, its manufacturer and its manufacturing facilities are subject to continual review and periodic inspections, and later discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions on such product or manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can, among other things, result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution.

Lack of Commercial Manufacturing Capability. To be successful, the Company's diagnostic and therapeutic products must be manufactured in commercial quantities, within regulatory requirements and at competitive costs. The Company's experience in commercial manufacturing is limited to the manufacturing of certain reagents and medical diagnostic test kits and there can be no assurance that the Company will be able to successfully continue to scale-up its diagnostic manufacturing operations to meet future market demands or to obtain access to suitable therapeutic manufacturing facilities.

Lack of Commercial Sales and Marketing Experience. Except for research reagents and certain diagnostic products, the Company has limited experience in sales, marketing and distribution of commercial products. To market any of its products directly, the Company must develop a substantial marketing and sales force with technical expertise and a supporting distribution capability. Alternatively, the Company may seek to obtain the assistance of a strategic partner with the necessary sales and distribution capabilities and expertise. There can be no assurance that the Company will be able to establish sales and distribution capabilities without undue delays or expenditures or that it will be successful in gaining market acceptance for its products.

Competition and Risk of Technological Obsolescence. Biotechnology, pharmaceuticals and medical diagnostics are rapidly evolving fields in which developments are expected to continue at a rapid pace. Competitors of the Company in the United States and abroad are numerous and include, among others, pharmaceuticals, medical diagnostics, biotechnology companies, universities and other research institutions. The Company's success depends upon developing and maintaining a competitive position in the development of products and technologies in its area of focus. Competition from other biotechnology, pharmaceuticals and medical diagnostics companies is intense and expected to increase as new products enter the market and new technologies become available. The Company's competitors may also succeed in developing technologies and products that are more effective than any which have been or are being developed by the Company or that render the Company's technologies or products obsolete or noncompetitive. The Company's competitors may also succeed in obtaining patent protection or other intellectual property rights that would block the Company's ability to develop its potential products, or in obtaining regulatory approval for the commercialization of their products more rapidly or effectively than the Company. Finally, many of these competitors have substantially greater research and development capabilities, clinical, manufacturing, regulatory and marketing experience and financial and managerial resources than the Company.

Dependence on Patents and Proprietary Technology. The biotechnology, medical diagnostics and pharmaceutical industries place considerable importance on the Company's obtaining patent and trade secret protection for new technologies, products and processes, and the Company's success will depend, in part, on its ability to obtain patent protection for its products and manufacturing processes, preserve its trade secrets and operate without infringing the proprietary rights of third parties. In addition to the Company's own patents and patent applications, a number of institutions have exclusively licensed rights to certain patents and patent applications to the Company.

The Company is conducting research and expects to seek additional patents in the future, but there can be no assurance as to its success or the timeliness in obtaining any such patents or as to the breadth or degree of protection which any such patents will afford the Company or not be challenged, invalidated or infringed. Furthermore, there can be no assurance that others will not independently develop similar products and processes, duplicate any of the Company's products or, if patents are issued to the Company, design around such patents. In

addition, the Company could incur substantial costs in defending itself in suits brought against it or in suits in which the Company may assert its patents against others. If the outcome of any such litigation is adverse to the Company, the Company's business could be adversely affected.

In addition, the Company may be required to obtain licenses to patents or other proprietary rights of third parties. No assurance can be given that any licenses required under any such patents or proprietary rights would be made available on terms acceptable to the Company, if at all. If the Company does not obtain such licenses, it could encounter delays in product market introductions while it attempts to design around such patents or other rights, or be unable to develop, manufacture or sell such products.

The Company also seeks to protect its proprietary technology, including technology which may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with its collaborators, advisors, employees and consultants. There can be no assurance that these agreements will not be breached, that the Company will have adequate remedies for any breach, or that the Company's trade secrets will not otherwise be disclosed to, or discovered by, competitors. Moreover, the Company conducts a significant amount of research through academic advisors and collaborators who are prohibited from entering into confidentiality or inventors' rights agreements by their academic institutions.

