HEALTH DISCOVERY CORP
Form POS AM
April 30, 2009

As filed with the Securities and Exchange Commission on April 30, 2009

Registration No. 333-150878

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1
to
FORM S-1
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

HEALTH DISCOVERY CORPORATION
(Exact Name of Registrant as Specified in Its Charter)

Georgia	8099	74-3002154
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

2 East Bryan Street, Suite #601
Savannah, GA 31401
(912) 443-1987
(Address, including zip code, and telephone number, including area code,
of registrant's principal executive offices)

Stephen D. Barnhill, M.D.
Chief Executive Officer
Health Discovery Corporation
2 East Bryan Street, Suite #601
Savannah, GA 31401
(912) 443-1987
(Name, address, including zip code, and telephone number, including area code,
of agent for service)

Copies of Communications to:

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Atlanta, Georgia 30309-3488
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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

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

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

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. o

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. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definition of “large accelerated filer,” “accelerated filer,” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer o
Non-accelerated filer (Do not check if a smaller reporting company) o	Smaller reporting company x

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 (2)
Common Stock, no par value, to be issued upon exercise of warrants exercisable at $0.14 per share	35,274,934	$ 0.14(1)	$ 4,938,490.76	$ 283.57
Common Stock, no par value, to be issued upon exercise of warrants exercisable at $0.19 per share	35,274,934	$ 0.19(1)	$ 6,702,237.46	$ 384.84
Common Stock, no par value	352,746	$ 0.08(1)	$ 41,230.72	$ 2.38

(1) Estimated solely for the purpose of computing the registration fee pursuant to Rule 457.
(2) Previously paid.

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 hereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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

Subject to Completion, dated April 30, 2009

PROSPECTUS

70,549,868 Shares of Common Stock to be issued upon Exercise of Warrants
352,746 Shares of Common Stock

HEALTH DISCOVERY CORPORATION
2 East Bryan Street
Suite #601
Savannah, GA 31401
(912) 443-1987

This prospectus relates to the resale of up to 70,549,868 shares of our common stock, no par value, which may be issued upon the exercise of warrants previously issued by us and 352,746 shares of our common stock, no par value, which are being offered for resale from time to time by the shareholders named in the section entitled “Selling Shareholders” on page 18. The number of shares the selling shareholders may offer and sell under this prospectus includes common shares:

the selling shareholders currently hold; and

issuable to them upon the exercise of warrants previously issued by us. The selling shareholders may also offer additional shares of common stock acquired upon the exercise of the warrants and our issuance of stock as a result of anti-dilution provisions, stock splits, stock dividends or similar transactions.

We are registering these shares to satisfy registration rights of the selling shareholders.

We will not receive any of the proceeds from any resales by the selling shareholders. We will, however, receive the proceeds from the exercise of the warrants issued to the selling shareholders. The selling shareholders may sell the shares of common stock from time to time in various types of transactions, including on the Over-the-Counter Bulletin Board and in privately negotiated transactions. For additional information on methods of sale, you should refer to the section entitled “Plan of Distribution” on page 19.

On April 28, 2009, the last sales price of the common stock quoted on the Over-the-Counter Bulletin Board was $0.07 per share. Our company’s common stock is quoted on the Over-the-Counter Bulletin Board under the symbol “HDVY.OB.”

Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 6.

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.

The date of this prospectus is April __, 2009.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement that we have filed with the Securities and Exchange Commission. You should read this prospectus and any accompanying prospectus supplement, as well as any post-effective amendments to the registration statement of which this prospectus is a part, together with the additional information described under “Available Information” before you make any investment decision.

The terms “Health Discovery,” “Company,” “we,” “our” and “us” refer to Health Discovery Corporation unless the cont suggests otherwise. The term “you” refers to a prospective purchaser of our common stock.

You should rely only on the information contained in this prospectus or any accompanying prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or any accompanying prospectus supplement. These securities are being offered for sale and offers to buy these securities are only being solicited in jurisdictions where offers and sales are permitted. The information contained in this prospectus and any accompanying prospectus supplement is accurate only as of the date on their respective covers, regardless of the time of delivery of this prospectus or any accompanying prospectus supplement or any sale of the securities.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read the entire prospectus carefully, including "Risk Factors" and the financial statements, before making an investment decision.

Our Company Overview

HDC is a pattern recognition company that uses advanced mathematical techniques to analyze large amounts of data to uncover patterns that might otherwise be undetectable. The Company operates primarily in the emerging field of molecular diagnostics where such tools are critical to scientific discovery. The terms artificial intelligence and machine learning are sometimes used to describe pattern recognition tools.

HDC's mission is to use its patents, intellectual prowess, and clinical partnerships principally to identify patterns that can advance the science of medicine, as well as to advance the effective use of our technology in other diverse business disciplines, including the high-tech, financial, and homeland security markets.

Our historical foundation lies in the molecular diagnostics field where we have made a number of important discoveries that may play a critical role in developing more personalized approaches to the diagnosis and treatment of certain diseases. However, our SVM assets in particular have broad applicability in many other fields. Intelligently applied, HDC's pattern recognition technology can be a portal between enormous amounts of otherwise undecipherable data and truly meaningful discovery.

Our Company's principal asset is its intellectual property which includes advanced mathematical algorithms called Support Vector Machines (SVM) and Fractal Genomic Modeling (FGM), as well as biomarkers that we discovered by applying our SVM and FGM techniques to complex genetic and proteomic data. Biomarkers are biological indicators or genetic expression signatures of certain disease states. Our intellectual property is protected by more than 69 patents that have been issued or are currently pending around the world.

Our business model has evolved over time to respond to business trends that intersect with our technological expertise and our capacity to professionally manage these opportunities. In the beginning, we sought only to use our SVMs internally in order to discover and license our biomarker signatures to various diagnostic and pharmaceutical companies. Today, our commercialization efforts include: utilization of our discoveries and knowledge to help develop biomarkers for use as companion diagnostics, surrogate biomarkers, and diagnostic and prognostic predictive tests; licensure of the SVM and FGM technologies directly to diagnostic and pharmaceutical companies; and, the formation of new ventures with domain experts in other fields where our pattern recognition technology holds commercial promise.

Our Principal Market

The principal healthcare market for our pattern recognition technology and biomarker discoveries is medical diagnostics, particularly the rapidly growing field of molecular diagnostics. The market consists of two basic types of diagnostic procedures: in vitro tests performed on a patient's fluid or tissue samples and in vivo tests performed directly on the body, including blood pressure monitoring and imaging analysis such as x-rays. In vitro diagnostics (IVD) can be further divided into several major segments including clinical chemistry, immunochemistry, hematology/cytometry, microbiology, and molecular diagnostics.

The IVD portion of the diagnostics market currently accounts for over $31 billion in sales worldwide. Today, the molecular diagnostics segment represents a fraction of the IVD revenues with about $2.5 billion in sales, but it is

widely considered to be the fastest growing segment, estimated at a 20-25% compounded annual growth rate, mainly in the U.S. and EU markets, versus 6-7% for IVD as a whole. It is difficult to accurately assess the size of this segment since many countries do not have reference laboratories external to hospitals. Areas of particular growth include infectious diseases, oncology, genetic diseases, and pharmacogenetic analyses. Companies involved in this space include several major pharmaceutical and diversified corporations. Roche, Abbott, and Johnson & Johnson have diagnostics divisions that generated $8.6 billion, $2.8 billion, and $23.1 billion in revenue in 2008, respectively, while Siemens and General Electric operate medical imaging segments that are expanding in diagnostics. Other market players include large technology companies like Becton-Dickinson, Beckman Coulter, and Bio-Rad.

IVDs have been established as effective tools for all aspects of disease management, especially in areas of unmet clinical need. Such tests have been developed for screening and prognosis as well as for applications, such as determination of genetic predisposition to disease, detection of presymptomatic disease, and prediction of individual drug response.

The Offering

Common stock offered upon exercise of warrants	70,549,868 Shares
Common Stock	352,746 Shares
Common stock to be outstanding after this offering(1)	240,072,458 Shares
Exercise price of warrants	35,274,934 at $0.14/share 35,274,934 at $0.19/share
Net Proceeds	The Company will not receive any proceeds from this offering. The Company will receive cash upon the exercise of the warrants of up to $11,640,728.22.
Use of proceeds from exercise of warrants	We will use the proceeds from the exercise of the warrants for general corporate purposes, which may include, among other things, our working capital needs and other general corporate purposes, including research and product development. See “Use of Proceeds” on page 14.
Risk Factors	See “Risk Factors” beginning on page 4 and other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Dividend Policy	We have not declared a dividend since our inception and we do not expect to do so in the foreseeable future. Instead, we anticipate that all of our earnings, if any, will be used for working capital, to support our operations and to finance the growth and development of our business. Any future determination relating to dividend policy will be made at the discretion of our Board of Directors and will depend on a number of factors, including our future earnings, capital requirements, financial condition, future prospects and other factors that our Board of Directors may deem relevant. If the Company were to pay dividends, the holders of the shares of Series A Preferred Stock and the Series B Preferred Stock have a right to first receive, or simultaneously receive, a dividend on each outstanding share of Series A Preferred Stock and Series B Preferred Stock on an as if converted to common stock basis. The

	holders of the shares of Series B Preferred Stock also accrue a 10% annual dividend and have a special dividend right to receive a portion of the Company's net revenues, subject to certain limitations. See "Price Range of Our Common Stock and Dividends" on page 15.
Over-the-Counter Bulleting Board Symbol	Our common stock is traded on the Over-the-Counter Bulletin Board under the symbol "HDVY-OB."

(1) The number of shares outstanding after this offering is based on the number of shares outstanding on April 28, 2009 and assumes the issuance of the Shares upon the exercise of the warrants but excludes 58,227,776 shares issuable upon the exercise of stock options and other warrants, which are vested and outstanding as of April 28, 2009 at a weighted average exercise price of $0.186 per share.

The Offering

We are registering up to 70,549,868 shares of our common stock that may be issued upon the exercise of warrants and 352,746 shares of our common stock to enable the sale of such shares by the selling shareholders identified in the section of this prospectus entitled “Selling Shareholders.” Information regarding our common stock and the warrants is included in the section of this prospectus entitled “Description of Capital Stock.”

RISK FACTORS

This document contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 including, without limitation, all statements, other than statements of historical facts, that address activities, events or developments that we expect or anticipate will or may occur in the future, including statements regarding the successful implementation of our services, business strategies and measures to implement such strategies, competitive strengths, expansion and growth of our business and operations, references to future success and other such matters. All such statements are forward-looking statements and are based on the beliefs of, assumptions made by and information currently available to our management. The words “expect,” “estimate,” “anticipate,” “believe,” “intend,” “plan” and similar expressions and variations thereof are intended to identify forward-looking statements. Such forward-looking statements may involve uncertainties and other factors that may cause the actual results and performance of our company to be materially different from future results or performance expressed or implied by such statements.

The cautionary statements set forth in this “Risk Factors” section and elsewhere in this registration statement identify important factors with respect to such forward-looking statements, including certain risks and uncertainties, which could cause actual results to differ materially from those expressed in or implied by such forward-looking statements. Among others, factors that could adversely affect actual results and performance include failure to successfully develop a profitable business, delays in identifying and enrolling customers, and the inability to retain a significant number of customers. All written or oral forward-looking statements attributable to us are expressly qualified in their entirety by the foregoing cautionary statement.

Risks Related to Our Business

We are a developing business and a high-risk company.

We are a high-risk company in a volatile industry. In September 2003, we completely changed the focus of our business from wireless telecommunications to biotechnology. Consequently, we have a limited history on which to base an evaluation of our business and prospects. Thus, investors should recognize that an investment in our company is risky and highly speculative. We are a developing business, and our prospects must be considered in light of the risks, uncertainties, expenses and difficulties frequently encountered by companies in their early stages of development. Failure to implement and execute our business and marketing strategy successfully, to provide superior customer service, to respond to competitive developments and to integrate, retain and motivate qualified personnel could have a material adverse effect on our business, results of operations and financial condition. We must successfully overcome these and other business risks. If our efforts are unsuccessful or other unexpected events occur, purchasers of the common stock offered hereby could lose their entire investment.

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We expect to incur future losses, and we may never achieve or sustain profitability.

We expect to continue to incur net losses and have negative cash flows in the future due in part to high research and development expenses, including enhancements to our technologies and investments in new technologies. Our expenses are expected to exceed our income until we successfully complete transactions resulting in significant revenue and thus our capital will be decreased to pay these operating expenses. If we ever become profitable, of which there is no assurance that we can, from time to time our operating expenses could exceed our income and thus our capital will be decreased to pay these operating expenses. We cannot assure you that we will ever achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability.

Our business is difficult to evaluate because we have a limited history of operations.

Since reorganizing in 2003, our focus and our business model have been continually evolving. Accordingly, we have a history of operations in which there is limited information to identify any historical pattern. Even if we could discern such a pattern, the rapidly evolving nature of the biotechnology and pharmaceutical industries would make it very difficult to identify any meaningful information in such a short history. Therefore, it is also difficult to make any projections about the future of our operations. This difficulty may result in our shares trading below their value.

We may need additional financing.

During the first quarter of 2009, we raised additional capital in the amount of $200,000 through the issuance of Series B Preferred Stock. If we are unable to generate sufficient revenue, additional proceeds may be required to finance our activities. We cannot assure prospective investors that we will not need to raise additional capital or that we would be able to raise sufficient additional capital on favorable terms, if at all. There can be no assurance that additional financing will be available, if required, on terms acceptable to us. If we fail to raise sufficient funds, we may have to cease operations, which would materially harm our business and financial results. If we raise additional capital by issuing equity securities, our shareholders may experience dilution. If we raise additional funds through collaboration and licensing arrangements, we may be required to relinquish some rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us.

Demand for additional shares of Company common stock from private placement investor could cause substantial dilution to existing shareholders.

The Company recently received letters from an investor in the Company’s 2007 private placement (“2007 Private Placement”), claiming (a) that its anti-dilution rights received in the 2007 Private Placement had been triggered by various amendments to the vesting provisions of outstanding warrants and that, as a result, it is entitled to receive additional shares of Company common stock for no additional consideration, (b) breaches of its contractual rights to approve certain issuances of derivative securities, (c) breaches of other covenants made by the Company in the 2007 Private Placement, (d) the Company had violated its SEC disclosure obligations, and (e) various breaches by the members of the Board of Directors of their fiduciary duties. While the Company denies the allegations and believes they are without merit, if the investor’s position is correct, the Company may be required, among other things, to issue approximately 98,500,000 shares to such investor, and, if all of the other investors in the 2007 Private Placement sought the same remedy, the Company may be required to issue approximately 739,000,000 shares in the aggregate. Issuing such shares of common stock would cause substantial dilution to existing shareholders and would exceed the number of the Company’s authorized shares of common stock.

Our operating results are unpredictable and may fluctuate significantly from period to period, which may cause our stock price to decline and result in losses to investors.

Our operating results may vary from period to period due to numerous factors, many of which are outside our control, including the number, timing and acceptance of our services. Factors that may cause our results to vary by period include:

changes in the demand for our products and services;

the nature, pricing and timing of products and services provided to our collaborators;

acquisition, licensing and other costs related to the expansion of our operations, including operating losses of acquired businesses;

reduced capital investment for extended periods;

losses and expenses related to our investments in joint ventures and businesses;

regulatory developments or changes in public perceptions relating to the use of genetic information and the diagnosis and treatment of disease based on genetic information;

changes in intellectual property laws that affect our rights in genetic information that we sell; and

payments of milestones, license fees or research payments under the terms of our increasing number of external alliances.

Research and development costs associated with our technologies and services, as well as personnel costs, marketing programs and overhead, account for a substantial portion of our operating expenses. These expenses cannot be adjusted quickly in the short term. If revenues of the business decline or do not grow as anticipated, we may not be able to reduce our operating expenses accordingly. Failure to achieve anticipated levels of revenue could therefore significantly harm our operating results for a particular period.

Our stock price has been, and is likely to continue to be, highly volatile.

Our stock price has, since September 1, 2003, traded as high as $0.60 and as low as $0.04. Our stock price could fluctuate significantly due to a number of factors beyond our control, including:

variations in our actual or anticipated operating results;

sales of substantial amounts of our stock;

announcements about us or about our competitors, including technological innovation or new products or services;

litigation and other developments related to our patents or other proprietary rights or those of our competitors;

conditions in the life sciences, pharmaceuticals or genomics industries; and

governmental regulation and legislation.

In addition, the stock market in general, and the market for life sciences and technology companies in particular, have experienced extreme price and volume fluctuations recently. These fluctuations often have been unrelated or disproportionate to the operating performance of these companies. These broad market and industry factors may decrease the market price of our common stock, regardless of our actual operating performance.

In the past, companies that have experienced volatility in the market prices of their stock have been the objects of securities class action litigation. If we became the object of securities class action litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could affect our profitability.

Our approach of incorporating ideas and methods from mathematics, computer science and physics into the disciplines of biology, organic chemistry and medicine is novel and may not be accepted by our potential customers or collaborators.

We intend to create a fully integrated biomarker discovery company to provide pharmaceutical and diagnostic companies worldwide with new, clinically relevant and economically significant biomarkers. We are a drug and diagnostic discovery company, which incorporates ideas and methods from mathematics, computer science and physics into the disciplines of biology, organic chemistry and medicine. Our objective is to significantly increase the probability of success of drug discovery and diagnostic development. Our approach and the products and technologies derived from our approach are novel. Our potential customers and collaborators may be reluctant to accept our new,

unproven technologies, and our customers may prefer to use traditional services. In addition, our approach may prove to be ineffective or not as effective as other methods. Our products and technologies may prove to be ineffective if, for instance, they fail to account for the complexity of the life processes that we are now attempting to model. If our customers or collaborators do not accept our products or technologies and/or if our technologies prove to be ineffective, our business may fail or we may never become profitable.

Even if our computational technologies are effective as research tools, our customers or we may be unable to develop or commercialize new drugs, therapies or other products based on them.

Even if our computational technologies perform their intended functions as research tools, our customers may be unable to use the discoveries resulting from them to produce new drugs, therapies, diagnostic products or other life science products. Despite recent scientific advances in the life sciences and our improved understanding of biology, the roles of genes and proteins and their involvement in diseases and in other life processes is not well understood.

Only a few therapeutic products based on the study of and discoveries relating to genes or proteins have been developed and commercialized. If our customers are unable to use our discoveries to make new drugs or other life science products, our business may fail or we may never become profitable.

Our acquired SVM Portfolio utilizes technology covered by an earlier-issued patent, and if we lose the rights to use that patent, our ability to exploit certain aspects of our SVM technology will be impaired.

Our acquired SVM Portfolio utilizes technology covered by the original hyperplane patent (Pat. No. 5,649,068) invented by members of our Scientific Advisory Board and owned by Lucent Technologies, Inc. - GRL Corp. ("Lucent"). We have obtained an assignment of a pre-existing patent license from Lucent. If Lucent were to terminate the license, it is possible that we would not be able to use portions of the Support Vector Machine technology.

We are currently marketing our SVM Portfolio for sale.

In August 2008, we entered into an agreement with Patent Profit International ("PPI"), a Silicon Valley-based patent brokerage firm, with the goal of marketing our patent portfolio and exclusive rights to SVM techniques and applications beyond biomarker discovery and the healthcare field, to prospective buyers/licensees in a wide range of technologies, including, but not limited to, information technology such as Internet browsers and search engines, digital photography, spam mail detection, oil exploration, homeland security, and the automotive industry. As a requirement of any potential sale of the patent portfolio, HDC expects to retain a royalty-free, worldwide, exclusive license, with the right to grant sublicenses, in the entire field of healthcare to enable our continued research, development, licensing and commercialization activities in diagnostic and prognostic areas such as prostate cancer, ovarian cancer, breast cancer, endometrial cancer, colon cancer, leukemia and other healthcare arenas. While we intend to enter into a definitive agreement to effect the sale of the SVM Portfolio, we cannot offer assurances that any strategic sale of the SVM Portfolio will be available to us on a timely basis or on acceptable terms, if at all.

The industries in which we are active are evolving rapidly, and we may be unable to keep pace with changes in technology.

The pharmaceutical and biotechnology industries are characterized by rapid technological change. This is especially true of the data-intensive areas of such technologies. Our future success will largely depend on maintaining a competitive position in the field of drug, therapeutics and diagnostic products discovery. If we fail to keep pace with changes in technology, our business will be materially harmed. Rapid technological development may result in our products or technologies becoming obsolete. This may occur even before we recover the expenses that we incurred in connection with developing those products and technologies. Products or services offered by us could become obsolete due to the development of less expensive or more effective drug or diagnostics discovery technologies. We may not be able to make the necessary enhancements to our technologies to compete successfully with newly emerging technologies.

We face intense competition and if we are unable to compete successfully we may never achieve profitability.

The markets for our products and services are very competitive, and we expect our competition to increase in the future. Although we have not identified one company that provides the full suite of services that we do, we compete with entities in the U.S. and elsewhere that provide products and services for the analysis of genomic information and information relating to the study of proteins (proteomic information) or that commercializes novel genes and proteins. These include genomics, pharmaceutical and biotechnology companies, academic and research institutions and government and other publicly funded agencies. We may not be able to successfully compete with current and future competitors. Many of our competitors have substantially greater capital resources, research and development staffs,

facilities, manufacturing and marketing experience, distribution channels and human resources than we do. This may allow these competitors to discover or to develop products in advance of us or of our customers.

Some of our competitors, especially academic and research institutions and government and other publicly funded agencies, may provide for free services or data similar to the services and data that we provide for a fee. Moreover, our competitors may obtain patent and other intellectual property protection that would limit our rights or our customers' and partners' ability to use or commercialize our discoveries, products and services. If we are unable to compete successfully against existing or potential competitors, we may never achieve profitability.

Our management may be unable to address future growth.

We anticipate that if we experience a period of growth in the future, a period of significant expansion will be required to address potential growth in our customer base and market opportunities. This expansion will place a significant strain on our management, operational and financial resources. To manage future growth of our operations, if any, we will be required to improve existing and implement new operational systems, procedures and controls, and to expand, train and manage our employee base. There can be no assurance that our current and planned personnel, systems, procedures and controls will be adequate to support our future operations, that management will be able to hire, train, retain, motivate and manage the required personnel or that we will be able to identify, manage and exploit existing and potential strategic relationships and market opportunities. Our failure to manage growth effectively could have a material adverse effect on our business, results of operations and financial condition.

If our business does not keep up with rapid technological change or continue to introduce new products, we may be unable to maintain market share or recover investments in our technologies.

Technologies in the biomarker industry have undergone, and are expected to continue to undergo, rapid and significant change. We may not be able to keep pace with the rapid rate of change and introduce new products that will adequately meet the requirements of the marketplace or achieve market acceptance. If we fail to introduce new and innovative products, we could lose market share to our competitors and experience a reduction in our growth rate and damage to our reputation and business.

The future success of our business will depend in large part on our ability to maintain a competitive position with respect to these technologies. We believe that successful new product introductions provide a significant competitive advantage because customers make an investment of time in selecting and learning to use a new product, and are reluctant to switch to a competing product after making their initial selection. However, our business or others may make rapid technological developments, which could result in our technologies, products or services becoming obsolete before we are able to recover the expenses incurred to develop them.

If our business cannot enter into strategic alliances or licensing agreements, we may be unable to develop and commercialize our technologies into new products and services or continue to commercialize existing products or services.

We may be unable to maintain or expand existing strategic alliances or establish additional alliances or licensing arrangements necessary to continue to develop and commercialize products, and any of those arrangements may not be on terms favorable to the business. In addition, current or any future arrangements may be unsuccessful. If we are unable to obtain or maintain any third party license required to sell or develop our products or product enhancements, we may choose to obtain substitute technology either through licensing from another third party or by developing the necessary technology ourselves. Any substitute technology may be of lower quality or may involve increased cost, either of which could adversely affect our ability to provide our products competitively and harm our business.

We also depend on collaborators for the development and manufacture of complex instrument systems and chemicals and other materials that are used in laboratory experiments. We cannot control the amount and timing of resources our collaborators devote to our products. We may not be able to enter into or satisfactorily retain these research, development and manufacturing collaborations and licensing agreements, which could reduce our growth and harm our competitive position.

We may not be able to find business partners to develop and commercialize product candidates deriving from our discovery activities.

Our strategy for the development and commercialization of diagnostic markers and therapeutic proteins depends on the formation of collaborations or licensing relationships with third parties that have complementary capabilities in relevant fields. Potential third parties include pharmaceutical and biotechnology companies, diagnostic companies, academic institutions and other entities. We cannot assure you that we will be able to form these collaborations or license our discoveries or that these collaborations and licenses will be successful.

Our dependence on licensing and other collaboration agreements with third parties subjects us to a number of risks.

