UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): October 18, 2004

MEDICAL DISCOVERIES, INC.

(Exact name of registrant as specified in charter)

Utah

0-12627

87-0407858

(State or other jurisdiction of incorporation)

(Commission File Number)

(IRS Employer Identification No.)

738 Aspenwood Lane

Twin Falls, Idaho 83301 (208) 736-1799

(Address of Principal Executive Offices and Telephone Number, Including Area Code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligations of the registrant under any of the following provisions (see General Instruction A.2. below):

□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

□ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

□ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

□ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c)

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Item 1.01 Entry into a Material Definitive Agreement.

On October 18, 2004, Medical Discoveries, Inc. (the "Company") entered into a Registration Rights Agreement dated October 18, 2004 among Monarch Pointe Fund, Ltd; Mercator Advisory Group, LLC; and the Company. The Registration Rights Agreement was entered into in connection with the sale by the Company of 12,000 shares of Series A Convertible Preferred Stock (the "Preferred Stock") of the Company and warrants to purchase 4,575,496 shares of common stock of the Company to Monarch Pointe Fund, Ltd and Mercator Advisory Group, LLC. The Registration Rights Agreement requires the Company to file a registration statement with the Securities and Exchange Commission (the "SEC") registering the shares of common stock issuable upon conversion of the Preferred Stock and exercise of the warrants. The registration statement must be filed within 30 days of the closing of the sale of the Preferred Stock and the warrants, and the registration statement must be declared effective by the SEC no later than 90 days after it is filed. A copy of the Registration Rights Agreement is attached to this report as Exhibit 4.1.

Item 3.02 Unregistered Sales of Equity Securities.

The Company has sold the following unregistered securities since June 30, 2004. None of the sales involved an underwriter. The Company believes 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.

Between June 30, 2004 and October 17, 2004, the Company sold 3,467,678 shares of restricted common stock for a total offering price of \$624,180.00.

On or about October 18, 2004, the Company sold 12,000 shares of its Preferred Stock and warrants to purchase 4,575,496 shares of common stock of the Company for a total offering price of \$1.2 million. Each share of Preferred Stock entitles the holder to convert the share of Preferred Stock 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 the Company's 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. The number of shares of common stock subject to the warrants and the exercise price are subject to equitable adjustment in connection with a stock split, stock dividend or similar transaction. The warrants at \$0.1967 per share. The number of shares of common stock subject to the warrants of 4,575,496 shares of common stock of the Company on or before the third anniversary of the issuance date of the warrants at \$0.1967 per share. The number of shares of common stock subject to the warrants at go the stock subject to the warrants and the exercise price are subject to the warrants and the exercise price are subject to equitable adjustment in connection with a stock split, stock dividend or similar transaction.

Item 7.01 Regulation FD Disclosure.

On October 20, 2004, the Company released the press release attached to this report as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(c) Exhibits.

Exhibit 4.1	Registration Rights Agreement dated October 18, 2004 among Monarch Pointe Fund, Ltd, Mercator Advisory Group, LLC and Medical		
	Discoveries, Inc.		

Exhibit 99.1 Press release issued October 20, 2004.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MEDICAL DISCOVERIES, INC.

/s/ Judy M. Robinett

Judy M. Robinett President and Chief Executive Officer

Date: October 22, 2004

INDEX TO EXHIBITS

Exhibit Number	Description of Exhibit
4.1	Registration Rights Agreement dated October 18, 2004 among Monarch Pointe Fund, Ltd, Mercator Advisory Group, LLC and Medical Discoveries Inc.
99.1	Press release issued October 20, 2004.

REGISTRATION RIGHTS AGREEMENT

AGREEMENT dated as of October 18, 2004, between MONARCH POINTE FUND, LTD. (the "Fund") and MERCATOR ADVISORY GROUP, LLC ("MAG") (the Fund and MAG are referred to individually as a "Holder" and collectively as the "Holders"), and Medical Discoveries, Inc., a Utah corporation (the "Company").

WHEREAS, the Funds have purchased, for an aggregate of \$1,200,000, an aggregate of 12,000 shares of Series A Convertible Preferred Stock (the "Series A Stock") from the Company, and have the right to cause their Series A Stock to be converted into shares of Common Stock, no par value (the "Common Stock"), of the Company, pursuant to the conversion formula set forth in the Certificate of Determination;

WHEREAS, each of Fund and MAG have acquired Warrants (together, the "Warrants") from the Company, pursuant to which the Holders have the right to purchase in the aggregate up to 4,575,496 shares of the Common Stock through the exercise of the Warrants;

WHEREAS, the Company desires to grant to the Holders the registration rights set forth herein with respect to the shares of Common Stock issuable upon the conversion of the Series A Stock and the exercise of the Warrants.

