PRO PHARMACEUTICALS INC
Form SB-2/A
July 25, 2003
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As filed with the Securities and Exchange Commission on July 25, 2003

Registration No. 333-107112

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 1 TO

FORM SB-2

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

PRO-PHARMACEUTICALS, INC.

(Name of Small Business Issuer in its Charter)

Nevada	**2834**	**04-3562325**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification No.)**

189 Wells Avenue

Newton, Massachusetts 02459

(617) 559-0033

(Address and Telephone Number of Principal Executive Offices)

David Platt, Ph.D.

President and Chief Executive Officer

Pro-Pharmaceuticals, Inc.

189 Wells Avenue

Newton, Massachusetts 02459

(617) 559-0033

(Name, Address and Telephone Number of Agent for Service)

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with copies to:

Jonathan C. Guest, Esq.

Perkins, Smith & Cohen, LLP

One Beacon Street

Boston, Massachusetts 02108

(617) 854-4000

Approximate date of commencement of proposed sale to the public: As soon as possible after this registration statement is declared effective.

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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: ¨

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box: ¨

The Registrant hereby amends this Registration Statement on such 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 1933, as amended, or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information contained in this prospectus is not complete and may be changed. The selling security holders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JULY 25, 2003

PRO-PHARMACEUTICALS, INC.

2,843,304 Shares of Common Stock

$.001 par value

We are registering up to 2,843,304 shares of our common stock for sale by certain shareholders of our company from time to time. The selling security holders will receive all the proceeds from the sale of the offered shares. See Selling Security Holders on page 26 of this prospectus.

Our common stock is traded on the OTC Bulletin Board under the symbol PROH . The last reported sales price of the common stock on July 15, 2003 was $4.30 per share.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page 2 to read about certain risks you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

Our principal executive offices are located at 189 Wells Avenue, Newton, Massachusetts 02459. Our telephone number is (617) 559-0033.

The date of this Prospectus is .

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PROSPECTUS SUMMARY

About This Prospectus

This prospectus is part of a registration statement we filed with the U.S. Securities and Exchange Commission. You should rely on the information provided in this prospectus. Neither we nor the selling security holders listed in this prospectus have authorized anyone to provide you with information different from that contained in this prospectus. The selling security holders are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock. Applicable SEC rules may require us to update this prospectus in the future.

About Pro-Pharmaceuticals, Inc.

We are engaged in research and development of drug technologies to enable targeted delivery of widely used chemotherapy drugs. We intend initially to combine our proprietary carbohydrate compounds with existing generic chemotherapy drugs used to treat cancer. We believe our technology will increase the body s tolerance to these toxic drugs by targeting the delivery directly to cancerous cells. Our company s approach of improving existing chemotherapy drugs by adding a targeting mechanism should reduce the toxicity and increase the efficacy of these drugs thereby creating a preferable treatment to existing first line regimens. Additionally, we believe that this drug development strategy will enable our company to gain patent protection on drugs we reformulate with our carbohydrate compounds.

The U.S. Food and Drug Administration (the FDA) has approved our first Investigational New Drug Application (IND) for Phase I human clinical trials relating to colorectal cancer. Additionally, the FDA also approved our amendment to broaden the scope of our IND to include all solid tumors. We have begun clinical trials of our drug and are in the process of collecting results. Also, we are currently conducting preclinical animal experiments with additional IND candidates. We have not yet generated any operating revenues.

We were incorporated under Nevada law in January 2001. Shares of our common stock currently are quoted on the OTC Bulletin Board under the symbol PROH .

Our address is 189 Wells Avenue, Newton, Massachusetts 02459. Our telephone number is (617) 559-0033, fax number is (617) 928-3450, e-mail address is foley@pro-pharmaceuticals.com, and our website address is www.pro-pharmaceuticals.com.

THE OFFERING

Common stock offered by the selling security holders:

2,843,304 shares

Common stock currently outstanding (as of May 31, 2003):	20,323,600 shares
Use of Proceeds:	We will not receive any of the proceeds from the sale of the shares owned by the selling security holders.

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RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the risks described below and the other information contained in this prospectus before deciding to invest in our common stock. The risks described below are not the only ones facing our company. Additional risks not presently known to us or which we currently consider immaterial may also adversely affect our business. We have attempted to identify below the major factors that could cause differences between actual and planned or expected results, but we cannot assure you that we have identified all of those factors. If any of the following risks actually happen, our business, financial condition and operating results could be materially adversely affected. In this case, the trading price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Pro-Pharmaceuticals

We Are At An Early Stage Of Development Without Operating History. We are a development-stage company without operating history, and we have not generated any revenues to date. We have no therapeutic products available for sale, and none are expected to be commercially available for several years, if at all. We may never generate revenue or become profitable, even if we are able to commercialize any products.

We Have Incurred Net Losses To Date And Depend On Outside Capital. Our accumulated deficit as of March 31, 2003 was approximately $8,778,098, which includes approximately $2,427,000 of various non-cash charges related to certain equity transactions. We will need to continue to conduct significant research, development, testing and regulatory compliance activities that, together with projected general and administrative expenses, we expect will result in substantial operating losses for the next several years. Accordingly, we will not be generating our own capital and will remain dependent on outside sources of financing during that time. If we are unable to raise funds from outside sources for our continuing operations, we may be adversely affected.

We may raise such capital through public or private equity financings, partnerships, debt financings, bank borrowings, or other sources. Additional funding may not be available on favorable terms or at all. If adequate funds are not otherwise available, we may curtail operations significantly. To obtain additional funding, we may need to enter into arrangements that require us to relinquish rights to certain technologies, products and/or potential markets. To the extent that additional capital is raised through the sale of equity, or securities convertible into equity, our equity holders may experience dilution of their proportionate ownership of the company.

Based on proceeds of approximately $4,311,000 received in our private placement which was completed in January 2003, of which approximately $1,088,000 was raised in 2003, proceeds of approximately $4,300,000 as of July 23, 2003 received in our recently completed private placement begun in May 2003, and approximately $1,921,000 in cash and cash equivalents as of December 31, 2002, and budgeted expenditures for the twelve-month period ending December 31, 2003 of approximately $3,700,000, we believe that we have sufficient capital to fund our operations for all of 2003 and through at least the third quarter of 2004. If actual expenses exceed our budget, however, we will need to raise additional capital sooner in order to meet our cash needs.

Our Product Candidates Will Be Based On Novel Unproven Technologies. Our product candidates will be based upon novel unproven technologies that we plan to use to apply to drugs currently used in the treatment of cancer and other diseases. Carbohydrates are difficult to synthesize, and we may not be able to synthesize carbohydrates that would be usable as delivery vehicles for the anti-cancer drugs we plan to work with.

We Have Only Recently Begun Clinical Trials And Results Are Uncertain. We have one product candidate in clinical trials. Preclinical results in animal studies are not necessarily predictive of outcomes in human clinical trials. Clinical trials are expensive, time-consuming and may not be successful. They involve the testing of potential therapeutic agents, or effective treatments, in humans in three phases (phases I, II, and III) to determine the safety and efficacy of the product candidates necessary for an approved drug. Many products in human clinical trials fail to demonstrate the desired safety and efficacy characteristics. Even if our products progress

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successfully through initial human testing, they may fail in later stages of development. We will be dependent on others to conduct our clinical trials, including clinical research organizations and, possibly, government-sponsored agencies. These trials may not start or be completed as we forecast, or may be unsuccessful.

Our Product Candidates May Not Be Successfully Commercialized. Even if our product candidates are successful in clinical trials, they may not be successfully commercialized. Potential products may be found ineffective or cause harmful side effects during preclinical testing or clinical trials, fail to receive necessary regulatory approvals, be difficult to manufacture on a large scale, be uneconomical to produce, fail to achieve market acceptance, or be precluded from commercialization by proprietary rights of third parties.

Our Lack Of Operating Experience May Cause Us Difficulty In Managing Our Growth. We have no experience in manufacturing or procuring products in commercial quantities, conducting other later-stage phases of the regulatory approval process, selling pharmaceutical products, or negotiating, establishing and maintaining strategic relationships. Any growth of our company will require us to expand our management and our operational and financial systems and controls. If we are unable to do so, our business and financial condition would be materially harmed. If rapid growth occurs, it may strain our operational, managerial and financial resources.

We Will Depend On Third Parties To Manufacture And Market Our Products. We do not have, and do not now intend to develop facilities for the manufacture of any of our products for clinical or commercial production. Accordingly, we will need to develop relationships with manufacturers and enter into collaborative arrangements with licensees or have others manufacture our products on a contract basis. We expect to depend on such collaborators to supply us with products manufactured in compliance with standards imposed by the FDA and foreign regulators. In addition, we have no direct experience in marketing, sales or distribution, and we do not intend to develop a sales and marketing infrastructure to commercialize our pharmaceutical products. If we develop commercial products, we will need to rely on licensees, collaborators, joint venture partners or independent distributors to market and sell those products.

We Depend On Key Individuals To Develop Our Products And Pursue Collaborations. We are highly dependent on Dr. David Platt, President and Chief Executive Officer; Dr. Anatole Klyosov, a member of our Scientific Advisory Board and a consultant; and Dr. Eliezer Zomer, Vice President of Manufacturing and Product Development. The loss of any of these persons, or failure to attract or retain other key personnel, could prevent us from pursuing collaborations or developing our products and core technologies.

Risks Related to the Drug Development Industry

We Will Need Regulatory Approvals To Commercialize Our Products. We currently do not have products approved for sale in the U.S. or any foreign market. We are required to obtain approval from the FDA in order to sell our products in the U.S. and from foreign regulatory authorities in order to sell our products in other countries. The FDA s review and approval process is lengthy, expensive and uncertain. Extensive preclinical and clinical data and supporting information must be submitted to the FDA for each indication for each product candidate in order to secure FDA approval. The FDA could reject an application or require us to conduct additional clinical or other studies as part of the regulatory review process. Delays in obtaining or failure to obtain FDA approvals would prevent or delay the commercialization of our products, which would prevent, defer or decrease our receipt of revenues. If we receive initial regulatory approval, our product candidates will be subject to extensive and rigorous ongoing domestic and foreign government regulation.

