

MEDICAL DISCOVERIES INC

Form SB-2

December 23, 2004

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As filed with the Securities and Exchange Commission on December 22, 2004

Registration No. 0333-

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM SB-2

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

MEDICAL DISCOVERIES, INC.

(Exact Name of Small Business Issuer in its Charter)

| | | |
|---|--|--|
| Utah (State or Jurisdiction of Incorporation or Organization) | 2834 (Primary Standard Industrial Classification Code Number) | 87-0407858 (I.R.S. Employer Identification No.) |
|---|--|--|

**1338 S. Foothill Drive, #266
Salt Lake City, Utah 84108
Telephone: (801) 582-9583**

(Address and telephone number of principal executive offices and principal place of business)

Judy M. Robinett
President and Chief Executive Officer
Medical Discoveries, Inc.
1338 S. Foothill Drive, #266
Salt Lake City, Utah 84108
Telephone: (801) 582-9583

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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

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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 any of the securities being registered on this form are to be offered on a delayed or continuing basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ý

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. "

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Amount to be Registered | Proposed Maximum Offering Price Per Unit | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|---|--------------------------------|---|--|-----------------------------------|
| Shares of restricted Common Stock | 350,000 ⁽¹⁾ | \$.21 | \$ 73,500 | \$ 8.65 |
| Shares of Common Stock issuable upon conversion of Series A | | | | |
| Convertible Preferred Stock | 84,000,000 ⁽¹⁾⁽²⁾ | \$.21 | \$ 17,640,000 | \$ 2,076.23 |
| Shares of Common Stock issuable upon exercise of Warrants | 29,161,158 ⁽¹⁾⁽³⁾ | \$.1967 | \$ 5,736,000 | \$ 675.13 |
| | | | | \$ 2,760.01 |

- (1) In addition, pursuant to Rule 416 of the Securities Act, this Registration Statement covers a presently indeterminate number of shares of common stock issuable upon the occurrence of a stock split, stock dividend or other similar transaction.
- (2) With respect to the shares of common stock issuable upon conversion of Series A Convertible Preferred Stock, pursuant to Rule 457(c), the offering price is calculated, solely for the purpose of calculating the registration fee, based upon the average of the high and low sales prices for the shares of common stock as reported on the OTC Bulletin Board on December 22, 2004.
- (3) With respect to the shares of common stock issuable upon exercise of warrants that have an exercise price that exceeds the average of the high and low sales prices for the shares of common stock as reported on the OTC Bulletin Board on December 22, 2004, pursuant to Rule 457(g), the offering price is assumed, solely for the purpose of calculating the registration fee, to be equal to \$0.1967, the maximum exercise price of the warrants.

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 or

until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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SUBJECT TO COMPLETION DATED December 22, 2004

The information in this prospectus is not complete and may be changed. We 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.

Medical Discoveries, Inc.

113,511,158 shares of common stock

This prospectus relates to the offering and sale of 113,511,158 shares of common stock, of which (i) 350,000 shares consists of restricted common stock, no par value, issued to Ascendant Capital Group, LLC, (ii) 84,000,000 shares consist of common stock, no par value, issuable upon conversion of the Series A convertible preferred stock issued to Monarch Pointe Fund, Ltd., Mercator Momentum Fund, LP, Mercator Momentum Fund III, LP, and Mercator Advisory Group, LLC, and (iii) 29,161,158 shares consist of common stock, no par value, issuable upon exercise of warrants acquired by Monarch Pointe Fund, Ltd., Mercator Momentum Fund, LP, Mercator Momentum Fund III, LP, Mercator Advisory Group, LLC and Ascendant Securities, LLC. All of the offered shares are to be sold by persons who are existing security holders and identified in the section of the prospectus entitled Selling Stockholders. In addition, pursuant to Rule 416 of the Securities Act, as amended, this prospectus, and the registration statement of which it is a part, covers a presently indeterminate number of shares of common stock issuable upon the occurrence of a stock split, stock dividend, or other similar transaction.

We will not receive any of the proceeds from the sale of the shares offered hereunder. Our common stock is traded on the NASD OTC Bulletin Board under the symbol MLSC. On December 22, 2004, the closing sales price of our common stock, as reported by the OTC Bulletin Board, was \$0.21 per share.

Our principal office is located at Medical Discoveries, Inc. 1338 S. Foothill Drive, #266, Salt Lake City, Utah 84108, and our telephone number is (801) 582-9583.

Consider carefully the risk factors beginning on page 2 in this prospectus before investing in the offered shares being sold with this prospectus .

This prospectus shall not constitute an offer to sell, or the solicitation of an offer to buy, in any state in which such offer or sale would be unlawful before or absent qualification under the securities laws of such state.

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.

Dated December 22, 2004

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ABOUT THIS PROSPECTUS

This prospectus provides you with a description of our company, certain risk factors associated with investment in our common shares, a description of the contemplated offering and certain financial information. In addition, you should read the additional information described under the heading *Incorporation of Certain Documents by Reference* on page 50 of this prospectus.

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PROSPECTUS SUMMARY

The following is a summary that highlights what we believe to be the most important information regarding Medical Discoveries, Inc. and the securities being offered herein. Because it is a summary, however, it may not contain all of the information that is important to you. To understand our business and this offering fully, you should read carefully this entire prospectus, including our financial statements and related notes and the risks of investing in our common stock discussed under Risk Factors.

Our Company

Medical Discoveries, Inc. was incorporated on November 20, 1991 as a Utah corporation and maintains its principal offices at 1338 S. Foothill Drive, #266, Salt Lake City, Utah 84108. Our telephone number is (801) 582-9583. We are a development-stage bio-pharmaceutical company engaged in the research, validation, development and ultimate commercialization of a patented anti-infective technology. Our electrolyzed solution of free radicals represents a novel approach to treating our initial target indications, Cystic Fibrosis and HIV.

Our product, called MDI-P, appears to have the ability to destroy certain viruses, bacteria and fungi without any associated toxicity both in animals and in cell-based assays. We are committed to the development of MDI-P as an anti-infective therapeutic product for in-vitro and in-vivo applications. Our highest priority is to develop and commercialize MDI-P as a pharmaceutical for the treatment of HIV and Cystic Fibrosis. On November 1, 2004, we filed an Investigative New Drug application (IND) with the Food and Drug Administration (FDA) for MDI-P as a Cystic Fibrosis treatment. We plan to file an IND with the FDA for HIV in early 2005.

The Offering

| | |
|--|---|
| Securities offered by the Selling Stockholders | 350,000 shares restricted common stock |
| | 84,000,000 ⁽¹⁾ shares of common stock issuable upon conversion of Series A convertible preferred stock |
| | 29,161,158 shares of common stock issuable upon exercise of warrants |
| <hr/> | |
| Shares of our common stock outstanding prior to this offering | 104,581,669 ⁽²⁾ |
| <hr/> | |
| Shares of common stock outstanding following this offering, if all shares are sold | 218,092,827 |
| <hr/> | |
| Use of Proceeds | All net proceeds of this offering will be received by the Selling Stockholders. |

Risk Factors

You should read the Risk Factors beginning on page 2 as well as other cautionary statements throughout this prospectus before investing in any shares offered hereunder.

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- (1) This registration statement covers, in part, the estimated number of shares of common stock issuable upon conversion of one issuance and one contingent issuance of Series A convertible preferred stock. On October 18, 2004 we issued 12,000 shares of Series A preferred stock to Monarch Pointe Fund, Ltd. Under the terms of that issuance, each share of Series A stock entitles the holder to convert the share into the number of shares of common stock resulting from multiplying \$100 by the conversion price. The conversion price is 85% of the average of the lowest three intra-day trading prices for our common stock during the 10 trading days immediately preceding the conversion date, but the conversion price may not exceed \$0.1967 or be lower than \$0.05. For purposes of this filing, we have assumed a conversion price of \$0.05 per share for purposes of the 12,000 share Series A issuance. Thus, for that issuance we are registering 24,000,000 shares of common stock (which is the number of shares required to be registered pursuant to the applicable registration rights agreement with Monarch Pointe Fund, Ltd.). On December 7, 2004 we entered into a subscription agreement to issue 30,000 shares of Series A preferred stock to Mercator Momentum

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Fund, LP and Mercator Momentum Fund III, LP. The sale is contingent upon us entering into and closing a definitive agreement to purchase certain assets in a proposed acquisition, the details of which have not yet been disclosed and regarding which no definitive agreement is yet executed. Under the terms of that contingent issuance, each share of Series A stock would entitle the holder to convert the share into the number of shares of common stock resulting from multiplying \$100 by the conversion price. The conversion price is 75% of the average of the lowest three intra-day trading prices for our common stock during the 10 trading days immediately preceding the conversion date, but the conversion price may not exceed \$0.1967. For purposes of this filing, we have assumed a conversion price of \$0.05 per share for purposes of the 302,000 share Series A contingent issuance. Thus, for that contingent issuance we are registering 60,000,000 shares of common stock (which is the number of shares required to be registered pursuant to the applicable registration rights agreement with Mercator Momentum Fund, LP and Mercator Momentum Fund III, LP).

- (2) Excludes up to 19,283,000 shares of common stock authorized for issuance upon exercise of outstanding options granted pursuant to our stock option plans, 4,000,000 shares of our common stock reserved for the future grant of stock options under such plans, and 38,551,695 shares of our common stock issuable upon exercise of warrants (which 38,551,695 includes the 29,161,158 shares of common stock subject to outstanding warrants being registered in this offering).

In addition, pursuant to Rule 416 of the Securities Act, this prospectus, and the registration statement of which it is a part, covers a presently indeterminate number of shares of stock issuable upon the occurrence of a stock split, stock dividend or other similar transaction.

Selling Stockholders

All of the offered shares are to be sold by existing security holders. The selling stockholders acquired the rights to their shares and warrants (i) in a private placement of Series A Convertible Preferred Stock and warrants in October 2004; (ii) in a contingent private placement of Series A Convertible Preferred Stock and warrants in December 2004; and (iii) in exchange for placement agent services and consulting in connection with the foregoing financings.

Of the shares of our common stock offered hereby, 350,000 shares consist of restricted common stock, an estimated 84,000,000 shares are issuable upon the conversion of Series A Convertible Preferred Stock, and 29,161,158 shares are issuable upon the exercise of outstanding warrants to purchase our common stock.