Dependence on Reimbursement. In both the United States and elsewhere, sales of most of the Company's products, if any, will be dependent in part on the availability of reimbursement from third party payors, such as government and private insurance plans. Third party payors are increasingly challenging the prices charged for medical products and services. Moreover, the federal government of the United States has made the containment of health care costs a top priority. If the Company succeeds in bringing one or more products to market, there can be no assurance that these products will be considered cost-effective, that reimbursement will be available or, if available, that the level of reimbursement will be sufficient to allow the Company to sell its products on a profitable basis.

Exposure to Product Liability Claims. The Company's business exposes it to potential product liability claims which are inherent in the testing, manufacturing, marketing and sale of human therapeutic products. The Company currently has liability insurance of limited coverage. There can be no assurance that it will be able to maintain such insurance or obtain general product liability insurance on acceptable terms or at reasonable costs or that such insurance will be in sufficient amounts to provide the Company with adequate coverage against potential liabilities.

Dependence Upon Key Personnel. The Company is dependent on the members of its management and scientific staff, the loss of one or more of whom could have a material adverse effect on the Company. The Company also depends on its scientific collaborators and advisors, all of whom have commitments that may limit their availability to the Company. In addition, the Company believes that its future success will depend in large part upon its ability to attract and retain highly skilled scientific, managerial and marketing personnel, particularly as the Company expands its activities in clinical trials, the regulatory approval process and sales and manufacturing. The Company faces significant competition for such personnel and from other companies, research and academic institutions, government entities and other organizations. There can be no assurance that the Company will be successful in hiring or retaining the personnel it requires for continued growth. The failure to hire and retain such personnel could materially and adversely affect the Company's prospects.

Shares Eligible for Future Sale. Future sales of Common Stock in the public market by existing stockholders could have an adverse effect on the price of the Common Stock. In addition, the Company has registered the shares of Common Stock issued under its Amended and Restated 1991 Stock Compensation Plan and approximately 2.3 million shares of Common Stock are presently eligible for sale upon exercise of currently outstanding options.

Volatility of Stock Price. The market price of the shares of Common Stock, like that of the common stock of many other early-stage biotechnology companies, may be highly volatile. Factors such as announcements of technological innovations or new commercial products by the Company or its competitors, disclosure of results of clinical testing or regulatory proceedings, governmental regulation and approvals, developments in patent or other proprietary rights, public concern as to the safety of products developed by the Company and general market conditions may have a significant effect on the market price of the Common Stock. In addition, the stock market has

experienced and continues to experience extreme price and volume fluctuations which have effected the market price of many biotechnology companies and which have often been unrelated to the operating performance of these companies. These broad market fluctuations, as well as general economic and political conditions, may adversely effect the market price of Common Stock.

## THE COMPANY

T Cell Sciences, Inc. ("T Cell Sciences" or "TCS" or the "Company") is an emerging biopharmaceutical company developing treatments for diseases caused by misregulation of the body's natural defense systems. TCS is developing products for diseases of inflammation, and autoimmunity. TCS has completed a Phase I clinical trial of its first complement inhibitor therapeutic, sCR1, in patients at risk of developing adult respiratory distress syndrome ("ARDS") and is conducting a second Phase I trial for reperfusion injury following a heart attack. TCS, with its partner AB Astra ("Astra"), is also developing products based on the T Cell antigen receptor for the treatment of autoimmune diseases. The initial product candidates being developed with Astra are now in the research and preclinical stage of development. T Cell Sciences' wholly owned subsidiary, T Cell Diagnostics, Inc. ("T Cell Diagnostics" or "TCD") is developing, manufacturing and marketing new classes of diagnostic products to be used for the detection and monitoring of immune-related disorders such as organ transplant rejection, autoimmune conditions and cancers and infections such as HIV. TCD recently received marketing clearance from the U.S. Food and Drug Administration ("FDA") to market TRAx(R) CD4 for CD4 T cell enumeration.

### THERAPEUTICS:

One of the Company's major programs is the development of products which inhibit a part of the immune system called the complement system. The complement cascade is a major initiator of the body's defense system and in certain situations triggers harmful inflammatory responses resulting in the death of viable tissue. No treatment currently exists to inhibit the harmful effects of complement mediated inflammation and other treatments for inflammatory diseases do not directly address inflammation caused by complement activation.