We may not be able to enter into licensing or other collaboration agreements on terms favorable to us. Collaborators may typically be afforded significant discretion in electing whether to pursue any of the planned activities. In most cases, our collaborators or licensees will have responsibility for formulating and implementing key strategic or operational plans. Decisions by our collaborators or licensees on these key plans, which may include development, clinical, regulatory, marketing (including pricing), inventory management and other issues, may prevent successful commercialization of the product or otherwise affect our profitability.

In addition, we may not be able to control the amount and timing of resources our collaborators devote to the product candidates, and collaborators may not perform their obligations as expected. Additionally, business combinations or changes in a collaborator's or a licensee's business strategy may negatively affect its willingness or ability to complete its obligations under the arrangement with us. Furthermore, our rights in any intellectual property or products that may result from our collaborations may depend on additional investment of money that we may not be able or willing to make.

Potential or future collaborators may also pursue alternative technologies, including those of our competitors. Disputes may arise with respect to the ownership of rights to any technology or product developed with any future collaborator. Lengthy negotiations with potential collaborators or disagreements between us and our collaborators may lead to delays or termination in the research, development or commercialization of product candidates or result in time-consuming and expensive litigation or arbitration. If our collaborators pursue alternative technologies or fail to develop or commercialize successfully any product candidate to which they have obtained rights from us, our business, financial condition and results of operations may be significantly harmed.

If we are unable to hire or retain key personnel or sufficient qualified employees, we may be unable to successfully operate our business.

Our business is highly dependent upon the continued services of our Chief Executive Officer, Board of Directors, and Scientific Advisory Board. While members of our senior management are parties to employment or consulting agreements and non-competition and non-disclosure agreements, we cannot assure you that these key personnel and others will not leave us or compete with us, which could materially harm our financial results and our ability to compete. The loss, incapacity or unavailability for any reason of any of these individuals could have a material adverse effect upon our business, as well as our relationships with our potential customers. We do not carry key person life insurance on any member of our senior management. Furthermore, competition for highly qualified personnel in our industry and geographic locations is intense. Our business would be seriously harmed if we were unable to retain our key employees, or to attract, integrate or retain other highly qualified personnel in the future.

We may not be able to employ and retain experienced scientists, mathematicians and management.

Technologies in our industry have undergone, and are expected to continue to undergo, rapid and significant change. A highly skilled staff is integral to developing, marketing and supporting new products that will meet or exceed the expectations of the marketplace and achieve market acceptance. Without experienced staff, our business may be unable to maintain or grow market share, which could result in lower than expected revenues and earnings.

We may acquire or make strategic investments in other businesses and technologies in the future, and these could prove difficult to integrate, disrupt our business, dilute stockholder value and adversely affect our operating results.

If opportunities arise, we may consider making acquisitions of businesses, technologies, services or products. Acquisitions may involve significant cash expenditures, debt incurrence, additional operating losses and expenses that

may have a material adverse effect on the operating results of our business. Moreover, even if we acquire complementary businesses or technologies, we may be unable to successfully integrate any additional personnel, operations or acquired technologies into our business.

Difficulties in integrating an acquired business could disrupt our business, distract our management and employees and increase our expenses. Future acquisitions could expose us to unforeseen liabilities and result in significant charges relating to intangible assets. Sizable acquisitions may also divert senior management from focusing on our existing business plan. Finally, if we make acquisitions using convertible debt or equity securities, existing shareholders may be diluted, which could affect the market price of our stock.

If our access to tissue samples or to genomic data or other information is restricted, or if this data is faulty, our business may suffer.

To continue to build our technologies and related products and services, we need access to third parties' scientific and other data and information. We also need access to normal and diseased human and other tissue samples and biological materials. We may not be able to obtain or maintain such access on commercially acceptable terms. Some of our suppliers could become our competitors and discontinue selling supplies to us. Information and data from these suppliers could contain errors or defects that could corrupt our databases or the results of our analysis of the information and data. In addition, government regulation in the United States and other countries could result in restricted access to, or use of, human and other tissue samples. Although currently we do not face significant problems in obtaining access to tissues, if we lose access to sufficient numbers or sources of tissue samples, or if tighter restrictions are imposed on our use of the information generated from tissue samples, our business may suffer.

The sales cycle for some of our products and services is lengthy. We expend substantial funds and management effort with no assurance of successfully selling our products or services.

Our ability to obtain customers for our platforms, tools and services depends in large part upon the perception that our technologies can help accelerate their efforts in drug and diagnostics discovery. Our ability to obtain customers for our therapeutic or diagnostic product candidates significantly depends on our ability to validate and prove that each such product candidate is suitable for our claimed therapeutic or diagnostic purposes. Our ability to obtain customers will also depend on our ability to successfully negotiate terms and conditions for such arrangements. The sales cycle for our therapeutic and diagnostic product candidates is typically lengthy and may take more than 12 months.

An inability to protect our proprietary data, technology or products may harm our competitive position.

If we do not adequately protect the intellectual property underlying our products and services, competitors may be able to develop and market the same or similar products and services. This would erode our competitive advantage. In addition, the laws of some countries do not protect or enable the enforcement of intellectual property to the same extent as the laws of the United States.

We use contractual obligations to protect a significant portion of our confidential and proprietary information and know-how. This includes a substantial portion of the knowledge base from which we develop a large portion of our proprietary products and services. However, these measures may not provide adequate protection for our trade secrets or other proprietary information and know-how. Customers, employees, scientific advisors, collaborators or consultants may still disclose our proprietary information in violation of their agreements with us, and we may not be able to meaningfully protect our trade secrets against this disclosure.

In addition, we have applied for patents covering some aspects of some of our technologies and predicted genes and proteins we have discovered using these technologies. We plan to continue to apply for patents covering parts of our technologies and discoveries as we deem appropriate, but cannot assure you that we will be able to obtain any patents. The patent positions of biotechnology companies are generally uncertain and involve complex legal and factual questions. Legislative changes and/or changes in the examination guidelines of governmental patents offices may negatively affect our ability to obtain patent protection for certain aspects of our intellectual property, especially with respect to genetic discoveries.

Our success depends in large part on our ability to patent our discoveries.

Our success depends, in large part, on our ability to obtain patents on biomarkers and pathways that we have discovered and are attempting to commercialize. We face intense competition from other biotechnology and

pharmaceutical companies. These include customers who use our products and technologies and are pursuing patent protection for discoveries, which may be similar or identical to our discoveries. We cannot assure you that other parties have not sought patent protection relating to the biomarkers and pathways that we discovered or may discover in the future. Our patent applications may conflict with prior applications of third parties or with prior publications. They may not result in issued patents and, even if issued, our patents could be invalidated or may not be sufficiently broad to provide us with any competitive advantages. U.S. and other patent applications ordinarily remain confidential for 18 months from the date of filing. As a result, patent applications that we file which we believe are novel at the time of filing, may be determined at a later stage to be inconsistent with earlier applications. Any of these events could materially harm our business or financial results.

Litigation or other proceedings or third party claims of intellectual property infringement could prevent us, or our customers or collaborators, from using our discoveries or require us to spend time and money to modify our operations.

If we infringe patents or proprietary rights of third parties, or breach licenses that we have entered into with regard to our technologies and products, we could experience serious harm. If litigation is commenced against us for intellectual property rights infringement, we may incur significant costs in litigating, whether or not we prevail in such litigation. These costs would also include diversion of management and technical personnel to defend us against third parties or to enforce our patents (once issued) or other rights against others. In addition, parties making claims against us may be able to obtain injunctive or other equitable relief that could prevent us from being able to further develop or commercialize. This could also result in the award of substantial damages against us. In the event of a successful claim of infringement against us, we may be required to pay damages and obtain one or more licenses from third parties. If we are not able to obtain these licenses at a reasonable cost, if at all, we could encounter delays in product introductions while we attempt to develop alternative methods or products. Defense of any lawsuit or failure to obtain any of these licenses could prevent us from commercializing available products.

The technology that we use to develop our products, and the technology that we incorporate in our products, may be subject to claims that they infringe the patents or proprietary rights of others. The risk of this occurring will tend to increase as the genomics, biotechnology and software industries expand, more patents are issued and other companies engage in other genomic-related businesses.

As is typical in the genomics, biotechnology and software industries, we will probably receive in the future notices from third parties alleging patent infringement. We believe that we are not infringing the patent rights of any third parties. No third party has filed a patent lawsuit against us. We may, however, be involved in future lawsuits alleging patent infringement or other intellectual property rights violations. In addition, litigation may be necessary to:

assert claims of infringement;

enforce our patents as they are granted;

protect our trade secrets or know-how; or

determine the enforceability, scope and validity of the proprietary rights of others.

We may be unsuccessful in defending or pursuing these lawsuits. Regardless of the outcome, litigation can be very costly and can divert management’s efforts. An adverse determination may subject us to significant liabilities or require us to seek licenses to other parties’ patents or proprietary rights. We may also be restricted or prevented from licensing or selling our products and services. Further, we may not be able to obtain any necessary licenses on acceptable terms, if at all.

The scope of patents we receive may not provide us with adequate protection of our intellectual property, which would harm our competitive position.

Any issued patents that cover our proprietary technologies may not provide us with substantial protection or be commercially beneficial to the business. The issuance of a patent is not conclusive as to its validity or its enforceability. Federal courts may invalidate these patents or find them unenforceable. Competitors may also be able to design around our patents. If we are unable to protect our patented technologies, we may not be able to commercialize our technologies, products or services and our competitors could commercialize our technologies.

Our business also relies on a combination of trade secrets, copyrights and trademarks, non-disclosure agreements and other contractual provisions and technical measures to protect our intellectual property rights. While we generally require employees, collaborators, consultants and other third parties to enter into confidentiality agreements where appropriate, it is not always possible to enforce these arrangements.

Monitoring the unauthorized use of our technology is difficult, and the steps we have taken may not prevent unauthorized use of our technology. The disclosure or misappropriation of our intellectual property for any of the above reasons could harm our ability to protect our rights and our competitive position.

We may become involved in disputes regarding our patents and other intellectual property rights, which could result in the forfeiture of these rights, expose the business to significant liability and divert management's focus.

In order to protect or enforce our patent rights, our business may need to initiate patent litigation against third parties. In addition, we may be sued by third parties alleging that we are infringing their intellectual property rights. These lawsuits are expensive, take significant time and divert management's focus from other business concerns. These lawsuits could result in the invalidation or limitation of the scope of our patents, forfeiture of the rights associated with these patents or an injunction preventing Health Discovery from selling any allegedly infringing product. In addition, we may not prevail or a court may find damages or award other remedies in favor of the opposing party in any of these suits. During the course of these suits, there may be public announcements of the results of hearings, motions and other interim proceedings or developments in the litigation. Securities analysts or investors may perceive these announcements to be negative, which could cause the market price of our common stock to decline.

Many of our services will be based on complex, rapidly developing technologies. Although we will try to identify all relevant third party patents, these products could be developed by the business without knowledge of published or unpublished patent applications that cover some aspect of these technologies. The biomarker industry has experienced intensive enforcement of intellectual property rights by litigation and licensing. If we are found to be infringing the intellectual property of others, we could be required to stop the infringing activity, or we may be required to design around or license the intellectual property in question. If we are unable to obtain a required license on acceptable terms, or are unable to design around any third party patent, we may be unable to sell some of our services, which could result in reduced revenue.

Risks Related to Our Industry

There are many risks of failure in the development of drugs, therapies, diagnostic products and other life science products. These risks are inherent to the development and commercialization of these types of products.

Risks of failure are inseparable from the process of developing and commercializing drugs, therapies, diagnostic products and other life science products. These risks include the possibility that any of these products will:

- be found to be toxic or ineffective;
- fail to receive necessary regulatory approvals;
- be difficult or impossible to manufacture on a large scale;
- be uneconomical to market;
- fail to be developed prior to the successful marketing of similar products by competitors; or
- be impossible to market because they infringe on the proprietary rights of third parties or compete with superior products marketed by third parties.

We are dependent on our customers' commercialization of our discoveries. Any of these risks could materially harm our business and financial results.

The trend towards consolidation in the pharmaceutical and biotechnology industries may adversely affect us.

The trend towards consolidation in the pharmaceutical and biotechnology industries may negatively affect us in several ways. These consolidations usually involve larger companies acquiring smaller companies, which results in the remaining companies having greater financial resources and technological capabilities, thus strengthening competition in the industry. In addition, continued consolidation may result in fewer customers for our products and services.

We may be subject to product liability claims if products derived from our products or services harm people.

We may be held liable if any product that is made with the use, or incorporation of, any of our technologies or data causes harm or is found otherwise unsuitable. These risks are inherent in the development of genomics, functional genomics and pharmaceutical products. If we are sued for any harm or injury caused by products derived from our services or products, our liability could exceed our total assets. In addition, such claims could cause us to incur substantial costs and subject us to negative publicity even if we prevail in our defense of such claims.

Our business and the products developed by our collaborators and licensees may be subject to governmental regulation.

Any new therapy or diagnostic product that may be developed by our collaborators or by our licensees will have to undergo a lengthy and expensive regulatory review process in the United States and other countries before it can be marketed. It may be several years, or longer, before any therapy or diagnostic product that is developed by using our technologies, will be sold or will provide us with any revenues. This may delay or prevent us from becoming profitable. Changes in policies of regulatory bodies in the United States and in other countries could increase the delay for each new therapy and diagnostic product.

Even if regulatory approval is obtained, a product on the market and its manufacturer are subject to continuing review. Discovery of previously unknown problems with a product may result in withdrawal of the product from the market.

Although we intend to become involved in the clinical phases in the future, we still expect to rely mainly on collaborators or licensees of our discovery activities to file regulatory approval applications and generally direct the regulatory review process. We cannot be certain whether they will be able to obtain marketing clearance for any product that may be developed on a timely basis, if at all. If they fail to obtain required governmental clearances, it will prevent them from marketing therapeutic or diagnostic products until clearance can be obtained, if at all. This will in turn reduce our chances of receiving various forms of payments, including those relating to sales of marketed therapeutic or diagnostic products by them.

The law applicable to us may change in a manner that negatively affects our prospects.

We must comply with various legal requirements, including requirements imposed by federal and state securities and tax laws. Should any of those laws change over the term of our existence, the legal requirements to which we may be subject could differ materially from current requirements, which could increase the cost of doing business or preclude us from undertaking certain parts of our business plan, would result in adverse consequences.

If ethical and other concerns surrounding the use of genetic information become widespread, there may be less demand for our products and services.

Genetic testing has raised ethical issues regarding confidentiality and the appropriate uses of the resulting information. For these reasons, governmental authorities may call for limits on or regulation of the use of genetic testing or prohibit testing for genetic predisposition to various conditions, particularly for those that have no known cure. Any of these scenarios could reduce the potential markets for our technologies in the field of predictive drug response, which could materially harm our business and financial results.

Risks Related to This Offering

The so-called “penny stock rule” could make it cumbersome for brokers and dealers to trade in our common stock, making the market for our common stock less liquid which could cause the price of our stock to decline.

Trading of our common stock on the OTC Bulletin Board may be subject to certain provisions of the Securities Exchange Act of 1934, commonly referred to as the “penny stock” rule. A penny stock is generally defined to be any equity security that has a market price less than $5.00 per share, subject to certain exceptions. If our stock is deemed to be a penny stock, trading in our stock will be subject to additional sales practice requirements on broker-dealers. These may require a broker-dealer to:

make a special suitability determination for purchasers of our shares;

receive the purchaser's written consent to the transaction prior to the purchase; and

deliver to a prospective purchaser of our stock, prior to the first transaction, a risk disclosure document relating to the penny stock market.

Consequently, penny stock rules may restrict the ability of broker-dealers to trade and/or maintain a market in our common stock. Also, prospective investors may not want to get involved with the additional administrative requirements, which may have a material adverse effect on the trading of our shares.

Any projections and forecasts included in this prospectus were prepared based on assumptions regarding facts and future events which may or may not materialize.

Many factors influencing the operation of our business are beyond our and our management's control. There can be no assurance that the actual operation of our company's business will correspond with any projections and the forecasts included in this prospectus. No representation or warranty of any kind is made by us, management, our accountant, attorneys or any other person associated with our company, that the projections made by us will correspond with future events.

Investors must rely on our management.

Holders of the common stock will have very limited rights or powers to participate in the management of Health Discovery. Accordingly, no potential investor should purchase the common stock unless he or she is willing to entrust all aspects of day-to-day management and operations to our management. Investors will be relying on the expertise and experience of our management to identify and administer the business. Past experience and performance by our Board of Directors, Scientific Advisory Board and employees provides no assurance of future results.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares in this offering by the selling shareholders. We will, however, receive proceeds from the exercise of warrants held by the selling shareholders. We expect to use any proceeds we receive for working capital and for other general corporate purposes, including research and product development.

PRICE RANGE OF COMMON STOCK AND DIVIDENDS

Our common stock is traded on the OTC Bulletin Board under the symbol HDVY. The range of closing prices for our common stock, as reported on Bloomberg.com during each quarter of the last two fiscal years was as follows. These quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions.

	High	Low
First Quarter 2007	$ 0.16	$ 0.09
Second Quarter 2007	$ 0.14	$ 0.09
Third Quarter 2007	$ 0.11	$ 0.07
Fourth Quarter 2007	$ 0.11	$ 0.07
First Quarter 2008	$ 0.08	$ 0.04
Second Quarter 2008	$ 0.07	$ 0.04
Third Quarter 2008	$ 0.09	$ 0.03
Fourth Quarter 2008	$ 0.07	$ 0.04

At March 27, 2009, there were approximately 355 holders of record of our common stock.

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We have not paid any cash dividends since inception, and we do not anticipate paying any in the foreseeable future. We intend to retain future earnings, if any, to support the development and growth or our business. Payment of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion. Under the Georgia Business Corporation Act, a company is prohibited from paying a dividend if, after giving effect to that dividend, either the company would not be able to pay its debts as they become due in the usual course of business or the company's total assets would be less than the sum of its total liabilities plus the amount that would be needed if the company were to be dissolved at the time of the dividend to satisfy the preferential rights upon dissolution of shareholders whose preferential rights are superior to those receiving the dividends. The Company has had limited revenue since inception, has incurred recurring losses from operations, and has had to continually seek additional capital investment in order to fund operations. The Company's auditors have concluded that these factors, among others, raise substantial doubt about the Company's ability to continue as a going concern. As a result, the Company may be unable to pay any dividend until the Company achieves a level of revenue that provides sufficient resources to pay its debts as they become due and to continue as a going concern. If the Company were to pay dividends, the holders of the shares of Series A Preferred Stock and the Series B Preferred Stock have a right to first receive, or simultaneously receive, a dividend on each outstanding share of Series A Preferred Stock and Series B Preferred Stock on an as if converted to Common Stock basis. The holders of the shares of Series B Preferred Stock also accrue a 10% annual dividend and have a special dividend right to receive a portion of the Company's net revenues, subject to certain limitations.

SELLING SHAREHOLDERS

In connection with the Securities Purchase Agreement by and among the Company and the selling shareholders dated August 16, 2007 (the "Private Placement"), a copy of which is attached as Exhibit 10.8, the Company issued 51,538,822 shares of restricted common stock at $0.08 per share in exchange for $2.55 million in cash and conversion of approximately $1.5 million in debt to common shares. In addition, each of the selling shareholders acquired a warrant to purchase shares equivalent to its investment, with an aggregate of warrants to purchase 51,538,822 shares of Company common stock issued at an exercise price of $0.14 and a warrant to purchase shares equivalent to its investment, with an aggregate of warrants to purchase 51,538,822 shares of Company common stock issued at an exercise price of $0.19. A form of warrant is attached here to as Exhibit 10.9. There was no private placement agent in connection with the Private Placement.

Certain of our shares of common stock which may be issued to the selling shareholders upon the exercise of warrants acquired by the selling shareholders in the Private Placement are being registered for resale by the selling shareholders. Certain of our shares of common stock, which were issued to the selling shareholders pursuant to the terms of the securities purchase agreement as a result of this registration statement not having been declared effective by August 28, 2008, are also being registered for resale by the selling shareholders. The table below shows the name and number of shares of our common stock owned by the selling shareholders who may sell shares covered by this prospectus.

The selling shareholders may resell all, a portion or none of such shares of common stock, whether previously issued or which may be issued upon the exercise of warrants from time to time. The table below sets forth with respect to each selling shareholder, based upon information available to us as the date of this prospectus, the number of shares of common stock beneficially owned, the number of shares of common stock registered by this prospectus and the number and percent of outstanding common stock that will be owned after the sale of the registered shares of common stock assuming the sale of all of the registered shares of common stock under this prospectus and all other currently effective prospectuses. Because the selling shareholders may offer all, some or none of their respective shares of common stock, no definitive estimate as to the number of shares thereof that will be held by the selling shareholders after such offering can be provided. Therefore, we have prepared the table below on the

assumption that the selling shareholders will sell all shares covered by this prospectus. Except as noted below by footnote, none of the selling shareholders are affiliates of Health Discovery, have had a material relationship with Health Discovery during the past three years or are or were affiliates with registered broker-dealers.

Name	Beneficially Owned Before Offering (1)	Number of Shares Being Offered (2)	Number of Shares Beneficially Owned After Offering (3)	Percentage of Class Owned After Offering (3)
Curtis G. Anderson	14,248,915 (6)	9,515,056	4,733,859	2.76%
Athena Venture Partners, L.P. (4)	9,406,250 (6)	6,281,250	3,125,000	1.84%
Bloom Investment Co. (5)	940,625 (6)	628,125	312,500	*
William M. Goldstein (7)	2,313,125 (8)	125,625	2,187,500	1.29%
Stephen M. Grosberg	12,040,000 (6)	8,040,000	4,000,000	2.36%
John A. Landsberger	5,450,000 (9)	2,512,500	2,937,500	1.73%
John and Laura Maring	940,625 (6)	628,125	312,500	*
Joseph McKenzie	5,556,295 (10)	3,456,800	2,099,495	1.24%
MicroCapital Fund LP (11)	10,299,843 (6)	6,877,968	3,421,875	2.02%
MicroCapital Fund Ltd. (12)	3,433,281 (6)	2,292,656	1,140,625	*
Molly Murphy Crowley Revocable Trust UTD April 1991 (13)	1,128,750 (6)	753,750	375,000	*
Frank T. Nickell	9,406,250 (6)	6,281,250	3,125,000	1.84%
Jules Paderewski	3,400,222 (14)	1,738,623	1,661,599	*
Prime Mover Capital Partners, L.P. (15)	20,693,750 (6)	13,818,750	6,875,000	4.06%
James Tobey Roberts	6,473,390 (6)	4,322,762	2,150,628	1.27%
Julian Stern	4,118,158 (6)	2,749,999	1,368,159	*
Manish Vora (16)	376,250 (6)	251,250	125,000	*
Jimmy Woodward (17)	940,625 (6)	628,125	312,500	*

* represents less than 1%

(1) The number of shares beneficially owned is determined in accordance with Rule 13(d)-3 of the Securities Exchange Act of 1934, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rule, beneficial ownership includes any shares as to which each selling shareholder has sole or shared voting power or investment power and also any shares that the selling shareholder has the right to acquire within 60 days.

(2) Represents the number of shares of company common stock that may be issued to the selling shareholders upon the exercise of warrants plus the number of shares of common stock issued to the selling shareholders (1% of the number of shares initially purchased by the selling shareholders). The warrants were issued to the selling shareholders in connection with the Private Placement described above.

(3) Assumes that 169,522,590 shares are outstanding and that all common shares and shares issued upon the exercise of warrants will be resold by the selling shareholders in this offering. On September 8, 2008, the Company received notice, claiming that certain anti-dilution rights had been triggered under the terms of the private placement. See Item 15, Recent Sales of Unregistered Securities on page II-1.

(4) A limited partnership in which the children of Dr. Richard Caruso, one of the Company's former directors, are limited partners. Voting and dispositive power are vested in Richard E. Caruso, Gary R. DiLella and Gerald N. Holtz.

(5)	Voting and dispositive power vested in Harold S. Bloom.
(6)	Includes warrants to acquire one-third the number of shares initially purchased by the selling shareholder at an exercise price of $0.14 per share and expiring on September 7, 2010, and warrants to acquire one-third the number of shares initially purchased by the selling shareholder at an exercise price of $0.19 per share and expiring on September 7, 2010. Includes the number of shares of common stock issued to the selling shareholders (1% of the number of shares initially purchased by the selling shareholder).
(7)	Resigned as a director on April 11, 2008.
(8)	Includes warrants to acquire 62,500 shares at an exercise price of $0.14 per share and expiring on September 7, 2010, and warrants to acquire 62,500 shares at an exercise price of $0.19 per share and expiring on September 7, 2010. Includes warrants to acquire 312,500 shares at an exercise price of $0.24 per share and expiring December 31, 2008. Includes warrants to acquire 1,500,000 shares at an exercise price of $0.13 per share and expiring on January 31, 2012. Includes the number of shares of common stock issued to the selling shareholders (1% of the number of shares initially purchased by the selling shareholder).