In addition, pursuant to Rule 416 of the Securities Act, this prospectus and the registration statement of which it is a part cover a presently indeterminate number of shares of common stock issuable upon the occurrence of a stock split, stock dividend, or other similar transaction.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should consider the following discussion of risks in addition to the other information in this prospectus before making an investment in Medical Discoveries. If any of the following risks actually occurs, our business, financial condition or results of operations could be materially adversely affected. In such a case, you may lose all or part of your investment. The risks below address some of the factors that may affect our future operating results and financial performance.

Risks Relating to Our Business

Our Independent Auditors Have Expressed Substantial Doubt As To Our Ability To Continue As A Going Concern. Our auditors have expressed substantial doubt about our ability to continue as a going concern because of our recurring losses from our development-stage activities in current and prior years. We have not generated any significant revenues to date. We expect to continue to incur substantial net operating losses over the next several years. We may not be able to generate sufficient revenues to become profitable and do not expect to generate any revenues for several years. We struggle with operating and liquidity issues due to our negative cash flows from operations and we have had difficulty in the past with raising capital. As a result of these and other factors, our independent auditors have

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expressed substantial doubt about our ability to continue as a going concern. The financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern.

We Have Incurred Substantial Losses Since Our Inception And May Continue To Operate At A Loss. We have experienced net losses in each twelve-month period since inception, with a retained deficit of approximately \$19,469,584 as of September 30, 2004. Our losses from operations in 2003 were \$952,043 and our cumulative losses from operations since inception through September 30, 2004 were \$18,070,007. We will likely continue to experience a net operating loss until, and if, we can fully commercialize our technologies, which will not be for several years. We are presently investing all of our resources in the testing, development and commercialization of MDI-P and our other technologies. There can be no assurance that MDI-P, our other technologies, or any other project undertaken by us will ever enable us to generate consistent revenues from operations. Even if our technologies begin generating revenues, the revenues may not exceed the costs of research, development, testing, regulatory approval and other costs. Accordingly, we may not ever realize a profit from operations.

We May Not Be Able To Raise Sufficient Capital To Meet Present And Future Obligations. As of September 30, 2004, our current liabilities exceeded our current assets by \$2,825,710 and we had cash of only \$434,455. We need additional capital in order to satisfy current liabilities and meet basic operational needs. We also will need substantial additional capital to fund regulatory approvals and to fully commercialize our technologies. We do not anticipate that revenues will satisfy these capital requirements. Furthermore, we may not be able to obtain the amount of additional capital needed or may be forced to pay an extremely high price for capital.

The timing and amount of our future capital requirements will depend on many factors, including, without limitation the following:

- our ability to raise additional funding and the amounts raised, if any;
- the time and costs involved in obtaining regulatory approvals;
- the results of pre-clinical studies and clinical trials;
- the cost of manufacturing scale-up;
- competing technological and market developments;
- the costs of filing, prosecuting and enforcing patent claims; and
- the effectiveness of our commercialization activities.

Factors affecting the availability and price of capital may include, without limitation, the following:

- market factors affecting the availability and cost of capital generally;
- our performance;
- the size of our capital needs;
- the market's perception and acceptance of our technologies;
- the price, volatility and trading volume of our common shares; and

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the effect of the exercise of outstanding options and warrants exercisable into approximately 58 million shares of common stock.

If we are unable to obtain sufficient capital or are forced to pay a high price for capital, we may be unable to complete testing, regulatory approval and commercialization of our technologies and may never achieve consistent revenues or profitability. In addition, because of their size, resources and other factors, our competitors may have better access to capital than we do and, as a result, may be able to exploit opportunities more rapidly, easily or thoroughly than we can.

We Are Dependent On A Single Product, The Failure Of Which Would Likely Cause Us To Cease Operations. We are entirely dependent on our ability to develop MDI-P, which is our sole product. We have not commercialized MDI-P or any other product and our failure to commercialize MDI-P would likely cause us to cease operations. While we believe MDI-P may have very broad commercial applications and is not tied to any one indication, we do not have any other products under development, nor do we have scientific personnel on staff to develop any further technologies. While our pre-clinical studies of MDI-P to date have been quite favorable in terms of high efficacy as an anti-infective with a low toxicity profile, there is no certainty that MDI-P will be successful. The results of our pre-clinical studies may not be indicative of future clinical trials. Moreover, unacceptable toxicity could occur at any time in the course of human trials or, if MDI-P is approved for sales, during commercial use. Even if MDI-P does prove to be safe and effective and receives regulatory approvals, we may be unable to successfully commercialize it or any other product.

Our Operations Are And Will Be Subject To Extensive Government Regulation. Our use of MDI-P in the treatment of Cystic Fibrosis, HIV and for other human or non-human uses is subject to extensive regulation by United States and foreign governmental authorities. In particular, pharmaceutical treatments are subject to rigorous pre-clinical and clinical testing and other approval requirements by the FDA in the United States under the federal Food, Drug and Cosmetic Act and by comparable agencies in most foreign countries. Various federal, state and foreign statutes also govern or influence the manufacture, labeling, storage, record keeping, and marketing of such products. Pharmaceutical manufacturing facilities are also regulated by state, local, and other authorities. Obtaining approval from the FDA and other regulatory authorities for a new drug or treatment may take several years and involve substantial expenditures. Moreover, ongoing compliance with these requirements can require the expenditure of substantial resources. Difficulties or unanticipated costs may be encountered by us in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing MDI-P.

There can be no assurance that we will attract sufficient capital to complete the regulatory approval process. Even if we do attract sufficient capital, we can make no assurance that we will be successful in achieving approval or, if we do achieve approval, that future revenues will be sufficient to justify the expense of the regulatory approval process. In addition, a marketed product is subject to continual FDA scrutiny. Post-clinical discovery of problems or failure to comply with Good Manufacturing Practices or other FDA requirements may result in restrictions on or discontinuance of marketing of a product, as well as expose the Company to potential civil and criminal sanctions.

The FDA imposes substantial requirements upon and conditions precedent to the introduction of therapeutic drug products, such as MDI-P, through lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time consuming procedures to demonstrate that such products are both safe and effective in treating the indications for which approval is sought. After testing in animals, an Investigational New Drug, or IND, application must be filed with the FDA to obtain authorization for human testing. When the clinical testing has been completed and analyzed, final manufacturing processes and procedures are in place, and certain other required information is available to the manufacturer, a manufacturer may submit a new drug application, or NDA, to the FDA. No action can be taken to market MDI-P, or any therapeutic drug product, in the United States until an NDA has been approved by the FDA.

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The IND process in the United States is governed by regulations established by the FDA which strictly control the use and distribution of investigational drugs in the United States. The guidelines require that an application contain sufficient information to justify administering the drug to humans, that the application include relevant information on the chemistry, pharmacology and toxicology of the drug derived from chemical, laboratory and animal or *in vitro* testing, and that a protocol be provided for the initial study of the new drug to be conducted on humans.

In order to conduct a clinical trial of a new drug in humans, a sponsor must prepare and submit to the FDA a comprehensive IND. The focal point of the IND is a description of the overall plan for investigating the drug product and a comprehensive protocol for each planned study. The plan is carried out in three phases: Phase I clinical trials, which involve the administration of the drug to a small number of healthy subjects to determine safety, tolerance, absorption and metabolism characteristics; Phase II clinical trials, which involve the administration of the drug to a limited number of patients for a specific disease to determine dose response, efficacy and safety; and Phase III clinical trials, which involve the study of the drug to gain confirmatory evidence of efficacy and safety from a wide base of investigators and patients.

Phase I testing typically takes at least one year, Phase II trials typically take from 1-1/2 to 2-1/2 years, and Phase III trials generally take from 2 to 5 years to complete. Should the FDA grant fast-track status to MDI-P based upon its safety profile and early signs of efficacy in Phase I clinical trials, the overall timeline for completion of Phase II-III clinical trials can be compacted to as little as 2-3 years. We can give no assurance that Phase I, Phase II or Phase III testing for MDI-P will be completed successfully within any specified time period, if at all. While we are hopeful that fast-track status might be provided MDI-P, there is no assurance that such status will, in fact, be provided. Furthermore, the FDA may suspend clinical trials at any time if the patients are believed to be exposed to a significant health risk.

An investigator's brochure must be included in the IND and the IND must commit the sponsor to obtain initial and continual review and approval of the clinical investigation. A section describing the composition, manufacture and control of the drug substance and the drug product is included in the IND. Sufficient information is required to be submitted to assure the proper identification, quality, purity and strength of the investigational drug. A description of the drug substance, including its physical, chemical, and biological characteristics, must also be included in the IND. The general method of preparation of the drug substance must be included. A list of all components including inactive ingredients must also be submitted. There must be adequate information about pharmacological and toxicological studies of the drug involving laboratory animals and *in vitro* tests on the basis of which the sponsor has concluded that it is reasonably safe to conduct the proposed clinical investigation. Where there has been widespread use of the drug outside of the United States or otherwise, it is possible in some limited circumstances to use well documented clinical experience as a substitute for other pre-clinical work.

The FDA typically takes several months to consider and act on an IND application. If no agency comment is provided on the IND application within one month, we will be allowed to begin recruiting patients for our Phase I clinical trial. We can give no assurance that our IND application will be approved or, if approved following comments or subject to modifications, the length of FDA approval time.

After the FDA approves the IND, the investigation is permitted to proceed, during which the sponsor must keep the FDA informed of new studies, including animal studies, make progress reports on the study or studies covered by the IND, and also be responsible for alerting FDA and clinical investigators immediately of unforeseen serious side effects or injuries.

When all clinical testing has been completed and analyzed, final manufacturing processes and procedures are in place, and certain other required information is available to the manufacturer, a manufacturer may submit an NDA to the FDA. An NDA must be approved by the FDA covering the drug before its manufacturer can commence

commercial distribution of the drug. The NDA contains a

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section describing the clinical investigations of the drug which section includes, among other things, the following: a description and analysis of each clinical pharmacology study of the drug; a description and analysis of each controlled clinical study pertinent to a proposed use of the drug; a description of each uncontrolled clinical study including a summary of the results and a brief statement explaining why the study is classified as uncontrolled; and a description and analysis of any other data or information relevant to an evaluation of the safety and effectiveness of the drug product obtained or otherwise received by the applicant from any source foreign or domestic. The NDA also includes an integrated summary of all available information about the safety of the drug product including pertinent animal and other laboratory data, demonstrated or potential adverse effects of the drug, including clinically significant potential adverse effects of administration of the drug contemporaneously with the administration of other drugs and other related drugs. A section is included describing the statistical controlled clinical study and the documentation and supporting statistical analysis used in evaluating the controlled clinical studies.