The Company's lead complement product is soluble complement receptor B or sCR1 (product name, TP10). TCS recently completed a Phase I clinical trial for TP10 in patients with acute lung injury at risk of developing ARDS. A Phase II trial is now being planned to evaluate TP10 in ARDS patients. A second Phase I trial is ongoing with the indication of reperfusion injury following heart attacks. A Phase II trial in reperfusion injury is being planned for early 1996. All development, marketing and manufacturing rights, outside of Japan and Taiwan, to TP10 are owned by T Cell Sciences.

In addition to TP10, T Cell Sciences is developing several other complement inhibitors, including sLex CR1, which combines complement inhibition with cell adhesion inhibition. These product candidates, which are in preclinical development, are proprietary to the Company.

T Cell Sciences' second major program therapeutic is focused on using the Company's proprietary T cell antigen receptor (TCAR) technology to develop treatments for autoimmune diseases such as rheumatoid arthritis, multiple sclerosis, Crohn's disease and T cell cancers. The Company believes that use of this technology will result in a new generation of immunosuppressive drugs that selectively eliminate the function of specific T cell subgroups which are thought to cause the disease while leaving the majority of T cells to perform their normal function in the immune system.

In January 1992, T Cell Sciences entered into a joint development and distribution agreement with Astra, to develop jointly TCS's TCAR technology and products for the treatment of autoimmune diseases and T cell cancers. TCS and Astra amended and restated this agreement in December 1993 to provide that TCS will continue to develop TP12, a peptide, and Astra will assume development responsibility for TM27, a humanized monoclonal antibody. Astra has worldwide marketing rights to the products developed from the joint program and T Cell Sciences will receive a percentage of net sales of the products.

DIAGNOSTICS:

T Cell Diagnostics is developing new human immuno-diagnostic products, which would provide earlier warning of disease and more effective ways to monitor and direct therapy. TCD's lead product, TRAx(R) CD4, received marketing clearance from the FDA in May 1995 and is now being launched through direct sales efforts in the U.S. and distributors outside the U.S. TRAx CD4 is used for enumerating the CD4+ T Cells in patients with infectious diseases, including HIV. TCD plans to submit TRAx CD8, a companion product to TRAx CD4, to the FDA as a 510(k) submission before the end of 1995. The potential market for TRAx CD4 is approximately $75 million in the U.S. and Europe. In clinical trials conducted to support the Company's submission for clearance, TRAx CD4 provided substantially equivalent results to those obtained from flow cytometry, the method currently used to enumerate CD4 T cells. However, TRAx CD4 is a less expensive alternative to flow cytometry, is more accessible to laboratories with cell enumeration needs, has sample handling benefits and is more precise. For these reasons, T Cell Diagnostics believes TRAx CD4 has distinct marketing advantages over flow cytometry. Yamanouchi Pharmaceutical Co., Ltd. has rights to market TRAx products in Japan and Taiwan. T Cell Diagnostics is evaluating different types of relationships with distributors and automated equipment partners to maximize the penetration of different markets for the TRAx products.

In addition to the TRAx product line, T Cell Diagnostics presently sells approximately 40 products in the preclinical research market through direct sales and distributors.

PATENTS:

T Cell Sciences has an extensive patent portfolio supporting its therapeutic and diagnostic efforts. The Company is the owner or licensee of over 200 patents and pending applications around the world, including 25 United States patents. Patent rights in the area of complement molecules include an issued United States patent which claims the nucleic acid sequences of recombinant soluble CR1 (TP10) and its fragments. T Cell Sciences also owns rights to a number of other patent applications relating to TP10, sCR1/SLex and other complement inhibitor molecules. Issued and pending T cell receptor patent rights cover the DNA, protein, and antibodies relating to the alpha, beta, gamma and delta chains of the T cell antigen receptor. T Cell Diagnostics is the owner of a number of patent rights relating to TRAx CD4 and CD8, other applications of the TRAx product technologies, and new diagnostic methods and products.

The Company is a Delaware corporation founded in 1983. The Company's principal offices and laboratories are located at 115 Fourth Avenue, Needham, Massachusetts 02194 and its telephone number is 617-433-0771.