(9) Includes warrants to acquire 1,250,000 shares at an exercise price of $0.14 per share and expiring on September 7, 2010, and warrants to acquire 1,250,000 shares at an exercise price of $0.19 per share and expiring on September 7, 2010. Includes warrants to acquire 1,687,500 shares at an exercise price of $0.24 per share and expiring on December 31, 2008. Includes the number of shares of common stock issued to the selling shareholders (1% of the number of shares initially purchased by the selling shareholder).
(10) Includes warrants to acquire 1,719,801 shares at an exercise price of $0.14 per share and expiring on September 7, 2010, and warrants to acquire 1,719,801 shares at an exercise price of $0.19 per share and expiring on September 7, 2010. Includes the number of shares of common stock issued to the selling shareholders (1% of the number of shares initially purchased by the selling shareholder).
(11) Voting and dispositive power vested in Ian Ellis and Tim Creutz.
(12) Voting and dispositive power vested in John Ivanac.
(13) Voting and dispositive power vested in Molly Crowley.
(14) Includes warrants to acquire 864,987 shares at an exercise price of $0.14 per share and expiring on September 7, 2010, and warrants to acquire 864,987 shares at an exercise price of $0.19 per share and expiring on September 7, 2010. Includes the number of shares of common stock issued to the selling shareholders (1% of the number of shares initially purchased by the selling shareholder).
(15) Voting and dispositive power vested in Peter Belton.
(16) Affiliated with registered broker dealer. Vora purchased the securities in his individual capacity and at the time of the purchase of the securities to be resold, he had no agreements or understandings, directly or indirectly, with any person to distribute the securities.
(17) Resigned as a director on November 13, 2007.

PLAN OF DISTRIBUTION

We are registering the shares of common stock to be issued upon the exercise of warrants on behalf of the selling shareholders. We are also registering certain of our shares of common stock which were issued to the selling shareholders pursuant to the terms of the securities purchase agreement on behalf of the selling shareholders. All costs, expenses and fees in connection with the registration of the shares offered by this prospectus will be borne by us, other than brokerage commissions and similar selling expenses, if any, attributable to the sale of shares which will be borne by the selling shareholders. We have agreed to indemnify the selling shareholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act. Sales of shares may be effected by selling shareholders from time to time in one or more types of transactions (which may include block transactions) in the over-the-counter market, any exchange or quotation system, in negotiated transactions, through put or call options transactions relating to the shares, through short sales of shares, or a combination of any such methods of sale, and any other method permitted pursuant to applicable law, at market prices prevailing at the time of sale, or at negotiated prices. Such transactions may or may not involve brokers or dealers.

The selling shareholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of the shares or of securities convertible into or exchangeable for the shares in the course of hedging positions they assume with selling shareholders. The selling shareholders may also enter into options or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealers or other financial institutions of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as amended or supplemented to reflect such transaction). The selling shareholders may pledge and/or loan these shares to broker-dealers who may borrow the shares against their hedging short position and in turn sell these shares under the prospectus to cover such short position.

The selling shareholders may make these transactions by selling shares directly to purchasers or to or through broker-dealers, which may act as agents or principals. Such broker-dealers may receive compensation in the

form of discounts, concessions or commissions from selling shareholders and/or the purchasers of shares for whom such broker-dealers may act as agents or to whom they sell as principal, or both (which compensation as to a particular broker-dealer is not expected to be in excess of customary commissions).

The selling shareholders and any broker-dealers that act in connection with the sale of shares may be deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act, and any commissions received by such broker-dealers or any profit on the resale of the shares sold by them while acting as principals might be deemed to be underwriting discounts or commissions under the Securities Act. The selling shareholders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares against certain liabilities, including liabilities arising under the Securities Act.

Because selling shareholders may be deemed "underwriters" within the meaning of Section 2(11) of the Securities Act, the selling shareholders may be subject to the prospectus delivery requirements of the Securities Act. We have informed the selling shareholders that the anti-manipulative provisions of Regulation M promulgated under the Exchange Act may apply to their sales in the market.

Selling shareholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act provided they meet the criteria and conform to the requirements of Rule 144.

BUSINESS

Our History

We were organized under the name Direct Wireless Communications, Inc. in April 2001 by Direct Wireless Corporation, which licensed to us its technology for a wireless telephone. In October 2001, Direct Wireless Corporation, then our sole stockholder, pursuant to an effective registration statement under the Securities Act of 1933, distributed its entire holdings of our common stock as a stock dividend to its shareholders. As a result of the dividend, Direct Wireless Corporation ceased to own any of our equity securities. The negative events that occurred over the next several years in the communications industry made it difficult for us to fund the advancement of our communication platform. As a result, we made the decision to strategically change the overall direction of our intended business activities.

On August 26, 2003, we acquired all of the assets of The Barnhill Group, LLC, which was owned by Stephen D. Barnhill, M.D. Dr. Barnhill is a physician trained in laboratory medicine and clinical pathology. He developed artificial intelligence and pattern recognition computational techniques used in medicine, genomics, proteomics, diagnostics and drug discovery. Following the acquisition, Dr. Barnhill became our Chief Executive Officer and Chairman of our Board of Directors. Also, immediately following our acquisition of the assets of The Barnhill Group, LLC and the change in strategic direction of the Company, our licensing rights to the telecommunications technology previously granted by Direct Wireless Corporation were terminated and all payments due to Direct Wireless Corporation were terminated.

Subsequently, we amended our charter to change our name to Health Discovery Corporation ("HDC" or the "Company"). Direct Wireless Communications (DWCM) officially became Health Discovery Corporation on November 6, 2003, at which time the new trading symbol (HDVY) became effective.

On September 30, 2003, we acquired the assets of Fractal Genomics, LLC, a company with patented Fractal Genomics Modeling ("FGM") software, through the issuance of 3,825,000 common shares of the Company. In addition to the shares of common stock of the Company issued for the acquisition of Fractal Genomics, LLC's assets, the Company agreed to execute a note for $500,000 payable in $62,500 quarterly installments to the sellers beginning on January 1, 2004 with the final payment being made in October 2005. Our acquisition of Fractal Genomics' assets was completed on December 30, 2003.

On July 30, 2004, we began purchasing rights to a portfolio of 71 patents and pending patent applications, including patents on the use of Support Vector Machines, or SVMs, and other machine learning tools useful for diagnostic and drug discovery (the "SVM Portfolio"). On May 6, 2005, we acquired the remaining interest in the SVM Portfolio from a group of unrelated third parties.

Effective September 26, 2004, we were assigned a patent license agreement with Lucent Technologies GRL Corporation ("Lucent"). The patent license agreement was associated with the patents acquired July 30, 2004. We agreed to pay minimum royalty fees to Lucent, which increases as a percentage of revenue based on each licensed

product that is sold, leased, or put into use by the Company. The license granted will continue for the entire unexpired term of Lucent's patents.

On July 12, 2007, we completed our reincorporation in Georgia by effecting a conversion in our legal domicile from Texas to Georgia. Our business, assets, liabilities, net worth and headquarters were unchanged as a result of the conversion, and our directors and officers prior to the conversion continued to serve after the conversion. In connection with the conversion, the Company's shares were converted on a one-for-one basis.

The conversion was approved by the shareholders holding at least two-thirds of the outstanding common shares of the Company at the reconvened special meeting of the shareholders held on June 13, 2007. Articles of Conversion were filed with the Secretaries of State of Texas and Georgia on July 12, 2007 to effect the reincorporation.

In connection with the conversion, we filed Articles of Incorporation in the State of Georgia, which increased the number of authorized shares of common stock, no par value, from two hundred million (200,000,000) shares to three hundred million (300,000,000) shares and authorized thirty million (30,000,000) shares of preferred stock, no par value, with the rights and preferences to be determined by the Company's Board of Directors prior to issuance. We also amended and restated our Bylaws. The Articles of Incorporation and Bylaws were submitted to the shareholders and were approved on June 13, 2007.

On October 9, 2007, we filed Articles of Amendment (the "Amendment") with the Secretary of State of the State of Georgia to amend our Articles of Incorporation. The Amendment sets forth the rights and preferences of the Series A Preferred Stock, including the right to receive dividends, the right to vote on matters presented to holders of common stock, a preference right in the event of liquidation, and the right to convert the Series A Preferred Stock into Common Stock. The Amendment was authorized by the Board of Directors on October 5, 2007.

On March 30, 2009, we filed Articles of Amendment (the "Second Amendment") with the Secretary of State of the State of Georgia to amend our Articles of Incorporation. The Second Amendment sets forth the rights and preferences of the Series B Preferred Stock, including the right to receive dividends, including special dividends, the right to vote on matters presented to holders of common stock, a preference right in the event of liquidation, and the right to convert the Series B Preferred Stock into Common Stock. The Second Amendment was authorized by the Board of Directors on March 20, 2009. A copy of the Second Amendment is attached to this registration statement as Exhibit 3.1(b).

On March 4, 2008, we formed two wholly owned subsidiaries, SVM Technology Inc., a Georgia corporation, and SVM Technology Inc., a Delaware corporation. We anticipate that we will use each of these subsidiaries to expand our business model by applying SVM technology outside of scientific discovery in the healthcare arena.

Our Company Overview

HDC is a pattern recognition company that uses advanced mathematical techniques to analyze large amounts of data to uncover patterns that might otherwise be undetectable. The Company operates primarily in the emerging field of molecular diagnostics where such tools are critical to scientific discovery. The terms artificial intelligence and machine learning are sometimes used to describe pattern recognition tools.

HDC's mission is to use its patents, intellectual prowess, and clinical partnerships principally to identify patterns that can advance the science of medicine, as well as to advance the effective use of our technology in other diverse business disciplines, including the high-tech, financial, and homeland security markets.

Our historical foundation lies in the molecular diagnostics field where we have made a number of important discoveries that may play a critical role in developing more personalized approaches to the diagnosis and treatment of certain diseases. However, our SVM assets in particular have broad applicability in many other fields. Intelligently applied, HDC's pattern recognition technology can be a portal between enormous amounts of otherwise undecipherable data and truly meaningful discovery.

Our Company's principal asset is its intellectual property which includes advanced mathematical algorithms called Support Vector Machines (SVM) and Fractal Genomic Modeling (FGM), as well as biomarkers that we discovered by applying our SVM and FGM techniques to complex genetic and proteomic data. Biomarkers are biological indicators or genetic expression signatures of certain disease states. Our intellectual property is protected by more than 69

patents that have been issued or are currently pending around the world.

Our business model has evolved over time to respond to business trends that intersect with our technological expertise and our capacity to professionally manage these opportunities. In the beginning, we sought only to use our SVMs internally in order to discover and license our biomarker signatures to various diagnostic and pharmaceutical companies. Today, our commercialization efforts include: utilization of our discoveries and knowledge to help develop biomarkers for use as companion diagnostics, surrogate biomarkers, and diagnostic and prognostic predictive tests; licensure of the SVM and FGM technologies directly to diagnostic and pharmaceutical companies; and, the formation of new ventures with domain experts in other fields where our pattern recognition technology holds commercial promise.

Our Principal Market

The principal healthcare market for our pattern recognition technology and biomarker discoveries is medical diagnostics, particularly the rapidly growing field of molecular diagnostics. The market consists of two basic types of diagnostic procedures: in vitro tests performed on a patient's fluid or tissue samples and in vivo tests performed directly on the body, including blood pressure monitoring and imaging analysis such as x-rays. In vitro diagnostics (IVD) can be further divided into several major segments including clinical chemistry, immunochemistry, hematology/cytometry, microbiology, and molecular diagnostics.

The IVD portion of the diagnostics market currently accounts for over $31 billion in sales worldwide. Today, the molecular diagnostics segment represents a fraction of the IVD revenues with about $2.5 billion in sales, but it is widely considered to be the fastest growing segment, estimated at a 20-25% compounded annual growth rate, mainly in the U.S. and EU markets, versus 6-7% for IVD as a whole. It is difficult to accurately assess the size of this segment since many countries do not have reference laboratories external to hospitals. Areas of particular growth include infectious diseases, oncology, genetic diseases, and pharmacogenetic analyses. Companies involved in this space include several major pharmaceutical and diversified corporations. Roche, Abbott, and Johnson & Johnson have diagnostics divisions that generated $8.6 billion, $2.8 billion, and $23.1 billion in revenue in 2008, respectively, while Siemens and General Electric operate medical imaging segments that are expanding in diagnostics. Other market players include large technology companies like Becton-Dickinson, Beckman Coulter, and Bio-Rad.

IVDs have been established as effective tools for all aspects of disease management, especially in areas of unmet clinical need. Such tests have been developed for screening and prognosis as well as for applications, such as determination of genetic predisposition to disease, detection of presymptomatic disease, and prediction of individual drug response.

Molecular Diagnostics

Within the overall IVD market, the molecular diagnostics segment is expected to expand dramatically, largely attributable to advances in genomics and proteomics. Primary market drivers include the addition of new diagnostic tests in high volume testing areas coupled with the introduction of new instrumentation that provide greater ease, speed, and quality in test performance. Given its annualized growth rate, the potential for molecular diagnostics is particularly impressive in the U.S. which represents the largest commercial market with the most favorable conditions for entry and marketing.

Borrowing from the two disciplines of genomics and proteomics, molecular diagnostics categorizes cancer and other diseases using technology such as mass spectrometry and gene chips. Genomics is the study of all the genes in a cell or organism, and proteomics is the study of all the proteins. Molecular diagnostics determines how these genes and proteins interact in patients by focusing on patterns – gene and protein patterns – in different types of healthy and diseased patient cells. Molecular diagnostics uncover these genomic and proteomic changes and capture this information as expression patterns. Also called molecular signatures, these expression patterns improve clinicians' ability to diagnose cancer earlier, predict which patients will respond to certain treatments, predict cancer recurrence risk, and select appropriate treatment for individual patients.

Molecular diagnostics can facilitate early, accurate screening and prediction of diseases in their asymptomatic stages, years before symptoms manifest or diseases actually begin. This allows intervention to begin earlier, perhaps preventing the disease entirely. Early intervention will allow the healthcare system to encompass both preventative and reactive medicine, improving overall healthcare efficiency and possibly reducing systemic healthcare expenditures.

The molecular diagnostics industry is an increasingly powerful health care participant with tremendous potential. It is characterized by a very diverse, constantly changing technology base that continuously produces new opportunities and applications. Advances in polymerase chain reaction ("PCR"), multiplexing, sequencing and other technologies are propelling both new and old companies forward with novel capabilities. Similarly, a growing understanding of the molecular basis of cancer and other chronic diseases has awakened new realms of medicine to the possibilities of molecular diagnostic testing.

Clinicians have discovered that molecular diagnostics have many uses beyond just the creation of new screening and diagnostic tools. Expression patterns can also provide information for the design of new cancer treatments, monitor the treatment's effectiveness as it is studied in a clinical trial, and even predict the patient's response to a new treatment. In addition to its importance in addressing the many kinds of cancer, molecular diagnostics will likely become an important technology for detecting resistance to antibiotics, a major hazard in the hospital setting. In the future, molecular tests should be able to determine within two to three hours not only the nature of an infection, but also therapeutic selection and any potential resistance.

The molecular diagnostics market is a rapidly growing and rapidly changing market with explosive potential, multiple opportunities for entry and growth, and intensifying competition. New tests and new instruments to perform automated analysis continue to expand the capabilities of companies in this segment. The identification and validation of novel genes, gene products, and biomarkers makes it possible to develop and introduce even more tests. The market includes sales of reagents, instruments, and kits to clinical laboratories and research reagents that can be used by labs to develop their own in-house procedures. It also includes testing services by those clinical labs that have developed their own products, plus diagnostics companies that operate their own branded, certified testing services.

Molecular diagnostic tests typically analyze DNA, RNA, or protein biomarkers (analytes) to identify a disease, determine its course, evaluate response to therapy, or predict individual predisposition to a disease. The techniques applied involve analysis of DNA sequences, DNA methylation patterns, gene expression profiles, proteins, protein expression, or combinations of these biomarkers. Such biomarkers provide direct information about genotypic and/or phenotypic changes associated with specific diseases or responses to treatment. Biomarker analysis has also become an important tool in drug discovery, preclinical drug development, and patient monitoring during clinical trials.

Most molecular diagnostics currently on the market are primarily single-analyte tests involving the detection of a single gene or protein. However, many disease-related processes are multifactorial, involving the abnormal expression of multiple genes or proteins. Second-generation molecular diagnostics are anticipated to utilize novel detection technologies and multiplexing platforms to allow the measurement of a large number of analytes simultaneously. These innovations will increasingly utilize multiplexing platforms such as DNA microarrays that perform parallel biomarker analysis.

The market has been driven by transition to fully automated systems, real time amplification, and growing development of point-of-care platforms. Industry experts estimate that future growth will stem from emerging applications like genotyping for identifying drug resistant strains; bioterrorism testing applications within infectious disease; disease diagnostics and prognostic assays for disease applications like sepsis and nosocomial infections, such as MRSA, cancer, cardiovascular disease, and Alzheimer's disease; diagnosis of inherited disorders; and theranostics companion diagnostics.

Genomic testing to determine diagnosis, therapeutic selection and response, and preventative measures is an important segment of the overall IVD market. Although this segment is small today, it is an extremely fast-growing component. Today, genomic testing is responsible for driving growth of the overall market, currently constituting approximately 7%–8% of the clinical testing service market. In the service segment, genomic testing is growing by about 60%–75% per year.

Other market segments include traditional genomics, personalized medicine, and cancer with 13%, 9%, and 8% of the U.S. clinical lab services market, respectively. Experts predict that the cancer segment is growing at 20% a year, traditional genomics about 15% a year, and personalized medicine about 20% a year, compared to the 5-10% growth rate for infectious diseases.

From a demographic standpoint, 12% of the U.S. population was 65 years old or older in 2000. By 2030, that segment is anticipated to grow to 20% of the population, burdening the healthcare system with increased numbers of cardiovascular, neurological, and other age-related diseases. Age-related conditions are expected to contribute to the health care market that will require greater product development and marketing of assays, including molecular tests.

Diagnostics addressing the pharmacogenetic testing segment (i.e. companion diagnostics and surrogate biomarkers) are expected to drive market growth in the years ahead. Pharmacogenetics broadly relates to the study of genetic variations and their application to drug discovery to provide personalized therapy. Currently the second largest market sector behind diagnostics for infectious diseases, the pharmacogenetic sector of the molecular diagnostics market is projected to grow rapidly.

The Role of HDC's Technology in Molecular Diagnostics

Our SVM technology offers pharmaceutical companies a key tool as they approach drug discovery in this new era of personalized medicine. Accordingly, our marketing efforts are focused on utilizing our technology in partnership with many of the world's leading pharmaceutical and life-sciences companies. Our primary commercialization pathway for our technology and discoveries is to enter into both licensing agreements and joint development opportunities that feature up-front license fees, fee-for-service development revenue, milestone payments, and royalty streams. We believe the pharmaceutical segment offers us an excellent commercial opportunity for the application of our technology, as the pharmaceutical industry is characterized by costly R&D efforts to create new patent-protected products, fierce competition for products that are not so well protected, and ongoing consolidation as major companies acquire smaller players to add new products to existing pipelines.

The use of HDC's SVM technology and our discovered biomarkers may help pharmaceutical companies develop and evaluate new drugs and medical therapies in less time and at lower cost. According to the lobby group PhRMA, only 1 of every 10,000 potential medicines investigated by America's drug companies survives the research and development process and is approved for patient use by the U.S. Food and Drug Administration (FDA). On average, the drug developmental process can take up to 15 years in research and development, with costs approaching many hundreds of millions of dollars. This extended timeframe and enormous expense has led to an emphasis on the development of "blockbuster" drugs.

Within the drug discovery R&D process, biomarkers like ours can help pharmaceutical companies identify disease targets and pathways and validate mechanisms of drug action. They may also serve as pharmacodynamic indicators of drug activity, drug response, and drug toxicity in clinical development. Biomarkers may also be used to help avoid new drug failures in late stage trials, earlier detection of disease, and improved prognosis of therapeutic outcome.

We consistently work to influence the evolving relationship between diagnostics and monitoring patients for therapeutic outcome. With its February 2007 approval of MammoPrint, Agendia's multi-gene expression breast cancer prognosis test, the FDA signaled its acceptance of the field of molecular diagnostics and highlighted the growing importance of personalized medicine. In particular, the advent of molecular diagnostics has led to the promise of a completely new paradigm in the care of patients suffering from cancer and other diseases.

Using companion diagnostics in patient care can substantially improve patient outcomes and pave the way for more personalized, targeted medicine by reducing both misdiagnoses and adverse reactions, and by eliminating unnecessary and expensive downstream tests. Today, patient dosage levels are based on age, sex, and weight, as determined by empirical studies. However, specific drug metabolism may be as individualized as one's fingerprint. In the future, molecular diagnostics may be able to direct physicians to the right drugs for every patient, no matter what the illness.

This trend towards personalized medicine may ultimately lead to the reduction of overall healthcare expenditures. What is known as a surrogate molecular marker may now be substituted for the lengthy process of comparing the effects of a prospective new drug versus a placebo on the ultimate outcome of a disease. As a result, a drug's effectiveness against the disease process in question may be monitored more efficiently by evaluating the presence or absence of a specific biomarker, thereby avoiding failures late in the research and development process as well as the threat of recalls. One example of the successful application of biomarker data to therapeutic evaluation is the use of blood cholesterol levels to evaluate the effectiveness of cholesterol lowering drugs. This approach has the potential for creating a revolutionary new paradigm in the conduct of clinical trials worldwide.

Current diagnostic tools, such as blood marker-based immunoassays, imaging techniques, and biopsy analyses, provide valuable information and have played an important role in increasing survival rates of cancer patients. However, these tools have inherent limitations in accuracy and remain quite expensive. There is a significant need for

advanced diagnostic and prognostic tests that can provide meaningful information, screen for cancer, detect early recurrence, and monitor progression and therapeutic response in real time. HDC's pattern recognition technology can play a critical role in the development of these tests because an advanced pattern recognition technique is required for this type of discovery. SVM technology is recognized as a superior pattern recognition tool available today as evidenced in hundreds of scientific papers worldwide.

Working with recognized diagnostic and pharmaceutical partners, our goal is to develop a product line of newly discovered biomarker signatures and pathways that can be found in human genes and genetic variations, as well as gene, protein and metabolite expression differences. In addition, we market our expertise in the design of clinical trials for companion diagnostics to substantiate the clinical validity and commercial utility of those biomarkers. We also market the potent combination of our intellectual property and intellectual prowess to our prospective collaborative partners. As inventors of the SVM technology, our world renowned mathematicians offer these companies the strongest possible development team for their drug discovery, diagnostic test, or other applications.

Our Technologies and Discoveries

HDC owns a patent portfolio of machine learning technology, including certain pioneer patents on SVM. We also have consulting arrangements with many of the physicians, clinical specialists and mathematicians responsible for developing and filing the pioneer neural network and SVM patents for the analysis of clinical data.

The Company's SVM technology is commonly considered within the context of artificial intelligence. This is a branch of computer science concerned with giving computers the ability to perform functions normally associated with human intelligence, such as reasoning and optimization through experience. Machine learning is a type of artificial intelligence that enables the development of algorithms and techniques that allow computers to learn. Pattern recognition is machine learning with a wide spectrum of applications including medical diagnosis, bioinformatics, classifying DNA sequences, detecting credit card fraud, stock market analysis, object recognition in computer vision, and robot locomotion.

SVM Overview

SVMs are mathematical algorithms that allow computers to sift through large, complex datasets to identify patterns. SVMs are widely acknowledged for their ability to discover hidden relationships in these complex datasets. With the ability to handle what is known as infinite dimensional space, SVMs are broadly considered to be superior to neural networks and other mathematical techniques. SVM is a core machine learning technology with strong theoretical foundations and excellent empirical successes.

Since their introduction in 1992, SVMs marked the beginning of a new era in the learning from examples paradigm in artificial intelligence. Rooted in the Statistical Learning Theory developed by Professor Vladimir Vapnik, a member of HDC's Scientific Advisory Board, SVMs quickly gained attention from the math and science communities due to a number of theoretical and computational merits. This development advanced a new framework for modeling learning algorithms. Within this framework, the fields of machine learning and statistics were merged introducing powerful algorithms designed to handle the difficulties of prior computational techniques.

The new generation of learning algorithms that were developed based on this theory has proved to be remarkably resistant to the problems imposed by noisy data and high dimensionality. They are computationally efficient, have an inherent modular design that simplifies their implementation and analysis and allows the insertion of domain knowledge, and, more importantly, they have theoretical guarantees about their generalization ability. SVMs have been validated in hundreds of independent academic publications and presentations. In recognition for his work, Professor Vapnik received the prestigious Alexander von Humboldt Prize from the German government honoring foreign scientists and scholars for lifetime achievement.