Our Competitive Position Depends On Protection Of Our Intellectual Property. Development and protection of our intellectual property are critical to our business. If we do not adequately protect our intellectual property, competitors may be able to practice our technologies. Our success depends in part on our ability to obtain patent protection for our products or processes in the United States and other countries, protect

trade secrets, and prevent others from infringing on our proprietary rights.

Since patent applications in the United States are maintained in secrecy for at least portions of their pendency periods (published on U.S. patent issuance or, if earlier, 18 months from earliest filing date for most

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applications) and since other publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that we are the first to make the inventions to be covered by our patent applications. The patent position of biopharmaceutical firms generally is highly uncertain and involves complex legal and factual questions. The U.S. Patent and Trademark Office has not established a consistent policy regarding the breadth of claims that it will allow in biotechnology patents.

We cannot assure you that all of our patent applications will issue as patents or that the claims of any issued patents will afford meaningful protection for our technologies or products. In addition, patents issued to us or our licensors may be challenged and subsequently narrowed, invalidated or circumvented. Patent litigation is widespread in the biotechnology industry and could harm our business. Litigation might be necessary to protect our patent position or to determine the scope and validity of third-party proprietary rights, and we may not have the required resources to pursue such litigation or to protect our patent rights.

Although we require our scientific and technical employees and consultants to enter into broad assignment of inventions agreements, we have not required Dr. Platt to do so. He has, however, assigned all his patents and patent applications of inventions related to our business. While our employees, consultants and corporate partners with access to proprietary information generally will be required to enter into confidentiality agreements, these agreements may not be honored.

Our Products Could Infringe The Intellectual Property Rights Of Others. We cannot assure that products based on our patents or intellectual property that we license from others will not be challenged by a third party claiming infringement of its proprietary rights. If we were not able to successfully defend our patents or licensed right, we may have to pay substantial damages, possibly including treble damages, for past infringement.

We Face Intense Competition In The Biotechnology And Pharmaceutical Industries. The biotechnology and pharmaceutical industries are intensely competitive. We face direct competition from U.S. and foreign companies focusing on drug delivery technologies which are rapidly evolving. Our competitors include major, multinational pharmaceutical and chemical companies, specialized biotechnology firms and universities and other research institutions. Many of these competitors have greater financial and other resources, larger research and development staffs and more effective marketing and manufacturing organizations, than we do. In addition, academic and government institutions are increasingly likely to enter into exclusive licensing agreements with commercial enterprises, including our competitors, to market commercial products based on technology developed at such institutions. Our competitors may succeed in developing or licensing technologies and products that are more effective or less costly than ours, or succeed in obtaining FDA or other regulatory approvals for product candidates before we do.

Health Care Cost Containment Initiatives And The Growth Of Managed Care May Limit Our Returns. Our ability to commercialize our products successfully will be affected by the ongoing efforts of governmental and third-party payors to contain the cost of health care. These entities are challenging prices of health care products and services, denying or limiting coverage and reimbursement amounts for new therapeutic products, and for FDA-approved products considered experimental or investigational, or which are used for disease indications without FDA marketing approval.

Even if we succeed in bringing any products to the market, they may not be considered cost-effective and third-party reimbursement might not be available or sufficient. If adequate third-party coverage is not available, we may not be able to maintain price levels sufficient to realize an appropriate return on our investment in research and product development. In addition, legislation and regulations affecting the pricing of pharmaceuticals may change in ways adverse to us before or after any of our proposed products are approved for marketing.

Our Insurance Coverage May Not Be Adequate In All Circumstances. In the future, we may, in the ordinary course of business, be subject to claims by, and liability to, persons alleging injury as a result of taking products we have under development. If we are successful in having products approved by the FDA, the sale of such products would expose us to additional potential product liability and other claims resulting from their use. This liability may result from claims made directly by consumers or by pharmaceutical companies or others

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selling such products. Although we currently have insurance coverage for both product liability and professional liability, it is possible that we will not be able to maintain such insurance on acceptable terms. Any inability to maintain insurance coverage on acceptable terms could prevent or limit the commercialization of any products we develop.

Risks Related to Our Stock

Stock Prices For Biopharmaceutical And Biotechnology Companies Are Volatile. The market price for securities of biopharmaceutical and biotechnology companies historically has been highly volatile, and the market from time to time has experienced significant price and volume fluctuations that are unrelated to the operating performance of such companies. Fluctuations in the trading price or liquidity of our common stock may adversely affect our ability to raise capital through future equity financings.

Trading of Our Shares Could Be Adversely Affected Because Our Stock Is Not Listed And Is A Penny Stock . Currently, our shares are traded on the OTC Bulletin Board (OTCBB) sponsored by the National Association of Securities Dealers. Trading volume in our shares is not consistent on a daily basis and our stockholders may be unable to sell their shares when they want or at a favorable price. We have not listed our stock and in the near term may not be able to meet the listing standards for any exchange or for the Nasdaq National Market or the Nasdaq SmallCap Market. Our stock is subject to SEC regulations that impose limitations upon the manner in which certain low priced equity securities, referred to as penny stocks are publicly traded. Under these regulations, a penny stock is defined as any equity security that has a market price of less than $5.00 per share, subject to certain exceptions for which we do not now qualify. Our stock does not regularly trade above $5.00 per share. Regulations require the delivery, prior to any transaction involving a penny stock, of a disclosure schedule explaining the penny stock market and the associated risks. They also require broker-dealers who recommend penny stocks to persons other than established customers and certain accredited investors to make a special written suitability determination for the purchaser and receive the purchaser s written agreement to a transaction prior to sale. These requirements make it more difficult to effect transactions in penny stocks as compared to other securities.

Four Principal Stockholders Own Enough Shares To Control The Company. Four of our principal stockholders, David Platt, James Czirr, Offer Binder and Anatole Klyosov own or control approximately 61% of our outstanding shares of our common stock, and Dr. Platt and Mr. Czirr together own approximately 49%. Some or all of these stockholders, acting in concert, will be able to continue to elect the Board of Directors and take other corporate actions requiring stockholder approval, such as recapitalization or other fundamental corporate action, as well as dictate the direction and policies of our company. Such concentration of ownership also could have the effect of delaying, deterring or preventing a change in control of the company that might otherwise be beneficial to stockholders.

Certain of our directors, officers or principal stockholders are offering for resale 615,846 shares of our common stock. This does not mean that any of these persons will sell all or any of such shares. None of such persons has a present intention to sell such shares and there currently are no agreements, arrangements or understandings with respect to the sale or distribution of any of the common stock by any of these directors, officers or principal stockholders. The sale of any or all of these shares by such persons or the perception that such sales will occur could materially adversely affect the market price of our common stock.

FORWARD-LOOKING STATEMENTS

This prospectus contains, in addition to historical information, forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the use of forward-looking terminology such as may, will, could, expect, anticipate, estimate, continue or other similar words. These forward-looking statements are based on management s c expectations and are subject to a number of factors and uncertainties which could cause actual results to differ materially from those described in

such statements. We caution investors that actual results

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or business conditions may differ materially from those projected or suggested in forward-looking statements as a result of various factors including, but not limited to, those described in the Risk Factors section of this prospectus. We cannot assure you that we have identified all the factors that create uncertainties. Readers should not place undue reliance on forward-looking statements. We undertake no obligation to publicly release the result of any revision of these forward-looking statements to reflect events or circumstances after the date they are made or to reflect the occurrence of unanticipated events.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares owned by the selling security holders.

MARKET FOR OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Market for Our Common Stock

Our common stock trades under the symbol PROH on the Over-the-Counter Bulletin Board Electronic Quotation System maintained by the National Association of Securities Dealers, Inc. Our stock commenced trading on September 9, 2002. Approximately thirteen professional market makers hold themselves out as willing to make a market in our common stock. Following is information about the range of high and low bid prices for our common stock for each fiscal quarter since our stock commenced trading. These quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not necessarily represent actual transactions.

Quarter Ended	High Bid Quotation	Low Bid Quotation
9/30/02	$ 4.00	$ 2.00
12/31/02	$ 3.34	$ 2.70
3/31/03	$ 3.14	$ 2.41
6/30/03	$ 5.00	$ 2.30

Equity Compensation Plans

On October 18, 2001, our Board of Directors adopted the Pro-Pharmaceuticals, Inc. 2001 Stock Incentive Plan which permits awards of incentive and non-qualified stock options and other forms of incentive compensation to employees and nonemployees such as directors and consultants. The Board reserved 2,000,000 of our shares of common stock for awards pursuant to the plan, all of which reserved shares could be awarded as incentive stock options. Our stockholders approved the plan on May 31, 2002.

The following table provides summary information on our equity incentive plans as of December 31, 2002:

	Equity Compensation Plan Information		
Plan category	Number of Securities To be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available For Future Issuance Under Equity Compensation Plans (excluding securities reflected in column)
Equity compensation plans approved by security holders(1)	345,000	$ 3.50	1,655,000
Equity compensation plans not approved by security holders(2)	224,000	$ 3.50	N/A
Total	569,000		1,655,000

(1) The only compensation plan approved by stockholders is the Pro-Pharmaceuticals, Inc. 2001 Stock Incentive Plan.

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(2) During 2001, we entered into a consulting agreement with a non-employee, who was also a Board member and then a member of the Audit Committee, pursuant to which we granted 200,000 options to purchase common stock at an exercise price of $3.50 in consideration for services to be performed. A portion of these options vested during fiscal years 2001 and 2002, and the remainder will vest during 2003. In March 2002, we entered into a second agreement with the same non-employee, by which the Company granted 2,000 options a month to purchase common stock at an exercise price of $3.50 in consideration for monthly consulting services. On November 11, such agreement was superceded by an amendment, which was effective retroactively to the date of the original agreement, March 1, 2002. Under the amended agreement, we granted 24,000 options on March 1, 2002, which vest at a rate of 2,000 options per month, as services are performed.