## USE OF PROCEEDS

The Company will not receive any proceeds from the sale of the Shares by the Selling Stockholders.

## RECENT DEVELOPMENTS

Certain Shares covered by this Prospectus were acquired by the Selling Stockholders from the Company in private placement transactions. Certain shares of Common Stock were purchased in a private placement transaction pursuant to the Stock Purchase Agreements, dated as of October 27, 1995 (the "October Stock Purchase Agreements") at a price per share of 20% below the average of the high and low trading prices of the Common Stock on the Nasdaq National Market on the five trading days preceding the Commitment Date (as defined therein) of the October Stock Purchase Agreements, which price per share as of the date of the October Stock Purchase Agreement was $2.825. In the October Stock Purchase Agreements, the Company agreed to bear all expenses in connection with the registration and sale of Shares and up to $2,500 of the outside counsel fees and expenses of the Selling Stockholders who acquired Shares pursuant to the October Stock Purchase Agreements (the "October Selling Stockholders").

Certain Shares covered by this Prospectus were acquired by the Selling Shareholders from the Company in a separate private placement transaction pursuant to the Stock Purchase Agreements, dated as of November 6, 1995 (the "November Stock Purchase Agreements") at a price per share of $2.50. In the November Stock Purchase Agreements, the Company agreed to bear all expenses in connection with the registration and sale of Shares (other than underwriting discounts and selling commissions and the fees and expenses of counsel and other advisors to the Selling Stockholders). The Company entered into a Placement Agency Agreement dated as of November 2, 1995 with Allen & Company Incorporated ("Allen & Company") pursuant to which the Company will pay Allen & Company a commission of $0.10 per share of Common Stock purchased by certain investors pursuant to the November Stock Purchase Agreements. In connection with the Placement Agency Agreement, the Company has also agreed to pay up to $5,000 of Allen & Company's outside counsel fees and expenses. See "Plan of Distribution."

Because certain Selling Stockholders have purchased shares of Common Stock pursuant to the November Stock Purchase Agreements (the "November Selling Stockholders") prior to the Closing Date (as defined therein) of the October Stock Purchase Agreements at a lower price per share than the $2.825 price per share reflected in the October Stock Purchase Agreements, the October Selling Stockholders will receive additional shares of Common Stock at no additional cost. This issuance of additional shares of Common Stock to the October Selling Stockholders is designed to result in the October Selling Shareholders receiving the same price per share as the November Selling Stockholders.

Certain Shares covered by this Prospectus will be acquired by the Selling Stockholders from the Company through the exercise of warrants for shares of Common Stock (the "Warrantholders"). These warrants were issued to these Selling Stockholders in connection with a private placement of Class B Preferred Stock in December 1985. As consideration for the Company's agreement to register shares of Common Stock issuable upon the exercise of these warrants, the Warrantholders have expressed their intent to exercise their warrants at the exercise price of $1.65 per share prior to the December 13, 1995 expiration date of such warrants.

Each Selling Stockholder represented in its respective Stock Purchase Agreement or in its agreement with the Company that it was purchasing its Shares from the Company or exercising its warrants for Shares of the Company without any present intention of effecting a distribution of those Shares. In recognition of the fact, however, that investors may desire to sell their Shares when they consider appropriate, and in accordance with its agreement in the respective Stock Purchase Agreements and its agreement with the Warrantholders, the Company has filed with the Commission a registration statement on Form S-3 (of which this Prospectus is a part, the "Registration Statement") with respect to the sale of the Shares by the Selling Stockholders from time to time on the Nasdaq National Market System or in negotiated transactions. The Company will prepare and file such amendments and supplements to the Registration Statement as may be necessary to keep it effective for a period not exceeding three years or such shorter period which will terminate when all the Shares covered by such Registration Statement have been sold pursuant to such Registration Statement or withdrawn. The Selling Shareholders (with the exception of the Selling Shareholders who have acquired Shares through the exercise of warrants) agree to hold their Shares for a period of thirty (30) days following the closing date of the transactions contemplated by the respective Stock Purchase Agreements, which is the filing date of the Registration Statement of which this Prospectus is a part.