SVMs have become widely established as one of the leading approaches to pattern recognition and machine learning worldwide and are replacing neural networks in a variety of fields, including engineering, information retrieval and bioinformatics. This technology has been incorporated into product and research applications by many biomedical, pharmaceutical, software, computer and financial companies. Educational and research institutions throughout the

world have successfully applied SVMs to a wide array of applications, including gene and protein expression analysis, medical image analysis, flow cytometry, and mass spectrometry.

Recursive Feature Elimination - Support Vector Machine Overview

Recursive Feature Elimination (RFE-SVM) is an application of SVM that was created by members of HDC's science team to find discriminate relationships within clinical datasets, as well as within gene expression and proteomic datasets created from micro-arrays of tumor versus normal tissues. In general, SVMs identify patterns – for instance, a biomarker/genetic expression signature of a disease. The RFE-SVM utilizes this pattern recognition capability to identify and rank order the data points that contribute most to the desired results. The Company believes that its four RFE-SVM patents are currently the only RFE patents issued in the world.

Using RFE-SVM, we have been able to access information in micro-array datasets that the most advanced bioinformatics techniques missed. In one micro-array experiment, RFE-SVMs were able to filter irrelevant tissue-specific genes from those related to the malignancy. RFE-SVM has also been used to determine gene expression patterns that correlate to the severity of a disease, not just its existence. It has been shown to improve both diagnosis and prognosis by providing physicians with an enhanced decision tool. HDC scientists believe that these analytic methods are effective for finding genes and proteins implicated in several cancers, as well as in assisting with the pharmacogenetic and toxicological profiling of patients. The RFE-SVM method is also capable of finding those specific genes and proteins that are unhindered by ever-increasing patent protection.

Fractal Genomic Modeling Overview

On September 30, 2003, we acquired the assets of Fractal Genomics, LLC, a company with patented FGM software. The fractal technology is used to find discriminate relationships within clinical datasets as well as within gene expression datasets created from micro-arrays of disease versus normal tissues.

The Fractal Genomic Modeling (“FGM”) data analysis technique has been shown to improve the mapping of genetic pathways involved in the diagnosis and prevention of certain diseases. HDC scientists feel that these analytic methods are effective for finding genes implicated in several cancers, HIV infection, lymphedema, Down’s syndrome, and a host of other diseases, as well as the pharmacogenetic profiling of patients.

FGM technology is designed to study complex networks. A complex network can be made up of genes inside a living organism, web pages on the Internet, stocks within a financial market, or any group of objects or processes that appear to be connected together in some intricate way. FGM uses a new approach toward modeling network behavior to rapidly generate diagrams and software simulations that facilitate prediction and analysis of whatever process is your particular object of study. Two important concepts behind FGM technology are the notions of scale-free networks and self-similarity.

Our Scientific Achievements

HDC’s world renowned scientific team is uniquely experienced in the design, analysis and application of machine learning technology, having invented the concepts and many of the methodologies used to exploit domain knowledge. In addition, through pattern recognition, our science team has identified and patent-protected biomarkers as possible treatment advances for several diseases, including Benign Prostatic Hyperplasia (BPH), prostate cancer, leukemia, colon cancer, AIDS and breast cancer.

Benign Prostatic Hyperplasia (BPH)

HDC has identified and patent-protected a subset of genes that separates benign prostatic hyperplasia (BPH) from prostate cancer with a high degree of accuracy. This same set of genes also separated BPH from normal tissue patterns, indicating that BPH is a disease with molecular characteristics of its own. This discovery could be used to develop a new non-invasive diagnostic test for BPH, which does not currently exist, as well as a completely new type of therapy for patients with this disease. This patent-protected gene set is the subject of discussions with an international pharmaceutical company to be used as a surrogate biomarker for their clinical trial evaluating a new BPH drug.

BPH is a non-cancerous enlargement of the prostate gland that occurs as men age. The enlargement often leads to obstruction in the flow of urine through the urethra that passes through the prostate gland. BPH is a common condition, representing a global treatment market of almost $4 billion annually growing by 12% per year in fixed-rate US dollar terms. According to the National Institutes of Health (NIH), BPH affects more than 50% of men over age

60 and as many as 90% of men over the age of 70. While BPH does not cause prostate cancer, both may be found together.

Prostate Cancer

HDC has identified, patent-protected and recently licensed a genetic biomarker signature that identifies clinically significant high grade prostate cancer cells based on analysis of tissue samples. More than one million men a year undergo biopsies of the prostate gland after a cancer-screening test reveals moderately elevated levels of prostate specific antigen (PSA) in the blood. Upon the achievement of successful validation, the Company's test will be used to analyze patients with elevated PSA or abnormal rectal exams, with negative biopsy results to determine if there is genomic evidence of grade three or higher cancer cells present in biopsy tissue, indicating the presence of a cancer missed by the biopsy. We and Clarient, Inc. have successfully completed all phases of the clinical trial process with the hope of achieving the statistical significance necessary to validate the ability to commercialize a test. Results from both the Phase I, Phase II and Phase III double-blinded clinical validation studies now completed at Clarient demonstrated a very high success rate for identifying the presence of Grade 3 or higher prostate cancer cells (clinically significant cancer), as well as normal BPH (benign prostatic hyperplasia) cells. With the completion of the clinical trial, HDC's new gene-based molecular diagnostic test is now being commercialized to be used by physicians on their patients at risk of having prostate cancer.

Prostate cancer is the second-leading cause of cancer death in men, after lung cancer. The National Cancer Institute (NCI) estimates that more than 186,000 new cases of prostate cancer will be diagnosed in the U.S. in 2008, with more than 28,660 deaths.

Leukemia

HDC has identified and patent-protected a set of leukemia genes that can separate ALL-T-cell leukemia from ALL-B-cell leukemia with a high degree of accuracy. The Company collaborated with a prominent cancer research hospital to analyze a gene expression database to identify new biomarkers and pathways involved in leukemia. The Company intends to further validate this finding in anticipation of developing a molecular diagnostic product for commercialization.

Leukemia is a type of cancer that originates in the bone marrow. The accumulation of malignant cells interferes with the body's production of healthy blood cells and makes the body unable to protect itself against infections. The National Cancer Institute (NCI) estimates that more than 44,000 new cases will be diagnosed in the U.S. in 2008, with almost 22,000 deaths.

Colon Cancer

HDC has identified and patent-protected colon cancer-specific biomarkers that can be used in the development of diagnostic assays for cancer detection, disease discrimination, and even a potential vaccine. The aim of this early biomarker discovery project was to define the gene expression patterns associated with colon cancer. Our RFE-SVM served as an effective tool for sifting through the noise of thousands of measurements to highlight only those genes that optimally contributed to the study focus. The Company is currently validating these findings in anticipation of developing a molecular diagnostic product for commercialization.

In the United States, colorectal cancer is the third most common cancer in men and women. The National Cancer Institute (NCI) estimates that more than 108,000 new cases of colon and rectal cancer will be diagnosed in the U.S. in 2008, with nearly 50,000 deaths.

AIDS

HDC identified and patent-protected an AIDS expression signature that separated AIDS brain cells from non-AIDS brain cells with a high degree of accuracy.

This biomarker discovery was accomplished in conjunction with Dr. Paul Shapshak, Director of the Dementia/HIV Laboratory at the University of Miami Medical School, and a group of leading scientists using HDC's proprietary FGM analysis technique. HDC sold the biomarker discovery to the University of Miami in November 2005.

Breast Cancer

HDC licensed its two breast cancer diagnostic technologies (MammoSIGHT, for detecting malignancy in mammograms and MetastaSIGHT, for identifying circulating tumor cells in the blood) to Smart Personalized Medicine, LLC in exchange for a 15% ownership position in Smart Personalized Medicine, LLC and a per test royalty up to 7.5% based on net proceeds received from the sale of the new breast cancer prognostic test. The detection component of these technologies finds the areas of particular interest in the image and separates these objects from the background. The feature extraction component formulates numerical values relevant to the classification task from the segmented objects. HDC's patented technology can be used within all diagnostic imaging radiology techniques, including PET scans, CT scans, and MRIs.

For women, breast cancer is the most common non-skin cancer and the second leading cause of cancer-related death in the United States. However, death rates from breast cancer have been declining since 1990, and these decreases are believed to be the result, in part, of earlier detection and improved treatment. Mammography remains the best method of early breast cancer detection. According to studies cited by the National Cancer Institute, 10-20% of breast cancers detected by a physical exam were missed by a film mammogram. For this reason, there have been extensive research efforts to improve mammography.

The FDA reports that there are about 33.5 million mammography procedures performed each year in the United States. Data from 2000-2002 show that about 70 percent of all mammograms that are performed annually are for screening purposes (to detect cancer as opposed to following cancer once it has been diagnosed). This translates to about 23.5 million screening procedures every year.

Studies have shown that among newly diagnosed breast cancer cases in which the patients have previous mammograms, 75% of the cases will have abnormality detectable in the old films. In fact, missed cancer reading in mammography is a major source of lawsuits in radiology. Detecting malignancy in mammograms can be very difficult. Individual mammograms are unique and there can be great variation within “normal” images. Unlike CT and MRI, mammograms are not cross-sectional images. Basically, a mammogram produces a two-dimensional picture of a three-dimensional object. The projection from 3D to 2D and the resulting overlaps on the images may interfere with the recognition of the distinguishing features. The features are often very subtle. The rules for differentiating the benign and malignant cases are vague and not easily formulated.

One way to reduce reading errors is to have two radiologists read the same mammograms independently. However, in most health care systems, it is not feasible to implement such a two-radiologist reading process. A computer-assisted detection (CAD) system serving as a second reader is therefore an attractive option and CAD is currently reimbursed by both insurance companies and Medicare.

Both digital and film mammography use X-rays to produce an image of the breast. In film mammography, which has been used for over thirty-five years, the image is created directly on a film. While standard film mammography is very good, it is less sensitive for women who have dense breasts. A major limitation of film mammography is the film itself. Once a film mammogram is obtained, it cannot be significantly altered; if the film is underexposed, for example, contrast is lost and cannot be regained.

Digital mammography takes an electronic image of the breast and stores it directly in a computer. Digital mammography uses less radiation than film mammography and allows for improvement in image storage and transmission because images can be stored and sent electronically. Radiologists can use software to help interpret digital mammograms.

MammoSIGHT

HDC’s MammoSIGHT technology introduces the use of SVMs in detecting malignancy in mammograms. The SVM classifier produces an index discriminating between the benign and malignant cases. The individual components can be developed in parallel because of the modular structure. In developing the calcification segmentation component, a selected set of malignant, benign and normal cases representing a wide range of images was used to guide and test the design in order to produce a general, robust and accurate algorithm. At the same time, the SVM classifier was developed and tested with manually prepared input data. A set of 300 images (150 benign and 150 malignant cases) was used in training the SVM. An independent set of 328 images was used for testing. High dimensional input features were used to ensure a sufficient capacity for automatically extracted features.

Clusters of micro calcifications are characterized by their relatively small sizes and high densities. The algorithm combines a recursive peak seeking technique with morphological operations to achieve a highly accurate calcification detection and segmentation.

MetastaSIGHT

Cancer cells have the ability to migrate from the organ of its origin to any distant organ throughout the body. This is known as metastasis, the hallmark of malignant cancers. During metastasis, cancerous cells break through barriers to travel through the body's circulatory system to invade other organs. These cells form new cells in vital organs throughout the body, becoming secondary tumors that destroy normal cells by depriving them of nutrition.

Even with today's best treatment when the cancer is forced into remission, metastasis will not necessarily leave the body. Metastasis cannot be eliminated by surgery. Often, malignant cells circulate in the blood before detection by clinical examination. MetastaSIGHT uses an SVM-based approach to introduce new cellular imaging technology that identifies circulating tumor cells in the blood.

Employees

On April 28, 2009, we had 3 full time employees.

Website Address

Our corporate website address is www.HealthDiscoveryCorp.com. To view our public filings from the home page, select the "Display SEC Filings" tab followed by "SEC Filings." This is a direct link to our filings with the Securities and Exchange Commission ("SEC"), including but not limited to our Annual Report of Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and any amendments to these reports. These reports are accessible soon after we file them with the SEC.

Governmental Regulation

Our business plan involves Biomarker Discovery in the field of molecular diagnostics. This early discovery process does not involve any governmental regulations or approvals. If we are successful in licensing our discoveries to other companies, FDA approvals may be required before the ultimate product may be sold to consumers. Companies licensing our discoveries or technologies will be responsible for all costs involved in such approvals. If we are not successful in licensing these discoveries and choose to take these discoveries to market ourselves, we may then be subject to applicable FDA regulations and would then bear the costs of such approvals.

We know of no governmental regulations that will affect the Company's current operations or products.

Intellectual Property

In connection with the SVM Acquisition, we obtained rights to the intellectual property within the "SVM portfolio" that currently consists of thirty-three patents which were or have since issued as well as thirty-four other patent applications that are pending in the U.S. and elsewhere in the world. The issued patents and pending applications in the SVM portfolio to date, including new applications that we have filed since acquiring the original IP, HDC are:

Patent/Application No.	Title	Expiration Date
U.S. Patent No. 6,128,608	Enhancing Knowledge Discovery Using Multiple Support Vector Machines	05/01/2019
U.S. Patent No. 6,157,921		05/01/2019

	Enhancing Knowledge Discovery Using Support Vector Machines in a Distributed Network Environment	
U.S. Patent No. 6,427,141	Enhancing Knowledge Discovery Using Multiple Support Vector Machines.	05/01/2019
U.S. Patent No. 6,658,395	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines.	05/01/2019
U.S. Patent No. 6,714,925	System for Identifying Patterns in Biological Data Using a Distributed Network.	05/01/2019

Patent/Application No.	Title	Expiration Date
U.S. Patent No. 6,760,715	Enhancing Biological Knowledge Discovery Using Multiple Support Vector Machines.	05/01/2019
U.S. Patent No. 6,789,069	Method of Identifying Patterns in Biological Systems and Method of Uses.	05/01/2019
U.S. Patent No. 6,882,990	Method of Identifying Biological Patterns Using Multiple Data Sets.	05/01/2019
U.S. Patent No. 6,944,602	Spectral Kernels for Learning Machines	02/19/2023
U.S. Patent No. 6,996,542	Computer-Aided Image Analysis	04/21/2021
U.S. Patent No. 7,117,188	Methods of Identifying Patterns in Biological Systems and Uses Thereof	05/01/2019
U.S. Patent No. 7,299,213	Method of Using Kernel Alignment to Extract Significant Features from a Large Dataset	03/01/2022
U.S. Patent No. 7,318,051	Methods for Feature Selection in a Learning Machine	02/25/2021
U.S. Patent No. 7,353,215	Kernels and Methods for Selecting Kernels for Use in a Learning Machine	05/07/2022
U.S. Patent No. 7,383,237	Computer-Aided Image Analysis	11/04/2019
U.S. Patent No. 7,444,308	Data Mining Platform for Bioinformatics	08/07/2020
U.S. Patent No. 7,475,048	Pre-Processed Feature Ranking for a Support Vector Machine	08/07/2020
Australian Patent No. 764897	Pre-processing and Post-processing for Enhancing Knowledge Discovery Using Support Vector Machines.	05/01/2019
Indian Patent No. 212978	Pre-Processing and Post-Processing for Enhancing Knowledge Discovery Using Support Vector Machines	05/01/2019
South African Patent No. 00/7122	Pre-processing and Post-processing for Enhancing Knowledge Discovery Using Support Vector Machines.	05/01/2019
Australian Patent No. 780050	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines.	05/24/2020
Chinese Patent No. ZL00808062.3	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines.	05/24/2020
		05/24/2020

European Patent No. 1192595	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines.	
German Patent No. DE60024452.0-08	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines.	05/24/2020
Indian Patent No. 223409	Enhancing Knowledge Discovery for Multiple Data Sets Using Multiple Support Vector Machines	05/24/2020
Israeli Patent No. 146705	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines	05/24/2020
Norwegian Patent No. 319,838	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines.	05/24/2020

Patent/Application No.	Title	Expiration Date
South Korean Patent No. 724104	Enhancing Knowledge Discovery from Data Sets Using Multiple Support Vector Machines	05/24/2020
Australian Patent No. 779635	Method of Identifying Patterns in Biological Systems and Method of Uses.	10/27/2020
Australian Patent No. 2002243783	Computer Aided Image Analysis	01/23/2022
Japanese Patent No. 3947109	Computer Aided Image Analysis	01/23/2022
Australian Patent No. 2002253879	Methods of Identifying Patterns in Biological Systems and Uses Thereof	01/24/2022
Japanese Patent No. 4138486	Methods of Identifying Patterns in Biological Systems and Uses Thereof	01/24/2022
Canadian Application No. 2,330,878	Pre-Processing and Post-Processing for Enhancing Knowledge Discovery Using Support Vector Machines	05/01/2019
European Publication No. 1082646	Pre-Processing and Post-Processing for Enhancing Knowledge Discovery Using Support Vector Machines	05/01/2019
Hong Kong Application No. 011065063	Pre-Processing and Post-Processing for Enhancing Knowledge Discovery Using Support Vector Machines	05/01/2019
Canadian Application No. 2,371,240	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines	05/24/2020
Japanese Application No. 2000-620577	Enhancing Knowledge Discovery from Multiple Data Sets Using Multiple Support Vector Machines	05/24/2020
Canadian Application No. 2,388,595	Method of Identifying Patterns in Biological Systems and Method of Uses	08/07/2020
European Publication No. 1236173	Method of Identifying Patterns in Biological Systems and Method of Uses	08/07/2020
Japanese Application No. 2001-534088	Method of Identifying Patterns in Biological Systems and Methods of Uses	08/07/2020
U.S. Patent Publication No. 2005/0165556	Colon Cancer-Specific Markers	05/01/2019
U.S. Application No. 11/926,129	System for Providing Data Analysis Services Using a Support Vector Machine for Processing Data Received from a Remote Source	05/01/2019
U.S. Patent Publication No. 2008/0033899		05/01/2019

	Feature Selection Using Support Vector Machine Classifier	
European Publication No. 1828917	Biomarkers for Screening, Predicting, and Monitoring Prostate Disease	11/14/2025
Canadian Application No. 2,435,254	Methods of Identifying Patterns in Biological Systems and Uses Thereof	01/24/2022
European Publication No. 1459235	Methods of Identifying Patterns in Biological Systems and Uses Thereof	01/24/2022
U.S. Application No. 11/929,354	Kernels and Methods for Selecting Kernels for Use in a Learning Machine	05/07/2022
Canadian Application No. 2,435,290	Computer Aided Image Analysis	01/23/2022

Patent/Application No.	Title	Expiration Date
European Publication No. 1356421	Computer Aided Image Analysis	01/23/2022
U.S. Application No. 11/929,213	Methods for Feature Selection in a Learning Machine	08/07/2020
U.S. Patent Publication No. 2005/0071140	Model Selection for Cluster Data Analysis	05/17/2022
U.S. Application No. 11/929,522	Model Selection for Cluster Data Analysis	05/17/2022
U.S. Patent Publication No. 2006/0064415	Data Mining Platform for Bioinformatics	08/07/2020
U.S. Patent Publication No. 2008/0097938	Data Mining Platform for Knowledge Discovery from Heterogeneous Data Types and/or Heterogeneous Data Sources	08/07/2020
U.S. Patent Publication No. 2005/0228591	Kernels and Kernel Methods for Spectral Data	08/07/2020
U.S. Patent Publication No. 2008/0097940	Kernels and Kernel Methods for Spectral Data	08/07/2020
U.S. Application No. 11/928,784	Pre-Processed Feature Ranking for a Support Vector Machine	08/07/2020
European Publication No. 1449108	Pre-Processed Feature Ranking for a Support Vector Machine	11/07/2022
U.S. Patent Publication No. 2008/0050836	Biomarkers for Screening, Predicting, and Monitoring Benign Prostate Hyperplasia	01/24/2022
U.S. Application No. 12/025,724	Biomarkers Upregulated in Prostate Cancer	01/24/2022
U.S. Application No. 12/242,264	Biomarkers Overexpressed in Prostate Cancer	01/24/2022
U.S. Application No. 12/242,912	Biomarkers Downregulated in Prostate Cancer	01/24/2022
U.S. Application No. 12/327,823	Methods for Screening, Predicting and Monitoring Prostate Cancer	01/24/2022
U.S. Application No. 12/349,437	Methods for Screening, Predicting and Monitoring Prostate Cancer	01/24/2022
U.S. Application No. 12/367,541	Method and System for Analysis of Flow Cytometry Data Using Support Vector Machines	02/08/2029
WIPO Application No. PCT/US09/33504	Method and System for Analysis of Flow Cytometry Data Using Support Vector Machines	02/08/2029

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HDC also owns intellectual property rights in U.S. and foreign patents and pending patent applications covering the FGM technology. The FGM portfolio includes two issued patents and three pending patent applications, which are:

Patent/Application No.	Title	Expiration Date
U.S. Patent No. 6,920,451	Method for the Manipulation, Storage, Modeling, Visualization and Quantification of Datasets.	01/19/2021
U.S. Patent No. 7,366,719	Method for the Manipulation, Storage, Modeling, Visualization and Quantification of Datasets	01/19/2021
European Patent No.: 1252588	Method for the Manipulation, Storage, Modeling, Visualization and Quantification of Datasets.	01/19/2021
U.S. Patent Publication No.: 2005/0079524	Method for Identifying Biomarkers Using Fractal Genomics Modeling.	01/19/2021
U.S. Patent Publication No.: 2005/0158735	Method for Studying Cellular Chronomics and Causal Relationships of Genes Using Fractal Genomics Modeling.	01/19/2021

Our Competition

HDC's main service/product is Biomarker Discovery. While a number of companies perform Biomarker Discovery, we feel that our SVM and FGM technologies give us a distinct advantage over competing technologies. Neither classical statistical analysis nor neural networks (the two competing technologies) can handle the large amounts of inputs necessary to produce fully validated biomarkers.

Customers and Licensees

We have produced sales, licensing, and developmental revenue since 2005 through agreements with a few customers and licensees. We have a strategic alliance and licensing agreement with Clarient, Inc. for commercialization of a new molecular diagnostic test for prostate cancer based on our discovered prostate cancer biomarker signature. Pursuant to our agreement, as amended, Clarient, Inc. obtained a non-exclusive license to the prostate cancer test in exchange for our 10% royalty interest from all reimbursements of the test once commercialized. We and Clarient have successfully completed all phases of the clinical trial process with the hope of achieving the statistical significance necessary to validate the ability to commercialize a test. Results from both the Phase I, Phase II and Phase III double-blinded clinical validation studies now completed at Clarient demonstrated a very high success rate for identifying the presence of Grade 3 or higher prostate cancer cells (clinically significant cancer), as well as normal BPH (benign prostatic hyperplasia) cells. With the completion of the clinical trial, HDC's new gene-based molecular diagnostic test is now being commercialized to be used by physicians on their patients at risk of having prostate cancer. The new prostate cancer test will be performed at Clarient's Clinical Laboratory in Aliso Viejo, CA. HDC will receive 10% royalty on each test performed.

In July 2008, we entered into a development and license agreement with DCL Medical Laboratories LLC, a full-service clinical laboratory focused on women's health, for the collaborative development and commercialization of SVM-based computer assisted diagnostic tests for the independent detection of ovarian, cervical and endometrial cancers. Pursuant to the development and license agreement, we will own any developed intellectual property and

DCL will have a sole use license relating to applications and new mathematical tools developed during the course of the development and license agreement. Images and interpretative data from this new SVM-based system may now be transmitted electronically, thus allowing remote review and collaborative interpretation. Dr. Hanbury, one of our directors, is currently President, CEO and a shareholder of DCL.

In August 2008, we entered into a licensing agreement with Smart Personalized Medicine, LLC, a company founded by our former director, Dr. Richard Caruso. Under the terms of this agreement, we will work to develop a superior breast cancer prognostic test using our SVM technology in collaboration with a prominent cancer research hospital. In exchange for a license to use our SVM technology, we received a 15% equity position in Smart Personalized Medicine, LLC (which will remain undiluted until there is at least $5 million in investment from investors in Smart Personalized Medicine, LLC) and a per test royalty up to 7.5% based on net proceeds received from the sale of the new breast cancer prognostic test.

In September 2008, we received royalty proceeds related to our licensing agreement with Bruker Daltonics, which was originally announced in August, 2006. The royalties relate to Bruker Daltonics' sales of its ClinProToolsTM clinical proteomics product line for its mass spectrometers, which contains HDC's SVM technology. Bruker launched its ClinProToolsTM at approximately the same time as the license with our Company. While this royalty was relatively small, it represents additional royalty payments from this relationship and offers the opportunity of future royalties for the life of the patents related to future sales of the Bruker product.

On January 30, 2009, we entered into a license agreement with Abbott Molecular Inc. ("Abbott"), pursuant to which the Company granted Abbott a worldwide, exclusive, royalty-bearing license for in-vitro diagnostic rights to develop and commercialize reagent test kits for the Company's prostate cancer molecular diagnostic tests in both biopsy tissue and urine. Upon regulatory approval, these individual test kits could be sold to national, regional and local clinical laboratories, as well as hospital, academic and physician laboratories around the world.