NOW, THEREFORE, the parties hereto mutually agree as follows:

REGISTRABLE SECURITIES. As used herein the terms "Registrable Security" means each of the shares of Common Stock (i) issued upon the conversion of the Series A Stock (the "Conversion Shares") or (ii) upon exercise of the Warrants (the "Warrant Shares"), provided, however, that with respect to any particular Registrable Security, such security shall cease to be a Registrable Security when, as of the date of determination that (a) it has been effectively registered under the Securities Act of 1933, as amended (the "Securities Act"), and disposed of pursuant thereto, or (b) registration under the Securities Act is no longer required for the immediate public distribution of such security. The term "Registrable Securities" means any and/or all of the securities falling within the foregoing definition of a "Registrable Security." In the event of any merger, reorganization, consolidation, recapitalization or other change in corporate structure affecting the Common Stock, such adjustment shall be made in the definition of "Registrable Security" as is appropriate in order to prevent any dilution or enlargement of the rights granted pursuant to this Section 1.

2. REGISTRATION.

(a) The Company shall file a registration statement (the "Registration Statement") with the Securities and Exchange Commission (the "SEC") within thirty (30) days after the date of this Agreement in order to register the resale of the Registrable Securities under the Securities Act. Once effective, the Company shall maintain the effectiveness of the Registration Statement until the earlier of (i) the date that all of the Registrable Securities have been sold, or (ii) the date that the Company receives an opinion of counsel to the Company that all of the Registrable Securities may be freely traded without registration under the Securities Act, under Rule 144 promulgated under the Securities Act or otherwise.

(b) The Company will initially include in the Registration Statement as Registrable Securities Twenty-Four Million (24,000,000) shares of Common Stock issuable upon conversion of the Series A Stock and the maximum number of shares of Common Stock issuable upon exercise of the Warrants.

3. COVENANTS OF THE COMPANY WITH RESPECT TO REGISTRATION.

The Company covenants and agrees as follows:

The Company shall use best efforts to cause the Registration (a) Statement to become effective with the SEC as promptly as possible and in no event more than 120 days after the date of this Agreement. If any stop order shall be issued by the SEC in connection therewith, the Company shall use best efforts to obtain promptly the removal of such order. Following the effective date of the Registration Statement, the Company shall, upon the request of any Holder, forthwith supply such reasonable number of copies of the Registration Statement, preliminary prospectus and prospectus meeting the requirements of the Securities Act, and any other documents necessary or incidental to the public offering of the Registrable Securities, as shall be reasonably requested by the Holder to permit the Holder to make a public distribution of the Holder's Registrable Securities. The obligations of the Company hereunder with respect to the Holder's Registrable Securities are subject to the Holder's furnishing to the Company such appropriate information concerning the Holder, the Holder's Registrable Securities and the terms of the Holder's offering of such Registrable Securities as the Company may reasonably request in writing.

(b) The Company shall pay all costs, fees and expenses in connection with the Registration Statement filed pursuant to Section 2 hereof including,

without limitation, the Company's legal and accounting fees, printing expenses, and blue sky fees and expenses; provided, however, that each Holder shall be solely responsible for the fees of any counsel retained by the Holder in connection with such registration and any transfer taxes or underwriting discounts, commissions or fees applicable to the Registrable Securities sold by the Holder pursuant thereto.

(c) The Company will take all actions which may be required to qualify or register the Registrable Securities included in the Registration Statement for the offer and sale under the securities or blue sky laws of such states as are reasonably requested by each Holder of such securities, provided that the Company shall not be obligated to execute or file any general consent to service of process or to qualify as a foreign corporation to do business under the laws of any such jurisdiction.