Another section of the NDA describes the data concerning the action of a drug in the human body over a period of time and data concerning the extent of drug absorption in the human body or information supporting a waiver of the submission of such data. Also included in the NDA is a section describing the composition, manufacture and specification of the drug substance including the following: a full description of the drug substance, its physical and chemical characteristics; its stability; the process controls used during manufacture and packaging; and such specifications and analytical methods as are necessary to assure the identity, strength, quality and purity of the drug substance as well as the availability of the drug products made from the substance. NDAs contain lists of all components used in the manufacture of the drug product and a statement of the specifications and analytical methods for each component. Also included are studies of the toxicological actions of the drug as they relate to the drug's intended uses.

The data in the NDA must establish that the drug has been shown to be safe for use under its proposed labeling conditions and that there is substantial evidence that the drug is effective for its proposed use(s). Substantial evidence is defined by statute and FDA regulation to mean evidence consisting of adequate and well-controlled investigations, including clinical investigations by experts qualified by scientific training and experience, to evaluate the effectiveness of the drug involved. We can give no assurance that even if we complete clinical testing that our NDA will be approved. Currently, we have not completed all testing required to prepare and submit an IND to the FDA and we do not have the financial resources necessary to do so.

Other product applications which may be developed for MDI-P could require regulatory approvals from other governmental agencies, such as the Environmental Protection Agency pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act and the Toxic Substances Control Act, and other present and potential federal, state and local regulations. These approvals can involve considerable money, time and effort and do not, in and of themselves, guarantee any commercial success for the product applications approved.

Our Products Will Be Exposed To Pricing And Reimbursement Risks. Our ability to earn revenue will depend in part on the extent to which reimbursement for the costs of the products and related treatments will be available from government health administration authorities, private health coverage and managed care organizations. Third-party payers are increasingly challenging the prices of drugs and medical services. If purchasers or users of MDI-P are not able to obtain adequate reimbursement, they may forego or reduce their use.

Our Technologies Are Unproven. While we have received positive results from preliminary studies of MDI-P, more studies are necessary in order for us to accurately predict the ultimate effectiveness of our technologies as anti-viral, anti-bacterial and anti-fungal agents. Furthermore, we cannot as of yet be sure that MDI-P is safe to humans when used as intended. Extensive additional research and testing will be necessary before we can fully commercialize our technologies. If our technologies are ultimately deemed unsafe or ineffective, then we will not likely be able to recoup our substantial investment in research and development.

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We Face Intense Competition And Competing Products. Competition in the market for MDI-P is intense and will likely further intensify. The biotechnology and pharmaceutical industries are characterized by rapidly evolving technologies and intense competition. Our competitors include major pharmaceutical, and specialized biotechnology companies, many of which have financial, technical, and marketing resources significantly greater than ours. Fully integrated pharmaceutical companies, due to their expertise in research and development, manufacturing, testing, obtaining regulatory approvals, and marketing, as well as their substantially greater financial and other resources, may be our most formidable competitors. In addition, acquisitions by such pharmaceutical companies could enhance the financial and marketing resources of smaller competitors. Furthermore, colleges, universities, governmental agencies, and other public and private research organizations will continue to conduct research and possibly market competitive commercial products on their own or through joint ventures. These institutions are becoming more active in seeking patent protection and licensing arrangements to collect royalties for use of technology that they have developed. These institutions also will compete with us in recruiting and retaining highly qualified scientific personnel.

We are also aware of private and government entities that have studied and used MDI-P-like products in Russia, Japan and the United States for several years. If MDI-P gains recognition, we anticipate that international pharmaceutical companies will be interested in investing or competing in this market. Our present and future competitors may be able to develop and commercialize technologies quicker than we can.

If and when we obtain regulatory approval for any of the potential uses of our technology which require them, we must then compete for acceptance in the marketplace. Given that such regulatory approval, especially in the United States, may take a number of years, the timing of the introduction of our technology and other products to the market is critical. Other safe and effective drugs and treatments may be introduced into the market prior to the time that we are able to obtain approval for the commercialization of our technology. In addition, even after such regulatory approval is obtained, competition among products approved for sale may be affected by, among other things, product efficacy, safety, reliability, availability, price, and patent position. There can be no assurance that our technology will be competitive if and when introduced into the marketplace for any of its possible uses. Even if we do successfully commercialize our technologies, there can be no assurance that our products will gain significant market share as we attempt to compete with more traditional anti-infective products and methods.

Our Intellectual Property May Not Be Adequately Protected. Our technology is not necessarily novel; thus we rely heavily on our patent protection to prevent others from using the human therapeutic applications of our technology. It is our policy to protect our intellectual property and proprietary technologies by, among other means, filing patent applications to protect technology that we consider important to the development of our business. We also rely on trade secrets and improvements, unpatented know-how, and continuing technological innovation to develop and maintain our competitive position. Despite our policy to seek patent protection wherever appropriate, there can be no assurance that our patent applications will result in further patents being issued or that, if issued, the patents will afford protection against competitors with similar technology. While we have obtained several United States patents, persons in jurisdictions outside of the United States in which no application has been filed, or which do not honor United States patents, may develop and market infringing technologies. Also, the cost of enforcing patents outside of North America, as well as other obstacles, may limit our ability to enforce any patents outside of the United States. There can also be no assurance that any patent issued to us will not be infringed or circumvented by others or that others will not obtain patents that we would need to license or circumvent. There can be no assurance that licenses, which might be required for our processes or products, would be available on reasonable terms or that patents issued to others would not prevent us from developing and marketing our products. In addition, there can be no assurance that a court of competent jurisdiction would hold our patents valid if issued. To the extent we also rely on unpatented trade secrets, there can be no assurance that others will not independently develop

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substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose such technology. Finally, our products and processes may infringe on patents of others. If relevant claims of third-party patents are upheld as valid and enforceable, we could be prevented from practicing the subject matter claimed in the claims, or be required to obtain licenses or redesign our products or processes to avoid infringement.

We Face Significant Product Liability. We face an inherent business risk of exposure to product liability and other claims in the event our products results in or is alleged to result in harmful effects. We may not be able to avoid significant liability exposure. We may not have or be able to obtain or maintain sufficient insurance coverage at a reasonable cost. An inability to obtain sufficient insurance coverage at a reasonable cost could prevent or inhibit the commercialization of our technology. Even if we avoid liability exposure, we could incur significant costs that hurt our financial performance.

Risks Specific to the Purchase of Common Stock in This Offering

The Market For Our Stock Is Thin And Subject To Manipulation. Our common stock is traded on the NASD OTC Bulletin Board under the symbol MLSC. The following table sets forth the range of bid quotations for our common stock for the quarters indicated according to data provided by The NASDAQ Stock Market, Inc. Such quotations reflect inter-dealer prices, without retail mark-ups, markdowns or commissions, and may not represent actual transactions.

| PERIOD | HIGH BID | LOW BID |
|----------------------------------|---------------------|--------------------|
| Quarter ended September 30, 2004 | \$ 0. | \$ 0. |
| Quarter ended June 30, 2004 | 0. | 0. |
| Quarter ended March 31, 2004 | 0. | 0. |
| Quarter ended December 31, 2003 | 0.085 | 0.035 |

The Market Price For Our Common Stock Will Likely Be Volatile And May Change Dramatically At Any Time.

The market price of our common stock, like that of the securities of other early-stage companies, may be highly volatile. Our stock price may change dramatically as the result of announcements of our quarterly results, the execution or termination of significant customer contracts, significant litigation or other factors or events that would be expected to affect our business or financial condition, results of operations and other factors specific to our business and future prospects. In addition, the market price for our common stock may be affected by various factors not directly related to our business, including the following:

intentional manipulation of our stock price by existing or future stockholders;

short selling of our common stock or related derivative securities;

the interest, or lack of interest, of the market in our business sector, without regard to our financial condition or results of operations;

the adoption of governmental regulations and similar developments in the United States or abroad that may affect our ability to develop our products or affect our cost structure;

economic and other external market factors, such as poor economic indicators or investor distrust.

Obtaining Additional Capital Though The Sale Of Common Stock Will Result In Dilution Of Stockholder Interests. We plan to raise additional funds in the future by issuing additional shares of common stock, or securities such as convertible notes, options, warrants or preferred stock that are

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convertible into common stock. Any such sale of common stock or other securities will lead to further dilution of the equity ownership of existing holders of our common stock.

We Are Unlikely To Pay Dividends On Our Common Stock In the Foreseeable Future. We have never declared or paid dividends on our stock. We currently intend to retain all available funds and any future earnings for use in the operation and expansion of our business. We do not anticipate paying any cash dividends in the foreseeable future, and it is unlikely that investors will derive any current income from ownership of our stock. This means that your potential for economic gain from ownership of our stock depends on appreciation of our stock price and will only be realized by a sale of the stock at a price higher than your purchase price. Because there presently is no public market for our common stock, you may be unable to realize a gain on your investment.

FORWARD-LOOKING STATEMENTS

This prospectus, any supplement to this prospectus and the documents incorporated by reference contains statements that constitute forward-looking statements within the meaning of section 27A of the Securities Act and section 21E of the Securities Exchange Act. To the extent that the information presented in this prospectus discusses financial projections, information or expectations about our business plans, results of operations, products or markets, or otherwise makes statements about future events, such statements are forward-looking. Such statements can be identified by the use of the forward-looking words such as intends, anticipates, believes, estimates, projects, fo expects, plans, and proposes and variations of such words or similar expressions. Additional forward-looking statements may be made by us from time to time.

Although we believe that the expectations reflected in these forward-looking statements are based on reasonable assumptions, expressed in good faith and have a reasonable basis, including without limitation, our examination of historical operating trends, data contained in our records and other data available from third parties, there can be no assurance that our expectations, beliefs and projections will result or be achieved or accomplished. There are a number of risks and uncertainties that could cause actual results to differ materially from such forward-looking statements. These include, among others, the cautionary statements in the Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations sections of this prospectus. When considering forward-looking statements in this prospectus, you should keep in mind the cautionary statements in the Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this prospectus.

In addition, these forward-looking statements speak only as of the date of this prospectus. We undertake no obligation to publicly update or revise forward-looking statements which may be made to reflect events or circumstances after the date made or to reflect the occurrence of unanticipated events.

USE OF PROCEEDS

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock, less any applicable discounts or commissions. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

DETERMINATION OF OFFERING PRICE

The offering price of the shares of common stock offered by this prospectus is being determined by each of the selling stockholders on a transaction-by-transaction basis based upon factors that such selling stockholder considers appropriate. The offering prices determined by the selling stockholders

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may, or may not, relate to a current market price but should not, in any case, be considered an indication of the actual value of the shares of common stock. We do not have any influence over the price at which selling stockholders offer or sell the shares of common stock offered by this prospectus.