We also granted Abbott a worldwide, royalty bearing, co-exclusive license (co-exclusive with Quest) for developing and commercializing a "laboratory developed" urine based molecular diagnostic test for clinically significant prostate cancer which could be commercialized and sold directly to physicians for their patients in a clinical laboratory.

We also granted Abbott a worldwide, royalty bearing, co-exclusive license (co-exclusive with Clarient, Inc.) for developing and commercializing a "laboratory developed" biopsy tissue based molecular diagnostic test for clinically significant prostate cancer which could be commercialized and sold directly to physicians for their patients in a clinical laboratory.

In February 2009, Abbott paid to us a one-time initial signing fee of $100,000. In addition, with respect to the products subject to the license (the "Products"), Abbott will pay milestone payments to us upon achievement of the following events: $250,000 upon completion of Phase 1 and 2 as described in the FDA Submission Plan; $250,000 upon completion of Phase 3 and 4 as described in the FDA Submission Plan; $500,000 upon submission of either a 510(k) or Pre Market Approval ("PMA") submission to the FDA; and $500,000 upon the receipt of a written notification by the FDA of the approval of the applicable 510(k) or PMA submission. We will also receive royalty payments of 10% of Abbott's Net Sales for the Products with medical utility claims for use on prostate biopsy tissue samples, and 5% of Abbott's Net Sales for the Products with medical utility claims for use on urine samples. We will also receive royalty payments on the "Laboratory Developed Tests" equal to 10% of Abbott's Net Sales for the tests performed on prostate biopsy tissue and 5% of Abbott's Net Sales for tests performed on urine samples. In addition to the royalty payments, with respect to the urine based Products, Abbott will also pay us certain amounts upon the achievement of certain milestones as follows: after the sale of 50,000 tests in a calendar year, a milestone payment of $200,000; after a sale of 200,000 tests in a calendar year, a milestone payment of $750,000; and after a sale of 500,000 tests in a calendar year, a milestone payment of $1,500,000. "Net Sales" is equal to Abbott's gross revenue less 5% subject to adjustments as described in the license.

On January 30, 2009, we entered into a license agreement with Quest Diagnostics Incorporated ("Quest"), pursuant to which the Company granted to Quest a non-exclusive, royalty bearing license for developing and commercializing a "laboratory developed" urine based molecular diagnostic test for clinically significant prostate cancer which could be commercialized and sold by Quest's clinical laboratories directly to physicians for their patients. In consideration of granting the license to Quest, Quest paid a license fee to the Company and will pay running royalty payments, certain milestone payments, and development fees.

Research and Development

Our past Research and Development costs have been minimal due to the unique relationships we have maintained with the members of our scientific team and their institutions. Our total R&D costs have consisted solely of the consultant fees paid to Dr. Stamey, Dr. Vapnik, and Dr. Guyon. These fees consisted of $14,160 for 2008 and $46,432 for 2007.

Description of Property

We do not own any real property. We lease 908 square feet of office space in Savannah, Georgia, pursuant to a three year lease dated July 1, 2007 with an initial cost of $1,678 per month. We currently pay $1,741 per month due to

subsequent contractual increases. Our principal executive office is located at 2 East Bryan Street, Suite #601, Savannah, Georgia 31401, and our telephone number is (912) 443-1987. Our principal executive office is well maintained and suitable for the business conducted in it.

Legal Proceedings

None.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Corporate Overview

Our Company is a pattern recognition company that uses advanced mathematical techniques to analyze large amounts of data to uncover patterns that might otherwise be undetectable. Our Company operates primarily in the emerging field of molecular diagnostics where such tools are critical to scientific discovery. Our primary business consists of licensing our intellectual property and working with prospective customers on the development of varied products that utilize pattern recognition tools. We also endeavor to develop our own product line of newly discovered biomarker-based diagnostic tests that include human genes and genetic variations, as well as gene, protein, and metabolite expression differences and image analysis. In drug discovery, biomarkers can help elicit disease targets and pathways and validate mechanisms of drug action. They may also be pharmacodynamic indicators of drug activity, response and toxicity for use in clinical development.

We have partnered and intend to continue partnering with clinical laboratories to commercialize our clinical diagnostic tests and to provide pharmaceutical and diagnostic companies with all aspects of all phases of diagnostic and drug discovery, from expert assessment of the clinical dilemma through proper selection and procurement of high quality specimens. We will then apply our proprietary analytical evaluation methods and state-of-the-art computational analysis to derive relevant and accurate clinical data, producing accurate biomarker and pathway discoveries, resulting in patent protection of our biomarker discoveries for future development.

Our business is based on the belief that in order to discover the most clinically relevant biomarkers, the computational component must begin at the inception of the clinical dilemma to be solved. This process includes several critical levels of decision-making - all of which are part of our business strategy. We intend to produce more relevant and predictable biomarkers for drug discovery so that new and better medicines and diagnostic markers can be developed for patients worldwide.

Operational Activities

The Company actively markets its technology and related developmental expertise to several prospects in the healthcare field, including some of the world's largest corporations in the pharmaceutical, biotech, and life sciences industries. Given the scope of some of these prospects, the sales cycle can be quite long, but management believes that these marketing efforts will produce favorable results.

On January 30, 2009, we entered into a license agreement with Abbott Molecular Inc. ("Abbott"), pursuant to which the Company granted Abbott a worldwide, exclusive, royalty-bearing license for in-vitro diagnostic rights to develop and commercialize reagent test kits for the Company's prostate cancer molecular diagnostic tests in both biopsy tissue and urine. Upon regulatory approval, these individual test kits could be sold to national, regional and local clinical laboratories, as well as hospital, academic and physician laboratories around the world.

We also granted Abbott a worldwide, royalty bearing, co-exclusive license (co-exclusive with Quest) for developing and commercializing a "laboratory developed" urine based molecular diagnostic test for clinically significant prostate cancer which could be commercialized and sold directly to physicians for their patients in a clinical laboratory.

We also granted Abbott a worldwide, royalty bearing, co-exclusive license (co-exclusive with Clarient, Inc.) for developing and commercializing a "laboratory developed" biopsy tissue based molecular diagnostic test for clinically significant prostate cancer which could be commercialized and sold directly to physicians for their patients in a clinical laboratory.

In February 2009, Abbott paid to us a one-time initial signing fee of $100,000. In addition, with respect to the products subject to the license (the "Products"), Abbott will pay milestone payments to us upon achievement of the following events: $250,000 upon completion of Phase 1 and 2 as described in the FDA Submission Plan; $250,000 upon completion of Phase 3 and 4 as described in the FDA Submission Plan; $500,000 upon submission of either a 510(k) or Pre Market Approval ("PMA") submission to the FDA; and $500,000 upon the receipt of a written notification by the FDA of the approval of the applicable 510(k) or PMA submission. We will also receive royalty payments of 10% of Abbott's Net Sales for the Products with medical utility claims for use on prostate biopsy tissue samples, and 5% of Abbott's Net Sales for the Products with medical utility claims for use on urine samples. We will also receive royalty payments on the "Laboratory Developed Tests" equal to 10% of Abbott's Net Sales for the tests performed on prostate biopsy tissue and 5% of Abbott's Net Sales for tests performed on urine samples. In addition to the royalty payments, with respect to the urine based Products, Abbott will also pay us certain amounts upon the achievement of certain milestones as follows: after the sale of 50,000 tests in a calendar year, a milestone payment of $200,000; after a sale of 200,000 tests in a calendar year, a milestone payment of $750,000; and after a sale of 500,000 tests in a calendar year, a milestone payment of $1,500,000. "Net Sales" is equal to Abbott's gross revenue less 5% subject to adjustments as described in the license.

On January 30, 2009, we entered into a license agreement with Quest Diagnostics Incorporated ("Quest"), pursuant to which the Company granted to Quest a non-exclusive, royalty bearing license for developing and commercializing a "laboratory developed" urine based molecular diagnostic test for clinically significant prostate cancer which could be commercialized and sold by Quest's clinical laboratories directly to physicians for their patients. In consideration of granting the license to Quest, Quest paid a license fee to the Company and will pay running royalty payments, certain milestone payments, and development fees.

On March 31, 2009, we entered into the Purchase Agreement with certain individual investors for the private issuance of shares of our Series B Preferred Stock at an offering price of $ 0.08 per share (the "Private Placement") . We anticipate that, in connection with the Private Placement, we will receive up to $500,000 in cash in exchange for the issuance of up to 6,250,000 shares of Series B Preferred Stock. A copy of the form of Purchase Agreement is attached to this Annual Report on Form 10-K as Exhibit 10.15. The shares will be offered and sold in reliance upon exemptions from registration pursuant to Section 4(2) under the Securities Act of 1933, as amended, and Regulation D promulgated thereunder.

On February 20, 2009, the U.S. Patent and Trademark Office issued a notice of allowance of the claims of the Company's patent application for "Feature Selection Using Support Vector Machine Classifier." The claims of this application are directed to the Company's innovative SVM-based Recursive Feature Elimination (RFE) technique. Although the Company has already been granted a U.S. patent covering this important method, because of its widespread use in industry and research, alternative claims were submitted to expand the scope of coverage. The newest set of allowed claims is directed to both biological and non-biological applications of RFE- SVM.

On February 26, 2009, the U.S. Patent and Trademark Office issued a notice of allowance for the Company's pending patent application entitled "Kernels and Kernel Methods for Spectral Data." The allowed claims in the application are directed to a method for identification of patterns in mass spectrographic data for protein analysis using support vector machines. The method includes pre-processing steps that involve alignment of the spectra and feature selection to utilize only the most determinative peaks of the spectra for separation of the data. The claimed technique identifies protein biomarkers that may be useful for diagnosis, prognosis or monitoring of diseases, including cancer, psychiatric conditions and others. Once the above identified applications and the application identified in "Operational Activities" above issue as patents, which is expected to occur in mid-2009, the Company will own exclusive rights in 37 issued U.S. and foreign patents covering SVM and FGM technologies and their uses.

The U.S. Patent and Trademark Office issued one new patent to the Company in April 2008, which covers the use of FGM technology for visualization of data patterns. In May 2008, the U.S. Patent and Trademark Office issued two new patents to the Company, one of which claims a method for analysis of any type of data that has a structure. The second patent covers additional feature selection techniques that can be used to successfully identify the most important pieces of information needed to solve complex pattern-recognition problems. The U.S. Patent and Trademark Office issued one new patent to the Company in June 2008, which covers the use of SVMs for computer-aided analysis of medical images, with particular applications in cytology and pathology. Also in June 2008, the Company was issued a patent in Japan, which covers recursive feature elimination (RFE) using SVMs for selection and ranking of the most important features within large datasets. In October 2008, an Indian patent was issued to the Company covering the use of SVMs for knowledge discovery from multiple data sets. Also that month, the U.S. Patent and Trademark Office issued a new patent to the Company covering a data mining platform with multiple SVM modules for use in analyzing bioinformatics data. With the issuance of these patents, the Company now holds the exclusive rights to 34 issued U.S. and foreign patents covering uses of SVM and FGM technology for discovery of knowledge from large data sets.

In July 2008, the Company and DCL Medical Laboratories LLC, a full-service clinical laboratory focused on women's health, entered into a development and license agreement for the collaborative development and commercialization of SVM-based computer assisted diagnostic tests for the independent detection of ovarian, cervical and endometrial cancers. Through the application of the advanced technology of pattern recognition, this new SVM-based system is intended to further improve the sensitivity of the Pap test and augment the recent improvements of computer guided screening that have already significantly improved detection rates. In addition, images and interpretative data from this new SVM-based system may now be transmitted electronically, thus allowing remote review and collaborative interpretation. Pursuant to the development and license agreement, HDC will own any developed intellectual property and DCL will have a sole use license relating to applications and new mathematical tools developed during the course of the development and license agreement. Dr. Hanbury, one of our directors, is currently President, CEO and a shareholder of DCL.

As we disclosed in our Form 10-K for the fiscal year ended December 31, 2007, we were in discussions regarding the licensing of and product development using SVMs and FGMs in diagnostic radiology, including mammography, PET scans, CT scans, MRI and other radiological images. In August 2008, we entered into a licensing agreement with Smart Personalized Medicine, LLC, a company founded by our former director, Dr. Richard Caruso. Under the terms of this agreement, we will work to develop a superior breast cancer prognostic test using our SVM technology in collaboration with a prominent cancer research hospital. In exchange for a license to use our SVM technology, we received a 15% equity position in Smart Personalized Medicine, LLC (which will remain undiluted until there is at least $5 million in investment from investors in Smart Personalized Medicine, LLC) and a per test royalty up to 7.5% based on net proceeds received from the sale of the new breast cancer prognostic test.

In August 2008, we entered into an agreement with Patent Profit International ("PPI"), a Silicon Valley-based patent brokerage firm, with the goal of marketing our patent portfolio and exclusive rights to SVM techniques and applications beyond biomarker discovery and the healthcare field, to prospective buyers/licensees in a wide range of technologies, including, but not limited to, information technology such as Internet browsers and search engines, digital photography, spam mail detection, oil exploration, homeland security, and the automotive industry. As a requirement of any potential sale of the patent portfolio, HDC expects to retain a royalty-free, worldwide, exclusive license, with the right to grant sublicenses, in the entire field of healthcare to enable our continued research, development, licensing and commercialization activities in diagnostic and prognostic areas such as prostate cancer, ovarian cancer, breast cancer, endometrial cancer, colon cancer, leukemia and other healthcare arenas and to retain ownership of patents relating solely to biomarker discovery and healthcare. PPI's marketing of our patent portfolio is ongoing.

In August 2008, the U.S. Patent and Trademark Office granted a patent to us covering the use of SVMs in computer-aided image analysis of digitized microscopic images of medical specimens. This patent focuses on a method and computer system for analyzing medical images generated during microscopic evaluation of cytology specimens and tissue samples. SVM-aided image analysis using this patented method could permit automated and rapid analysis of a series of sample images that are typically examined visually by a technologist or pathologist, greatly increasing the sensitivity and accuracy of tests.

On September 24, 2008, our previously-filed registration statement on Form S-1, which was required by the terms of the private placement we completed in September, 2007 (the "Private Placement") and first disclosed on Form 8-K, dated September 10, 2007, was declared effective. The registration statement covers 35,274,934 shares of our common stock if warrants with an exercise price of $0.14 per share are exercised and 35,274,934 shares of our common stock if warrants with an exercise price of $0.19 per share are exercised. The registration statement also covers 352,746 shares of our common stock that were issued to the investors in September pursuant to the terms of the Private Placement. All of the Private Placement warrants are currently outstanding. We will not receive any proceeds from any shares ultimately sold pursuant to the registration statement. However, we will receive cash upon the

exercise of the warrants of $11,640,728.22 if all of the warrants are exercised. The exercise price of the warrants is fixed, subject to adjustments for stock splits or combinations.

On December 31, 2008, the U.S. Patent and Trademark Office issued a notice of allowance for the Company's pending patent application entitled "Data Mining Platform for Bioinformatics and Other Knowledge Discovery." This application includes claims covering a web-based data mining system that utilizes multiple support vector machine models to analyze combinations of biological data of many different types, for example, genomic, proteomic, and clinical data, from many different sources, including measurement instruments, clinical databases, on-line databases and on-line journals to produce ranked lists of genes or proteins that may be used as biomarkers. Once the above identified application and those applications described in Subsequent Events below issue as patents, which is expected to occur in mid-2009, the Company will own exclusive rights in 37 issued U.S. and foreign patents covering SVM and FGM technologies and their uses.

On July 31, 2007, we announced our alliance and licensing agreement with Clarient, Inc. for development of a new molecular diagnostic test for prostate cancer based on our discovered prostate cancer biomarker signature. Under the terms of that agreement, as amended, Clarient obtained a non-exclusive license to make, use and sell any Licensed Product in the Field of Use within the Licensed Territory with respect to both the commercial reference laboratory field and the academic and research fields. In exchange for the non-exclusive license, Clarient will pay the Company 10% of Clarient's net proceeds with respect to all licensed laboratory tests performed during the term of the license. During 2008, we and Clarient successfully completed all phases of the clinical trial process with the hope of achieving the statistical significance necessary to validate the ability to commercialize a test. Results from both the Phase I, Phase II and Phase III double-blinded clinical validation studies now completed at Clarient demonstrated a very high success rate for identifying the presence of Grade 3 or higher prostate cancer cells (clinically significant cancer), as well as normal BPH (benign prostatic hyperplasia) cells. On November 6, 2008, we announced that the RT-PCR assay for the four genes comprising the Company's recently commercialized gene-based molecular diagnostic test for prostate cancer, which is currently available at Clarient's Clinical Laboratory, can be successfully used in urine samples for gene testing. The study, completed in collaboration with a prominent cancer research hospital, demonstrated that the gene expression of all four genes comprising the molecular signature for clinically significant prostate cancer could be detected in urine samples spiked with as few as 50 prostate cancer cells. On January 13, 2009, we announced the commercial launch of the new gene expression test for prostate cancer, which will be available through Clarient's PATHSiTETM virtual reporting tool and accessible to the Company's entire pathology network. The new prostate cancer test will be performed at Clarient's Clinical Laboratory in Aliso Viejo, CA. HDC will receive 10% royalty on each test performed.

In September 2008 and December 2007, we received royalty proceeds related to our licensing agreement with Bruker Daltonics, which was originally announced in August, 2006. The royalties relate to Bruker Daltonics' sales of its ClinProToolsTM clinical proteomics product line for its mass spectrometers, which contains HDC's SVM technology. Bruker launched its ClinProToolsTM at approximately the same time as the license with HDC. While these royalty payments were relatively small, it offers the opportunity of future royalties for the life of the patents related to future sales of the Bruker product.

Management believes that our research agreement with a leading biotech company to develop an SVM-based diagnostic test to help interpret flow cell cytometry data for a particular medical condition has resulted in a successful proof of concept. These findings were presented during the first quarter of 2008 and the due diligence process has accelerated to confirm our findings for that particular condition and determine other applications within flow cytometry.

We are in discussions with a large international pharmaceutical company to develop a diagnostic test using our discovered biomarkers during a clinical trial for its new drug to treat BPH (enlarged prostate).

We have advanced our dialogue with several other important industry players in the healthcare field and, in certain situations, related to the field of molecular diagnostics, including a proposed project with one of the world's largest pharmaceutical companies, and other prospective partnership opportunities with additional companies and research institutions. We also continue to pursue development opportunities with our existing licensing customers.

In January 2007, SVM Capital, LLC was formed as a joint venture between HDC and Atlantic Alpha Strategies, LLC ("Atlantic Alpha") to explore and exploit the potential applicability of our SVM technology to quantitative investment management techniques. Atlantic Alpha has over thirty years of experience in commodity and futures trading. SVM Capital has made significant progress since the formation of the joint venture. The SVM technology is now working well with dynamic time series for S&P data accumulated over the past fifty-eight years as well as a limited pilot program of real-time trading activity. The latest SVM-derived models generated by SVM Capital have successfully outperformed the static buy-and-hold model both in increased returns as well as in reduced risk. Once the stability of

these models is confirmed, SVM Capital intends to apply the models to a wide range of financial asset classes such as interest rates, currencies, metals and petroleum products. The joint venture partners plan to apply the investment model either in a single fund or a series of related funds. SVM Capital expects to charge a management fee and a performance fee related to its investment activities. Depending on the level of its success, this venture can be profitable given its reliance on cost effective use of computer technology and ready access to efficient trading platforms.

The Company has recorded revenue of $555,000 through December 31, 2008 and has deferred revenue yet to be recognized of $450,000 at December 31, 2008. In addition, the Company has received $150,000 in additional cash payments in 2009. The Company believes that the aggregate value created by its patent portfolio to date is therefore $1,055,000.

While we have a number of negotiations in process with potential licensing partners, there is a possibility that we will be unable to reach agreement with any party, that the negotiations continue but are not finalized, or that those that may be finalized do not provide the economic returns that we expect.

Year Ended December 31, 2008 Compared with Year Ended December 31, 2007

Revenue

For the year ended December 31, 2008, revenue was $65,731 compared with $57,905 in revenue for the year ended December 31, 2007. Revenue is recognized for licensing and development fees over the period earned and the revenue recognized in 2008 was primarily the amortization and recognition of prior deferred revenue items during the year. As of December 31, 2008, the Company had deferred revenue of $453,715. This deferred revenue includes $341,215 of cash received but not yet recognized as revenue and $112,500 in accounts receivable. Deferred revenue was $516,424 at December 31, 2007.

Cost of Revenue and Gross Margin

Cost of revenues for 2008 was $9,000. Cost of revenues includes all direct costs associated with the acquisition and development of patents and processes sold. All direct costs, primarily professional fees associated with licensing negotiations, are also included in cost of revenues. Cost of revenues was $21,300 in 2007.

Operating and Other Expenses

Amortization expense, which is the amortization of patents over their estimated useful lives, was $262,719 for the twelve months ended December 31, 2008 and 2007.

Professional and consulting fees totaled $748,748 for 2008 compared with $980,833 for 2007. These fees, related to legal, accounting, scientific and sundry activities, were reduced because of fewer outside services being required in the current year.

Compensation of $745,918 for the twelve months ended December 31, 2008 was slightly lower than the $783,721 reported for the comparable period of 2007 as compensation was held constant in an effort by the Company to control costs. The decrease was due to a smaller charge for employee stock, options and warrants.

Other general and administrative expenses increased from $459,064 in 2007 to $484,806 in 2008. This increase was due to additional costs related to the issuance of common stock.

Loss from Operations

The loss from operations for the twelve months ended December 31, 2008 was $2,185,460 compared to $2,449,737 for the prior year. The decreased loss was due to reduced expenses as previously discussed.

Other Income and Expense

Interest income was $39,160 for the twelve months ended December 31, 2008 compared to $39,614 in 2007. Decreased interest income was due to the higher average cash available to invest throughout 2008, offset by generally lower rates available.

A gain on the restructuring of accounts payable of $44,594 was recorded in 2007 to reflect common stock warrants issued in payment of liabilities. No corresponding event occurred in 2008.

The Company recognized a $5,000 loss related to its investment in SVM Capital LLC in 2007. No gain or loss relating to SVM Capital LLC was recorded in 2008.

The Company recorded an expense of approximately $42,000, which was associated with the settlement of litigation in 2007. No such charge applied to 2008.

Interest expense was $1,161 in 2008 compared with $286,398 in 2007. This decrease was due to the elimination of indebtedness during the third quarter of 2007.

Net Loss

The net loss for the twelve months ended December 31, 2008 was $2,147,461 compared to $2,698,927 for the twelve months ended December 31, 2007. The reduced loss was due to the overall reduction in expenses as previously discussed.

Net loss per share was $0.01 for the twelve months ended December 31, 2008 compared to a net loss per share of $0.02 for the prior year. The smaller net loss in 2008 and the increased number of average shares outstanding in 2008 favorably impacted the net loss per share.

Liquidity and Capital Resources

At December 31, 2008, the Company had $325,887 in available cash. Cash used by operating activities was $1,309,832. This was due primarily to the net loss of $2,147,461; however, net non-cash charges and adjustments of $837,629 favorably impacted the computation of the net cash used. Cash used by investment activities was $12,720 due to the acquisition of assets. Net cash provided by financing activities was zero because no such activities occurred.

On July 15, 2008, the Company received $112,500 due from Ciphergen Biosystems, Inc. in accordance with a patent license and settlement agreement.

The following table summarizes the due dates of our contractual obligations.

	Total	Less than 1 Year	1-3 Years
Deferred Compensation	54,500	54,500	—
Corporate Office Lease	31,338	20,892	10,446
Total	$ 85,838	$ 75,392	$ 10,446

The Company continues to incur maintenance fees for its patent portfolio and expects those fees to be approximately $29,500 during 2009.

In the first quarter of 2008, the Company fully vested a 1,500,000 warrant grant for a retiring director by accelerating the vesting of 375,000 warrants exercisable at $0.13. A charge of $44,438 was recorded as directors' fees.

In June 2008, a warrant to purchase 1,500,000 shares of Company common stock at an exercise price of $0.08, vesting over three years and expiring in six years, was granted by the Company to a new director. The value of $85,200 will be charged as directors' fees over the vesting period.

The Company granted 1,250,000 options to an advisor to the Company during the third quarter of 2008, at an exercise price of $0.08, vesting over two years and expiring in five years. The value of these options was $74,693 and this amount will be charged as expense over the two year vesting period.

Also during the third quarter of 2008, the Company granted 6,000,000 options to its Chief Executive Officer. The options have an exercise price of $0.08, with an aggregate value of $172,485 that will be charged to expense over the 1.4 year vesting period. The vesting period of the options is conditioned upon the achievement of certain service and performance goals.