4. ADDITIONAL TERMS.

The Company shall indemnify and hold harmless the Holders and (a) each underwriter, within the meaning of the Securities Act, who may purchase from or sell for any Holder, any Registrable Securities, from and against any and all losses, claims, damages and liabilities caused by any untrue statement of a material fact contained in the Registration Statement, any other registration statement filed by the Company under the Securities Act with respect to the registration of the Registrable Securities, any post-effective amendment to such registration statements, or any prospectus included therein or caused by any omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, except insofar as such losses, claims, damages or liabilities are caused by any such untrue statement or omission based upon information furnished or required to be furnished in writing to the Company by the Holders or underwriter expressly for use therein, which indemnification shall include each person, if any, who controls any Holder or underwriter within the meaning of the Securities Act and each officer, director, employee and agent of each Holder and underwriter; provided, however, that the indemnification in this Section 4(a) with respect to any prospectus shall not inure to the benefit of any Holder or underwriter (or to the benefit of any person controlling any Holder or underwriter) on account of any such loss, claim, damage or liability arising from the sale of Registrable Securities by the Holder or underwriter, if a copy of a subsequent prospectus correcting the untrue statement or omission in such earlier prospectus was provided to such Holder or underwriter by the Company prior to the subject sale and the subsequent prospectus was not delivered or sent by the Holder or underwriter to the purchaser prior to such sale and provided further, that the Company shall not be obligated to so indemnify any Holder or any such underwriter or other person referred to above unless the Holder or underwriter or other person, as the case may be, shall at the same time indemnify the Company, its directors, each officer signing the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act, from and against any and all losses, claims, damages and liabilities caused by any untrue statement of a material fact contained in the Registration Statement, any registration statement or any prospectus required to be filed or furnished by reason of this Agreement or caused by any omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, insofar as such losses, claims, damages or liabilities are caused by any untrue statement or omission based upon information furnished in writing to the Company by the Holder or underwriter expressly for use therein.

(b) If for any reason the indemnification provided for in the preceding section is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any loss, claim, damage, liability or expense referred to therein, then the indemnifying party, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by the indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the

relative fault of the indemnified party and the indemnifying party, as well as any other relevant equitable considerations.

(c) Neither the filing of a Registration Statement by the Company pursuant to this Agreement nor the making of any request for prospectuses by the Holder shall impose upon any Holder any obligation to sell the Holder's Registrable Securities.

(d) Each Holder, upon receipt of notice from the Company that an event has occurred which requires a Post-Effective Amendment to the Registration Statement or a supplement to the prospectus included therein, shall promptly discontinue the sale of Registrable Securities until the Holder receives a copy of a supplemented or amended prospectus from the Company, which the Company shall provide as soon as practicable after such notice.

(e) If the Company fails to keep the Registration Statement referred to above continuously effective during the requisite period, then the Company shall, promptly upon the request of any Holder, use best efforts to update the Registration Statement or file a new registration statement covering the Registrable Securities remaining unsold, subject to the terms and provisions hereof.

(f) Each Holder agrees to provide the Company with any information or undertakings reasonably requested by the Company in order for the Company to include any appropriate information concerning the Holder in the Registration Statement or in order to promote compliance by the Company or the Holder with the Securities Act.

(g) The Company agrees that it shall cause each of its directors, officers and shareholders owning ten percent (10%) or more of the Company's outstanding Common Stock to refrain from selling any shares of the Company's Common Stock until the Registration Statement has been declared effective.

(h) Each Holder, on behalf of itself and its affiliates, hereby covenants and agrees not to, directly or indirectly, offer to "short sell", contract to "short sell" or otherwise "short sell" any securities of the Company, including, without limitation, shares of Common Stock that will be received as a result of the conversion of the Series A Stock or the exercise of the Warrants.

5. GOVERNING LAW. The Registrable Securities will be, if and when issued, delivered in California. This Agreement shall be deemed to have been made and delivered in the State of California and shall be governed as to validity, interpretation, construction, effect and in all other respects by the internal substantive laws of the State of California, without giving effect to the choice of law rules thereof.

6. AMENDMENT. This Agreement may only be amended by a written instrument executed by the Company and the Holders.

7. ENTIRE AGREEMENT. This Agreement constitutes the entire agreement of the parties hereto with respect to the subject matter hereof, and supersedes all prior

agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

8. EXECUTION IN COUNTERPARTS. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same document.

9. NOTICES. All communications hereunder shall be in writing and shall be hand delivered, mailed by first-class mail, couriered by next-day air courier or by facsimile at the addresses set forth below.