DILUTION

Our net tangible book value (tangible assets less total liabilities) at September 30, 2004 was \$(2,825,710) or approximately \$(0.0275) per each of the 102,746,101 shares of common stock then outstanding. Accordingly, new investors who purchase shares will suffer an immediate, total dilution of their investment.

As of September 30, 2004, there were outstanding options to purchase up to 19,283,000 shares of our common stock as well as warrants to purchase up to 7,299,979 shares of our common stock. The existence of those options and conversion rights may hinder future equity offerings by us, and the exercise of those options and conversion rights may have an adverse effect on the value of shares of our common stock. Furthermore, the holders of those options and conversion rights may exercise them at a time when we would otherwise be able to obtain additional equity capital on terms more favorable to us.

SELLING SECURITY HOLDERS

All of the offered shares are to be sold by existing security holders. The selling stockholders acquired the rights to their shares and warrants (i) in a private placement of Series A Convertible Preferred Stock and warrants in October 2004; (ii) in a contingent private placement of Series A Convertible Preferred Stock and warrants in December 2004; and (iii) in exchange for placement agent services and consulting in connection with the foregoing financings.

Of the shares of our common stock offered hereby, 350,000 shares consist of restricted common stock, 84,000,000 shares are issuable upon the conversion of Series A Convertible Preferred Stock, and 29,161,158 shares are issuable upon the exercise of outstanding warrants to purchase our common stock.

In addition, pursuant to Rule 416 of the Securities Act, this prospectus and the registration statement of which it is a part cover a presently indeterminate number of shares of common stock issuable upon the occurrence of a stock split, stock dividend, or other similar transaction.

For purposes of this prospectus, we have assumed that the number of shares issuable upon exercise of each of the warrants is the number stated on the face thereof. The number of shares issuable upon exercise of the warrants, and available for resale hereunder, is subject to adjustment and could materially differ from the estimated amount depending on the occurrence of a stock split, consolidation stock dividend, or similar transaction resulting in an adjustment in the number of shares subject to the warrants.

The table below sets forth, as of December 22, 2004:

the name of each selling stockholder;

certain beneficial ownership information with respect to the selling stockholders;

the number of shares that may be sold from time to time by each selling stockholder pursuant to this prospectus;
and

the amount (and, if 1% or more, the percentage) of shares of common stock to be owned by each selling stockholder if all offered shares are sold.

Beneficial ownership is determined in accordance with SEC rules and generally includes voting or investment power with respect to securities. Shares of common stock that are issuable upon the

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conversion of Preferred stock or exercise of outstanding warrants held by a selling stockholder, to the extent exercisable before December 31, 2004, are treated as outstanding for purposes of computing each selling stockholder's ownership of outstanding shares of common stock and percentage ownership (but not the percentage ownership of other selling stockholders).

We believe that voting and investment power with respect to shares shown as beneficially owned by selling stockholders resides with the individuals identified in the table below, with respect to entities, or in the footnotes to the table below. There can be no assurance that any of the shares offered hereby will be sold.

| Beneficial Owner | Beneficial Ownership Before Offering | | Number of Shares Being Offered | Beneficial Ownership upon Completion of the Offering | |
|-----------------------------------|---|----------------|---|---|----------------|
| | Number of Shares | Percent | | Number of Shares | Percent |
| Monarch Pointe Fund, Ltd. | 27,660,397(1) | 12.68 | 27,660,397 | | |
| Mercator Momentum Fund, LP | 42,248,856(2) | 19.37 | 42,248,856 | | |
| Mercator Momentum Fund III, LP | 29,189,883(2) | 13.38 | 29,189,883 | | |
| Mercator Advisory Group, LLC | 12,353,838(2) | 5.66 | 12,353,838 | | |
| Ascendant Securities, LLC | 1,708,184 | 0.78 | 1,708,184 | | |
| Ascendant Capital Group, LLC | 350,000 | 0.16 | 350,000 | | |

- (1) Includes an estimated number of shares of common stock issuable upon conversion of Series A convertible preferred stock. On October 18, 2004 we issued 12,000 shares of Series A preferred stock to Monarch Pointe Fund, Ltd. Under the terms of that issuance, each share of Series A stock entitles the holder to convert the share into the number of shares of common stock resulting from multiplying \$100 by the conversion price. The conversion price is 85% of the average of the lowest three intra-day trading prices for our common stock during the 10 trading days immediately preceding the conversion date, but the conversion price may not exceed \$0.1967 or be lower than \$0.05. For purposes of this filing, we have assumed a conversion price of \$0.05 per share for purposes of the 12,000 share Series A issuance. Thus, for that issuance we are registering 24,000,000 shares of common stock (which is the number of shares required to be registered pursuant to the applicable registration rights agreement with Monarch Pointe Fund, Ltd.).
- (2) Includes an estimated number of shares of common stock issuable upon conversion of a contingent issuance of Series A convertible preferred stock. On December 7, 2004 we entered into a subscription agreement to issue 30,000 shares of Series A preferred stock to Mercator Momentum Fund, LP and Mercator Momentum Fund III, LP. The sale is contingent upon us entering into and closing a definitive agreement to purchase certain assets in a proposed acquisition, the details of which have not yet been disclosed and regarding which no definitive

agreement is yet executed. Under the terms of that contingent issuance, each share of Series A stock would entitle the holder to convert the share into the number of shares of common stock resulting from multiplying \$100 by the conversion price. The conversion price is 75% of the average of the lowest three intra-day trading prices for our common stock during the 10 trading days immediately preceding the conversion date, but the conversion price may not exceed \$0.1967. For purposes of this filing, we have assumed a conversion price of \$0.05 per share for purposes of the 302,000 share Series A contingent issuance. Thus, for that contingent issuance we are registering 60,000,000 shares of common stock (which is the number of shares required to be registered pursuant to the applicable registration rights agreement with Mercator Momentum Fund, LP and Mercator Momentum Fund III, LP).

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of

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common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders may also transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders may also sell shares by means of short sales to the extent permitted by United States securities laws. Short sales involve the sale by a selling shareholder, usually with a future delivery date, of shares of common stock that the seller does not own. Covered short sales are sales made in an amount not greater than the number of shares subject to the short seller's warrant, exchange right or other right to acquire shares of common stock. A selling shareholder may close out any covered short position by either exercising its warrants or exchange rights to acquire shares of common stock or purchasing shares in the open market. In determining the source of shares to close out the covered short position, a selling shareholder will likely consider, among other things, the price of shares of common stock available for purchase in the open market as compared to the price at which it may purchase shares of common stock pursuant to its warrants or exchange rights.

Naked short sales are any sales in excess of the number of shares subject to the short seller's warrant, exchange right or other right to acquire shares of common stock. A selling shareholder must close out any naked position by

purchasing shares. A naked short position is more likely to be created if a selling shareholder is concerned that there may be downward pressure on the price of the shares of common stock in the open market.

The existence of a significant number of short sales generally causes the price of the shares of common stock to decline, in part because it indicates that a number of market participants are taking a

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position that will be profitable only if the price of the shares of common stock declines. Purchases to cover naked short sales may, however, increase the demand for the shares of common stock and have the effect of raising or maintaining the price of the shares of common stock.

The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities that require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be underwriters within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are underwriters within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealers or underwriters, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

Expenses, Indemnification and Registration Obligations. We are paying the expenses incurred in connection with preparing and filing this prospectus and the registration statement to which it relates, other than selling commissions. We have not retained any underwriter, broker or dealer to facilitate the offer or sale of the shares offered hereby. We will pay no underwriting commissions or discounts in connection therewith.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus. The selling stockholders may indemnify any broker-dealers that participate in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (i) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (ii) the date on which the shares may be sold pursuant to Rule 144(k) of the Securities Act.

Passive Market Making. We have advised the selling stockholders that while they are engaged in a distribution of the shares offered pursuant to this prospectus, they are required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling stockholders, any affiliate purchasers and any broker-dealers or other persons who participate in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase, any security that is subject to the distribution until the entire distribution is complete. Regulation M also restricts bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. We do not intend to engage in any passive market making or stabilization transactions during the course of the distribution described in this prospectus. All of the foregoing may affect the marketability of the shares offered pursuant to this prospectus.

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Limitations. We have advised the selling stockholders that, to the extent necessary to comply with governing state securities laws, the offered securities should be offered and sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, we have advised the selling stockholders that the offered securities may not be offered or sold in any state unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available with respect to such offers or sales.

LEGAL PROCEEDINGS

We are not aware of any legal proceedings against us. We may however be involved, from time to time, in various legal proceedings and claims incident to the normal conduct of our business.

DIRECTORS, EXECUTIVE OFFICERS, PROMOTERS AND CONTROL PERSONS

The following table sets forth certain information regarding the executive officers and directors of Medical Discoveries, Inc. as of December 22, 2004.

| Name | Age | Title | Term of |
|------------------|------------|---|----------------|
| David R. Walker | 59 | Chairman of the Board of Directors | 6 Years |
| Judy Robinett | 51 | President and Chief Executive Officer, Director | 4 Years |
| Larry Anderson | 55 | Director | < 1 Year |
| Stephen R. Drake | 35 | Secretary | < 1 Year |

David R. Walker

David R. Walker joined the Board of Directors on May 2, 1996, and was appointed Chairman of the Board of Directors on May 10, 1998. He has served as Chairman of the Audit Committee since its inception in 2001. For over 20 years, Mr. Walker has held the office of General Manager of Sunheaven Farms, the largest onion growing and packing entity in the State of Washington with annual revenues in excess of \$50 million. In the capacity of General Manager, Mr. Walker performs the functions of a traditional chief financial officer. Mr. Walker holds a Bachelor of Arts degree in economics from Brigham Young University with minors in accounting and finance.

Judy Robinett

Judy M. Robinett has held the office of President and Chief Executive Officer since November, 2000, and joined the Board of Directors on February 9, 2001. Since 1994, she has owned and operated an international consulting company focused on strategic planning, finance, marketing, and distribution for entrepreneurs and established companies. Prior to that, Ms. Robinett's employment positions included Vice President for Quality Improvement for a regional hospital, Division Manager for Universal Foods, Group Manager for EG&G's Nuclear Training Facility in Idaho, and a Planner for the State of Idaho. Ms. Robinett has published more than 50 articles on business finance and operations and is a recognized authority on quality control. Ms. Robinett holds a Bachelors of Sciences degree in psychology and a Masters degree in labor economics from Utah State University.