In August 2008, the Company issued 515,384 shares of common stock to certain investors pursuant to the terms of the Securities Purchase Agreement dated August 15, 2007. A charge of $0.07 per share or $36,076 was recorded. The Company did not issue any other shares during the twelve months ended December 31, 2008.

The Company has relied primarily on equity funding plus debt financing for liquidity. The Company produced sales, licensing, and developmental revenue since 2005 and must continue to do so in order to generate sufficient cash to continue operations. The Company's plan to have sufficient cash to support operations is comprised of generating revenue through licensing its significant patent portfolio, providing services related to those patents, and obtaining additional equity or debt financing. The Company has been and continues to be in meaningful discussions with a variety of parties, which if successful, may result in significant revenue. The Company has implemented a cash conservation plan that includes a reduction in consulting payments, and a heightened scrutiny of all potential expenditures.

Should it prove necessary, the Company may also consider such alternatives as raising additional equity through private placements and/or debt offerings. Although this raises doubt with respect to our ability to operate as a going concern, the Company believes that it has sufficient capability to operate through the next twelve months, if the Company is able to achieve milestones contained in the Abbott and Quest license agreement and we complete the sale of our patent portfolio.

Year Ended December 31, 2007 Compared with Year Ended December 31, 2006

Revenue

For the year ended December 31, 2007, revenue was $57,905 compared with $203,889 in revenue for the year ended December 31, 2006. Revenue is recognized for licensing and development fees over the period earned. The decrease of revenue in 2007 was due largely to the fact that the contracts finalized in 2007 required recognition of the revenue generated be deferred and recognized over the contractual period rather than immediately recorded. As of December 31, 2007, the Company had deferred revenue of $516,424. This deferred revenue includes $291,424 of cash received but not yet recognized as revenue and $225,000 in accounts receivable. Deferred revenue was $101,111 at December 31, 2006.

Cost of Revenue and Gross Margin

Cost of revenues for 2007 was $21,300. Cost of revenues includes all direct costs associated with the acquisition and development of patents and processes sold. All direct costs, primarily professional fees associated with licensing negotiations, are also included in cost of revenues. Cost of revenues was $28,671 in 2006.

Operating and Other Expenses

Amortization expense was $262,719 for the twelve months ended December 31, 2007 and 2006.

Professional and consulting fees totaled $980,833 for 2007 compared with $1,123,498 for 2006. These fees, related to legal, accounting and scientific activities, were reduced because of fewer warrants issued to service providers and continued cost containment efforts.

Compensation of $783,721 for the twelve months ended December 31, 2007 was slightly higher than the $770,000 reported for the comparable period of 2006.

Other general and administrative expenses decreased from $542,710 in 2006 to $459,064 in 2007. This decrease was largely due to expense reduction efforts throughout the fiscal year.

Loss from Operations

The loss from operations for the twelve months ended December 31, 2007 was $2,449,737 compared to $2,523,709 for the prior year. The decreased loss was due to the factors enumerated above.

Other Income and Expense

Interest income was $39,614 for the twelve months ended December 31, 2007 compared to $21,008 in 2006. Increased interest income was due to the higher average cash available to invest throughout 2007.

A gain on the restructuring of accounts payable of $44,594 was recorded in 2007 to reflect common stock warrants issued in payment of liabilities compared to $97,864 in 2006.

The Company also recognized a $5,000 loss related to its investment in SVM Capital LLC.

The Company recorded an expense of approximately $42,000, which was associated with the settlement of litigation.

Interest expense was $286,398 in 2007 compared with $190,922 in 2006. This increase was due to the higher interest rate associated with the renegotiated promissory notes, and interest related to the promissory note executed in the third quarter of 2006.

Net Loss

The net loss for the twelve months ended December 31, 2007 was $2,698,927 compared to $2,595,759 for the twelve months ended December 31, 2006. The increased loss was due to increased net other expense, which unfavorably offset the reduced 2007 loss from operations

Net loss per share was $0.02 for the twelve months ended December 31, 2007 and 2006. A larger net loss in 2007 was favorably offset by increased number of average shares outstanding.

Liquidity and Capital Resources

At December 31, 2007, the Company had $1,648,439 in available cash. Cash used by operating activities was $1,467,118. This was due primarily to the net loss of $2,698,927; however, net non-cash charges and adjustments of $1,231,809 favorably impacted the computation of the net cash used. Cash used by investment activities was $998 due to the acquisition of assets. Net cash provided by financing activities was $2,442,189 due to the cash received from the sale of common stock and the exercise of warrants offset by the repayment of debt totaling $49,351.

The following table summarizes the due dates of our contractual obligations.

	Total	Less than 1 Year	1-3 Years
Deferred Compensation	66,500	66,500	—
Corporate Office Lease	50,340	20,136	30,204
Total	$ 116,840	$ 86,636	$ 30,204

The Company continues to expend capital to maintain its patent portfolio.

In January 2007, the Company issued 100,000 shares of stock for warrants exercised at $0.01 each. Proceeds of $1,000 were recorded in capital stock. In February 2007, the Company granted warrants to purchase 15,235,000 restricted shares of Company stock at a fixed price of $0.35 per share, exercisable until November 1, 2007. These warrants expired in November 2007. Also in February 2007, the Company issued warrants to purchase up to 500,000 shares of Company common stock to consultants, which vested immediately, and have an exercise price of $0.14. Additionally, the Company issued a warrant to purchase up to 100,000 shares of Company common stock to a consultant, which vests over ten months, and has an exercise price of $0.14.

During the second quarter of 2007, the Company issued warrants to purchase up to 500,000 shares of Company common stock to consultants, which vested immediately and had an exercise price of $0.11.

In July 2007, the Company issued 575,000 shares of common stock valued at $46,000 to a former employee as part of a termination agreement. In connection with that termination agreement, the Company also issued to the former employee a warrant to purchase 300,000 shares of Company common stock with an exercise price of $0.08. These warrants vested immediately and expire in three years. The Company also issued 400,000 shares of common stock valued at $32,000 as part of a litigation settlement in July 2007.

During the third quarter of 2007, the Company issued warrants to purchase 60,750 shares of Company common stock to a vendor as payment for professional services. These warrants expire on December 31, 2008, vested immediately, and have an exercise price of $0.10.

Two new directors were each awarded warrants to purchase 1,500,000 shares of Company common stock, which vest over three years and expire in six year. These warrants have an exercise price of $0.08, and will be charged as directors' fees over the vesting period. One director subsequently forfeited his warrant upon his resignation as a director.

Effective September 7, 2007, the Company issued 31,937,500 shares of restricted common stock in return for $2.55 million in cash. The stock is restricted from resale as the stock has not been registered. Each purchaser of common stock also received one warrant to acquire an equal number of shares at $0.14 and one warrant to acquire an equal number of shares at $0.19. The common shares were valued at $0.07 each and the warrants were valued at $0.005 each for a total of $0.08.

The Company also issued 19,601,323 shares of common stock and 7,437,184 shares of Series A Preferred Stock in a conversion of secured debt to equity. The amount of debt converted to common stock and warrants was $1.6 million and the amount of debt converted to Series A Preferred Stock was $594,975. Each share of common stock issued in the conversion was accompanied by one warrant to acquire an equal number of shares of common stock at $0.14 and one warrant to acquire an equal number of shares of common stock at $0.19.

The shares of Series A Preferred Stock may be converted into common stock of the Company at any time without the payment of additional consideration. The Series A Preferred Stock must be converted into common stock of the Company when the trading value of the common stock of the Company exceeds $0.12 per share for a period of 30 consecutive calendar days. The holder of the Series A Preferred Stock has the right to receive dividends, the right to vote on matters presented to the common shareholders, and a preference right in the event of liquidation in an amount equal to $594,975, which is the amount of debt converted, plus any declared but unpaid dividends. The Company has a right to redeem the shares of Series A Preferred stock upon the fifth anniversary of the issue date at a redemption price of $0.08 per share.

The Company has relied primarily on equity funding plus debt financing for liquidity during its developmental phase that ended in 2004. The Company produced sales, licensing, and developmental revenue since 2005 and must continue to do so in order to generate sufficient cash to continue operations. The Company’s plan to have sufficient cash to support operations is comprised of generating revenue through licensing its significant patent portfolio, providing services related to those patents, and obtaining additional equity or debt financing. The Company has been and continues to be in meaningful discussions with a variety of parties, which if successful, may result in significant revenue. The Company has implemented a cash conservation plan that includes a reduction in consulting payments, negotiated settlements with creditors whereby the Company substituted equity instruments for amounts owed, and a heightened scrutiny of all potential expenditures.

Should it prove necessary, the Company may also consider such alternatives as raising additional equity through private placements and/or debt offerings. Although this raises doubt with respect to our ability to operate as a going concern, the Company believes that it has sufficient capability to operate through the next twelve months.

Critical Accounting Policies, Estimates and Assumptions

We consider our accounting policies related to revenue recognition, impairment of intangible assets and stock based compensation to be critical accounting policies. A number of significant estimates, assumptions, and judgments are inherent in our determination of when to recognize revenue, how to evaluate our intangible assets, and stock-based compensation expense. These estimates, assumptions and judgments include deciding whether the elements required to recognize revenue from a particular arrangement are present, estimating the fair value of an intangible asset, which represents the future undiscounted cash flows to be derived from the intangible asset, and estimating the useful life and volatility of stock awards granted. We base our estimates and judgments on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates.

Valuation of intangible and other long-lived assets.

We assess the carrying value of intangible and other long-lived assets at least annually, which requires us to make assumptions and judgments regarding the future cash flows related to these assets. The assets are considered to be impaired if we determine that the carrying value may not be recoverable based upon our assessment of the following events or changes in circumstances such as:

- the asset’s ability to continue to generate income from operations and positive cash flow in future periods;

loss of legal ownership or title to the asset;
significant changes in our strategic business objectives and utilization of the asset(s); and
the impact of significant negative industry or economic trends.

If the assets are considered to be impaired, the impairment we recognize is the amount by which the carrying value of the assets exceeds the fair value of the assets. In addition, we base the useful lives and related amortization or depreciation expense on our estimate of the period that the assets will generate revenues or otherwise be used by us. We also periodically review the lives assigned to our intangible assets to ensure that our initial estimates do not exceed any revised estimated periods from which we expect to realize cash flows from the technologies. If a change were to occur in any of the above-mentioned factors or estimates, the likelihood of a material change in our reported results would increase.

Revenue Recognition

We recognize revenue principally from license and royalty fees for intellectual property and from development agreements with research partners. Each element of revenue recognition requires a certain amount of judgment to determine if the following criteria have been met: (i) persuasive evidence of an arrangement exists; (ii) delivery has occurred or services have been rendered; (iii) the seller's price to the buyer is fixed or determinable; (iv) collectability is reasonably assured, and (v) both title and the risks and rewards of ownership are transferred to the buyer. We are required to make more significant estimates involving our recognition of revenue from license and royalty fees. Our license and royalty fees revenue estimates depend upon on our interpretation of the specific terms of each individual arrangement and our judgment to determine if the arrangement has more than one deliverable and how each of these deliverables should be measured and allocated to revenue. In addition, we have to make significant estimates about the useful life of the technology transferred to determine when the risk and rewards of ownership have transferred to the buyer to decide the period of time to recognize revenue. In certain circumstances we are required to make judgments about the reliability of third party sales information and recognition of royalty revenue before actual cash payments for these royalties have been received.

Share-Based Compensation

Share-based compensation expense is significant to our financial position and results of operations, even though no cash is used for such expense. In determining the period expense associated with unvested options, we estimate the fair value of each option at the date of grant. We believe it is important for investors to be aware of the high degree of subjectivity involved when using option pricing models to estimate share-based compensation under SFAS No. 123R. The determination of the fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables include, but are not limited to, our valuation methodology, the expected term, expected stock price volatility over the term of the awards, the risk-free interest rate, expected dividends and pre-vesting forfeitures. If any one of these factors changes and we employ different assumptions in the application of SFAS No. 123R in future periods, the compensation expense that we record under SFAS No. 123R will differ significantly from what we have recorded in the current period.

For share-based awards issued during the year ended December 31, 2008, we estimated the expected term by considering various factors including the vesting period of options granted, employees' historical exercise and post-employment termination behavior; however, due to the limited history of our Company, such data is limited. We estimated the expected life will be substantially longer than the vesting period given the start-up nature of our operations and accordingly have used the contractual life as the expected term. Our estimated volatility was derived using our historical stock price volatility. We have never declared or paid any cash dividends on our common stock and currently do not anticipate paying such cash dividends. The risk-free interest rate is based upon U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements that provide financing, liquidity, market or credit risk support or involve leasing, hedging or research and development services for our business or other similar arrangements that may expose us to liability that is not expressly reflected in the financial statements.

DIRECTORS AND EXECUTIVE OFFICERS

Our executive officers, directors and significant employees are:

Name	Age	Position
Stephen D. Barnhill, M.D.	50	Chief Executive Officer and Chairman of the Board
Hong Zhang, Ph.D.	47	Senior Vice President
Michael Hanbury	45	Director

Stephen D. Barnhill, M.D., is currently our Chief Executive Officer and Chairman of the Board. He has been a member of the Board of Directors since November 2003. He is a physician trained in laboratory medicine and clinical pathology. He has developed and used artificial intelligence, pattern-recognition, and computational techniques in Medicine, Genomics, Proteomics, Diagnostics and Drug Discovery.

Dr. Barnhill is or has been a Fellow of the American College of Physician Inventors, the American College of International Physicians, the American Medical Association, the American College of Physician Executives, the American Association of Artificial Intelligence, the American College of Managed Care Medicine, the Association of Clinical Scientists, the American Society of Contemporary Medicine and Surgery, the American Society of Law, Medicine and Ethics, the Southern Medical Society, the American Federation for Clinical Research, and the National Federation of Catholic Physicians.

Dr. Barnhill founded the Barnhill Clinical Laboratories in 1988 and served as Chairman, CEO, President and Medical Director. This laboratory was later acquired by Corning-Metpath in 1989 and after the acquisition he served as Medical Director of this clinical laboratory until 1992. This clinical laboratory, now owned by Quest Diagnostics, continues to be the largest and busiest clinical laboratory in the Savannah, Georgia area.

In 1992, Dr. Barnhill founded National Medical Specialty Laboratories and served as Chairman, CEO, President, and Medical Director. This research laboratory was founded to utilize pattern-recognition mathematics and artificial intelligence techniques in cancer diagnosis. Dr. Barnhill is an inventor on the very first patents issued by the United States Patent and Trademark Office for the use of neural networks in medicine. This company was acquired by Horus Therapeutics, a New York based pharmaceutical company. Dr. Barnhill served as Executive Vice-President and Chairman of the Scientific Advisory Board for Horus Therapeutics until 1998. Johnson & Johnson later acquired the Horus patents invented by Dr. Barnhill.

In 1999, Dr. Barnhill founded and served as Chairman, President and CEO of Barnhill BioInformatics, Inc. Barnhill BioInformatics, Inc. later became Barnhill Genomics, Inc. and BioWulf Technologies, LLC and raised over $13.5 million in private placement funding. The primary focus of these companies was to utilize the next generation of artificial intelligence and pattern-recognition techniques, known as support vector machines, to identify genes that cause cancer. Dr. Barnhill is the sole inventor on the very first patents issued by the United States Patent and Trademark Office for the use of support vector machines in medicine. From the summer of 2000 until he organized The Barnhill Group L.L.C. in the summer of 2003, Dr. Barnhill was not engaged in any professional activities as the result of a non-compete agreement signed by Dr. Barnhill when he left the employment of Barnhill Genomics, Inc.

Hong Zhang, Ph.D. is our Senior Vice President, Computational Medicine. As visiting faculty at Johns Hopkins University, Dr. Zhang lectured at the Center for Biomarker Discovery on Bioinformatics: Peak Detection Methods for

Mass Spectral Data. Currently a Yamacraw Associate Professor at Armstrong Atlantic University, Dr. Zhang was the Vice President and CIO for a neural network and computer assisted medical diagnostic systems company that employs neural network and mathematical/statistical preprocessing techniques. In this position, Dr. Zhang was involved in digital image processing and pattern recognition for medical image processing as well as software design and programming for support vector machine applications. Dr. Zhang was a professor in the Department of Mathematical Sciences at Purdue University from 1989 to 1996. He has held numerous academic positions, including Adjunct Associate Professor, Associate Professor with Tenure, and Assistant Professor. He was a visiting Associate Professor in 1995 in the Department of Biometry at the Medical University of South Carolina.

Throughout his academic career, Dr. Zhang has consulted on many software and analytical development projects for Union Switch and Signal, Inc., General Electric Company, and the Department of Pharmacology at the University of Pittsburgh. Dr. Zhang has published numerous articles on the use of neural networks in the detection of cancers. He has been published in more than twenty medical and technical journals. Dr. Zhang received a Ph.D., Mathematics at the University of Pittsburgh, 1989, M.A., Mathematics, University of Pittsburgh, 1986, M.S.E.E., Electrical Engineering, University of Pittsburgh, 1984, B.S., Computer Science, Fudan University, 1982. Dr. Zhang's numerous awards and honors include: National Cancer Institute SBIR Grant, 1999, 2000; Purdue Research Foundation Summer Faculty Grant, 1993; IPFW Summer Research Grant, 1992; Andrew Mellon Fellowship, 1986-1987; Andrew Mellon Fellowship, 1985-1986; First Place, Fudan University Mathematics Competition, 1979.

Michael Hanbury is a member of the Board of Directors and has been a director since June 27, 2008. Dr. Hanbury has over 25 years professional and associated corporate management experience in medical diagnostic and clinical laboratory sectors with a diverse experience base including successful tenures in research and direct patient care in nationally renowned academic medical centers; operations management in public and private clinical laboratories; and concept-to-market design, development, customer support, engineering, compliance and regulatory management in in-vitro diagnostic manufacturing companies. In addition to substantial academic research experience, he has directed all US operations for an international in-vitro diagnostics company and managed regulatory affairs for Roche Molecular Systems, where his efforts were instrumental in obtaining the first FDA clearances for some of the most widely used commercial molecular diagnostic products on the market. Before its acquisition by Quest Diagnostics, he was Chief Operating Officer of Unilab Corporation, formerly the third largest reference laboratory in the country operating 51 laboratories with revenue exceeding $600 million annually. He also remains operating Principal at HCC Consulting providing operating and regulatory services to a number of recognized clinical laboratories and IVD clients and he continues to serve on the Board of Alexeter Technologies. Dr. Hanbury is currently President, CEO and a shareholder of DCL Medical Laboratories in Indianapolis, Indiana. Dr. Hanbury completed his undergraduate studies at the University of Virginia in Biochemistry and Economics and graduate studies at the Medical College of Virginia where he also completed his clinical training. He also holds Masters Degrees in Clinical Chemistry and a MBA from ODU/Eastern Virginia Medical School and the University of Michigan, respectively.

The directors named above will serve until the next annual meeting of our shareholders. Absent an employment agreement, officers hold their positions at the pleasure of the Board of Directors.

Corporate Governance

Audit Committee

We do not have a separately designated standing audit committee. The entire board of directors is acting as our audit committee, and no individual on our Board of Directors possesses all of the attributes of an "audit committee financial expert." Given the development stage and size of the Company and the difficulty in attracting additional directors, the Board does not have an audit committee financial expert. In forming our Board of Directors, we sought out individuals who would be able to guide our operations based on their business experience, both past and present, or their education. Responsibility for our operations is centralized within management.

Shareholder Nomination of Candidates for Board of Directors

Nominations of persons for election to the Board of Directors may be made by any shareholder who complies with the notice provisions set forth in Section 3.8 of the Bylaws, which provides that a shareholder's notice must be delivered or mailed and received at the principal executive office of the Company not less than thirty days before the date of the meeting; provided, however, that in the event that less than forty days' notice or prior public disclosure of the date is given, notice by the shareholder to be timely must be so received not later than the close of business on the tenth day

following the day on which the public announcement of the meeting date was made. Such shareholder's notice shall set forth (i) as to each person whom the shareholder proposes to nominate for election or reelection as a Director, all information relating to such person as required to be disclosed in solicitation of proxies for election of Directors made in compliance with Regulation 14A under the Securities and Exchange Act of 1934, as amended (including such person's written consent to being named in a proxy statement as a nominee and to serving as a Director if elected); and (ii) as to the shareholder giving the notice (A) the name and address, as they appear on the books of the Company, of such shareholder and (B) the class and number of shares of the Company's capital stock that are beneficially owned by such shareholder. At the request of the Board of Directors, any person nominated by the Board of Directors for election as a Director shall furnish to the Secretary of the Company that information required to be set forth in a shareholder's notice of nomination which pertains to the nominee. No person shall be eligible for election as a Director of the Company unless nominated in accordance with the provisions of Section 3.8 of the Company's Bylaws.

Code of Ethics

The Company has adopted a Code of Ethics applicable to its Chief Executive Officer and Principal Financial Officer. This Code of Ethics is posted on our website at www.HealthDiscoveryCorp.com. These codes are also available without charge upon request directed to Investor Relations, Health Discovery Corporation, 2 East Bryan Street, Suite #601, Savannah, GA 31401. The Company intends to disclose amendments or waivers of the Code of Ethics required to be disclosed by posting such information on its website.

Director Compensation

Outside directors are paid $1.00 each year. Each outside director is awarded options to purchase 1,500,000 shares of Company common stock, which vest over three years and expire in six years.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)	Total ($)
Stephen D. Barnhill, M.D.	$ 0.00	$ 0.00	$ 0.00
Michael Hanbury (1)	$ 1.00	$ 14,200	$ 14,201
William F. Quirk, Jr. (2)	$ 1.00	$ 29,625	$ 29,626
William M. Goldstein (3)	$ 1.00	$ 59,250	$ 59,251
Richard E. Caruso (4)	$ 1.00	$ 31,981	$ 31,982

(1) 1,500,000 warrants remain outstanding as of April 28, 2009.
(2) 1,000,000 warrants remain outstanding as of April 28, 2009.
(3) 1,500,000 warrants remain outstanding as of April 28, 2009.
(4) 250,000 warrants and 1,250,000 options remain outstanding as of April 28, 2009.

Michael Hanbury was awarded warrants to purchase 1,500,000 shares of Company common stock in 2008, which vest over three years and expire in six years. These warrants have an exercise price of $0.08, and will be charged as directors' fees over the vesting period. In August 2008, the Company awarded 1,250,000 options to Dr. Richard Caruso which vest over 2 years and expire in 4 years. The vesting of the options is conditioned upon Dr. Caruso's continued service as an advisor to the Company.

Dr. Caruso was awarded warrants to purchase 1,500,000 shares of Company common stock, which vest over three years and expire in six years. These warrants have an exercise price of $0.08, and will be charged as directors' fees over the vesting period. Dr. Caruso resigned as a director effective August 15, 2008.

William M. Goldstein resigned as a director on April 11, 2008. William F. Quirk resigned as a director on June 21, 2008.

Summary Compensation Table

The following table sets forth various elements of compensation for our Named Executive Officers for each of the last two calendar years:

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)	All Other Compensation ($)	Total
Stephen D. Barnhill, M.D.						
Chief Executive Officer	2008	$ 300,000	$ 50,000	$ 52,587[1]	$ 38,291[2]	$ 440,878
	2007	$ 196,875	$ 50,000	—	$ 3,719[2]	$ 250,594
Daniel R. Furth						
Executive Vice President	2008	$ 54,000		—$ 38,615	$ 7,443[3]	$ 100,058
	2007	$ 91,500		—$ 92,676	$ 5,969[2]	$ 190,145

(1) The options vest according to the following vesting schedule: 1,000,000 vest on August 15, 2008 and upon the Company's common stock's closing price for any 20 consecutive trading days achieving a minimum share price of $0.10; 2,000,000 vest on January 1, 2009 and upon the Company's common stock's closing price for any 20 consecutive trading days achieving a minimum share price of $0.15; 2,000,000 vest on January 1, 2010 and upon the Company's common stock's closing price for any 20 consecutive trading days achieving a minimum share price of $0.20; and 1,000,000 vest on January 1, 2010 and upon the Company's common stock's closing price for any 20 consecutive trading days achieving a minimum share price of $0.25. The fair value of each option granted was $0.03 and was estimated on the date of grant using a probability weighted fair value model, similar to a lattice valuation model, with the following assumptions: dividend yield at 0%, risk-free interest rate of 3.50%, an expected life of 6 years, and volatility of 106.52%. The aggregate computed value of these options was $172,485, and this amount will be charged as expense over the 1.4 year vesting period.

(2) Represents health insurance premiums and reimbursed healthcare costs.

(3) Includes health insurance premiums and consulting payments.