Holders

As of May 31, 2003, there were 308 holders of record of our common stock, although we believe that there are additional beneficial owners of our common stock who own their shares in street name.

Dividends

There have been no cash dividends declared on our common stock since our company was formed. Dividends are declared at the sole discretion of our Board of Directors.

BUSINESS

Corporate Formation

We were incorporated as DTR-Med Pharma Corp. under Nevada law in January 2001 for the purpose of acquiring all the outstanding stock of our predecessor, Pro-Pharmaceuticals, Inc., which was a Massachusetts corporation engaged in a business we desired to acquire. From our incorporation until just before the acquisition, we were a wholly owned subsidiary of Developed Technology Resource, Inc., a Minnesota corporation whose common stock is publicly traded on the OTC Bulletin Board. In exchange for 1,221,890 shares of our common stock, Developed Technology transferred to us contractual rights. As part of that process, Developed Technology distributed its holdings of our common stock to its shareholders of record as of May 7, 2001. In anticipation of the acquisition of the Massachusetts company, we changed our name to Pro-Pharmaceuticals, Inc.

On May 15, 2001, we acquired all of the outstanding common stock of the Massachusetts corporation. We acquired these shares in exchange for 12,354,670 shares of our common stock. As a result, that corporation became our wholly owned subsidiary, and its shareholders through an exchange owned approximately 91% of the outstanding shares of our common stock, with the Developed Technology shareholders owning the remaining 9%. After the acquisition, we merged with the Massachusetts corporation and are the surviving corporation in the merger. The merger was treated as a capital transaction and was accounted for as a reverse merger in which Pro-Pharmaceuticals (Massachusetts) was the accounting acquirer.

Overview

We are a research and development pharmaceutical company that intends to identify, develop and seek regulatory approval of technology that will reduce toxicity and improve the efficacy of widely used chemotherapy drugs by combining the drugs with a number of specific carbohydrate compounds. Our fundamental objective is to increase the body s tolerance to the drugs by enabling delivery of the drugs while protecting healthy tissue. Our carbohydrate-based drug delivery system may also have applications for drugs now used to treat other diseases and chronic health conditions.

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In technical terms, we seek to reformulate existing cancer chemotherapy drugs with non-toxic carbohydrate-based compounds that are recognized by and adhere to specific binding sites on the surface of cancer cells. Reformulation of chemotherapy drugs already approved by the U.S. Food and Drug Administration has the following benefits for our business:

We expect fewer risks in drug development because our carbohydrate-based compounds would be combined with drugs already in widespread use. Use of carbohydrate compounds with increased capacity to bind to receptors only on cancer cells and combining the drug with a harmless carbohydrate polymer will reduce the toxic effect on healthy cells and permit better calibration (including possible increase) of dosages to diseased tissue.

We foresee a ready demand for chemotherapy drugs that are less toxic and have greater efficacy. We believe the pharmaceutical industry would respond favorably to drug delivery systems that upgrade existing chemotherapy treatments which patients could tolerate more easily. The industry would likely also be receptive to patent-protected drug delivery systems that attach to existing chemotherapy drugs whose patent protection has expired.

We believe that the development of drug delivery systems to upgrade these widely used drugs can be accomplished with much less investment compared to the typical expenditures made by large pharmaceutical companies for a new drug launch.

Our Business Strategy and Initial Objectives

The initial objectives of our business strategy are as follows:

Verify and extend the carbohydrate-based drug enhancement concept utilizing our approach for developing novel cancer chemotherapy products.

Expand and enhance clinical applications of at least five widely used chemotherapy drugs (5-Fluorouracil, Adriamycin®, Taxol®, Cytoxan®, and Cisplatin®) by combining them with our carbohydrate-based drug delivery system.

Demonstrate the safety and efficacy of such product candidates by means of preclinical evaluation and submitting investigational new drug (IND) applications to the FDA.

Accelerate commercialization by identifying products that qualify for fast-track designation by the FDA (further described below) with respect to products to be used in treatment of types and stages of cancer for which treatments are now inadequate.

Leverage our carbohydrate-based drug enhancement technology by applying it to other FDA-approved drugs, including drugs for conditions or ailments other than cancer, that would benefit from reduced toxicity and/or greater efficacy. This strategy would enable us to increase the portfolio of drugs to which our technology may be applied without corresponding development risk and expense of creating new drugs.

Apply our drug enhancement system with the aim of extending the patent life of current drugs, or as to drugs with expired patents, thus creating new patent protection.

Limitations of Chemotherapy for Cancer Treatment

Cancer is a disease characterized by uncontrolled growth and spread of abnormal cells. The disease may be caused by patient-specific factors such as genetic predisposition, immune deficiency, hormones, diet and smoking, or external factors such as exposure to a toxic environment. It is a leading cause of death in the United States and worldwide.

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The most widely used methods to treat cancer are surgery, radiation and chemotherapy. Cancer patients often receive a combination of these treatments, and about half of all patients receive chemotherapy. Both radiation and chemotherapy have significant limitations that often result in treatment failure. In the case of chemotherapy, these limitations include:

Toxicity. Most chemotherapy agents kill cancer cells by disrupting the cell division process. Cells are killed once they begin to undergo division and replication. Although these agents are effective on cancer cells, which generally grow rapidly through cell division, they also kill healthy non-cancerous cells as these cells undergo ordinary division. This is particularly apparent in fast-growing normal cells, such as blood cells forming bone marrow, in the digestive tract, hair follicles, and reproductive organ cells. As the chemotherapy harms healthy tissue, the effectiveness of the drug is limited because dosage levels and treatment frequency cannot exceed tolerance levels for noncancerous cells. Moreover, the chemotherapy regimen often dramatically diminishes the quality of a patient s life through its physical and emotional side effects.

Inability to Selectively Target Diseased Cells. The administration of chemotherapy occurs in such a way that the drug reaches both healthy and diseased tissue. Normal cells are generally as receptive as tumors to the toxic effects of chemotherapy. Without the ability to target the drug exclusively to cancerous tissue, chemotherapy dosages must be kept within a range that healthy tissue can tolerate, thus reducing the optimal effectiveness of chemotherapy on diseased tissue.

Drug Delivery Technologies

General

The ultimate objective of enhanced drug delivery is to control and optimize the localized release of a drug at the target site and rapidly eliminate from the body the portion of the drug that was not delivered to the diseased tissue. Conventional drug delivery systems such as controlled release, sustained release, transdermal systems, and others are based on a physical erosion process for delivering active product into the systemic circulation over time with the objective of improving compliance by patients with a therapy regimen. These systems do not address the biologically important issues such as site targeting, localized release and elimination of undelivered drug from the body. The major factors that impact the achievement of this ultimate goal are:

Physical characteristics of a drug. These characteristics affect, among other things, the drug s interactions with the intended pharmacological target sites and undesired areas of toxicity; and

Biological characteristics of the diseased area. These characteristics impact the ability of a drug to selectively interact with the intended target site to allow the drug to express the desired pharmacological activity.

Both of these factors are important in increasing efficacy and reducing toxicity of cancer drugs. Biotechnology affords a new opportunity in drug delivery techniques by taking advantage of biological mechanisms such as drug-cell recognition and interactions, and particular physical characteristics of cancerous tissue.

Our Focus: Carbohydrate-Based Drug Enhancement Technology

We are attempting to develop a carbohydrate-based drug delivery technology to direct cancer drugs more selectively to tumor tissue so as to reduce the toxic side effects and improve the tumor reduction capacity of chemotherapy drugs now in use. Carbohydrates are found in the structural elements of cell walls and, among other functions, serve as recognition elements in biomolecules, enabling molecule-cell recognition, and hence, molecular targeting. The dense concentration of chemical functional groups within carbohydrates compared to other chemicals suits them for use in cell recognition applications in biological systems.

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Our drug enhancement technology is intended to take advantage of the following biological mechanisms to improve drug delivery:

- Disease-specific carbohydrate recognition; and
- Enhanced permeability and retention in tumors.

Our technology does not change the chemistry of the drugs themselves, but rather attaches cancer drugs to proprietary carbohydrate compounds, which interact with sugar-specific proteins on the surface of the tumor cell. Because of these cell surface interactions, we believe that these compounds will increase cell permeability, resulting in increased targeted absorption of drugs by cancer cells. These cell surface interactions may also reduce the cells ability to adhere to each other as well as to normal tissue, resulting in diminished ability of cancer cells to metastasize, or spread to other tissue systems.

Initial Chemotherapy Applications

We believe that our carbohydrate-based drug enhancement technology applies to essentially any oncology drug whose delivery to the target can be improved by utilizing sugar-specific recognition at the cancer cell surface. Our initial program is designed to be risk-contained in that it will focus on proven drugs for which there are already a great deal of data on their therapeutic efficacy and toxicity, along with an accumulated knowledge of their limitations. We intend to apply our drug delivery technology initially to five widely used chemotherapy agents: 5-Fluorouracil, Adriamycin®, Taxol®, Cytoxan® and Cisplatin®. Each of these drugs is among the most popular drugs used in cancer chemotherapy treatment in the United States, and for each of these drugs there is a strong need for improving its therapeutic efficacy and decreasing its toxicity.

5-Fluorouracil (5-FU) is a fluorinated pyrimidine (a nucleic acid component). It interferes with the synthesis of DNA and inhibits the formation of RNA. Since DNA and RNA are essential for cell division and growth, the effect of 5-FU provokes unbalanced growth and death of the cell. The effect of DNA and RNA deprivation is most marked on those cells which grow more rapidly and which take up the 5-FU at a more rapid rate, such as cancer cells. 5-FU is effective against cancers of the colon, rectum, breast, stomach and pancreas. This drug is also toxic, resulting in side effects such as nausea, vomiting, mouth sores, gastrointestinal ulceration and bleeding, loss of hair, skin darkening and fatigue. 5-FU is manufactured by Roche Laboratories for intravenous administration. Originally patented in the late 1950s, its patent protection has expired.