Larry Anderson

Larry Anderson has a wide range of investment banking, sales and entrepreneurial experience. He has held investment banking and stock broker positions with Merrill Lynch, Oppenheimer and Kidder Peabody, managing up to \$300 million in accounts. Mr. Anderson has significant sales experience including holding national sales leader awards while at Automated Data Processing and Qantel. Mr.

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Anderson is an entrepreneur with numerous start-ups and turn-arounds to his credit. He currently owns and operates, among other companies, C Innovation, a leading K-12 educational software company. Mr. Anderson currently lives in Salt Lake City, Utah, and attended college at Brigham Young University.

Stephen R. Drake

Stephen R. Drake was elected Secretary of the Company effective as of April 1, 2004. He has served as legal counsel to the Company since November 2000. Mr. Drake is an attorney in private practice with Stoel Rives LLP in Boise, Idaho, where he practices corporate and securities law. Mr. Drake received a Bachelors of Arts degree, *cum laude*, from Albertson College in 1991 and a Juris Doctor degree, *cum laude*, from Willamette University College of Law in 1996.

We also have a scientific advisory board consisting of the following individuals:

Bruce I. Dezube, M.D.

*Director of AIDS Oncology, Beth Israel Deaconess Medical Center, Boston
Associate Professor of Medicine, Harvard Medical School*

We retained Dr. Dezube to oversee medical testing, FDA protocol alignment and approvals planning for MDI-P. Dr. Dezube will be the principal investigator for our IND in HIV. Dr. Dezube is a member of the AIDS Clinical Trial Group (ACTG) where he is principal investigator in more than seven studies involving the testing and evaluation of interferon and newer anti-HIV agents. Additionally, Dr. Dezube has been involved in industry-sponsored studies of other anti-HIV agents, assisting with required FDA approvals. In one such action, Dr. Dezube assisted Fuji Immuno Pharmaceuticals, Inc. in receiving the quickest FDA approval for Phase 1 clinical trials ever granted an anti-HIV drug. Dr. Dezube received his M.A. from Harvard University and his M.D. from Tufts University. Dr. Dezube was a research fellow in hematology and oncology and is board certified in internal medicine, hematology, and oncology.

Robert A. Mastico, Ph.D.

Physical Chemist, Independent Consultant

Dr. Mastico specializes in the chemistry, manufacturing and control of new drug substances required for FDA approval. He successfully submits at least three new INDs to the FDA each year, handling the manufacturing and analytical data (CMC section) for investigational therapeutics. We have retained Dr. Mastico to determine the chemical characterization requirements for MDI-P, and for planning and compliance with all FDA and other required certifications involving chemical analyses. Dr. Mastico received his Ph.D. from the University of Leeds in genetic biochemistry and has fifteen years experience in the fields of biotherapeutics and pharmaceutical production.

Craig R. Palmer, Ph.D.

Principal, Palmer Capital Group, LLC

Dr. Palmer has served over the past twenty years as a strategic financial advisor to a wide variety of technology platform and biotech companies in their capital formation, management and product licensing arenas. We have retained Dr. Palmer to assist us in managing the pre-clinical and clinical development of MDI-P as well as commercialization. He serves as a director on several biotech and biomedical companies, and has successfully licensed major ethical drugs and biomedical devices. Prior to his involvement as a Principal in Palmer Capital Group LLC, and its predecessor The Palmer Group, he served as a manager and principal in the consulting operations of Ernst & Young (10 years), followed by a brief stint as a VP of Investments for a regional bank and its SBIC. Dr. Palmer has assisted a number of his clients in securing underwriters for their IPOs or secondary offerings. He has also assisted several clients in establishing major strategic partnerships for product development. Dr. Palmer received his Ph.D. from the University of Washington, where he was an NDEA Title IV fellow.

Dr. Henry R. Thompson, M.D.

Director, Cystic Fibrosis Program Therapeutics Center, St. Luke's Health Center, Boise, Idaho

On September 23, 2004, Dr. Thompson agreed to serve as Project Manager and Principal Investigator for

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MDI's Phase I trials in late-term adult Cystic Fibrosis (CF) patients. Dr. Thompson is a gastroenterologist, and received his M.D. from Oregon Health Sciences University. He held a Fellowship in pediatric gastroenterology at Children's Hospital in Denver, at the University of Colorado Health Science's unit, where he also participated in clinical studies. Dr. Thompson has been an Assistant Professor at the University of Utah's Medical School, and is a Board certified Fellow in the American Association of Pediatrics. He has previously received grants from both the Cystic Fibrosis Foundation and the NIH.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding persons known by the Company to beneficially own, as defined by Rule 13d-3 under the Securities Exchange Act of 1934, more than 5% of Common Stock as of November 4, 2004, based solely on information regarding such ownership available to the Company in filings by such beneficial owners with the SEC on Schedules 13D and 13G. The following table also sets forth information regarding beneficial ownership of Common Stock as of November 4, 2004, except as noted below, by the Directors and the Named Executive Officer and by the Directors and Named Executive Officer as a group.

| Name and Address of Beneficial Owner(a) | Number of Shares and Nature of Beneficial Ownership(b) | Percent of Class |
|--|---|---------------------------------|
| Certain Beneficial Owners: | | |
| Monarch Pointe Fund, Ltd. | 10,353,585 | 9.9 |
| Judy M. Robinett | 16,030,000(c) | 15.3 |
| Directors/Named Executive Officer: | | |
| David R. Walker | 1,153,539(d) | 1.1 |
| Judy M. Robinett | 16,030,000(c) | 15.3 |
| Larry Anderson | 250,000 | .2 |
| All Directors and Executive Officers as a Group (3 persons) | 43,817,124(e) | 41 |

* Less than 1%

- (a) Unless otherwise indicated, the business address of each person listed is c/o Medical Discoveries, Inc., 1338 S. Foothill Drive, #266, Salt Lake City, Utah 84108.
- (b) For purposes of this table, shares are considered to be beneficially owned if the person directly or indirectly has the sole or shared power to vote or direct the voting of the securities or the sole or shared power to dispose of or direct the disposition of the securities. Shares are also considered beneficially owned if a person has the right to acquire the beneficial ownership of the shares within 60 days of November 4, 2004. Unless otherwise indicated in these footnotes, each shareholder has sole voting and investment power with respect to the shares beneficially owned.
- (c) Includes 16,000,000 shares that may be acquired upon the exercise of currently exercisable stock options.
- (d) Includes 750,000 shares that may be acquired upon the exercise of currently exercisable stock options.
- (e)

Includes 16,750,000 shares that may be acquired upon the exercise of currently exercisable stock options and warrants.

DESCRIPTION OF SECURITIES

The following description of our authorized capital stock is subject to the detailed provisions of our Articles of Incorporation. Our Articles of Incorporation are included as Exhibit 2.1 to the registration statement.

The aggregate number of shares of capital stock authorized for issuance by our Articles of Incorporation is 300,000,000, of which 250,000,000 are shares of common stock, no par value, and 50,000,000 are shares of preferred stock, no par value.

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Common Stock.

As of November 4, 2004, there were 104,581,669 shares of common stock issued and outstanding and 1,435 stockholders of record.

Dividend Rights. We have never declared or paid any cash dividends on our voting ordinary shares. Any future payment of dividends will be made at the discretion of our Board of Directors based upon conditions then existing, including earnings, financial condition and capital requirements as well as such economic and other conditions as our Board of Directors may deem relevant. Our By-Laws provide that the Board of Directors may, from time to time declare, and we may pay dividends on our outstanding shares in the manner and upon the terms and conditions provided by law.

Voting. Holders of our common stock are entitled to cast one vote in person or by proxy for each share of such common stock standing in his name on the stock transfer records of the Corporation. No shareholder has the right to cumulate votes in the election of directors. Currently, there are three members on our Board of Directors.

Dissolution Rights. In the event of any liquidation, dissolution or winding up of the affairs of the Company, after any preferential amount with respect to the Preferred Stock has been paid or reserved, the holders of Common Stock and the holders of any series of Preferred Stock entitled to participate in the distribution of assets are entitled to receive the net assets of the Company.

Preemptive Rights. There are no preemptive rights authorized by our Articles of Incorporation or our By-Laws.

Redemption. There are no redemption provisions applicable to our common stock.

Certain Provisions of the Articles of Incorporation. Our Articles of Incorporation provide that we may indemnify and advance expenses to its directors, officers, employees, fiduciaries or agents and to any person who is or was serving at the Corporation's request as a director, officer, partner, trustee, employee, fiduciary or agent of another domestic or foreign corporation or other person or of an employee benefit plan (and their respective estates or personal representatives) to the fullest extent as from time to time permitted by Utah law.

Preferred Stock.

As of November 4, 2004, there were 12,000 shares of Series A Convertible Preferred Stock issued and outstanding and another 30,000 shares pending issuance pursuant to a contingent subscription agreement.

Dividend Rights. The holders of Series A preferred stock are entitled to a dividend preference over other classes of capital stock.

Voting. The Series A preferred stock is non-voting.

Dissolution Rights. In the event of any liquidation, dissolution or winding up of the affairs of the Company, the holders of Series A preferred stock are entitled to a return of their original investment before the holders of Common Stock and the holders of any other series of Preferred Stock are entitled to receive the net assets of the Company.

Other Preferred Stock. Our Articles of Incorporation authorize the issuance of Preferred Stock in one or more series, from time to time, by the Board of Directors without further vote of the shareholders, except as may be provided for under applicable law or the rules of any stock exchange or other market system on

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which the preferred stock may then be listed or traded. The rights of the Board of Directors to designate and issue specific series of Preferred Stock will include, without limitation, the right to determine or designate the following with respect to each series:

The distinctive designation and number of shares comprising such series, which number may (except where otherwise provided by the Board of Directors in creating such series) be increased or decreased (but not below the number of shares then outstanding) from time to time by like action of the Board of Directors;

The dividend rate of such series, the conditions and times upon which such dividends shall be payable, the relation which such dividends shall bear to the dividends payable on any other class or classes of stock or series thereof, or on the other series of the same class, and whether dividends shall be cumulative or noncumulative;

The conditions upon which the shares of such series shall be subject to redemption by the Company and the times, prices and other terms and provisions upon which the shares of the series may be redeemed;

Whether or not the shares of the series shall be subject to the operation of retirement or sinking fund provisions to be applied to the purchase or redemption of such shares and, if such retirement or sinking fund be established, the annual amount thereof and the terms and provisions relative to the operation thereof;

Whether or not the shares of the series shall be convertible into or exchangeable for shares of any other class or classes, with or without par value, or of any other series of the same class and, if provision is made for conversion or exchange, the times, prices, rates, adjustments and other terms and conditions of such conversion or exchange;

Whether or not the shares of the series shall have voting rights, in addition to the voting rights provided by law, and, if so, the terms of such voting rights;

The rights of the shares of the series in the event of voluntary or involuntary liquidation, dissolution or upon distribution of assets of the Company; and

Any other designations, preferences, limitations and relative rights of the shares of such series, as the Board of Directors may deem advisable.

