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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

July 15, 2004

(Date of earliest event reported)

MEDICAL DISCOVERIES, INC.

(Exact name of registrant as specified in its charter)

Utah	0-12627	87-0407858
(State or other jurisdiction of incorporation or organization)	(Commission File No.)	(I.R.S. Employer Identification No.)

738 Aspenwood Lane
Twin Falls, Idaho 83301
(208) 736-1799

(Address of principal executive offices and telephone number, including area code)

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Item 9. Regulation FD Disclosure

This Current Report on Form 8-K is filed for the purpose of disclosing the press release that was released on July 15, 2004 and is attached hereto as Exhibit 99.

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: July 15, 2004

INDEX OF EXHIBITS

Number	Description
99	Press Release issued July 15, 2004

EXHIBIT 99

Contact: Medical Discoveries, Inc.
208-736-1799

FOR IMMEDIATE RELEASE

MEDICAL DISCOVERIES INC. ANNOUNCES RECEIPT OF LARGE MAMMAL TOXICITY REPORT

TWIN FALLS, IDAHO, July 15**,** 2004 – Medical Discoveries, Inc. (OTC-BB as MLSC) announced its receipt from Clagett Consulting of a large mammal toxicity report involving its proprietary drug 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. The study was conducted in the rabbit species (New Zealand white rabbits) because of their acknowledged hyper-reactivity to toxicity in drugs. These results, when combined with the Company's prior toxicological work, suggest that MDI-P should not cause toxic events in humans,

This study and the other pre-clinical studies of MDI-P are required for filing Investigational New Drug (IND) applications later this year with the FDA for MDI's primary target uses for MDI-P, which includes treating humans with HIV as well as humans with Cystic Fibrosis. There is not an animal test relevant to HIV/AIDS in humans, so MDI is required to sponsor testing of MDI-P on other standard animal/mimicking human models, such as the recently-reported cystic fibrosis results, in order to determine if there is any potentially significant toxicity to humans related to usage of MDI-P.

Additional Tests Performed

Included in the Clagett Consulting report was a further genomic analysis for toxicology of MDI-P performed at the University of Albany's Genomics Laboratory. Over the past several years, genomic technologies have evolved that enable the simultaneous analysis of the expression of hundreds to thousands of genes. The analysis and evaluation of gene and protein expression changes that modulate toxic responses can help supplement the mechanistic understanding of how drug treatments in animals and humans possibly induce toxicity in one or more tissues or organs.

MDI wanted to determine whether MDI-P affects the up-or-down-regulation of any controlling genes in toxicity or immuno-regulation. Livers from the rabbit were used to isolate RNA and perform such analyses using Affymatrix GeneChips. This genomics analysis indicated that MDI-P had no effect on:

-bone marrow function;
- -hematocrit levels in peripheral blood;
- -serum levels for alanine aminotransferase levels (ALT) and aspartate aminotransferase levels (AST), both of which provide sensitive measures of hepatic toxicity
- -serum protein and albumin levels;
- -bound urinary nitrogen (Bun) levels;
- -serum calcium levels;
- -blood glucose levels.

In addition, this genomics analysis provided confirmation that various measures of impact on the hundreds of genes controlling toxicity as well as the immuno-regulatory system were neither up-or-down regulated by MDI-P.

MDI's President and Chief Executive Officer, Judy Robinett, stated: "We are pleased with the stark absence of toxicity confirmed through the rabbit toxicity study and with the positive results from the University of Albany's genomics profiling of MDI-P."

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, HIV and Cystic Fibrosis.

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.

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