If to the Holders,	Mercator Advisory Group, LLC Mercator Momentum Fund, L.P. Mercator Momentum Fund III, L.P. Monarch Pointe Fund, Ltd. 555 South Flower Street, Suite 4500 Los Angeles, CA 90071 Attention: David Firestone
With a copy to Sheppard M	ullin Richter & Hampton LLP 333 South Hope Street 48th Floor Los Angeles, CA 90071-1448 Telephone No.: (213) 620-1780 Facsimile No.: (213) 620-1398 Attention: David C. Ulich
If to the Company,	Medical Discoveries, Inc. 738 Aspenwood Lane Twin Falls, Idaho 83301 Telephone No.: (208) 736-1799 Facsimile No.: (208) 733-5877 Attention: Judy M. Robinett
a copy to	Stoel Rives LLP 101 S. Capitol Blvd., Suite 1900 Boise, Idaho 83702 Telephone No.: (208) 389-9000 Facsimile No.: (208) 389-9040 Attention: Stephen R. Drake

With a

All such notices and communications shall be deemed to have been duly given: (i) when delivered by hand, if personally delivered; (ii) five business days after being deposited in the mail, postage prepaid, if mailed certified mail, return receipt requested; (iii) one business day after being timely delivered to a next-day air courier guaranteeing overnight delivery; (iv) the date of transmission if sent via facsimile to the facsimile number as set forth in this Section or the signature page hereof prior to 4:00 p.m. on a business day, or (v) the business day following the date of transmission if sent via facsimile at

a facsimile number set forth in this Section or on the signature page hereof after 4:00 p.m. or on a date that is not a business day. Change of a party's address or facsimile number may be designated hereunder by giving notice to all of the other parties hereto in accordance with this Section.

10. BINDING EFFECT; BENEFITS. Any Holder may assign its rights hereunder. This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, legal representatives, successors and assigns. Nothing herein contained, express or implied, is intended to confer upon any person other than the parties hereto and their respective heirs, legal representatives and successors, any rights or remedies under or by reason of this Agreement.

11. HEADINGS. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Agreement.

12. SEVERABILITY. Any provision of this Agreement which is held by a court of competent jurisdiction to be prohibited or unenforceable in any jurisdiction(s) shall be, as to such jurisdiction(s), ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction.

13. JURISDICTION. Each of the parties irrevocably agrees that any and all suits or proceedings based on or arising under this Agreement may be brought only in and shall be resolved in the federal or state courts located in the City of Los Angeles, California and consents to the jurisdiction of such courts for such purpose. Each of the parties irrevocably waives the defense of an inconvenient forum to the maintenance of such suit or proceeding in any such court. Each of the parties further agrees that service of process upon such party mailed by first class mail to the address set forth in Section 9 shall be deemed in every respect effective service of process upon such party to serve process in any other manner permitted by law. Each of the parties agrees that a final non-appealable judgment in any such suit or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on such judgment or in any other lawful manner.

14. ATTORNEYS' FEES AND DISBURSEMENTS. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party or parties shall be entitled to receive from the other party or parties reasonable attorneys' fees and disbursements in addition to any other relief to which the prevailing party or parties may be entitled.

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IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto as of the date first above written.

MEDICAL DISCOVERIES, INC.

HOLDERS:

MONARCH POINTE FUND, LTD.

MERCATOR ADVISORY GROUP, LLC

By: /s/ Harry Aharonian Name: Harry Aharonian Its: Portfolio Manager Contact: Medical Discoveries, Inc. 208-736-1799

MEDICAL DISCOVERIES INC. COMPLETES \$1,200,000 EQUITY PRIVATE PLACEMENT

FINANCING TO SUPPORT PHASE I CLINICAL TRIALS

TWIN FALLS, Idaho, October 20, 2004 - Medical Discoveries, Inc. (OTCBB: MLSC) announced today that it has completed a private placement financing consisting of convertible preferred stock and warrants, generating gross proceeds of \$1,200,000 to the Company.

Mercator Advisory Group, LLC of Los Angeles, California participated in the investment through its designated accredited fund, Monarch Pointe Fund, Ltd.

Ascendiant Securities LLC of Irvine, California served as placement agent on the transaction.