Adriamycin® (generic name: doxorubicin hydrochloride) is a cytotoxic agent that selectively kills malignant cells and causes tumor regression. It binds to the DNA, and presumably inhibits nucleic acid synthesis. It is used to treat, among others, leukemia, cancers of the breast, ovaries, bladder, stomach and thyroid, as well as Hodgkin s and non-Hodgkin s lymphoma. Adriamycin® is toxic, resulting in side effects such as nausea, vomiting, loss of hair, mouth sores, colon ulceration and heart damage. It is manufactured by Pharmacia Upjohn for intravenous administration. Originally patented in 1971, its patent protection has expired.

Taxol® (generic name: paclitaxel) is a relatively new anti-leukemic and anti-tumor agent, possessing a cytotoxic activity. It suppresses cell division by binding to so-called microtubules that form in a cell s nucleus to help move the chromosomes around during the division process. Taxol® is most effective against ovarian and advanced breast cancers, particularly after failure of standard chemotherapy. Studies indicate that it might be effective against leukemia, lung carcinoma, colon carcinoma, renal carcinoma, melanoma, and CNS carcinoma. Taxol® is toxic, and patients receiving it often develop problems ranging from rashes, drop in blood pressure and anemia to major breathing problems, hives and/or fluid buildup around the heart and bone marrow suppression. Almost all patients experience hair loss from Taxol®, and some patients experience severe hypersensitivity reactions to Taxol®. It is manufactured by Bristol-Myers-Squibb Company for intravenous administration. We believe that there are no patents covering the

composition of Taxol (paclitaxel).

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Cytoxan® (generic name: cyclophosphamide) has action leading to cross-linking of RNA of tumor cells, and thereby interferes with the growth of susceptible rapidly proliferating malignant cells. It is effective against a range of cancers, such as malignant lymphomas, Hodgkin s disease, various leukemias, and cancer of the breast and ovaries. This drug is toxic, with side effects including nausea, vomiting, anorexia, diarrhea, skin rash and darkening and, in extreme cases, heart damage or failure, and secondary malignancies. It is manufactured by Bristol-Myers-Squibb Company for intravenous and oral administration. We believe that there are no patents covering the composition of Cytoxan® (cyclophosphamide).

Cisplatin® appears to act by inhibiting DNA synthesis. It is effective against metastatic testicular and ovarian tumors (typically in combination with other chemotherapeutic agents, such as Cytoxan, above), and advanced bladder cancer. This drug is toxic, with side effects including renal toxicity, nausea, vomiting, anorexia, diarrhea and anemia. It is manufactured as PLATINOL® by Bristol-Myers-Squibb Company for intravenous injection. We believe that there are no patents covering the composition of Cisplatin®.

Preclinical Studies

Toxicity Studies

Our initial toxicity studies in smaller animals, conducted in early 2001, were performed to test the potential reduction of toxicity of anticancer drugs in combination with certain of our polysaccharide compounds. The results of one study demonstrated that one of our polysaccharide compounds, DAVANAT™, might significantly decrease the toxicity of 5-FU. A second, similar study was performed to test a potential reduction of toxicity of Adriamycin in combination with each of two selected polysaccharide compounds. The results indicated that DAVANAT™ might decrease the toxicity of Adriamycin®. The fact that two different cancer drugs with chemically unrelated structures showed a marked reduction of their toxicity in combination with DAVANAT™ indicates that there might be some fundamental underlying biological reasons related to this polysaccharide, rather than to the drugs, for the reduction in toxicity.

In subsequent pre-clinical experiments conducted in 2001 and 2002, we studied on larger animals the toxicity reduction of DAVANAT™-1, a DAVANAT™ combination with 5-FU/leocovorin, which had demonstrated toxicity reduction in the prior studies. These experiments were performed in accordance with FDA guidelines and recommendations on rats (acute and long-term toxicity study) and dogs (acute and long-term toxicity study) measuring the effect of the DAVANAT™/5-FU combination on body weight, feed consumption, blood structure and survival of these animals. Preliminary results indicate that the DAVANAT™/5-FU combination decreased toxicity, resulting in lower animal mortality and decreased loss of blood structure components in comparison to the results in animals which were administered 5-FU/leocovorin alone. These studies were presented to the FDA as part of our IND submission (detail below). We conducted additional toxicity studies on rats using escalating dosages of DAVANAT™ and submitted these results to the FDA in an amendment to our IND in support of our Phase I clinical trials. The results of these additional toxicity studies were such that the FDA approved our commencement of Phase I clinical trials.

Efficacy Studies

We undertook independent studies at Southern Research Institute and Charles River Laboratories to test a potential change in the therapeutic efficacy of the DAVANAT™ /5-FU combination that had decreased toxicity of the drug in healthy animals. Results of the studies demonstrated that DAVANAT™ might also increase efficacy of 5-FU when administered into cancer-carrying animals. The studies, conducted with two different human colon tumors implanted into the test animals, demonstrated a decrease in tumor size following administration of 5-FU/leocovorin alone, as well as a significant decrease with the administration of the DAVANAT™/5-FU combination.

Two of our efficacy studies were conducted to evaluate the compatibility of DAVANAT™ with leucovorin, which is commonly used in cancer treatment with 5-FU. The studies showed that DAVANAT™ and leucovorin

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do not interfere with each other when administered following standard procedure, and that the DAVANAT™/5-FU combination is superior, compared to 5-FU/leucovorin when both are administered in tumor-bearing animals. Leucovorin is a folinic acid derivative, which may enhance both the therapeutic and toxic effect of 5-FU in cancer therapy. In these studies, the growth of the tumor was decreased significantly by using a DAVANAT™/5-FU combination compared to a 5-FU/leucovorin combination.

We also conducted a study that involved injecting radiolabeled DAVANAT™ (with and without 5-FU) into tumor-free and tumor-bearing animals. The study provided experimental data with respect to DAVANAT™ distribution in organs and tissues (liver, kidney, lungs, plasma, and tumor) and the capacity of such organs and tissue to clear DAVANAT™ after various time periods. The study suggested that DAVANAT™ may protect the liver from the toxic effect of 5-FU yet increase the amount, and hence the therapeutic effect, of 5-FU in the tumor. In other words, we have indications that DAVANAT™ may decrease toxicity and increase efficacy of 5-FU.

In addition to the DAVANAT™-1/5-FU combination, we are also conducting pre-clinical studies for doxurubicin and paclitaxel, both in combination with DAVANAT™ and other polysaccharide compounds.

Although the foregoing studies are encouraging, the results achieved in preclinical studies with animals are often not duplicated in human patients. Please see Risk Factors We Have Only Recently Began Clinical Trials And Results Are Uncertain.

Phase I Clinical Trials

We submitted an IND to the FDA on May 26, 2002 based on the pre-clinical data obtained from our 5-FU studies. The FDA accepted the IND as of June 26, 2002 which authorized us to begin Phase I clinical trials with humans. We filed an amendment to the IND on November 27, 2002 in order to incorporate new toxicology data and to enable us to undertake dose escalation in our Phase I trials. In response to the amendment, the FDA approved the dose escalation schema which would allow assessment in clinical trials of DAVANAT™ doses anticipated to be in the range of those for which the pre-clinical studies suggested efficacy.

In Phase I we are evaluating the ability of cancer patients to tolerate increasing doses of DAVANAT™ while receiving a stable dose of 5-FU for treatment of a variety of solid tumors which have not responded to accepted therapies. The Phase I study has two primary objectives: (1) to determine the maximum dose of DAVANAT™ that can be tolerated when administered with a stable dose of 5-FU, and (2) to define the dose-limiting toxicities of DAVANAT™ in combination with 5-FU. We expect that up to 40 male and female patients suffering from advanced solid malignancies, who failed the accepted chemotherapeutic, radiation, and/or surgical treatments, will participate in the study.

We have identified four clinical sites and lead investigators in which to undertake our Phase I trials. On February 10, 2003, we dosed the first patients at a private oncology treatment center in Howell, New Jersey. On May 14, 2003, we announced the dosing of a patient at the Ochsner Cancer Institute in New Orleans. Additionally, on June 24, 2003, we announced the dosing of a patient at the Norris Cotton Cancer Center at Dartmouth-Hitchcock Medical Center in Lebanon, NH.

We have also engaged a professional consultant, Dr. Marilyn Pike, who is affiliated with Harvard Medical School and Massachusetts General Hospital, to serve as Medical Director of our clinical trials.

The pharmaceutical company with which we contracted to produce DAVANAT™, a certified GMP facility, has manufactured sufficient quantities for the doses that will be needed for the human clinical trials.

We have engaged PRA International Inc. to serve as our independent Contract Research Organization (CRO) to manage and implement the clinical trials on our behalf, and Medidata Solutions Inc. to construct an

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on-line electronic data capture (EDC) method to collect and aggregate the clinical trial data. We expect that this will better enable us to manage clinical data and increase the speed at which such data is reported and compiled. We believe this may accelerate our commencement of Phase II clinical trials.

Other Carbohydrate-Cancer Drug Formulations

We have chemically synthesized four novel products that are carbohydrate derivatives of Adriamycin®, and have conducted preclinical studies in mice of both toxicity (effects on healthy animals) and efficacy (on cancer-carrying animals). Preliminary results of these experiments indicate that all four of the synthesized carbohydrate-Adriamycin® compounds, and particularly one, named Galactomycin, are significantly less toxic compared with the original Adriamycin®, and demonstrate therapeutic efficacy as well. In the case of Galactomycin, the preliminary results indicated a therapeutic efficacy higher than that for the parent Adriamycin. These studies were conducted at the Academy of Medical Sciences, Moscow, Russia. We have started the scale-up manufacturing for Galactomycin and are currently conducting pre-clinical efficacy studies in tumor-bearing animals.