Outstanding Equity Awards at Fiscal Year-end

	Option Awards			
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price	Option Expiration Date
Stephen Barnhill M.D.	0	6,000,000(1)	$ 0.08	August 15, 2018

(1) The options vest according to the following vesting schedule: 1,000,000 vest on August 15, 2008 and upon the Company's common stock's closing price for any 20 consecutive trading days achieving a minimum share price of $0.10; 2,000,000 vest on January 1, 2009 and upon the Company's common stock's closing price for any 20 consecutive trading days achieving a minimum share price of $0.15; 2,000,000 vest on January 1, 2010 and upon the

Company’s common stock’s closing price for any 20 consecutive trading days achieving a minimum share price of $0.20; and 1,000,000 vest on January 1, 2010 and upon the Company’s common stock’s closing price for any 20 consecutive trading days achieving a minimum share price of $0.25.

Employment Agreements

On August 15, 2008, the Company entered into a new employment agreement with Dr. Stephen Barnhill for his employment as Chief Executive Officer. Dr. Barnhill's existing employment agreement was scheduled to expire by its terms on September 15, 2008. The employment agreement has a term of two years. Under the terms of the employment agreement, Dr. Barnhill received a one-time retention signing bonus of $50,000 and his annual base salary is $300,000. Dr. Barnhill will also be eligible to receive a cash bonus equal to 10% of the Company's revenue received during the term of the employment agreement; but such cash bonus cannot exceed 300% of his annual base salary. Dr. Barnhill was also granted an option to purchase an aggregate of 6,000,000 shares of the Company's common stock at an exercise price of $0.08; the options vest over a two year period, assuming a minimum share price. Dr. Barnhill is eligible to be reimbursed monthly for reasonable and necessary business expenses and to receive health insurance benefits and other benefits maintained by us for our executives. Dr. Barnhill will be entitled to twenty paid vacation days during the calendar year. If Dr. Barnhill's employment is terminated for Cause, as that term is defined in the employment agreement, or if Dr. Barnhill terminates the employment agreement for Good Reason, as that term is defined in the employment agreement, then Dr. Barnhill will receive as severance the amount of his base salary for the remainder of the term and an amount equal to the actual cost of ninety days of his COBRA premium payments. If the employment agreement is terminated for any other reason than for Cause or for Good Reason, Dr. Barnhill is not eligible to receive severance. The employment agreement also generally provides that Dr. Barnhill will keep confidential information confidential and that he will not compete with us in our business nor solicit our customers or employees for a period of 12 months following termination of employment.

In 2007, the Company awarded Dr. Barnhill a bonus in the gross amount of $50,000 in recognition of his extraordinary efforts on behalf of the Company.

We entered into an employment agreement with Mr. Daniel R. Furth effective November 18, 2005 regarding Mr. Furth's employment as Executive Vice President. The term of the employment was for three years, with compensation of $60,000, reviewed each year for potential increase. Effective as of September 10, 2007, Mr. Furth's annual salary was increased to $108,000. Mr. Furth received options to acquire 1,500,000 shares of our common stock. Mr. Furth was eligible to be reimbursed monthly for reasonable and necessary business expenses and for other benefits maintained by us. If the Company terminated the employment agreement for cause or if the agreement was terminated by Mr. Furth without cause, Mr. Furth would have been entitled to receive his salary only through the date such termination was effective. If Mr. Furth terminated the employment agreement for cause or, if the employment agreement was terminated without cause, he would have been entitled to receive his salary for a period of three months from the date such termination is effective. The agreement also generally provided that Mr. Furth will keep confidential information confidential and that he will not compete with us in our business nor solicit our customers or employees for a period of 12 months following termination of employment. On June 30, 2008, Mr. Furth notified the Company of his resignation. As a result of his resignation, his employment agreement was terminated.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information concerning the beneficial ownership of our common stock as of April 28, 2009 by (i) each of our directors, (ii) each of our executive officers, (iii) each person who is known to us to be the beneficial owner of more than five percent of our common stock, and (iv) all of our executive officers and directors as a group. At April 28, 2009, there were 169,522,590 shares of common stock outstanding, 7,437,184 shares of Series A Preferred Stock outstanding, and 3,125,000 shares of Series B Preferred Stock outstanding.

Name and Address of Beneficial Owner	Amount and Nature of Beneficial Owner	Percent of Class (1)
Dr. Stephen D. Barnhill Chairman of the Board, Chief Executive Officer and Chief Medical Officer, Director 2 East Bryan Street, Suite #601 Savannah, GA 31401	22,181,522 (2)	13.08%
Michael Hanbury Director Suite 200 9550 Zionville Road Indianapolis IN 46268	250,000 (3)	0.15%
William Quirk 2 East Bryan Street, Suite #601 Savannah, GA 31401	68,624,302 (4)	32.21%
Dr. Richard Caruso 795 East Lancaster Avenue, Suite #200 Villanova, PA 19085	10,156,250 (5)	5.75%
Micro Capital Fund, LP 623 Fifth Avenue Suite 2502 New York, NY 10022	13,733,124 (6)	7.69%
Prime Mover Capital Partners 767 Third Avenue New York, NY 10007	20,693,750 (7)	11.29%
Curtis G. Anderson 44 Delegal Road Savannah, GA 31411	14,248,915 (8)	7.96%
Stephen M. Grosberg 201 East 20th Street, #8C New York, NY 10010	12,040,000 (9)	6.78%
Frank T. Nickell 320 Park Ave. 24th Floor New York, NY 10027	9,406,250 (10)	5.35%
All executive officers and directors as a group (2 persons)	22,431,522	13.21%

(1) The percentage assumes the exercise by the shareholder or group named in each row of all options or warrants for the purchase of our common stock held by such shareholder or group and exercisable within 60 days as of April 28, 2009.

(2) These shares are held by The Barnhill Group LLC, which is wholly owned by Dr. Barnhill.

(3) Consists of warrants vesting within 60 days.

(4) Includes 43,527,776 vested warrants.

(5) Consists of 3,156,250 shares and 6,250,000 vested warrants held by Athena Venture Partners LP, a limited partnership in which Dr. Caruso's children are limited partners, 250,000 vested warrants and 500,000 vested options held individually.

(6) Includes 9,125,000 vested warrants. Includes beneficial ownership of MicroCapital Fund Ltd., which includes 2,281,250 vested warrants.

(7) Includes 13,750,000 vested warrants.

(8) Includes 9,467,718 vested warrants.

(9) Includes 8,000,000 vested warrants.

(10) Includes 6,250,000 vested warrants.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In May 2008, we entered into a letter of intent with DCL Medical Laboratories LLC, a full-service clinical reference laboratory focused on women's health, for the joint development of an SVM-based computer assisted diagnostic test for the analysis of cervical cells. Through the application of the advancing technology of pattern recognition, this new SVM-based system is intended to further improve the sensitivity of the Pap test and augment the recent improvements in computer guided screening that have already significantly improved detection rates. In addition, images and interpretative data from this new SVM-based system may now be transmitted electronically, thus allowing remote review and collaborative interpretation. In July 2008, the Company and DCL Medical Laboratories, LLC entered into a Development and License Agreement for the collaborative development and commercialization of SVM-based computer assisted diagnostic tests for the independent detection of ovarian, cervical and endometrial cancers, which expands the scope of the joint development efforts. Pursuant to the Development and License Agreement, HDC will own any developed intellectual property and DCL Medical Laboratories will have a sole use license relating to applications and new mathematical tools developed during the course of the Development and License Agreement. In connection with the Development and License Agreement, HDC will receive 50% of the profits from screening services performed by DCL Medical Laboratories. If HDC commercializes an application and offers services as permitted by the Development and License Agreement, HDC will pay DCL Medical Laboratories 25% of HDC's profits. Dr. Hanbury, one of the Company's directors, is currently President, CEO and a shareholder of DCL Medical Laboratories.

In August 2008, we entered into a licensing agreement with Smart Personalized Medicine, LLC, a company founded by our former director, Dr. Richard Caruso. Under the terms of this agreement, we will work to develop a superior breast cancer prognostic test using our SVM technology in collaboration with a prominent cancer research hospital. In exchange for a license to use our SVM technology, we will receive a 15% equity position in Smart Personalized Medicine, LLC (which will remain undiluted until there is at least $5 million in investment from investors in Smart Personalized Medicine, LLC) and a per test royalty up to 7.5% based on net proceeds received from the sale of the new breast cancer prognostic test.

On August 14, 2008, the Company and Dr. Richard Caruso entered into an Amendment to Stock Purchase Warrant. The Amendment permits Dr. Caruso's warrants, which were previously granted to Dr. Caruso in 2007 for his services as a director, to continue to vest so long as he serves the Company as an advisor. The amendment was subsequently rescinded by the Company and Dr. Caruso. The Company granted 1,250,000 options to Dr. Caruso during the third quarter of 2008. These options will continue to vest so long as Dr. Caruso is an advisor to the Company.

The Company has adopted the independence standards promulgated by the New York Stock Exchange and has made a determination that, as of March 27, 2009, the following directors are independent according to those standards: Michael Hanbury.

DESCRIPTION OF CAPITAL STOCK

The following information concerning our capital stock summarizes certain provisions of our Articles of Incorporation, commonly referred to as our Charter, and Bylaws, as well as certain statutes regulating the rights of holders of our common stock. The information does not purport to be a complete description of such matters and is qualified in all respects by the provisions of the Charter, the Bylaws and the Georgia Business Corporation Code.

Common Stock

General. We are authorized to issue 300,000,000 shares of common stock, no par value. As of April 28, 2009, there were 169,522,590 shares of common stock outstanding. Holders of the common stock are entitled to one vote per share for the election of directors and on all other matters submitted to a vote of shareholders. Subject to any preferences for preferred shares then outstanding, they are also entitled to dividends declared by the directors out of funds legally available for payment of dividends. Holders of the common stock do not have any cumulative voting rights or any preemptive or similar rights. On September 8, 2008, the Company received notice, claiming that certain anti-dilution rights had been triggered under the terms of the Private Placement. See Item 15, Recent Sales of Unregistered Securities on page II-1.

Assessment and Redemption. The shares of common stock presently outstanding are, and the shares that will be issued in connection with this offering will be, fully paid and non-assessable. There is no provision for redemption or conversion of our common stock.

Liquidation Rights. In the event of our liquidation, dissolution or winding up, whether voluntarily or involuntarily, the holders of our common stock (and the holders of any class or series of preferred stock entitled to participate with our common stock in the distribution of assets) will be entitled to share ratably in any of the net assets or funds which are available for distribution to shareholders, after the satisfaction of all liabilities or after adequate provision is made therefor and after distribution to holders of any class of stock having preference over our common stock in the case of liquidation.

Our Transfer Agent is Corporate Stock Transfer, 3200 Cherry Creek Drive South, Denver, Colorado 80209; telephone (303) 282-4800.

Preferred Stock

We are authorized to issue 30,000,000 shares of preferred stock. The Board of Directors has the authority to issue classes or series of preferred stock in the future having designations, rights, preferences and relative, participating, option or other special rights of the shares of each such class or series, including such things as voting rights, dividend rights, redemption rights, and other restrictions and features. The Board of Directors has authorized the designation of Series A Preferred Stock. The number of shares constituting the Series A Preferred Stock is 7,437,184 and such shares have a stated value of $0.08 per share. The rights associated with the Series A Preferred Stock include the right to receive dividends, the right to vote on matters presented to holders of common stock, a preference right in the event of liquidation, and the right to convert the Series A Preferred Stock into Common Stock. The shares of Series A Preferred Stock must be converted into common stock of the Company when the trading value of the common stock of the Company exceeds $0.12 per share for a period of thirty (30) consecutive calendar days. As of April 28, 2009, there were 7,437,184 shares of Series A Preferred Stock outstanding. The Company has the right to redeem all of the outstanding shares of Series A Preferred Stock following the fifth anniversary of the first issue date at a redemption price of $0.08 per share.

The Board of Directors has authorized the designation of Series B Preferred Stock. The number of shares constituting the Series B Preferred Stock is 13,750,000. On March 31, 2009, pursuant to a Securities Purchase Agreement (the "Purchase Agreement"), we completed the sale to individual investors to acquire 2,500,000 shares of Series B Preferred Stock for $200,000 in cash. Since March 31, 2009, we have received additional investments in aggregate amount of $50,000. In connection with the Purchase Agreement, the Company may issue up to 6,250,000 shares of Series B Preferred Stock. The Series B Preferred Stock may be converted into Common Stock of the Company at the option of the holder, at a price of $0.08 per share (subject to adjustment) so long as the Company has a sufficient number of authorized shares to allow for the exercise of all of its outstanding derivative securities, and without the payment of additional consideration by the holder. The Shares of Series B Preferred Stock must be converted into Common Stock of the Company upon the demand by the Company after the fifth anniversary of the date of issuance. The Series B Preferred Stock will not be immediately registered under either federal or state securities laws and must be held for at least six months from the time they are issued or until a registration statement covering such securities is declared effective by the Securities and Exchange Commission or other applicable exemption applies.

Any amendment to the Charter authorizing an increase in the number of authorized shares of preferred stock will require the prior approval of the holders of a majority of our common stock, Series A Preferred Stock, and Series B Preferred Stock then issued and outstanding. Although we do not have any present plans to issue any additional preferred stock, the ownership and control of Health Discovery Corporation by the holders of our common stock and Series A Preferred Stock would be diluted if we were to issue additional preferred stock that had voting rights.

Private Placement Warrants

In connection with the Company's private placement on September 7, 2007, the Company issued warrants to acquire a total of 51,538,822 shares of common stock at $0.14 (the "Tranche 1 Warrants") and warrants to acquire a total of 51,538,822 shares common stock at $0.19 (the "Tranche 2 Warrants"). The Tranche 1 Warrants and the Tranche 2 Warrants expire on September 7, 2010. With respect to both the Tranche 1 Warrants and the Tranche 2 Warrants, the number of shares issuable upon exercise and the exercise price will be automatically adjusted equitably and proportionately to reflect any stock dividend, stock split, reverse stock dividend or reverse stock split, or any capital reorganization or recapitalization of the Company, or any similar event affecting the Company's common stock. The Tranche 1 Warrants and the Tranche 2 Warrants will also be adjusted to prevent anti-dilution if (i) the Company issues rights, options or warrants to all holders of common stock (but not to the holders of the Tranche 1 Warrants or the Tranche 2 Warrants) entitling them to subscribe for or purchase shares of common stock at a price per share less than the current market price or (ii) the Company distributed to all holders of common stock (but not to the holders of the Tranche 1 Warrants or the Tranche 2 Warrants) evidences of its indebtedness or assets, including cash and cash dividends, or rights or warrants to subscribe for or purchase any security other than common stock. The holders must exercise fifty percent of the Tranche 1 Warrants if the market price for the Company's common stock is $0.17 for a period of thirty consecutive calendar days. The holders must exercise fifty percent of the Tranche 2 Warrants if the market price for the Company's common stock is $0.24 for a period of thirty consecutive calendar days. As of April 28, 2009, all of the Tranche 1 Warrants and Tranche 2 Warrants are outstanding.

Certain Takeover Considerations

If the Company were to pursue a merger or share exchange of the Company with or into any other corporation, or any sale, lease, exchange or other disposition of all or substantially all of the assets of the Company to any other corporation, person or other entity, the Articles of Incorporation of the Company require that the Board of Directors recommend the plan of merger, plan of conversion or share exchange to the shareholders, unless the Board of Directors elects, because of conflict of interest or other special circumstances, to make no recommendation to the shareholder, and that two-thirds of all of the votes entitled to be cast on the plan approve such plan.

Change in Number of Directors. Our bylaws provide that any change in the number of directors requires the affirmative vote of at least a majority of the entire Board of Directors or the affirmative vote of the holders of at least a majority of the outstanding shares of common stock.

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Powell Goldstein LLP, Atlanta, Georgia.

EXPERTS

Hancock Askew & Co., LLP audited our balance sheets as of December 31, 2008 and 2007 and the related statements of operations, changes in stockholders' equity, and cash flows for the years then ended, as stated in their report appearing herein, which report expressed an unqualified opinion and includes an explanatory paragraph referring to

the Company's ability to continue as a going concern, and are included in reliance upon their report given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the SEC pursuant to the information requirements of the Securities Exchange Act of 1934. You can read and copy these reports, proxy statements and other information concerning us at the SEC's Public Reference Room at 100 F Street, N.E, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. You can review our electronically filed reports, proxy and information statements on the SEC's Internet site at http://www.sec.gov.

We have filed with the SEC, Washington, D.C. 20549, a registration statement on Form S-1 under the Securities Act of 1933, as amended, with respect to our common stock issuable upon the exercise of warrants offered hereby. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. Certain items are omitted in accordance with the rules and regulations of the SEC. For further information with respect to our company and our common stock, reference is made to the registration statement and the exhibits and any schedules filed with the registration statement. Statements contained in this prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance, if such contract or document is filed as an exhibit, reference is made to the copy of such contract or other documents filed as an exhibit to the registration statement, each statement being qualified in all respects by such reference. You can obtain a copy of the full registration statement, including the exhibits and schedules thereto, from the SEC as indicated above.

Hancock Askew & Co LLP
100 Riverview Drive
Savannah, GA 31404

Report of Independent Registered Public Accounting Firm

Board of Directors
Health Discovery Corporation
Savannah, Georgia

We have audited the accompanying balance sheets of Health Discovery Corporation as of December 31, 2008 and 2007, the related statements of operations, changes in stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2008. These financial statements are the responsibility of the management of Health Discovery Corporation. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we expressed no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Health Discovery Corporation as of December 31, 2008 and 2007 and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2008 in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note M, the Company has had limited revenue since inception, has incurred recurring losses from operations, and has had to continually seek additional capital investment in order to fund operations. These factors, among others, raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note M. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Hancock Askew & Co., LLP

Savannah, Georgia
March 20, 2009

HEALTH DISCOVERY CORPORATION

Balance Sheets

December 31, 2008 and 2007

		2008	2007
Assets			
Current Assets			
Cash	$	325,887	1,648,439
Accounts Receivable		112,500	112,500
Prepaid Expense and Other Current Assets		34,355	33,829
Total Current Assets		472,742	1,794,768
Equipment, Less Accumulated Depreciation of $25,947 and $22,402		14,888	7,596
Other Assets			
Accounts Receivable – Long Term		—	112,500
Patents, Less Accumulated Amortization of $1,205,963 and $942,972		2,780,101	3,042,820
Total Assets	$	3,267,731	4,957,684
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable – Trade	$	220,972	61,173
Accrued Liabilities		245,742	239,589
Deferred Revenue		57,153	62,708
Total Current Liabilities		523,867	363,470
Deferred Revenue – Long Term		396,562	453,715
Total Liabilities		920,429	817,185
Commitments and Contingencies			
Stockholders' Equity			
Series A Preferred Stock, Convertible, Stated Value of $0.08 per Share			
7,437,184 Shares Authorized, Issued and Outstanding		594,975	594,975
Common Stock, No Par Value, 300,000,000 Shares Authorized,		15,744,873	15,390,609

Issued and Outstanding 169,522,590 and 169,007,206 Shares, respectively			
Accumulated Deficit		(13,992,546)	(11,845,085)
Total Stockholders' Equity		2,347,302	4,140,499
Total Liabilities and Stockholders' Equity	$	3,267,731	4,957,684

See accompanying notes to financial statements.

HEALTH DISCOVERY CORPORATION

Statements of Operations

For the Years Ended December 31, 2008 and 2007

	2008	2007
Revenues		
Licensing and Development	$ 65,731	57,905
Cost of Revenues		
Licensing and Development	9,000	21,300
Gross Profit	56,731	36,605
Expenses:		
Amortization	262,719	262,719
Professional and Consulting Fees	748,748	980,833
Compensation	745,918	783,726
Other General and Administrative Expenses	484,806	459,064
Total Expenses	2,242,191	2,486,342
Net Loss from Operations	(2,185,460)	(2,449,737)
Other Income (Expense):		
Interest Income	39,160	39,614
Gains on Restructuring of Accounts Payable	—	44,594
Loss from Unconsolidated Joint Venture	—	(5,000)
Litigation Settlement	—	(42,000)
Interest Expense	(1,161)	(286,398)
Total Other Income (Expense)	37,999	(249,190)
Net Loss	$ (2,147,461)	(2,698,927)
Weighted Average Outstanding Shares	169,165,786	132,718,789
Loss Per Share	$ (.01)	(.02)

See accompanying notes to financial statements.

HEALTH DISCOVERY CORPORATION

Statements of Changes in Stockholders' Equity

For the Year Ended December 31, 2008 and 2007

	Issued and Outstanding					
	Preferred Shares	Common Shares	Preferred Amount	Common Amount	Accumulated Deficit	Total Stockholders' Equity
Balance – January 1, 2007	—	116,393,384	$ —	$ 11,059,674	$ (9,146,158)	$ 1,913,516
Stock Issued for Cash	—	31,937,500	—	2,490,540	—	2,490,540
Stock Issued upon Exercise of Options and Warrants	—	100,000	—	1,000	—	1,000
Stock Issued in Connection with Debt Conversion	7,437,184	19,601,322	594,975	1,298,800	—	1,893,775
Stock Issued for Settlement of Litigation	—	400,000	—	32,000	—	32,000
Stock Issued in Severance Agreement	—	575,000	—	46,000	—	46,000
Warrants Issued for Services	—	—	—	320,570	—	320,570
Stock Compensation Expense for Compensatory Options and Warrants	—	—	—	142,025	—	142,025
Net Loss	—	—	—	—	(2,698,927)	(2,698,927)
Balance - December 31, 2007	7,437,184	169,007,206	$ 594,975	$ 15,390,609	$ (11,845,085)	$ 4,140,499
Shares issued pursuant to the terms of the Securities Purchase Agreement for no additional consideration	—	515,384	—	36,077	—	36,077
Options Issued for Services	—	—	—	9,336	—	9,336
Warrants Issued for Services	—	—	—	217,666	—	217,666
	—	—	—	91,185	—	91,185

Stock Compensation Expense for Compensatory Options						
Net Loss	—	—	—	—	(2,147,461)	(2,147,461)
Balance - December 31, 2008	7,437,184	169,522,590	$ 594,975	$ 15,744,873	$ (13,992,546)	$ 2,347,302

See accompanying notes to financial statements.

HEALTH DISCOVERY CORPORATION

Statements of Cash Flows

For the Years Ended December 31, 2008 and 2007

	2008	2007
Cash Flows From Operating Activities:		
Net Loss	$ (2,147,461)	$ (2,698,927)
Adjustments to Reconcile Net Loss to Net Cash Used by Operating Activities:		
Stock Issued in Settlement of Litigation	—	32,000
Stock Issued Pursuant to Shareholder Agreement	36,077	—
Non-cash Compensation	100,520	188,025
Accretion of Debt Discount	—	192,361
Services Exchanged for Common Stock or Warrants	217,667	286,814
Issuance of Warrants	—	33,756
Gain on Restructuring Accounts Payable	—	(44,594)
Depreciation and Amortization	268,147	270,865
Changes in Assets and Liabilities:		
Decrease (Increase) in Accounts Receivable	112,500	(205,000)
(Increase) Decrease in Prepaid Expense & Other Assets	(526)	21,358
Increase (Decrease)in Accounts Payable – Trade	159,799	(132,161)
(Decrease) Increase in Deferred Revenue	(62,708)	415,312
Increase in Accrued Liabilities	6,153	173,073
Net Cash Used by Operating Activities	(1,309,832)	(1,467,118)
Cash Flows From Investing Activities:		
Purchase of Equipment	(12,720)	(998)
Net Cash Used by Investing Activities	(12,720)	(998)
Cash Flows From Financing Activities:		
Repayment of Notes Payable	—	(49,351)
Proceeds from Issuance of Common Stock	—	2,491,540
Net Cash Provided by Financing Activities	—	2,442,189
Net Increase (Decrease) in Cash	(1,322,552)	974,073
Cash, at Beginning of Period	1,648,439	674,366
Cash, at End of Period	$ 325,887	$ 1,648,439
Stock-Based Investing and Financing Transactions:		

Common Stock, Series A Preferred Stock, and Warrants Issued in Settlement of Promissory Notes	$	—	$	1,893,775
Supplemental Disclosures of cash Flow Information:				
Cash Paid for Interest	$	1,161	$	10,084

See accompanying notes to financial statements.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements

Note A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

DESCRIPTION OF BUSINESS

Health Discovery Corporation (the “Company”) is a biotechnology-oriented company that has acquired patents and has patent pending applications for certain machine learning tools, primarily pattern recognition techniques using advanced mathematical algorithms to analyze large amounts of data thereby uncovering patterns that might otherwise be undetectable. Such machine learning tools are currently in use for diagnostics and drug discovery, but are also marketed for other applications. The Company licenses the use of its patented protected technology or may provide services to develop specific learning tools under development agreements or to sell to third parties.

USE OF ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. Accordingly, actual results could differ from those estimates. Significant estimates that are particularly suspectible to change in the near-term include the valuation of share-based compensation and consideration for services and the recoverability of the patents.