## SELLING STOCKHOLDERS

The Shares are to be offered by and for the respective accounts of the Selling Stockholders. The following table sets forth the name and the number of shares of Company Common Stock to be offered by each Selling Stockholder.

| Selling Stockholder | Number of Shares of Common Stock Beneficially Owned Prior to the Offering | Number of Shares of Common Stock offered hereby | Percentage of Shares of Common Stock after the Offering |
|---|---|---|---|
| Allen & Company Incorporated(1) | 359,928 | 300,000 | 3.35% |
| GFL Advantage Fund Limited | -- | 500,000 | 2.54% |
| GFL Performance Fund Limited | -- | 400,000 | 2.03% |
| Bruce Allen | -- | 100,000 | * |
| American Diversified Enterprises Inc. | -- | 100,000 | * |
| Donald R. Keough | -- | 50,000 | * |
| SMALLCAP World Fund, Inc. | -- | 800,000 | 4.06% |
| Cook & CIE, S.A. | -- | 300,000 | 1.13% |

| | | | |
|---|---|---|---|
| Aetna Life & Casualty Co.(2) | 71,776 | 151,297 | -- |
| F. Daniel Frost (2) | -- | 40,346 | -- |
| Allenwood Ventures, Inc.(2) | -- | 20,173 | -- |

- ----------

* Denotes less than 1%.

(1) Allen & Company Incorporated has acted as a placement agent with respect to some of the shares of Common Stock purchased by certain of the November Selling Stockholders. John Simon, a member of the Company's Board of Directors, is a Managing Director and Executive Vice President of Allen & Company.

(2) Denotes Selling Shareholders who may acquire shares of Common Stock upon the exercise of warrants at an exercise price of $1.65 per share; since the warrants have not been or may not ultimately be exercised, no calculation has been made based on ownership after exercise.

Except as set forth above, the Selling Stockholders have not held any position or office with, been employed by, or otherwise had a material relationship with the Company or any of its predecessors or affiliates.

## PLAN OF DISTRIBUTION

Shares of Common Stock covered hereby may be offered and sold from time to time by the Selling Stockholders. The Selling Stockholders will act independently of the Company in making decisions with respect to the timing, manner and size of each sale. Such sales may be made in transactions in the Nasdaq National Market System or otherwise at prices related to the then current market price or in negotiated transactions. The Shares may be sold by one or more of the following methods: (a) purchases by the broker-dealer as principal and resale by such broker or dealer for its account pursuant to this Prospectus; (b) ordinary brokerage transactions and transactions in which the broker solicits purchasers; and (c) block trades in which the broker-dealer so engaged will attempt to sell the Shares as agent but may position and resell a portion of the block as principal to facilitate the transaction. The Company has been advised by the Selling Stockholders that they have not, as of the date hereof, made any arrangements relating to the distribution of the Shares covered by this Prospectus. In effecting sales, broker-dealers engaged by the Selling Stockholders may arrange for other broker-dealers to participate. Broker-dealers will receive commissions or discounts from the Selling Stockholders in amounts to be negotiated immediately prior to the sale.

In offering the Shares of Common Stock covered hereby, the Selling Stockholders and any broker-dealers who execute sales for the Selling Stockholders may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales, and any profits realized by the Selling Stockholders and the compensation of such broker-dealer may be deemed to be underwriting discounts and commissions under the Securities Act.

The Company has agreed to indemnify each Selling Stockholder against any liabilities, under the Securities Act or otherwise, arising out of or based upon any untrue or alleged untrue statement of a material fact in the Registration Statement or this Prospectus or by any omission of a material fact required to be stated therein except to the extent that such liabilities arise out of or are based upon any untrue or alleged untrue statement or omission in any information furnished in writing to the Company by the Selling Stockholder expressly for use in the Registration Statement.

## LEGAL MATTERS

The validity of the issuance of the Shares offered hereby will be passed upon for the Company by its counsel, Goodwin, Procter & Hoar, Exchange Place, 24th Floor, Boston, Massachusetts 02109.

## EXPERTS

The consolidated financial statements and schedule of T Cell Sciences, Inc. and subsidiary included in the Company's Annual Report to Stockholders on Form 10-K for the year ended December 31, 1993 and the eight months ended December 31, 1992, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG Peat Marwick LLP, independent certified public accountants, incorporated by reference herein and upon the authority of said firm as experts in accounting and auditing.