JUDY ROBINETT, PRESIDENT & CHIEF EXECUTIVE OFFICER OF MEDICAL DISCOVERIES (MDI), STATED: "WE ARE DELIGHTED TO HAVE MERCATOR AND ITS DESIGNATED FUND ON BOARD AS AN INVESTOR. THIS CAPITAL INFUSION, WHEN COMBINED WITH FUNDS FROM A SUCCESSFUL PRIVATE PLACEMENT ANNOUNCED SEPTEMBER 29, WILL HELP TO COMPLETE OUR PHASE I CLINICAL TRIALS IN CYSTIC FIBROSIS (CF) WHICH WE PLAN TO COMMENCE IN THE FIRST QUARTER OF 2005. WE WERE PARTICULARLY IMPRESSED WITH THE PERFORMANCE OF ASCENDIANT SECURITIES AND THEIR ABILITY TO ARRANGE THIS INVESTMENT QUICKLY."

MDI IS PURSUING A COMMERCIALIZATION STRATEGY FOR ITS ANTI-INFECTIVE THERAPEUTIC COMPOUND, MDI-P. THIS QUARTER, THE COMPANY PLANS TO FILE AN INVESTIGATIONAL NEW DRUG (IND) APPLICATION WITH THE FOOD & DRUG ADMINISTRATION (FDA) FOR CF, AN ORPHAN DRUG INDICATION, AND FOLLOW WITH INDS FOR HIV AND ASTHMA AS ADDITIONAL SIGNIFICANT MEDICAL INDICATIONS.

THE SHARES OF PREFERRED STOCK AND WARRANTS SOLD IN THE PRIVATE PLACEMENT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR STATE SECURITIES LAWS AND MAY NOT BE OFFERED OR SOLD IN THE UNITED STATES ABSENT REGISTRATION WITH THE SECURITIES AND EXCHANGE COMMISSION (SEC) OR AN APPLICABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS. THE SHARES AND WARRANTS WERE OFFERED AND SOLD ONLY TO ACCREDITED INVESTORS. THE COMPANY HAS AGREED TO FILE A REGISTRATION STATEMENT WITH THE SEC COVERING THE RESALE OF THE SHARES OF COMMON STOCK UNDERLYING THE PREFERRED STOCK ISSUED IN THE PRIVATE PLACEMENT AND THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THE WARRANTS.

THIS PRESS RELEASE SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY ANY OF THESE SECURITIES NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE OR JURISDICTION IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE OR JURISDICTION.

ABOUT MEDICAL DISCOVERIES, INC.

FORMED IN 1991, MEDICAL DISCOVERIES, INC. IS A PUBLICLY TRADED (OTC BULLETIN BOARD AS MLSC) DEVELOPMENT-STAGE BIOPHARMACEUTICAL RESEARCH COMPANY ENGAGED IN THE RESEARCH, DEVELOPMENT AND VALIDATION OF ITS PATENTED ANTI-INFECTIVE TECHNOLOGY. MDI'S ELECTROLYZED SOLUTION OF FREE RADICALS REPRESENTS A NOVEL APPROACH TO TREATING ITS INITIAL TARGET INDICATIONS, CF AND HIV.

About Mercator Advisory Group LLC:

Mercator Advisory Group LLC, through its designated managed equity funds, specializes in direct equity investments in public companies. Mercator's strategy is to make investments into small to mid cap companies that show strong potential for near and long-term appreciation. Mercator incorporates strict selection criteria for their portfolio companies including a company's liquidity, fundamental analysis within its own space and the ability of the company's management to show a path toward growth.

About Ascendiant Securities LLC

Ascendiant Securities LLC is an investment banking firm, registered as a broker-dealer with the United States Securities and Exchange Commission (SEC), and member of the National Association of Securities Dealers (NASD) and Securities Investor Protection Corporation (SIPC). Ascendiant provides investment banking and corporate finance services to its emerging public and private company clients. These services include equity private placements of preferred and common stock, PIPEs (private investments in public equities), direct participation programs (investment limited partnerships), mezzanine financing, senior and subordinated debt financing, working capital facilities, convertible debt, and bridge financing. For more information, please visit www.ascendiant.com or contact 949-756-1010.

INFORMATION IN THIS PRESS RELEASE RELATING TO THE POTENTIAL OF MDI CONSTITUTES FORWARD-LOOKING STATEMENTS. ACTUAL RESULTS IN FUTURE PERIODS MAY DIFFER MATERIALLY FROM THE FORWARD-LOOKING STATEMENTS BECAUSE OF A NUMBER OF RISKS AND UNCERTAINTIES SET FORTH IN MDI'S 2003 ANNUAL REPORT ON FORM 10-KSB AND OTHER FILINGS WITH THE SECURITIES AND EXCHANGE COMMISSION.