Although the foregoing studies are encouraging, the results achieved in preclinical studies with animals are often not duplicated in human patients. Please see Risk Factors We Have Only Recently Began Clinical Trials And Results Are Uncertain.

Patents and Proprietary Rights

We have one patent application that has received a Notice of Allowance from the U.S. Patent and Trademark Office. We also have four non-provisional utility patent applications, and one provisional patent application, pending in the Patent Office. The patent applications cover methods and compositions for reducing side effects in chemotherapeutic formulations, and improving efficacy and reducing toxicity of chemotherapeutic agents. The patent that received the Notice of Allowance is entitled Methods and Compositions for Reducing Side Effects in Chemotherapeutic Treatments and covers improved targeting of Doxorubicin using Galactomycin. In addition, international patent applications corresponding to two of our U.S. applications have been filed under the Patent Cooperation Treaty.

We filed with the U.S. Patent and Trademark Office (PTO) applications to register the numerous trademarks and service marks. For more detailed information on our trademarks/servicemarks, see our Annual Report on Form 10-KSB for the year ended December 31, 2002 filed with the Securities and Exchange Commission.

Research

We focus on the design and analysis of carbohydrate-based drug enhancement systems. We do not anticipate building in-house research or development facilities, or hiring staff in this connection other than for purposes of designing and managing our out-sourced research. Our pre-clinical testing has been conducted by outside laboratories and accredited facilities.

Our early stage research was conducted by Toxikon Corporation, based in Bedford, Massachusetts, and Charles River Laboratories, Inc., based in Wilmington, Massachusetts. Toxikon is a comprehensive compliance FDA-registered service testing laboratory that is not affiliated with Pro-Pharmaceuticals. Toxikon s laboratory is ISO-9001 certified and EN-45001 approved, meaning that it complies with quality management standards as established by the International Organization for Standardization and other international organizations. Charles River Laboratories, a contract laboratory not affiliated with Pro-Pharmaceuticals, conducted the research on our behalf in major part through its Redfield Laboratories division in Redfield, Arkansas. Redfield Laboratories is licensed by the U.S. Department of Agriculture to conduct research in laboratory animals, and its conditions are in compliance with the federal Animal Welfare Act and the FDA s Good Laboratory Practices (GLP) guidelines. Dr. Mildred S. Christian, who became a director of Pro-Pharmaceuticals in October 2002, was until

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November 15, 2002 Executive Director of Research of Redfield Laboratories and of Argus Research, which is also a division of Charles River Laboratories. The contract research undertaken by Charles River Laboratories concluded before Dr. Christian became a director of Pro-Pharmaceuticals.

Our current research on toxicity and efficacy of several chemotherapy drugs both alone and in combination with our technology on cancer-carrying animals is being conducted by Southern Research Institute in Birmingham, Alabama. Southern Research Institute is an independent, not-for-profit contract research organization that is not affiliated with our company.

As we develop products eligible for clinical trials, we intend to continue to contract with with independent clinical research organizations to design the trial protocols and arrange for and monitor the clinical trials. We may rely on academic institutions or clinical research organizations to conduct, supervise or monitor some or all aspects of clinical trials involving our products. In addition, certain clinical trials for our products may be conducted by government sponsored agencies and consequently will be dependent on governmental participation and funding. Our dependence on third-party researchers will involve risks including lessened control over the timing and other aspects of any clinical trials, since we will not be conducting them on our own.

Our research and development expenditures totaled $1,483,027 and $893,457 in 2002 and 2001 respectively. These totals include amounts spent by Pro-Pharmaceuticals (Massachusetts) prior to our merger in May 2001.

Manufacturing and Marketing

We are a development company and do not have, or intend to obtain, marketing infrastructure or internal facilities for the manufacture of any of our products for clinical or commercial production. In order to have our products marketed or manufactured, we will initially need to develop relationships with third-parties. Later we would propose to have our products manufactured and marketed pursuant to licensing agreements as discussed below. Our dependence on third-party manufacturers and marketers will involve risks relating to our lessened control, and other risks including those discussed in Risk Factors We Will Depend On Third Parties To Manufacture And Market Our Products.

We currently envision having our manufacturing and marketing operations conducted pursuant to license agreements that we would negotiate with pharmaceutical companies with respect to manufacturing and marketing of their upgraded drugs. While we presently contemplate offering the rights to manufacture and market an upgraded drug to the original pharmaceutical company that developed the drug, we will evaluate other manufacturing and marketing arrangements as well.

Competition

A number of biotechnology and pharmaceutical companies are developing new drug delivery systems for the treatment of the same diseases being targeted by us. Our potential competition includes other companies developing drug delivery systems using other technologies, including systems based on other biochemical polymers. The principal competitors in the polymer area are Cell Therapeutics, Access Pharmaceuticals, Daiichi, Enzon and Pharmacia which are developing alternate drugs in combination with polymers.

We also face competition with technologies other than polymer-based delivery technologies. We believe that the principal current competitors to polymer-based targeting technology fall into two categories: monoclonal antibodies and liposomes. Several well-known companies are working on targeted monoclonal antibody therapy and on liposomal formulations, which are the major competing intravenous drug delivery formulations which deliver similar drug substances.

Please see Risk Factors We Face Intense Competition In The Biotechnology And Pharmaceutical Industries, for additional discussion related to our current and potential competition.

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Government Regulation

The research, development, testing, manufacture, labeling, promotion, advertising, distribution, and marketing, among other things, of our products are extensively regulated by governmental authorities in the United States and other countries. In the United States, the Food and Drug Administration (FDA) regulates drugs under the Federal Food, Drug, and Cosmetic Act and its implementing regulations. Please see Risk Factors We Will Need Regulatory Approvals To Commercialize Our Products, for additional discussion of risks related to regulatory compliance.

Drug Approval Process

No drug may be marketed in the U.S. until the drug has received FDA approval. The steps required before a drug may be marketed in the U.S. include:

- preclinical laboratory tests, animal studies, and formulation studies, conducted in compliance with Good Laboratory Practices (GLPs) established by the FDA;
- submission to the FDA of an investigational new drug application, or IND, for human clinical testing, which must become effective before human clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug for each indication, conducted in conformance with Good Clinical Practices (GCPs) established by the FDA;
- submission to the FDA of a New Drug Application, or NDA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with current Good Manufacturing Procedures (cGMP) established by the FDA;
- FDA review and approval of the NDA; and
- FDA review and approval of a trademark used in connection with a pharmaceutical.

Preclinical tests include laboratory evaluation of product chemistry, toxicity, and formulation, as well as animal studies. The results of the preclinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND, which must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions about issues such as the conduct of the trials as outlined in the IND. In such a case, the IND sponsor and the FDA must resolve any outstanding FDA concerns or questions before clinical trials can proceed. There is no certainty that submission of an IND will result in the FDA allowing clinical trials to begin.

Clinical trials involve the administration of the investigational drug to human subjects under the supervision of qualified investigators. Clinical trials are conducted under protocols detailing the objectives of the study, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND.

Clinical trials typically are conducted in three sequential phases, but the phases may overlap or be combined. Each trial must be reviewed and approved by an independent Institutional Review Board (IRB) before it can begin. Study subjects must sign an informed consent form before participating in a clinical trial. Phase I usually involves the initial introduction of the investigational drug into people to evaluate its safety, dosage tolerance, pharmacodynamics, and, if possible, to gain an early indication of its effectiveness. Phase II usually involves trials in a limited patient population to (i) evaluate dosage tolerance and appropriate dosage; (ii) identify possible adverse effects and safety risks; and (iii) evaluate preliminarily the efficacy of the drug for specific indications. Phase III trials usually further evaluate clinical efficacy and test further for safety by using the drug in its final form in an expanded patient population.

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Assuming successful completion of the required clinical testing, the results of the preclinical studies and of the clinical studies, together with other detailed information, including information on the manufacture and composition of the drug, are submitted to the FDA in the form of an NDA requesting approval to market the product for one or more indications. Before approving an NDA, the FDA usually will inspect the facility or the facilities at which the drug is manufactured, and will not approve the product unless cGMP compliance is satisfactory. If the FDA evaluates the NDA and the manufacturing facilities as acceptable, the FDA will issue an approval letter. If the FDA evaluates the NDA submission or manufacturing facilities as not acceptable, the FDA will outline the deficiencies in the submission and often will request additional testing or information. Even if an applicant submits the requested additional information, the FDA ultimately may decide that the NDA does not satisfy the regulatory criteria for approval. The testing and approval process requires substantial time, effort, and financial resources, and there is no assurance that any approval will be granted on a timely basis, if at all. After approval, certain changes to the approved product, such as adding new indications, manufacturing changes, or additional labeling claims are subject to further FDA review and approval.

FDA Fast Track Program; Priority Review

The FDA s fast track program is intended to facilitate the development and expedite the review of drugs intended for the treatment of serious or life-threatening diseases and that demonstrate the potential to address unmet medical needs for such conditions. Under this program, the FDA can, for example, review portions of an NDA for a fast track product before the entire application is complete, thus potentially beginning the review process at an earlier time. We intend to seek to have some of our products designated as fast track products, with the goal of reducing review time. There can be no guarantee that the FDA will grant any of our requests for fast track designation, that any fast track designation would affect the time of review, or that the FDA will approve the NDA submitted for any of our product candidates, whether or not fast track designation is granted. Additionally, FDA approval of a fast track product can include restrictions on the product s use or distribution (such as permitting use only for specified medical procedures or limiting distribution to physicians or facilities with special training or experience), and can be conditioned on the performance of additional clinical studies after approval.

FDA procedures also provide priority review of NDAs submitted for drugs that, compared to currently marketed products, offer a significant improvement in the treatment, diagnosis, or prevention of a disease. NDAs that are granted priority review are intended to be acted upon more quickly than NDAs given standard review. The FDA s current goal is to act on 90% of priority NDAs within six months of receipt. We anticipate seeking priority review with regard to some of our product candidates. There can be no guarantee that the FDA will grant priority review status in any instance, that priority review status will affect the time of review, or that the FDA will approve the NDA submitted for any of our product candidates, whether or not priority review status is granted.

