HEALTH DISCOVERY CORP
Form 8-K
October 11, 2006

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 4, 2006

Health Discovery Corporation
(Exact name of registrant as specified in charter)

Texas	**333-62216**	**74--3002154**
(State of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

5501 ½ Abercorn Street, Savannah, GA 31405
(Address of principal executive offices / Zip Code)

912-352-7488
(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

o Written communications pursuant to Rule 425 under the Securities Act.

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act.

o Pre-commencement communications pursuant to Rule 14d—2(b) under the Exchange Act.

o Pre-commencement communications pursuant to Rule 13e—4(c) under the Exchange Act.

Item 8.01 Other Events.

On October 4, 2006, the U.S. Patent and Trademark Office issued to Health Discovery Corporation ("HDC") Patent No. 7,117,188, entitled “Methods of Identifying Patterns in Biological Systems and Uses Thereof” covering the use of recursive feature elimination ("RFE") using the support vector machine ("SVM"). RFE is a mathematical filtering process by which features within input data can be identified as being more significant for use in classifying the data by rank order using an SVM. When analyzing large volumes of data, eliminating features that are non-critical to the successful rank order classification of the data improves accuracy and reduces processing time. RFE is a particularly powerful tool for achieving feature reduction because it takes into account dependencies between features and is therefore considered more sophisticated than other methods that evaluate and eliminate such features independently. No RFE patent has ever been issued to another party in the United States.

Reported applications of RFE-SVMs include gene expression and mass spectrometry analysis for biomarker identification and medical diagnostics, predicting antisense oligonucleotide efficacy, discriminating classes of toxicants, text and image recognition, and evaluating beef cattle quality, and others.

While the title of the patent suggests that the scope of the technology is limited to biological data, the basic claims encompass the application of the RFE-SVM method to all data types. Dependent claims are directed to the use of RFE-SVM for identifying patterns in biological data and for use in diagnosis, prognosis or treatment of a disease.

The RFE method was first reported in 2002 in an article by inventors Isabelle Guyon, a member of HDC’s Scientific Advisory Board, Stephen Barnhill, HDC’s Chairman and CEO, and Jason Weston, together with co-author Vladimir Vapnik, also a member of HDC’s Scientific Advisory Board. The article, entitled “Gene Selection for Cancer Classification Using Support Vector Machines”, published in the journal Machine Learning, has been broadly cited in subsequent publications by hundreds of researchers worldwide, demonstrating the significance and widespread use of the RFE method within the SVM field.

In addition to this newly issued RFE-SVM patent, HDC now holds the exclusive rights to 17 issued U.S. and foreign patents covering uses of SVMs for discovery of knowledge from large data sets. The issued patents cover methods and systems for pre-processing of data to enhance knowledge discovery using SVMs, analysis of data using multiple SVMs and for multiple data sets, providing SVM analysis services over the Internet, use of SVMs for digital image analysis, and new kernels for machine learning. HDC’s pending U.S. and foreign patent applications cover numerous improvements to and applications of SVMs including computer-aided image analysis using SVMs, with particular application to diagnosis using medical images, methods of feature selection for enhanced SVM efficiency and biomarkers for colon cancer, prostate cancer and renal cancer discovered with these methods, and use of SVMs for analysis of spectral data such as data generated in mass spectrometry.

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.

HEALTH DISCOVERY CORPORATION

Dated: October 11, 2006

By: /s/ Daniel Furth
Daniel Furth
Principal Financial Officer