The consolidated financial statements incorporated in this Prospectus by reference to the Annual Report to Stockholders on Form 10-K of T Cell Sciences, Inc. for the year ended December 31, 1994 have been so incorporated in reliance on the report of Price Waterhouse LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

NO DEALER, SALESMAN OR OTHER PERSON IS AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS NOT CONTAINED IN THIS PROSPECTUS IN CONNECTION WITH THE OFFER MADE HEREBY, AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY OR ANY UNDERWRITER. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY THE SECURITIES OFFERED HEREBY TO ANY PERSON IN ANY STATE OR OTHER JURISDICTION IN WHICH SUCH OFFER OR SOLICITATION WOULD BE UNLAWFUL. THE DELIVERY OF THIS PROSPECTUS AT ANY TIME DOES NOT IMPLY THAT INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY TIME SUBSEQUENT TO ITS DATE.

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2,761,816 Shares

T CELL SCIENCES

COMMON STOCK

PROSPECTUS

November __, 1995

PART II.

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION. (1)

The following are the estimated expenses of issuance and distribution of the shares registered hereunder on Form S-3:

| | |
|---|---|
| SEC Registration fee | $ 2,857 |
| NASDAQ listing fee | $ 17,500 |
| Legal fees and expenses | $ 50,000 |
| Miscellaneous(2) | $175,000 |
| Total | =$245,357 |

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(1) The amounts set forth above, except for the SEC Registration Fee and the Nasdaq Listing Fee, are estimated.

(2) Includes $165,000 commission paid to Allen & Company pursuant to the Placement Agency Agreement, dated as of November 2, 1995.

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

SECURITIES AND EXCHANGE COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Section 145 of the General Corporation Law of Delaware permits indemnification of directors, officers and employees of a corporation under certain conditions and subject to certain limitations. Article FIFTH of the registrant's Amended and Restated By-Laws contains provisions for the indemnification of directors, officers and employees within the limitations permitted by Section 145.

The registrant carries a directors' and officers' liability insurance policy which provides for payment of expenses of the registrant's directors and officers in connection with threatened, pending or completed actions, suits or proceedings against them in their capacities as directors and officers, in accordance with the registrant's Amended and Restated By-Laws and the Delaware General Corporation Law. In addition, Article SIXTH of the Third Restated Certificate of Incorporation of the registrant protects a director of the registrant against any personal liability to the registrant or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the registrant or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived any improper benefit.

ITEM 16. EXHIBITS.

| EXHIBIT NO. | DESCRIPTION |
|---|---|
| 5 | Opinion of Goodwin, Procter & Hoar.* |
| 10.1 | Form of Stock Purchase Agreement dated as of October 27, 1995 between the Company and the Purchasers.* |
| 10.2 | Form of Stock Purchase Agreement dated as of November 3, 1995, between the Company and the Purchasers.* |
| 23.1 | Consent of Price Waterhouse LLP.* |
| 23.2 | Consent of KPMG Peat Marwick LLP.* |
| 23.3 | Consent of Goodwin, Procter & Hoar (included in Exhibit 5).* |
| 24 | Power of Attorney (included on signature page).* |

* Previously filed.

ITEM 17. UNDERTAKINGS.

A. The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement. To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each post- effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described under Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Needham, Commonwealth of Massachusetts, on the 20th day of November, 1995.

T CELL SCIENCES, INC.

By: /s/ Alan W. Tuck
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Alan W. Tuck
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ Alan W. Tuck<br>(Alan W. Tuck) | President, Chief Executive Officer & Chief Financial Officer & Director | November 20, 1995 |
| *<br>(James D. Grant) | Chairman of the Board & Director | November 20, 1995 |
| *<br>(Patrick C. Kung) | Vice Chairman of the Board & Director | November 20, 1995 |
| *<br>(John P. Munson) | Director | November 20, 1995 |
| *<br>(John Simon) | Director | November 20, 1995 |
| *<br>(Thomas R. Ostermueller) | Director | November 20, 1995 |

By: /s/ Alan W. Tuck
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Alan W. Tuck
Attorney-in-Fact