LIMITATION OF LIABILITY AND INDEMNIFICATION

Our Articles of Incorporation provide that we will indemnify and advance expenses to our directors, officers, employees, fiduciaries or agents and to any person who is or was serving at our request as a director, officer, partner, trustee, employee, fiduciary or agent of another domestic or foreign corporation or other person or of an employee benefit plan (and their respective estates or personal representatives) to the fullest extent as from time to time permitted by Utah law. The personal liability of our directors and officers to us or our shareholders, or to any third person, will be eliminated or limited to the fullest extent as from time to time permitted by Utah law.

Our Bylaws provide that we shall indemnify any director or officer if a determination has been made that the director or officer acted in good faith, he or she reasonably believed that his or her conduct was in, or not opposed to, the Company's best interests. The Bylaws provide that we shall not indemnify a director or officer if the director or officer, in connection with any proceeding by or in the right of the Company in which he or she was adjudged liable to the Company or any other proceeding he or she was adjudged liable on the basis that he or she derived an improper benefit.

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Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the Act) may be permitted to directors, officers and controlling persons of the small business issuer pursuant to the foregoing provisions, or otherwise, the small business issuer has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable.

RELATED PARTY TRANSACTIONS

At September 30, 2004, we had accounts payable to our President and CEO totaling \$879,136 for services performed and costs incurred in behalf of the Company. Also at September 30, 2004, we had an account payable to our bookkeeper of \$91,161. We had notes payable to our stockholders aggregating \$529,917 at September 30, 2004. Accrued interest payable recorded on these notes at September 30, 2004 was approximately \$399,233.

DESCRIPTION OF BUSINESS

Medical Discoveries, Inc. was incorporated on November 20, 1991 as a Utah corporation and maintains its principal offices at 1338 S. Foothill Drive, #266, Salt Lake City, Utah 84108. Our telephone number is (801) 582-9583. We are a development-stage bio-pharmaceutical company engaged in the research, validation, development and ultimate commercialization of a patented anti-infective technology. Our electrolyzed solution of free radicals represents a novel approach to treating our initial target indications, Cystic Fibrosis and HIV. We plan in the near future to conclude our pre-clinical work and enter the clinic in our initial target indication.

Our product, called MDI-P, appears to have the ability to destroy certain viruses, bacteria and fungi without any associated toxicity both in animals and in cell-based assays. We are committed to the development of MDI-P as an anti-infective therapeutic product for in-vitro and in-vivo applications. Recently we announced that our clinical development objects have broadened to include Cystic Fibrosis as a lead indication, together with HIV. Our highest priority is to develop and commercialize MDI-P as a pharmaceutical for the treatment of HIV and Cystic Fibrosis. On November 1, 2004, we filed an Investigative New Drug application (IND) with the Food and Drug Administration (FDA) for MDI-P as a Cystic Fibrosis treatment. We plan to file an IND with the FDA for HIV in early 2005.

To date, we have not generated significant revenues from operations or realized a profit. Through September 30, 2004, we had incurred a cumulative net loss since inception of \$18,070,007. We believe we have sufficient capital to complete Phase I trials for Cystic Fibrosis. We are currently attempting to secure capital commitments to finance HIV clinical trials, determine additional potential indications for MDI-P, and to otherwise continue research and testing of our technologies in order to secure required approvals to bring products to market. In that we are a development stage company, we will increasingly require additional funding to continue the development of our technology and to finance submittal of our testing and trials to the appropriate regulatory agencies in order to secure approvals for product development and sales.

Status of Publicly Announced Reports. On August 4, 2004, we announced that our clinical development objectives have been broadened to include Cystic Fibrosis (CF) as a lead indication, together with HIV. The decision to include CF as a co-lead indication for MDI-P found its genesis in the third in a series of pre-clinical research reports from Dr. Emil Chi, Chairman of the Department of Histopathology at the University of Washington Medical School. This trial, the results of which were announced on May 20, 2004, studied MDI-P as a potential therapeutic agent for the treatment of the symptoms of CF. Results from this study showed that, 48 hours after treatment, MDI-P-treated CF-like mice lungs evidenced: a) a 60% reduction in mucus secretion; b) a 49% reduction in white blood cellular infiltration; and c) a 42% reduction in lung edema, as contrasted with untreated CF-like mice. In MDI-P-treated mice, the associated level of lung hemorrhage was reduced by 39%, the level of neutrophil lung infiltration was reduced by

49%, and eosinophil lung infiltration was reduced by 86%, as contrasted with untreated CF-

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like mice. The 100% MDI-P solution provided a 100% host-sparing effect against this fatal CF-like condition. No overt signs of toxicity were found in the primary organs (lungs, liver, spleen, kidneys, brain) of mice treated with MDI-P.

On August 10, 2004, we announced our receipt of a pharmacokinetics (PK) report, which studied the processes of bodily absorption, distribution, metabolism, and excretion (ADME) of in rabbits. Pharmacokinetics describes the time course of drug concentrations in plasma (and sometimes in other fluids and tissues) resulting from a particular dosing regimen. This study indicates that MDI-P has an average half-life in-vivo of 17.3 minutes, within a range of 10-20 minutes. Compared with most drugs, where the PK half-life thresholds typically range from many hours to days, this indicates that MDI-P's pathogen-killing activity is compressed within very short timeframes. Furthermore, because toxicity is frequently associated with long half-lives of drug residues in the liver, heart, brain and other vital organs, the truncated half-life of MDI-P has very favorable characteristics associated with lower toxicity profiles.

On August 17, 2004, we announced our receipt of a chronic toxicity study of MDI-P. Chronic toxicity studies test maximum dosages over longer timeframes in order to establish safety parameters for human usage and are required for any IND filings the Company makes. This study, when combined with our recently completed large mammal toxicology study, indicates that MDI-P is safe for use in humans under ICH guidelines, and appears non-toxic for use in human clinical trials. This report is consistent with the report we received on July 15, 2004, which was a large mammal toxicity report for MDI-P. The study found no sign of any toxicity from MDI-P in the anatomy, behavior, clinical chemical, hematological, or histopathological measures of adverse events.

On September 23, 2004, we reached an agreement with Dr. Henry R. Thompson, Director of the Cystic Fibrosis Program Therapeutics Center at Boise, Idaho's Cystic Fibrosis Clinic, located in St. Luke's Health Center, to serve as Project Manager and Principal Investigator for MDI's Phase I trials in late-term adult Cystic Fibrosis (CF) patients.

On October 6, 2004, we announced our receipt of the last in a series of research reports required by the FDA for the company's submission of an IND application in the fourth quarter for MDI-P in treating Cystic Fibrosis. The report focused on the use of MDI-P as an adjunct therapy to Tobramycin in pulmonary infection of juvenile New Zealand rabbits. The acute study, encompassing 25 rabbits in various study arms including saline control, showed that no inhibitory effects as a result of MDI-P occurred in rabbits also given Tobramycin, when administered intra-nasally in sequence with intra-nasal Tobramycin. When applied alone, Tobramycin showed satisfactory reduction in the extent of *Pseudomonas aeruginosa* pulmonary infection, as compared with saline control animals, and measured by bronchoalveolar lavage analysis of *Pseudomonas aeruginosa* infection from the rabbit lungs. When applied in sequence, both drugs also produced satisfactory reductions in infection.

Patents. Our patents and resulting intellectual properties now span more than a decade of research and development. We hold eight United States Patents, two Japanese patents and a Mexican patent on our core technologies. The US Patents are identified and have been awarded by the U.S. Patent Office under the following Notifications:

Patent No. 5,334,383

Electrically Hydrolyzed Salines As In Vivo Microbicides For Treatment Of
Cardiomyopathy And Multiple Sclerosis,

Patent No. 5,507,932

Apparatus For Electrolyzing Fluids,

Patent No. 5,560,816

Method For Electrolyzing Fluids,

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Patent No. 5,622,848

Electrically Hydrolyzed Saline Solutions As Microbicides For In Vitro Treatment Of Contaminated Fluids Containing Blood,

Patent No. 5,674,537

An Electrolyzed Saline Solution Containing Concentrated Amounts Of Ozone And Chlorine Species,

Patent No. 5,731,008

Electrically Hydrolyzed Salines As Microbicides,

Patent No. 6,007,686

System For Electrolyzing Fluids For Use As Antimicrobial Agents,

Patent No. 6,117,285

System For Carrying Out Sterilization Of Equipment,

Government Regulation. Our use of MDI-P in the treatment of HIV, Cystic Fibrosis and for other human or non-human uses is subject to extensive regulation by United States and foreign governmental authorities. In particular, pharmaceutical treatments are subject to rigorous pre-clinical and clinical testing and other approval requirements by the FDA in the United States under the federal Food, Drug and Cosmetic Act and by comparable agencies in most foreign countries. Various federal, state and foreign statutes also govern or influence the manufacture, labeling, storage, record keeping, and marketing of such products. Pharmaceutical manufacturing facilities are also regulated by state, local, and other authorities. Obtaining approval from the FDA and other regulatory authorities for a new drug or treatment may take several years and involve substantial expenditures. Moreover, ongoing compliance with these requirements can require the expenditure of substantial resources. Difficulties or unanticipated costs may be encountered by us in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing MDI-P.

Other product applications which may be developed for MDI-P could require regulatory approvals from other governmental agencies, such as the Environmental Protection Agency pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act and the Toxic Substances Control Act, and other present and potential federal, state and local regulations. These approvals can involve considerable money, time and effort and do not, in and of themselves, guarantee any commercial success for the product applications approved.

For more information about the governmental regulation with respect to our business, you should refer to the Risk Factors section of this prospectus.

Research and Development Expenditures. Our research and development efforts consist primarily of pre-clinical development of and preparing applications for regulatory approvals for MDI-P. During the fiscal year ended December 31, 2003, we spent \$100,423 on research and development of MDI-P. For the During fiscal 2002, we had no research and development expenditures due to lack of funds. From inception through September 30, 2004, we have recorded \$3,361,129 in research and development expenses.

Employees. We currently have no employees. Judy M. Robinett, MDI's President and CEO, is an independent contractor. We have engagements with a number of consultants for communications, investor relations, website development, accounting and other services. Over the past several years, our priority has been the advancement of our therapeutic technology through pre-clinical development and all capital resources have been devoted in that direction. At such time as capital resources permit, we will hire a full-time staff of employees.