Post-Approval Requirements

If FDA approval of one or more of our products is obtained, we will be required to comply with a number of post-approval requirements. For example, holders of an approved NDA are required to report certain adverse reactions to the FDA, and to comply with certain requirements concerning advertising and promotional labeling for their products. Also, quality control and manufacturing procedures must continue to conform to cGMP after approval, and the FDA periodically inspects manufacturing facilities to assess compliance with cGMP. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. In addition, discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved NDA, including withdrawal of the product from the market. Also, new government requirements may be established that could delay or prevent regulatory approval of our products under development.

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FDA Orphan Drug Designation

The FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition , which generally is a disease or condition that affects fewer than 200,000 individuals in the United States. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are publicly disclosed by the FDA. Orphan drug designation does not convey an advantage in, or shorten the duration of, the regulatory review and approval process. If a product which has an orphan drug designation subsequently receives the first FDA approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the FDA may not approve any other applications to market the same drug for the same indication, except in certain very limited circumstances, for a period of seven years. As well, orphan drugs usually receive ten years of marketing exclusivity in the E.U.

Non-United States Regulation

Before our products can be marketed outside of the United States, they are subject to regulatory approval similar to that required in the United States, although the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country. No action can be taken to market any product in a country until an appropriate application has been approved by the regulatory authorities in that country.

Environmental Regulation

Pharmaceutical research and development involves the controlled use of hazardous materials including but not limited to certain hazardous chemicals and radioactive materials. Since we do not anticipate building in-house research, development or manufacturing facilities, but plan to have these activities conducted by contractors and other third parties, we do not anticipate that we will be directly affected by environmental regulations.

Employees

As of May 31, 2003, we have seven employees, all of whom are full time.

Scientific Advisory Board

We continue to recruit members for a Scientific Advisory Board that will include recognized scientists with expertise in the fields of carbohydrate chemistry and biochemistry, immunology, cell and molecular biology, and synthetic and medical chemistry. The Scientific Advisory Board will meet with our management on a regular basis and in smaller groups or individually from time to time on an informal basis. The members will assist us in identifying scientific and product development opportunities, reviewing with management the progress of our specific projects and recruiting and evaluating our scientific staff. We may also have a Clinical Advisory Board that will assist us from time to time on clinical matters.

The initial members of our Scientific Advisory Board (SAB) are: Dr. David Platt, our President and Chief Executive Officer and a director; Dr. Anatole A. Klyosov; Dr. Dale H. Conaway, a director; Dr. Edgar Ben-Josef, a director; Dr. Mildred Christian, a director; Dr. Henry Esber; and Dr. Irwin I. Goldstein. See Management for additional information about the business and educational backgrounds of our SAB members other than Drs. Klyosov, Esber and Goldstein, whose backgrounds are as follows:

Dr. Klyosov is Vice President of Research and Development for Kadant Composites Inc., which develops and manufactures composite-based building products. He has served in this capacity since 1996. From 1990 to June 1998, Dr. Klyosov served as Professor of Biochemistry at Harvard Medical School Center for Biochemical and Biophysical Sciences and Medicine,

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where he studied an enzyme involved in angiogenesis of cancer cells, glucocorticoid receptors, and biochemistry of alcohol abuse. Dr. Klyosov received a Ph.D. degree in Physical Chemistry from Moscow State University in 1972, and a D.Sc. degree in Physical Chemistry and Biochemistry from Moscow State University in 1977. Dr. Klyosov owns 50% of MIR International, Inc., which provides consulting services regarding our research and development.

Dr. Esber is Executive Director of Business Development for Charles River Laboratories Discovery and Development Services, a contract research organization. Dr. Esber has served in this capacity for more than five years. Dr. Esber is a co-founder and a director of BioQuant Corporation (formerly BioSignature Diagnostics, Inc.), a developer of immunochemistry kits for diagnosis and assessment of immunological diseases. He is also a co-founder of Advanced Drug Delivery, Inc., a biotechnology company that focuses on development of drug delivery systems using co-polymers or other modifications for use in the area of cancer and other diseases. Dr. Esber serves on the Scientific Advisory Boards of several U.S. and non-U.S. biotechnology companies, including Celltek Biotechnologies, Inc., BioQuant Corporation and Delmont Laboratories. Dr. Esber received a B.S. degree in Biology from the College of William and Mary in 1961, an M.S. degree in Public Health and Parasitology from the University of North Carolina in 1963, and a Ph.D. degree in Immunology/Microbiology from West Virginia University Medical Center in 1967.

Dr. Goldstein is Emeritus Professor and Interim Chair of the Department of Biological Chemistry at the University of Michigan Medical School, and was Professor from 1972 to 1999. He is the recipient of many professional awards and is the author of over 200 publications. He received a B.A. degree in Chemistry from Syracuse University, and a Ph.D. in Biochemistry from the University of Minnesota, St. Paul, Minneapolis.

Properties

We entered into a 5-year sublease commencing June 1, 2001 for approximately 2,830 square feet for our executive offices located at 189 Wells Avenue, Newton, Massachusetts 02459. The rent for the year 2003 is approximately $106,000 ($8,833 per month) and is subject to increase in subsequent years. The sublease is a so-called triple net lease, meaning that we must pay our proportionate share of items such as property taxes, insurance and operating costs.

We completed a build-out of our office space in 2002, at a cost of approximately $104,000 before related expenditures such as office furnishings. We believe that our currently leased facilities, as modified by the buildout, are suitable and adequate to meet our requirements for the near term.

Legal Proceedings

On May 14, 2003 an action titled Sheila Jayaraj v. Pro-Pharmaceuticals, Inc. and David Platt (Commonwealth of Massachusetts, Middlesex Superior Court, Case No. 03-2102) was instituted against us. A related complainant letter dated May 14, 2003 was filed with the Occupational Safety and Health Administration of the U.S. Department of Labor. The Plaintiff, who was Vice President of Investor Relations and Corporate Strategy for approximately five months, asserts against us claims for wrongful discharge in violation of public policy and of employee protection provided for under the Sarbanes-Oxley Act of 2002. The plaintiff seeks monetary damages and full reinstatement of her position at Pro-Pharmaceuticals, Inc. Based on a preliminary investigation we have conducted, we believe the claims are without merit, and accordingly we intend to defend the allegations vigorously.

PLAN OF OPERATION

This Plan of Operation and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties. All forward-looking statements included in this document are based on information

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available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including those set forth in Risk Factors and elsewhere in this prospectus.

We are a development-stage company and have not generated any revenues to date. We have raised funds primarily through private placements of convertible debt and shares of common stock, and a public offering of shares of common stock.

As of March 31, 2003, we had $2,150,617 in cash and working capital of $1,936,400. Our budgeted expenditures for the year ending December 31, 2003, total $3,700,000, including research and development expenditures of $2,200,000 and general and administrative expenditures of $1,500,000.

In May 2003, we began a private placement of up to 2.5 million shares of restricted common stock at $2.00 per share, exempt from registration pursuant to Rule 506 of Regulation D under the Securities Act 1933. We terminated this private placement on July 15, 2003 and as of July 23, 2003 had received gross proceeds of approximately $4,300,000. Prior to our recently completed offering, we raised a total of approximately $4,311,000 in a private placement of common stock begun in September 2002 and completed in January 2003. We intend to dedicate the proceeds to research and development, including expenses of Phase I/II clinical trials of our drug candidate for which the FDA approved our investigational new drug application, and general and administrative expenses.

We plan to raise additional capital through private placements or of public offerings of equity securities in order to cover our budget. If we are limited to the capital we have raised to date, we may be unable to proceed with our current plan of operations and meet our obligations for the next twelve months. Given our current attempts to raise additional capital, we believe we will be able to proceed with our current plan of operations and meet our obligations for the next nine months. If we do not raise the additional funds, we would slow or halt our research and development expenditures until adequate funding becomes available. Our business structure is somewhat flexible because we outsource most of our research and development.

Our financial statements have been presented on a going-concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. We are in the development stage, have incurred a net loss since inception of $8,778,098, based on results as of March 31, 2003, and expect to incur additional losses in the near future. These factors raise substantial doubt about our ability to continue as a going concern. Successful completion of our development program and, ultimately, the attainment of profitable operations is dependent upon future events, including maintaining adequate financing to fulfill our development activities and achieving a level of sales adequate to support our cost structure. We are actively seeking additional financing to fund future operations, but cannot assure we will be successful.

We have one product candidate in Phase I clinical trials. During the next twelve months, we anticipate that our research and development activities will include continuation of this Phase I first-in-man clinical trial, as discussed above under Business Phase I Clinical Trials, as well as continuing preclinical animal experiments to study toxicity and efficacy of 5-FU and other cancer chemotherapies both in combination with our polysaccharide compounds and, in the case of Adriamycin, as chemically modified with sugar residues via linkers of a certain chemical structure that are our proprietary technology.

We do not anticipate building in-house research or development facilities, or hiring staff to conduct those activities. Consequently, we do not expect to make any purchases or sales of plant or significant equipment during the next twelve months. We currently have seven employees, all full-time. We do not expect a substantial increase to our employee headcount.