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Reports to Security Holders. We have filed with the Securities and Exchange Commission, a Registration Statement on Form SB-2 under the Securities Act of 1933 with respect to the common stock offered by this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. For further information with respect to us and the common stock offered by this prospectus, reference is made to the registration statement and the exhibits and schedules filed as a part of the registration statement. Additionally, we file annual, quarterly and current reports, proxy statements and other documents with the Securities and Exchange Commission. You may read and copy any materials we file with the Securities and Exchange Commission at the Securities and Exchange Commission's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the Securities and Exchange Commission at 1-800-SEC-0330. The Securities and Exchange Commission also maintains a World Wide Web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Securities and Exchange Commission. The address of the Securities and Exchange Commission's Web site is <http://www.sec.gov>. You may also find more information about us, and any recent developments at our Web site at <http://medicaldiscoveries.com>.

MANAGEMENT'S PLAN OF OPERATION

Plan of Operation

Our Business and Strategy. Our highest priority is to complete our pre-clinical development, file an IND and begin the clinical development of MDI-P as a therapeutic regimen for the treatment of HIV and Cystic Fibrosis. On November 1, 2004, we filed an Investigative New Drug application (IND) with the Food and Drug Administration (FDA) for MDI-P as a Cystic Fibrosis treatment. We plan to file an IND with the FDA for HIV in early 2005.

Our second priority is the completion of a longer-range strategic business plan in which we utilize the intellectual property and analysis that has been developed over the last decade and determine an appropriate direction for future development of the business over the next five years. Some of the issues we will be dealing with will include:

How to provide shareholders with liquidity, transparency and a return on investment

A decision on whether or when to relocate the Company or maintain its current location

A decision as to what staffing requirements the Company will have, when to bring additional permanent staff on board and the best route for recruiting those staff members

Additional target indications and the formulation and development process required for those target indications

A comprehensive intellectual property strategy

A potential partnering strategy

Projected long-term financing requirements

Liquidity and Capital Resources. As of September 30, 2004, we had \$434,455 in cash and had a working capital deficit of \$2,825,710. Since our inception, we have financed our operations primarily through private sales of equity and the issuance of convertible and non-convertible notes. We will require significant additional funding to continue to develop, research and seek regulatory approval of our technologies. In addition, we cannot survive, even in the near term, without immediate additional funding for operations. We do not currently generate any cash from operations and have no credit facilities in

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place or available. Currently, we are funding operations through issuances of private equity and short-term loans from shareholders and others.

We are seeking to raise substantial additional funds in private stock offerings in order to meet our near-term and mid-term funding requirements. While we are optimistic that we can raise such funds, we have not always been successful in doing so in recent years. Given that we are still in an early development stage and do not have revenues from operations, raising equity financing is difficult. In addition, any additional equity financing will have a substantial dilutive effect to our current shareholders.

We believe we have sufficient capital on hand to complete Phase I clinical trials for Cystic Fibrosis once the FDA approves our IND. We also believe we have sufficient capital to file our IND for HIV.

Once an IND application for HIV is submitted, and assuming it is approved, we will need additional capital to initiate Phase I clinical trials. We estimate the cost to complete Phase I and Phase II clinical trials to be several million dollars per indication and the cost to complete Phase III testing and obtain approval of an NDA to be in the tens of millions of dollars per indication.

While our ability to obtain financing may improve in the event our IND application is approved, we cannot give assurances that we will have the access to the significant capital required to take a drug through regulatory approvals and to market. We may seek a partner in the global pharmaceutical industry to help us co-develop, license, or even purchase some or all of our technologies.

Management is basing this discussion and analysis of our financial condition and results of operations on our consolidated financial statements. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our critical accounting policies and estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

DESCRIPTION OF PROPERTY

We do not currently own or lease any real property. Currently, we operate out of the President and CEO's home office. We do not pay any rent to the President and CEO. Over the past several years, our priority has been the advancement of our therapeutic technology through pre-clinical development and all capital resources have been devoted in that direction. At such time as capital resources permit, we will lease dedicated office and laboratory space.

MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information. Our common stock is traded on the NASD OTC Bulletin Board under the symbol MLSC. The following table sets forth the range of bid quotations for our common stock for the quarters indicated according to data provided by The NASDAQ Stock Market, Inc. Such quotations reflect inter-dealer prices, without retail mark-ups, markdowns or commissions, and may not represent actual transactions.

FISCAL YEAR ENDED DECEMBER 31, 2003

| | HIGH BID | LOW BID |
|----------------|---------------------|--------------------|
| First Quarter | \$0.085 | \$0.035 |
| Second Quarter | 0.090 | 0.055 |
| Third Quarter | 0.075 | 0.045 |
| Fourth Quarter | 0.395 | 0.060 |

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| FISCAL YEAR ENDED DECEMBER 31, 2002 | HIGH BID | LOW BID |
|-------------------------------------|-------------|------------|
| First Quarter | \$0.250 | \$0.095 |
| Second Quarter | 0.450 | 0.075 |
| Third Quarter | 0.105 | 0.035 |
| Fourth Quarter | 0.075 | 0.045 |

Shareholders. The approximate number of shareholders of record of our common stock as of November 4, 2004 was 1,435. This number does not include shareholders whose shares are held in securities position listings.

Dividends. We have never paid any cash dividends on our common stock and do not anticipate paying dividends in the foreseeable future. We presently intend to retain any future earnings for financing our growth and expansion.

Securities Authorized For Issuance Under Equity Compensation Plans. The following table contains information regarding our equity compensation plans as of December 31, 2003.

| 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 the First Column) |
|--|---|---|--|
| Equity compensation plans approved by security holders (1) | 3,283,000 | \$ 0.13 | -0- |
| Equity compensation plans not approved by security holders (2) | <u>15,300,000</u> | \$ 0.02 | <u>4,700,000</u> |
| Total | 18,583,000 | \$ 0.04 | 4,700,000 |

(1) Consists of the 1993 Incentive Plan.

(2) Consists of the 2002 Stock Incentive Plan. A maximum of 20,000,000 shares of our common stock are authorized to be issued under the plan. This number is subject to adjustment in the case of certain changes in our capital structure. Moreover, shares subject to expired, terminated or canceled options or performance-based awards and shares forfeited to or repurchased by us will again be available for issuance under the plan. The plan is administered by the Board of Directors.

The plan provides for grants of incentive stock options, nonstatutory stock options, stock bonuses, restricted stock and performance-based awards to selected employees, officers, directors, non-employee agents, consultants and independent contractors of the Company or any parent or subsidiary of the Company. The plan will remain in effect

until all shares available for issuance under the plan have been issued and all restrictions on outstanding shares have lapsed. The Board of Directors may suspend or terminate the plan early, however, except with respect to outstanding options, restricted stock and performance-based awards.

Options awarded under the plan are subject to vesting requirements. Generally, options awarded under the plan have a term of ten years, subject to acceleration in the event of termination, death or disability or a change of control of the Company, and the exercise price is equal to the fair market value on the date of grant. Shares of restricted stock are also subject to vesting requirements. Performance-based awards are intended to qualify as qualified performance-based compensation under Section 162(m) of the Internal Revenue Code.

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Unregistered Sales of Securities. We sold the following unregistered securities in the past three years. None of the sales involved an underwriter. We believe these sales were exempt from registration pursuant to Section 4(2) of the Securities Act of 1933 because the sales did not involve a public offering.

On September 9, 2004 and November 4, 2004, we completed \$243,880 and \$680,302, respectively, in equity financing through subscriptions for a total of 7,247,136 shares of restricted common stock by private investors.

During the quarter ended June 30, 2004, we sold 4,900,000 shares of restricted common stock at \$0.04 per share.

During the quarter ended March 31, 2004, we sold 11,037,600 shares of restricted common stock at \$0.04 per share.

On October 8, 2003 through January 26, 2004, we sold 26,862,500 shares of restricted common stock at \$0.04 per share to various private investors pursuant to a private placement, further terms of which are disclosed in Form D filed with the Commission.

\$195,000 secured promissory note dated February 20, 2003, bearing interest at the rate of 12%.

\$25,000 secured promissory note dated October 25, 2002, bearing interest at the rate of 15%, 12% of which is payable in cash and 3% of which is payable in common stock at a rate equal to the 15-day average market price determined at the date of maturity.

\$125,000 secured promissory note dated October 24, 2002, bearing interest at the rate of 15%, 12% of which is payable in cash and 3% of which is payable in common stock at a rate equal to the 15-day average market price determined at the date of maturity. This note has subsequently been retired.

\$50,000 secured promissory note dated October 24, 2002, bearing interest at the rate of 15%, 12% of which is payable in cash and 3% of which is payable in common stock at a rate equal to the 15-day average market price determined at the date of maturity.

\$50,000 unsecured convertible promissory note dated February 8, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.06 per share. This note was subsequently refinanced with a 15% interest rate.

\$50,000 unsecured convertible promissory note dated April 8, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.06 per share. This note was subsequently refinanced with a 15% interest rate.

\$50,000 unsecured convertible promissory note dated July 12, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.06 per share. This note was subsequently refinanced with a 15% interest rate.

\$50,000 unsecured convertible promissory note dated April 21, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.125 per share. This note was subsequently refinanced with a conversion rate of \$0.06 per share.

\$55,000 unsecured convertible promissory note dated February 22, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.125 per share. This note was subsequently

refinanced with a conversion rate of \$0.06 per share.

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On December 20, 2001, the Company sold 160,000 shares of common stock to Ferret Resources at \$0.15 per share for total proceeds of \$24,000.

EXECUTIVE COMPENSATION

Director Compensation. Directors who are not officers of the Company do not receive any regular compensation for their service on the board of directors, and directors who are officers of the Company receive no additional compensation for their service as a director of the Company. Directors are entitled to receive compensation for services unrelated to their service as a director to the extent that they provide such unrelated services to the Company. See Related Party Transactions above.

Directors of the Company and its subsidiaries are entitled to participate in the Company's 2002 Stock Incentive Plan. During the year ended December 31, 2003, the Company granted options to purchase 300,000 shares of its Common Stock to its independent directors and granted options to purchase 14,500,000 shares of its Common Stock to its director who is also an officer of the Company.

Summary Compensation Table. The following table sets forth certain summary information concerning compensation paid by the Company to the President and Chief Executive Officer (the "Named Executive Officer") for the years ended December 31, 2003, 2002, and 2001. No other executive officer of the Company received a total annual salary and bonus in excess of \$100,000 during the year ended December 31, 2003.

| Name and Principal Position(s) | Year | Salary \$(a) | Bonus (\$) | Securities Underlying Options (#) |
|--------------------------------|------|-----------------|------------|--|
| Judy M. Robinett | 2003 | 220,000 | | 14,500,000 |
| President and Chief | 2002 | 193,336 | 300,000 | 500,000 |
| Executive Officer | 2001 | 180,000 | 4,500(b) | 1,000,000 |

(a) Represents total amounts accrued for the period, whether or not actually paid. As of December 31, 2003, the Company had a total payable to Ms. Robinett of \$785,000. During the year ended December 31, 2003, Ms. Robinett was actually paid \$60,000 by the Company.

(b) Represents value of 30,000 shares of common stock of the Company granted on April 20, 2001, based on the closing price of the stock that day (\$0.15).

The following table sets forth certain summary information concerning options granted to the Named Executive Officer for the year ended December 31, 2003.

Options Granted in Last Fiscal Year

| Number of Securities | Percent of Total Options Granted to Employees in | Exercise Price | Market Price on Date of Grant | Expiration |
|-------------------------|---|-------------------|--|------------|
|-------------------------|---|-------------------|--|------------|

| Name and Principal Position(s) | Underlying Options | Fiscal Year | (\$/sh) | (\$/sh) | Date |
|---------------------------------------|-------------------------------|--------------------|----------------|----------------|-------------|
| Judy M. Robinett | 500,000 | 100% | .01 | .05 | 12/31/12 |
| President and Chief Executive Officer | 14,000,000 | 100% | .02 | .075 | 10/27/13 |

The following table sets forth certain summary information concerning options exercised by the Named Executive Officer during 2003, and the value of options held by such person at December 31, 2003 measured in terms of the average sale price reported for Common Stock on December 31, 2003 (\$.1475, as reported by OTC Bulletin Board).

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| Name | Shares Acquired on Exercise (#) | Value Realized (\$) | Number of Securities Underlying Unexercised Options at December 31, 2003 (#) Exercisable/Unexercisable | Value of Unexercised In-the-Money Options at December 31, 2003 (\$) Exercisable/Unexercisable |
|------------------|--|--------------------------------|---|--|
| Judy M. Robinett | | | 16,000,000/0 | 2,060,000/0 |

The Company has never granted any freestanding stock appreciation rights.

EXPERTS

Our financial statements included in this prospectus as of December 31, 2003 and for each of the two years then ended have been audited by Eide Bailey LLP (f/k/a Balukoff Lindstrom & Co., P.A.), independent certified public accountants, as stated in their report appearing elsewhere in this prospectus and in the registration statement, and are included in reliance upon that report given upon the authority of that firm as experts in accounting and auditing.

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Item 7. *Financial Statements*

FINANCIAL STATEMENT TABLE OF CONTENTS

[TO BE ADDED BY PRE-EFFECTIVE AMENDMENTS WITHIN 10 DAYS]

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No dealer, salesman or other person is authorized to give any information or to make any representations not contained in this prospectus in connection with the offer made hereby, and, if given or made, such information or representations must not be relied upon as having been made by us.

This prospectus does not offer to sell or buy any securities in any jurisdiction where it is unlawful.

The information in this prospectus is current as of the date hereof. Neither the delivery of this prospectus nor any sale made hereunder shall create any implication that the information contained herein is correct as of any time subsequent to the date hereof.

**113,511,158 shares common
stock**

Medical Discoveries, Inc.

Prospectus

December 22, 2004

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PART II
INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 24. Indemnification of Officers and Directors

Part 9 of the Utah Business Corporation Act empowers a corporation to indemnify its directors and officers, advance or reimburse expenses to its directors and officers, and to purchase insurance with respect to liability arising out of their capacity or status as directors and officers. Such indemnification is permissible in certain situations and mandatory in other situations. In cases where indemnification or advancing or reimbursing of expenses is permissible, authorization and a determination of qualification must be made in each specific case. The Registrant's articles of incorporation and bylaws provide for the indemnification of its directors and officers to the fullest extent permitted by law.

Item 25. Other Expenses of Issuance and Distribution

The following table sets forth the various expenses of the offering, sale and distribution of the offered securities being registered pursuant to this registration statement (the Registration Statement). We will bear all of the expenses listed below. All of the amounts shown are estimates except the SEC registration fees.

| Item | Amount |
|--|--|
| SEC registration fees | \$ 2,760.01 |
| Accounting and legal fees and expenses | \$ 35,000 |
| Printing expenses | \$ 5,000 |
| Miscellaneous expenses | \$ 1,000 |
| | <hr/> |
| Total: | \$43,760.01 |
| | <hr style="border-top: 3px solid black;"/> |

Item 26. Recent Sales of Unregistered Securities

We sold the following unregistered securities in the past three years. None of the sales involved an underwriter. We believe these sales were exempt from registration pursuant to Section 4(2) of the Securities Act of 1933 because the sales did not involve a public offering.

On September 9, 2004 and November 4, 2004, we completed \$243,880 and \$680,302, respectively, in equity financing through subscriptions for a total of 7,247,136 shares of restricted common stock by private investors.

During the quarter ended June 30, 2004, we sold 4,900,000 shares of restricted common stock at \$0.04 per share.

During the quarter ended March 31, 2004, we sold 11,037,600 shares of restricted common stock at \$0.04 per share.

On October 8, 2003 through January 26, 2004, we sold 26,862,500 shares of restricted common stock at \$0.04 per share to various private investors pursuant to a private placement, further terms of which are disclosed in

Form D filed with the Commission.

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\$195,000 secured promissory note dated February 20, 2003, bearing interest at the rate of 12%.

\$25,000 secured promissory note dated October 25, 2002, bearing interest at the rate of 15%, 12% of which is payable in cash and 3% of which is payable in common stock at a rate equal to the 15-day average market price determined at the date of maturity.

\$125,000 secured promissory note dated October 24, 2002, bearing interest at the rate of 15%, 12% of which is payable in cash and 3% of which is payable in common stock at a rate equal to the 15-day average market price determined at the date of maturity. This note has subsequently been retired.

\$50,000 secured promissory note dated October 24, 2002, bearing interest at the rate of 15%, 12% of which is payable in cash and 3% of which is payable in common stock at a rate equal to the 15-day average market price determined at the date of maturity.

\$50,000 unsecured convertible promissory note dated February 8, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.06 per share. This note was subsequently refinanced with a 15% interest rate.

\$50,000 unsecured convertible promissory note dated April 8, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.06 per share. This note was subsequently refinanced with a 15% interest rate.

\$50,000 unsecured convertible promissory note dated July 12, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.06 per share. This note was subsequently refinanced with a 15% interest rate.

\$50,000 unsecured convertible promissory note dated April 21, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.125 per share. This note was subsequently refinanced with a conversion rate of \$0.06 per share.

\$55,000 unsecured convertible promissory note dated February 22, 2002, bearing interest at the rate of 18%, convertible to common stock of the Company at the rate of \$0.125 per share. This note was subsequently refinanced with a conversion rate of \$0.06 per share.

On December 20, 2001, the Company sold 160,000 shares of common stock to Ferret Resources at \$0.15 per share for total proceeds of \$24,000.

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Item 27. Exhibits

The following exhibits required by Item 601 of Regulation S-B promulgated under the Securities Act have been included with the Registration Statement as indicated below.

| Exhibit No. | Exhibit |
|--------------------|---|
| 3.1 | Amended and Restated Articles of Incorporation of the Company (filed as Exhibit 3.1 to the Company's Annual Report on Form 10-KSB for the fiscal year ended December 31, 1994, and incorporated herein by reference). |
| 3.2 | Amended Bylaws of the Company (filed as Exhibit 3.2 to the Company's Annual Report on Form 10-KSB for the fiscal year ended December 31, 1994, and incorporated herein by reference). |
| 4.1 | Series A Preferred Stock Certificate of Rights and Preferences |
| 4.2 | Amendment to Series A Preferred Stock Certificate of Rights and Preferences |
| 4.3 | Registration Rights Agreement dated October 18, 2004 among Monarch Pointe Fund, Ltd, Mercator Advisory Group, LLC and Medical Discoveries, Inc. |
| 4.4 | Registration Rights Agreement dated December 3, 2004 among Mercator Momentum Fund, LP, Mercator Momentum Fund III, LP, Mercator Advisory Group, LLC and Medical Discoveries, Inc. |
| 5.1 | Opinion of Stoel Rives LLP* |
| 10.1 | 2002 Stock Incentive Plan adopted by the Board of Directors as of July 11, 2002 (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 2002, and incorporated herein by reference). |
| 23.1 | Consent Eide Bailey LLP |
| 23.2 | Consent of Stoel Rives LLP |

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Item 28. Undertakings

The Registrant hereby undertakes:

(1) To file during any period in which offers or sales are being made, a post-effective amendment to this registration statement to:

(i) Include any prospectus required by Section 10(a)(3) of the Securities Act.

(ii) Reflect in the prospectus any facts or events that, individually or together, represent a fundamental change in the information. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement.

(iii) Include any additional or changed material information on the plan of distribution.

(2) That for determining liability under the Securities Act, to treat each post-effective amendment as a new registration statement of the securities offered, and the offering of the securities at that time to be the initial bona fide offering.

(3) To file a post-effective amendment to remove from registration any of the securities that remain unsold at the end of the offering.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

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SIGNATURES

In accordance with the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form SB-2 and authorized this registration statement to be signed on its behalf by the undersigned, in Salt Lake City, Utah, on December 22, 2004.

Medical Discoveries, Inc.

By: /s/ Judy M. Robinett
 Judy M. Robinett
 President, Chief Executive Officer and
 principal financial officer

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Judy M. Robinett his or her attorney-in-fact and agent, with full power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any or all amendments to this Registration Statement on Form SB-2, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection with this Registration Statement, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that any of said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

In accordance with the requirements of the Securities Act, this registration Statement was signed by the following persons in the capacities and on the dates stated:

| | | |
|----------------------|---|-------------------|
| /s/ Judy M. Robinett | President, Chief Executive Officer and principal financial officer | December 22, 2004 |
| Judy M. Robinett | | |
| /s/ David R. Walker | Chairman of the Board of Directors | December 22, 2004 |
| David R. Walker | | |
| /s/ Larry Anderson | Director | December 22, 2004 |
| Larry Anderson | | |

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* Filed herewith

+ [TO BE ADDED BY PRE-EFFECTIVE AMENDMENTS WITHIN 10 DAYS]