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MANAGEMENT

Officers and Directors

The following table sets forth information about our executive officers and directors:

Name	Age as of May 31, 2003	Position
David Platt, Ph.D.	49	President, Chief Executive Officer, Secretary and Director
David A. Christopher	35	Chief Financial Officer and Treasurer
Maureen E. Foley	61	Chief Operating Officer
James C. Czirr	49	Executive Vice President of Business Development and Director
Eliezer Zomer, Ph.D.	56	Vice President of Manufacturing and Product Development
Anthony Squeglia	60	Vice President of Investor Relations
Burton C. Firtel	63	Director
Dale H. Conaway, D.V.M.	48	Director
David H. Smith	63	Director
Edgar Ben-Josef, M.D.	43	Director
Mildred S. Christian, Ph.D.	60	Director
Steven Prelack	45	Director

Dr. Platt has served as our President, Chief Executive Officer, Secretary and a director since May 15, 2001. Previously, he had been President, Chief Executive Officer, Treasurer, Clerk and a director of Pro-Pharmaceuticals (Massachusetts), the Company s predecessor, since its founding in July 2000. He was Chairman of the Board, Chief Executive Officer and Secretary of SafeScience Inc. (now known as GlycoGenesys, Inc.) (NASDAQ SmallCap: GLGS), a biotechnology company involved in research and development of products for treating cancer and immune system diseases, from December 1992 through May 2000. Dr. Platt had been Chairman of the Board, Chief Executive Officer and Secretary of Agricultural Glycosystems, Inc., a wholly owned subsidiary of SafeScience, from its inception in June 1995 through May 2000. Agricultural Glycosystems manufactures and markets complex carbohydrate compounds for use in agriculture. Dr. Platt received a Ph.D. in Chemistry from Hebrew University in Jerusalem, Israel, in 1988, and also earned a M.S. degree in 1983 and a B.S. degree in 1978 from Hebrew University. He earned a Bachelor of Engineering degree in 1980 from Technicon in Haifa, Israel.

Mr. Christopher has served as our Chief Financial Officer since April 1, 2003, and Treasurer since June 12, 2003. Before joining the company, Mr. Christopher was a Director of Investment Banking and a consultant for Bryant Park Capital from November 2001 to March 2003. From January 1997 to October 2001 he was initially Senior Associate, and subsequently Vice President of Corporate Finance and Investment Banking, for J.P.

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Morgan Securities, a subsidiary of J.P. Morgan Chase & Co. From January 1992 to December 1994, Mr. Christopher was an Associate for Donaldson, Lufkin & Jenrette Securities Corporation, an investment banking and equity research firm that was acquired by Credit Suisse First Boston. Mr. Christopher received his MBA with honors from The University of Chicago Graduate School of Business in Finance and Accounting in 1996. He earned a B.S. in Economics and Business Administration in 1990 at The University of New Hampshire s Whittemore School of Business and Economics.

Ms. Foley has served as our Chief Operating Officer since October 18, 2001 and prior to that time served as our Manager of Operations since January 2001. She has been involved in the start-up of several high tech companies, where she has been responsible for the establishment and administration of business operations including human resources and benefits, accounting and finance, marketing, product development, and project management. Her experience at start-up companies includes the following: From June 2000 to December 2000, she provided business operations services as described for eHealthDirect, Inc., a developer of medical records processing software. From October 1999 to May 2000 she provided business operations services for ArsDigita, Inc., a developer of business software and programs. From June 1996 to August 1999, Ms. Foley managed operations at Thermo Fibergen Inc., a subsidiary of Thermo Electron Corporation, a paper waste processing developer. She is a director and Chairman of Tax/Eze, Inc. a tax preparation and financial services company, and a director of Stewart/Precision, Inc., a metal fabricator, and Ergonics, Inc., a project management firm. Ms. Foley is a graduate of The Wyndham School, Boston, Massachusetts, with a major in Mechanical Engineering.

Mr. Czirr has served as Executive Vice President of Business Development and a director since May 15, 2001. He had been a director of Pro-Pharmaceuticals (Massachusetts), our predecessor, since its founding in July 2000. Mr. Czirr became a full-time employee of Pro-Pharmaceuticals in June 2002. He was previously an independent corporate and public relations consultant for over ten years, working with various companies concerning business strategies, including issues such as organization of production, finance and capital programs, marketing strategies and incentive programs. He is a director of the following company that is subject to the reporting requirements of the Securities Exchange Act of 1934: NACO Industries Inc., which manufactures polyvinyl chloride fittings for use in agriculture, municipal and industrial applications. Mr. Czirr received a B.B.A. degree from the University of Michigan in 1976, and has completed post-graduate courses at the University of Toledo School of Business Administration, and at the College for Financial Planning.

Dr. Zomer has served as Vice President of Manufacturing and Product Development since May 1, 2002, and provided part-time consulting services to Pro-Pharmaceuticals since mid 2001. Before joining the company, Dr. Zomer had been the founder of Alicon Biological Control, an Israeli company, where he served from November 2000 to July 2002; Vice President of Product Development at SafeScience, Inc. (now known as GlycoGenesys, Inc.) (Nasdaq SmallCap: GLGS) from December 1998 to July 2000; and Vice-President of Research and Development at Charm Sciences, Inc. from June 1987 to November 1998. Dr. Zomer received a B.Sc. degree in industrial microbiology from the University of Tel Aviv in 1972, a Ph.D. in biochemistry from the University of Massachusetts in 1978, and undertook post-doctoral study at the National Institute of Health.

Mr. Squeglia has served as our Vice President-Investor Relations since May 12, 2003. Before joining Pro-Pharmaceuticals, he was a partner from February 2001 to May 2003 at JFS Advisors, a management consulting firm, where he provided strategic planning services, including marketing, public relations and investor relations, to entrepreneurial companies. From June 1996 to January 2001 he was Director of Corporate Communications and Investor Relations at Coyote Networks, Inc., now known as Quentra Networks, Inc. (Nasdaq: QTRA), a telecommunications and Internet solutions provider. Previous positions also include Director of Corporate Communications at Summa Four, Inc. (Nasdaq: SUMA), where he was involved in its initial public offering, marketing and communications management positions at Timeplex (later acquired by Unisys Corporation), ITT and AT&T. During his career Mr. Squeglia has been involved in financings of more than $50 million in debt and equity capital. Mr. Squeglia earned an M.B.A. from Pepperdine University and a B.B.A. from The Wharton School, and is a member of the National Investor Relations Institute and an accredited member of Public Relations Society of America.

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Mr. Firtel has served as a director since May 15, 2001. He is President of Adco Medical Supplies Incorporated, a company he founded in 1970. Adco Medical Supplies distributes disposable medical supplies to U.S. customers, mostly for hospital use. Mr. Firtel also serves as President of Plastic Fabricators Incorporated, a manufacturer of plastic burial supplies sold through distributors to customers in the funeral industry, which was acquired by Adco Medical Supplies in 1992. Mr. Firtel received a B.S. degree in Business Administration from Boston University in 1961.

Dr. Conaway has served as a director since May 15, 2001. He is currently the Deputy Regional Director (Southern Region) and Chief Veterinary Medical Officer for the Office of Research Oversight, an office within the Veterans Health Administration under the U.S. Department of Veterans Affairs. From March 1998 to March 2001, he served as Manager of the Equine Drug Testing and Animal Disease Surveillance Laboratories, for the Michigan Department of Agriculture. From July 1994 to March 1998, he was the Regulatory Affairs Manager for the Michigan Department of Public Health Vaccine Production Division. Dr. Conaway received a D.V.M. degree from Tuskegee Institute in 1979, and a M.S. degree in Pathology from the College of Veterinary Medicine, Michigan State University, in 1984.

Mr. Smith has served as a director since January 10, 2002. Since 1996, he has been a Founder and Managing Director of venture capital funds, as follows: Interim Advantage Fund, LLC (founded in 1996), Contra V.C., LLC (founded in 1998) and Tailwind V.C., LLC (founded in 2000). He has had significant business experience in the clinical laboratory industry. He was a co-founder, Vice President and Director of Canberra Industries, a large publicly-traded manufacturer of analytical instruments, and also of Canberra Clinical Laboratories, which was sold in 1986 to MetPath, Inc., a subsidiary of Corning, Inc. Mr. Smith received a B.A. degree in Political Science from Hampden-Sydney College in 1961.

Dr. Ben-Josef has served as a director since January 10, 2002. He is a physician specializing in radiation oncology, both as a clinician and a researcher. Since July 1995, he has served as an attending physician at the Gershenson Radiation Oncology Center, Harper Hospital, in Detroit, Michigan. Since July 2000, he has been an Associate Professor in the Department of Radiation Oncology of the Wayne State University School of Medicine. Dr. Ben-Josef received an M.D. degree in 1986 from The Hebrew University Hadassah School of Medicine in Jerusalem, Israel. He received a B.Med.Sc. degree from that institution in 1980.

Dr. Christian has served as a director since October 10, 2002. She is President and Chief Executive Officer of Argus International, Inc., a provider of consulting services in regulatory affairs. Until November 2002 she was Executive Director of Research of Argus and Redfield Laboratories, both divisions of Charles River Laboratories, Inc. Before founding Argus Research Laboratories in 1979 and Argus International in 1980, she spent 14 years in drug development at McNeil Laboratories, a division of Johnson & Johnson Corporation. She has participated at all levels in the performance, evaluation and submission in over 1,800 preclinical studies, from protocol to final report. Dr. Christian is a member of 20 professional organizations, and has served as president of each of the Teratology Society, the American College of Toxicology, and the Academy of Toxicological Sciences. She is an honorary member of the Society of Quality Assurance and founding editor of the *Journal of Toxicological Sciences.* She has edited or contributed to several major textbooks and is the author of over 120 papers and abstracts published in U.S. and international journals. Dr. Christian obtained her Ph.D. from Thomas Jefferson University in developmental anatomy and pharmacology in 1979.

Mr. Prelack has served as a director since April 16, 2003. Since 2001 he has served as Senior Vice President, Chief Financial Officer and Treasurer of VelQuest Corporation, a provider of automated compliance management solutions for the pharmaceutical industry. In this capacity, he oversees business development, financial, administrative and other functions, and has been responsible for VelQuest s transition from a development-stage company to an operating company. From 1997 to 2000, he was Senior Vice President, Chief Financial Officer and Treasurer of LifeMetrix, Inc., a leading provider of cancer disease management services, as well as disease management technology, data and clinical trial product lines and related technology-based services. As co-founder of LifeMetrix, Mr. Prelack was responsible for all stages of its development, including

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initial seed capital funding, execution of its strategic business plan, and sale of the company. Mr. Prelack is a director of Codeco Corporation, a designer and manufacturer of custom resisters and switches, and of Sight Code, Inc., which specializes in OPM, a systems design and architecture platform. Mr. Prelack, a Certified Public Accountant, received a B.B.A. degree from the University of Massachusetts Amherst in 1979.

None of the persons specified above share any familial relationship. Other than the persons specified above, there are currently no significant employees that we expect to make a significant contribution to our business. All of our directors serve until the next annual meeting of stockholders.

Executive Compensation

The following table sets forth certain information regarding our Chief Executive Officer and each of our most highly compensated executive officers whose total annual salary and bonus for the fiscal year ending December 31, 2002 exceeded $100,000 (the Named Executive Officers).

SUMMARY COMPENSATION TABLE

					Long Term Compensation			
		Annual Compensation			Awards		Payouts	
Name And Principal Position	Year	Salary ($)	Bonus ($)	Other Annual Compensation ($)	Restricted Stock Award(s) ($)	Securities Under-Lying Options/ SARs (#)	LTIP Payouts ($)	All Other Compensation ($)
David Platt, Chief Executive Officer	2002	150,000						
	2001	150,000						
	2000	25,000(1)						
James Czirr, Executive Vice President, Business Development	2002	120,000(2)						
	2001							
	2000							

(1) During the year ended December 31, 2000, Dr. Platt, earned $25,000 in salary compensation from Pro-Pharmaceuticals (Massachusetts). We acquired Pro-Pharmaceuticals (Massachusetts) on May 15, 2001 by means of an exchange of stock, detailed at Business Corporate Formation above.

(2) Mr. Czirr became our employee in June 2002.

Compensation of Directors and Advisors

We have no standard arrangement to compensate directors for their services in their capacity as directors. In January 2003 we compensated each of our directors with a grant of 500 non-qualified stock options for each meeting of our board that such director attended during 2002. These options were exercisable on the date of grant.

Certain of our directors have been compensated for services as consultants to Pro-Pharmaceuticals, as follows:

1. On November 26, 2001, we granted Burton Firtel, for services he rendered, a non-qualified stock option under our stock incentive plan to purchase 200,000 shares of common stock at an exercise price of $3.50 per share. As of December 31, 2002, the option was exercisable as to 160,000 shares, and will vest as to the remaining 40,000 shares on the second anniversary of the grant date, provided Mr. Firtel remains a director up to and as of that date. In March 2002, we entered into a contract with Mr. Firtel pursuant to which we would grant Mr. Firtel each month an immediately exercisable option to purchase 2,000 shares of

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common stock, at an exercise price of $3.50 per share, in consideration of monthly consulting services to be provided to us by him during the following 12 months. In November 2002, this agreement was superseded by an amendment, retroactive to the original contract date, pursuant to which we granted Mr. Firtel an option to purchase 24,000 shares of common stock, at an exercise price of $3.50 per share, to vest at a rate of 2,000 shares per month as services are performed. As of December 31, 2002, Mr. Firtel s option under this agreement was vested as to 20,000 shares. In May 2003, we approved an engagement of Mr. Firtel for consulting services for an additional twelve months beginning March 2003, pursuant to which we granted Mr. Firtel an option effective June 1, 2003 to purchase 24,000 shares of common stock at an exercise price of $3.50 per share, to vest at a rate of 2,000 shares per month as services are performed.

2. In January 2003, we entered into a contract with David Smith pursuant to which Mr. Smith would provide consulting services in connection with our business development and related financial services. As compensation for these services, we granted Mr. Smith an option to purchase 100,000 shares of common stock, at an exercise price of $3.50 per share. The option vested as to 33,334 shares as of the grant date, and will vest as to a further 33,333 shares on the first anniversary of the grant date, and as to the remaining 33,333 shares on the second anniversary of the grant date provided that Mr. Smith remains a director up to and as of each such date.

3. We entered into a consulting agreement with Argus International, Inc., a organization that provides consulting services in regulatory affairs and is owned by Dr. Mildred Christian, who became a director of Pro-Pharmaceuticals in October 2002. Compensation for these services, paid to Dr. Christian in 2003, consisted of 25,324 shares of our common stock and 25,324 options to purchase common stock, at an exercise price of $2.96.

Option Grants

We have not granted any stock options to either of our Named Executive Officers.

Employee Stock Incentive Plan

On October 18, 2001, our Board of Directors adopted the Pro-Pharmaceuticals, Inc. 2001 Stock Incentive Plan which permits awards of incentive and non-qualified stock options and other forms of incentive compensation to employees and non-employees such as directors and consultants. The Board reserved 2,000,000 of our shares of common stock for awards pursuant to the Stock Incentive Plan, all of which reserved shares could be awarded as incentive stock options. Our stockholders approved the plan on May 31, 2002. As of December 31, 2002, we have granted options to purchase 569,000 shares of common stock under the Stock Incentive Plan.

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SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding beneficial ownership of our common stock, as of May 31, 2003, by (1) each shareholder known to us to be the beneficial owner of more than 5% of our outstanding shares of common stock, (2) each of our executive officers and directors and (3) our executive officers and directors, as a group.

Name and Address(1)	Shares of Common Stock Beneficially Owned(2)	Percentage of Class Before Offering	Percentage of Class After Offering
David Platt, Ph.D.	4,953,247(3)	24.4%	23.4%
James Czirr	4,877,868(4)	24.0	23
Anatole Klyosov, Ph.D.	1,235,467	6.1	5.8
Offer Binder	1,250,878(5)	6.2	5.9
Burton C. Firtel	351,500(6)	1.7	1.2
Dale H. Conaway, D.V.M.	23,596(7)	*	*
David H. Smith	263,834(8)	1.3	1.3
Edgar Ben-Josef, M.D.	4,000(9)	*	*
Mildred S. Christian, Ph.D.	61,788(10)	*	*
Steven Prelack	750(9)	*	*
David A. Christopher	500	*	*
All executive officers and directors as a group (9 persons)	10,530,083	51.8%	49.3%

* Less than 1%.

(1) The address of each of the persons listed is c/o Pro-Pharmaceuticals, Inc., 189 Wells Avenue, Newton, MA 02459.

(2) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission. In computing the number of shares owned by a person and the percentage ownership of that person, shares of common stock subject to options and warrants held by that person that are currently exercisable or exercisable within 60 days of May 31, 2003, are deemed outstanding. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. This table has been prepared based on 20,323,600 shares of common stock outstanding as of May 31, 2003.

(3) Includes 7,379 shares, as well as 3,500 shares which may be acquired upon the exercise of an immediately exercisable share purchase warrant, all owned by Dr. Platt s wife, and as to which Dr. Platt disclaims beneficial ownership.

(4) Includes 16,000 shares owned by minor children of Mr. Czirr, as to which Mr. Czirr disclaims beneficial ownership.

(5) Includes 10,411 shares, as well as 5,000 shares issuable upon the exercise of a share purchase warrant, all owned by Mr. Binder s wife, as to which Mr. Binder disclaims beneficial ownership.

(6) Includes 198,000 shares issuable upon the exercise of stock options. Also includes 50,000 shares that may be acquired upon the exercise of an immediately exercisable share purchase warrant.

(7) Includes 4,500 shares issuable upon the exercise of stock options. Also includes 6,250 shares that may be acquired upon the exercise of an immediately exercisable share purchase warrant.

(8) Includes 37,834 shares issuable upon the exercise of stock options. Also includes 100,000 shares and 100,000 shares issuable upon the exercise of an immediately exercisable share purchase warrant, all owned

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by a limited liability company of which Mr. Smith is a member and the manager. Mr. Smith disclaims beneficial ownership of such securities except to the extent of his pecuniary interest therein.

(9) Represents shares issuable upon the exercise of stock options.

(10) Includes 26,434 shares issuable upon the exercise of stock options.

We are not aware of any arrangements that may result in changes in control as that term is defined by the provisions of Item 403(c) of Regulation S-B.

SELLING SECURITY HOLDERS

The selling security holders identified in the following table are offering for sale 2,843,304 shares of common stock. 615,846 of these shares are being offered by directors, officers or principal stockholders of the company. The registration for resale of shares of common stock held by directors, officers or principal stockholders of the Company does not mean that any of these persons will sell all or any of such shares of common stock. None of such persons has a present intention to sell such shares and there currently are no agreements, arrangements or understandings with respect to the sale or distribution of any of the common stock by any of these directors, officers or principal stockholders.

The selling security holders may offer their shares of common stock for sale from time to time at market prices prevailing at the time of sale or at negotiated prices, and without payment of any underwriting discounts or commissions except for usual and customary selling commissions paid to brokers or dealers.

The following table sets forth, as of May 31, 2003, the number of shares being held of record or beneficially by the selling security holders and provides by footnote reference any material relationship between the company and the selling security holder, all of which is based upon information currently available to the company.

	Beneficial Ownership of Selling Security Holder Prior to Offering(1)			Beneficial Ownership of Shares After Offering(2)	
Name of Selling Security Holder	Number	Percent	Number of Shares offered hereby(2)	Number	Percent
Kathleen C. Anderson	183		183		
Avrit Family Trust DTD 9/29/92	7,000		7,000		
Gertrude Barbush	334		334		
C. Eileen Bastian	7,000		7,000		
James J. & Loretta Beakey	10,275		10,275		
David A. Beckerman	14,000		14,000		
Adrienne Berkman	7,000		7,000		
Milton Berlinski	50,795		50,795		
James F. & Donna F. Biehl	10,318		10,318		
Offer Binder	1,235,467		50,000	1,185,467	

Merlin Bingham	10,167	10,167
Theresa S. Block	2,167	2,167
Kent Bond	34	34
Brad M. Bristol	333	333
Laurence W. Bunde	47,000	47,000