REVENUE RECOGNITION

Revenue is generated through the sale or license of patented technology and processes and from services provided through development agreements. These arrangements are generally governed by contracts that dictate responsibilities and payment terms. The Company recognizes revenues as they are earned over the duration of a license agreement or upon the sale of any owned patent once all contractual obligations have been fulfilled. Revenue is recognized under development agreements in the period the services are performed.

COST OF REVENUE

Cost of revenue includes internal development costs and fees directly associated with sales contracts.

Cost of revenue for licensing and development revenue includes fees directly asssociated with the contracts and salary expense based upon the estimated amount of time worked on the licensing or development contract.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash and monies invested in overnight funds with financial institutions.

ACCOUNTS RECEIVABLE

Trade accounts receivable for licensing fees and development services are recorded at net contract value based upon the written agreement with the customer. In certain cases, accounts receivable may include royalties receivable from customers based upon those customers estimated sales of the products or diagnostic tests containing patented processes and technologies. The Company considers amounts past due based on the related terms of the agreement and reviews its exposure to amounts receivable based upon collection history and specific customer credit analysis. The Company provides an allowance for doubtful amounts if collectability is no longer reasonably assured. As of December 31, 2008 and 2007, all amounts receivable were considered fully collectable.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

PROPERTY AND EQUIPMENT

Property and equipment, which consists of office furniture, computer equipment and leasehold improvements, are stated at cost. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, which range from 3 to 10 years. Leasehold improvements are amortized using the straight-line method over the estimated useful lives of the assets or the term of the lease, whichever is shorter.

PATENTS

Initial costs paid to purchase patents are capitalized and amortized using the straight line method over the remaining license period. The Company capitalizes the external and in-house legal costs and filing fees associated with obtaining patents on its new discoveries and amortizes these costs using the straight-line method over the shorter of the legal life of the patent or its economic life, generally 17 years, beginning on the date the patent is issued. If the applied for patents are abandoned or are not issued, the Company will expense the capitalized costs to date in the period of abandonment. The carrying value of patents is reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. As of December 31, 2008, the Company does not believe there has been any impairment of its intangible assets.

INCOME TAXES

The Company accounts for income taxes using the asset and liability method. Deferred tax assets and liabilities are recognized for future tax benefits and expenses or consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income for the years in which those temporary differences are expected to be recovered or settled.

In the event the future tax consequences of differences between the financial reporting bases and tax bases of the Company's assets and liabilities result in deferred tax assets, an evaluation of the probability of being able to realize the future benefits indicated by such assets is made. A valuation allowance is provided for the portion of the deferred tax asset when it is more likely than not that some portion or all of the deferred tax asset will not be realized. In assessing the realizabilty of the deferred tax assets, management considers the scheduled reversals of deferred tax liabilities, projected future taxable income and tax planning strategies.

On January 1, 2007 the Company adopted the provisions of FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes, an interpretation of FASB Statement No. 109" (FIN 48). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in a company's financial statements in accordance with SFAS No. 109. FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The interpretation also provides guidance on derecognition, classification, interest, and penalties, accounting in interim periods, disclosure, and transition. Based in its evaluation of tax positions, the Company has concluded that there are no significant uncertain tax positions requiring recognition in its financial statements. The Company's evaluation was performed for all tax years which remain subject to examination and adjustment by major tax jurisdictions as of December 31, 2008. FIN 48 did not have an impact on the Company's financial position or results of operations.

STOCK-BASED COMPENSATION

Stock-based compensation cost is measured at grant date, based on the fair value of the award, and is recognized as expense over the requisite service period. Stock-based expense included in the 2008 net loss consisted of $309,687 in compensatory warrants, options and stock for professional consulting services and compensation. Stock-based expense included in the net loss for 2007 consisted of $540,595 for the issuance of common stock, warrants and options.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

Valuation and Amortization Method – Under SFAS No. 123(R), the fair value awards of stock which do not contain market conditions, such as a specified hurdle price, is based on the market price of the Company's common stock on the date of grant and the fair value of each stock option or warrant which does not contain a market condition is estimated on the grant date using the Black-Scholes option-pricing model. Under SFAS No. 123(R), the fair value of options which contain a market condition, such as a specified hurdle price, is estimated on the grant date using a probability weighted fair value model similar to a lattice valuation model. Both the Black-Scholes and the probability weighted valuation models require assumptions and estimates to determine expected volatility, expected life, expected dividend yield and expected risk-free interest rates.

Expected Term – The expected term of the award represents the period that the Company's stock-based awards are expected to be outstanding and was determined based on historical experience, giving consideration to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. Given the lack of historical data and start-up nature of the company's operations, the expected term is estimated as the contractual term.

Expected Volatility – Volatility is a measure of the amounts by which a financial variable such as stock price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. The Company uses the historical volatility to estimate expected volatility.

Risk-Free Interest Rate – The Company bases the risk-free interest rate used in the Black-Scholes valuation method on the implied yield currently available on U.S. Treasury zero-coupon issues with a remaining term equivalent to the expected term of a stock award.

Estimated Forfeitures – When estimating forfeitures, the Company considers voluntary termination behavior as well as analysis of actual option forfeitures.

Estimated Dividend yield – The Company has not paid any dividends and has no current plans to do so. Therefore, the dividend rate is assumed to be zero.

RESEARCH AND DEVELOPMENT EXPENSE

The Company's past research and development costs have been minimal due to the unique relationships we have maintained with the members of our scientific team and their institutions. Our total R&D costs have consisted solely of the consultant fees paid to members of our scientific advisory board. These fees consisted of $14,160 for 2008 and $46,432 for 2007.

FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company's financial instruments consist of cash, accounts receivable, accounts payable and accrued expenses. The Company considers the carrying values of its financial instruments in the financial statements to approximate their fair value due to the short term nature of such items.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note A - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

NET LOSS PER SHARE

Basic Earnings Per Share ("EPS") includes no dilution and is computed by dividing income or loss available to common shareholders by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution of securities that could share in the earnings or losses of the entity. Due to the net loss in all periods presented, the calculation of diluted per share amounts would cause an anti-dilutive result and therefore is not presented. Potentially dilutive shares at December 31, 2008 and 2007 include the following:

	2008	2007
Stock options	7,250,000	3,500,000
Warrants	121,527,644	159,099,644
	128,777,644	162,599,644

CONCENTRATIONS OF CREDIT RISK

The Company maintains its cash balances at financial institutions that are insured by the Federal Deposit Insurance Corporation ("FDIC") up to $100,000. From time-to-time, the Company's cash balances exceed the amount insured by the FDIC. Management believes the risk of loss of cash balances in excess of the insured limit to be low.

NEW ACCOUNTING PRONOUNCEMENTS

In September 2006, the FASB issued Statement No. 157, Fair Value Measurements, ("Statement No. 157"). This statement provides a single definition of fair value, a framework for measuring fair value, and expanded disclosures concerning fair value. Previously, different definitions of fair value were contained in various accounting pronouncements creating inconsistencies in measurement and disclosures. We adopted Statement No. 157 effective January 1, 2008. The adoption of Statement No. 157 did not have a material impact on our financial statements.

In April 2008, the FASB issued FASB Staff Position FAS 142-3, Determination of the Useful Life of Intangible Assets ("FSP 142-3"). FSP 142-3 amends the factors to be considered in developing renewal and extension assumptions used to determine the useful life of a recognized intangible asset accounted for under FAS No. 142, Goodwill and Other Intangible Assets. FSP 142-3 is effective for the Company's fiscal year 2009 and must be applied prospectively to intangible assets acquired after January 1, 2009. Early adoption is not permitted. The Company does not expect the adoption of FSP 142-3 will have a material impact on its Consolidated Financial Statements.

In December 2007, FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements – an amendment of ARB No. 51" ("SFAS No. 160"). SFAS No. 160 requires that noncontrolling (i.e. Minority) ownership interests in subsidiaries held by parties other than the parent, and the amount of consolidated net income, be clearly identified, labeled, and presented in the consolidated financial statements within equity, but separate from the parent's equity. It also requires that once a subsidiary is deconsolidated, any retained noncontrolling equity investment in the former subsidiary be initially measured at fair value. Sufficient disclosures are required to clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. In addition to the amendments to ARB 51, this Statement amends SFAS No. 128 "Earnings per Share"; so that earnings-per-share data

will continue to be calculated the same way those data were calculated before SFAS No. 160 was issued. SFAS No. 160 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. SFAS No. 160 was effective for us beginning January 1, 2009 and did not have a material impact on our financial statement.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note B – DEFERRED REVENUE

Deferred revenue represents the unearned portion of payments received in advance for licensing or service agreements.

The Company had total unearned revenue of $453,715 as of December 31, 2008. Unearned revenue of $57,153 is recorded as current and $396,562 is classified as long-term. The long term portion of unearned revenue is being amortized over the remaining term of the agreements or the remaining lives of the underlying patents, as appropriate, and ranges from one to sixteen years.

Deferred revenue was $516,423 as of December 31, 2007. Of this amount, $62,708 was recognized as income in 2008.

The expected future annual recognition of revenue is as follows (in thousands):

For the Year Ending December 31,	
2009	$ 57,153
2010	29,375
2011	29,375
2012	29,375
2013	29,375
Thereafter	279,062
Total expected future annual amortization	$ 453,715

Note C – PATENTS

The Company has acquired a group of patents related to biotechnology and certain machine learning tools used for diagnostic and drug discovery. Additionally, legal costs associated with patent acquisitions and the application process are also capitalized as patent costs. The Company has recorded $2,780,101 and $3,042,820 in patents and patent related costs, net of accumulated amortization, at December 31, 2008 and 2007.

Amortization charged to operations for each of the years ended December 31, 2008 and 2007 was $262,719. The weighted average amortization period for patents is 14 years. Estimated amortization expense for the next five years is $262,719 per year.

Note D – INVESTMENTS

The Company uses the equity method to account for its equity investments in ventures for which it has 50% or less ownership and the ability to exercise significant influence over operating and financial policies, but does not control. The Company uses the cost method to account for its investments in companies that it does not control and for which it does not have the ability to exercise significant influence over operating and financial policies. In accordance with the cost method, these investments are recorded at cost or fair value, as appropriate. As of December 31, 2008, the Company had investments in SVM Capital, which it owned 45% and account for under the equity method, and Smart Personalized Medicine, which it owned 15% and will account for by the cost method. The carrying value of both

investments was zero at December 31, 2008.

On March 27, 2007, the Company and an investment partner formed SVM Capital LLC as an equity investment for purposes of utilizing SVMs as a quantitative investment management technique. The Company owns 45% of the membership interest and has significant influence with the operation of the entity but is not considered the primary beneficiary. Accordingly, the investment is presented using the equity method of accounting. The Company's initial investment was $5,000. Equity in the loss of SVM Capital LLC for 2007 was $5,000. The resultant net value was zero as of December 31, 2008 and December 31, 2007. The Company has no contractual obligation to provide any additional funds to this venture.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note E – LITIGATION SETTLEMENT

Effective July 1, 2007, the Company entered into a patent license and settlement agreement with Ciphergen Biosystems, Inc. ("Ciphergen") in connection with the pending litigation styled Health Discovery Corporation v. Ciphergen Biosystems, Inc. Case No. 07-00285-CRB before the United States District Court for the Northern District of California ("The Agreement"). The Agreement provides Ciphergen a license to use certain patents. In consideration for entering into the Agreement, Ciphergen agreed to pay the Company $600,000 over a two-year period. The revenue associated with this settlement was recorded net of $130,000 in contingently payable attorney fees as deferred revenue in the amount of $470,000 and will be recognized over the sixteen year remaining life of the subject patents.

On June 19, 2007, the Company entered into a settlement agreement (the "Settlement Agreement") among Bill G. Williams, Shirley K. Williams, and Automated Shrimp Corporation (collectively, the "Defendants"), Stephen Barnhill as Third-Party Defendant, and Baptist Community Services, Tim Holloway, Guadalupe Family Limited Partnership, and Gerald Easterling as Intervenors in connection with the pending litigation styled Health Discovery Corporation v. Williams et al., filed in the District Court of McLennan County, State of Texas, Civil Action File No. 10-04-00012-CV. Pursuant to the terms of the Settlement Agreement, each party agreed to voluntarily dismiss with prejudice any and all claims it has against each and every other party. In consideration for entering into the Settlement Agreement, the Company agreed to issue in the aggregate 400,000 shares of Company common stock valued at $32,000 to the Defendants and pay the defendants an aggregate $10,000.

Note F – LICENSE FEES EXPENSE - LICENSE AGREEMENT

Effective September 26, 2004, the Company was assigned a patent license agreement with Lucent Technologies GRL Corporation ("Lucent"). The patent license agreement was associated with the patents acquired July 30, 2004. The Company agreed to pay royalty fees to Lucent in the amount of the greater of an annual fee of $10,000 or at the rate of five percent (5%) on each licensed product which is sold, leased, or put into use by the Company, until cumulative royalties equal $40,000 and at the rate of one percent (1%) subsequently. The license granted will continue for the entire unexpired term of Lucent's patents. During both 2008 and 2007, the Company paid approximately $10,000 in royalty fees to Lucent.

Note G – INCOME TAXES

The Company has incurred net losses since inception and, consequently, we have not recorded any U.S. federal or state income taxes. We have no recorded income tax provision or benefit for the fiscal years ending December 31, 2008 or 2007.

The following items comprise the Company's net deferred tax assets (liabilities) as of December 31, 2008.

	2008	2007
Deferred tax assets:		
Net operating loss carry-forward	$ 3,655,365	$ 2,975,861
Deferred revenue	154,263	175,584
Contributions	2,491	2,474
Depreciation and amortization	1,148	1,724
Warrants and options granted	560,136	783,341

Total	4,373,403	3,938,984
Less valuation allowance	(4,373,403)	(3,938,984)
Net deferred asset	—	—

As of December 31, 2008, an increase in the valuation allowance of $434,418 has been recorded for the deferred tax asset, as management has determined that it is more likely than not that the deferred tax asset will not be realized.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note G – INCOME TAXES, continued

Total income tax expense (benefit) differed from the amounts computed by applying the U.S. Federal statutory tax rates to pre-tax loss for the fiscal years ending December 31, 2008 and 2007 as follows:

	2008	2007
Total expense (benefit) computed by:		
Applying the U.S. Federal statutory rate	(34.0)%	(34.0)%
State income taxes, net of federal tax benefit	(3.0)	(3.0)
Valuation allowance	37.0	37.0
Effective tax rate (benefit)	—	—

The Company has unused net operating loss carry-forwards of approximately $10.8 million that are available to offset future income taxes. The net operating loss will expire beginning in 2021.

Note H – NOTES PAYABLE AND CONVERTIBLE NOTES PAYABLE

The Company eliminated all notes payable and convertible debt in 2007 through the conversion of debt to equity.

The Company issued 19,601,323 shares of common stock and 7,437,184 shares of Series A Preferred Stock in a conversion of secured debt to equity. The amount of debt converted to common stock and warrants was $1.6 million and the amount of debt converted to Series A Preferred Stock was $594,975. Each share of common stock issued in the conversion was accompanied by one warrant to acquire an equal number of shares of common stock at $0.14 and one warrant to acquire an equal number of shares of common stock at $0.19.

	Converted Debt	Common Stock 19,601,323 Shares	Common Stock Warrants @0.14 19,601,323	Common Stock Warrants @$0.19 19,601,323	Common Stock Total	Preferred Stock 7,437,184 Shares
Term Debt	$ 321,911	$ 157,167	11,227	11,227	179,621	142,290
Convertible Debt	$ 616,292	$ 220,068	15,719	15,719	251,506	364,786
Promissory Note	$ 1,000,000	$ 875,000	62,500	62,500	1,000,000	—
Payable Accrued Interest	$ 224,878	$ 119,859	8,561	8,561	136,981	87,899
Total Debt	$ 2,163,081	1,372,094	98,007	98,007	1,568,108	594,975
Promissory Note Payable	$ (269,307)	$ (235,644)	(16,832)	(16,832)	(269,308)	—
Discount Unaccreted Increase in Equity	$ 1,893,774	$ 1,136,450	81,174	81,174	1,298,800	594,975

The $49,351 debt remaining after the conversion was paid in cash along with interest accrued of $6,374.

On September 1, 2006, the Company obtained a $1,000,000 loan from a director. The loan had interest at 5%, all interest and principal was due at maturity on September 1, 2008. The outstanding balance of this loan was converted to common stock in September 2007. The Company also issued 10,000,000 warrants to this director with an exercise price of $0.16 in connection with the promissory note dated September 1, 2006.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note H – NOTES PAYABLE AND CONVERTIBLE NOTES PAYABLE, continued

The warrants vested over ten months because the note remained unpaid during that period. The warrants were assigned a value of $554,000. A discount of the loan was recorded in the amount of $554,000 and was accreted through interest expense over the period the loan was outstanding.

Note I – COMMITMENTS

The Company has entered into agreements with certain members of its Scientific Advisory Board wherein they are each entitled to receive 100,000 shares of the Company's common stock annually upon satisfactory completion of one year of service. The Company is accruing an expense for the anticipated issuance over the service period. At December 31, 2008, the Company has recorded $30,000 of consultant expense for anticipated issuances of the shares.

The Company signed a three year lease on July 1, 2007 at $1,678 per month for the corporate office. The Company currently pays $1,741 per month due to subsequent contractual increases in the rental rate. Future lease payments will be $20,892 and $10,446 in 2009, and 2010 respectively.

Note J – STOCK COMPENSATION

The Company approved 8,000,000 shares of common stock to be reserved solely for issuance and delivery upon the exercise of option grants. Information about options and warrants outstanding for 2008 and 2007 is summarized below:

Number of Derivative Securities Issued	2008	Weighted Average Exercise Price	2007	Weighted Average Exercise Price
Outstanding beginning of year	162,599,644	$ 0.17	72,296,250	$ 0.23
Granted	8,750,000	$ 0.08	122,773,394	$ 0.18
Exercised	0		(100,000)	$ 0.01
Expired un-exercised	(42,572,000)	$ 0.21	(32,370,000)	$ 0.33
Outstanding end of the year	128,777,644	$ 0.16	162,599,644	$ 0.17

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note J – STOCK COMPENSATION, continued

December 31, 2008

Exercise Prices	Number Outstanding	Weighted-Average Remaining Contractual Life (years)	Number Exercisable	Weighted Average Remaining Contractual Life (years) of Exercisable Warrants
$0.08	9,300,000	7.75	1,050,000	4.15
$0.10	300,000	0.7	300,000	0.7
$0.11	500,000	1.0	500,000	1.0
$0.13	5,000,000	0.7	5,000,000	0.7
$0.14	52,138,822	1.7	52,138,822	1.7
$0.16	10,000,000	1.7	10,000,000	1.7
$0.19	51,538,822	1.7	51,538,822	1.7
Total	128,777,644		120,527,644	

There were 2,875,000 options exercisable at December 31, 2007. There were 250,000 options exercisable at December 31, 2008. The weighted average exercise prices of options were $0.08 and $0.11 at December 31, 2008 and 2007 respectively. The weighted average remaining life of all exercisable and non-vested options at December 31, 2008 is 8.8 years.

As of December 31, 2008, there was approximately $179,030 of unrecognized cost related to stock option grants. The cost is to be recognized over the remaining vesting periods that average approximately 1.17 years. The aggregate intrinsic value of options outstanding and exercisable as of December 31, 2008 was zero.

The Company granted 1,250,000 options to an advisor during the third quarter of 2008. The fair value of each option granted was $0.06 and was estimated on the date of grant using the Black-Scholes pricing model with the following assumptions: dividend yield at 0%, risk-free interest rate of 2.62%, an expected life of 5 years, and volatility of 98.61 %. The aggregate computed value of these options was $74,693 and this amount will be charged as expense over the two year vesting period.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note J – STOCK COMPENSATION, continued

The Company entered into an award agreement with the Chief Executive Officer granting 6,000,000 stock options. The options vest in the following increments once both the service condition, indicated by the applicable Vesting Date, and the market condition, indicated by attaining the minimum share price for any 20 consecutive trading days, are satisfied:

Vesting Date	Minimum Share Price	Number of Options
August 15, 2008	$ 0.10	1,000,000
January 1, 2009	$ 0.15	2,000,000
January 1, 2010	$ 0.20	2,000,000
January 1, 2010	$ 0.25	1,000,000

The fair value of each option was $0.03 and was estimated on the date of the grant using a probability weighted fair value model similar to a lattice valuation model with the following assumptions: dividend yield at 0%, risk free interest rate of 3.50%, an expected life of 6 years, and volatility of 106.52%. The aggregate computed value of these options was $172,485 and this amount will be charged as expense over the 1.4 year vesting period.

On February 1, 2007, the Company issued in the aggregate 15,235,000 warrants to purchase common stock of the Company to certain institutional investors and individual accredited investors. These warrants vested immediately and had an exercise price of $0.35 per share. The warrants expired on November 1, 2007. On February 1, 2007, an equal number of warrants issued to the same institutional and individual investors and with substantially similar terms expired. The fair value of the warrants issued was approximately $33,755 and they were recorded as expense on the issue date.

Also on February 1, 2007, the Company issued 500,000 warrants to consultants, which vested immediately, and have an exercise price of $0.14. Additionally, the Company issued 100,000 warrants to a consultant, which vested over a period of ten months, and have an exercise price of $0.14. Together, these warrants were valued at $49,068 and expire on December 31, 2009.

During the second quarter of 2007, the Company issued 500,000 immediately vesting warrants to consultants with an exercise price of $0.11. These warrants expire on December 31, 2009, and were valued at $19,815. They were charged to expense upon issuance.

During the third quarter of 2007, the Company issued 60,750 warrants, which expired on December 31, 2008, to a vendor as payment for professional services rendered. These warrants had an exercise price of $0.10 and were fully vested upon issuance. The fair value of $1,719 was recorded as expense. The Company also issued 300,000 warrants with an exercise price of $0.08 to a former employee as part of a termination agreement. These warrants, which expire after three years, vested immediately and had a fair value of $13,869. This amount was recorded as compensation expense. Two new directors were each awarded 1,500,000 warrants which vest over three years and expire in six years. These warrants have an exercise price of $0.08 and had an aggregate fair market value of $197,374. These warrants will be charged as directors' fees over the vesting period. One director subsequently forfeited his 1,500,000 warrants upon his resignation as a director.

The Company also issued warrants to purchase up to 103,077,644 shares of common stock in connection with the sale of common stock effective September 7, 2007. Each purchaser of common stock received one warrant exercisable at $0.14 (the “Tranche 1 Warrants”) and one warrant exercisable at $0.19 (the “Tranche 2 Warrants”) for each share of common stock purchased or converted from debt. All these warrants vested immediately, expire three years from the date of issuance, and are subject to call rights based upon the trading value of the Company’s stock. With respect to the Tranche 1 Warrants, if the Company’s stock trades for an amount in excess of $0.17 for thirty (30) consecutive days, then 50% of the warrants may be called by the Company. The Tranche 1 warrants, if exercised, may result in the issuance of up to 51,538,832 shares of the Company’s common stock, at an exercise price of $0.14 per share, and the Tranche 2 warrants, if exercised, may result in the issuance of up to 51,538,832 shares of Company common stock at an exercise price of $0.19 per share. These warrants were valued at $0.005 each resulting in $515,388 of common stock proceeds being allocated to the fair value of the warrants. With respect to the Tranche 2 Warrants, if the Company’s stock trades for an amount in excess of $0.24 for thirty (30) consecutive days, then 50% of the warrants may be called by the Company. As of December 31, 2008 there was approximately $196,033 in unrecognized cost related to warrants granted.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note J – STOCK COMPENSATION, continued

In the first quarter of 2008, the Company fully vested a 1,500,000 warrant grant for a retiring director by accelerating the vesting of 375,000 warrants exercisable at $0.13. A charge of $44,438 was recorded as directors' fees.

In June 2008, a warrant to purchase 1,500,000 shares of Company common stock at an exercise price of $0.08, vesting over three years and expiring in six years, was issued by the Company to a new director. The value of $85,200 will be charged as directors' fees over the vesting period.

Note K - STOCKHOLDERS' EQUITY

In July 2007, the Company issued 575,000 shares of common stock valued at $46,000 to a former employee as part of a termination agreement. The Company also issued 400,000 shares of common stock valued at $32,000 as part of a litigation settlement in July 2007.

Effective September 7, 2007, the Company issued 31,937,500 shares of restricted common stock in return for $2.55 million. The stock is restricted from resale as the stock has not been registered. Each purchaser of common stock also received one warrant to acquire an equal number of shares at $0.14 and one warrant to acquire an equal number of shares at $0.19. The common shares were valued at $0.07 each and the warrants were valued at $0.005 each for a total of $0.08.

During 2007, the Company also issued 19,601,323 shares of common stock and 7,437,184 shares of Series A Preferred Stock in a conversion of secured debt to equity. The amount of debt converted to common stock and warrants was $1.6 million and the amount of debt converted to Series A Preferred Stock was $594,975. Each share of common stock issued in the conversion was accompanied by one warrant to acquire an equal number of shares of common stock at $0.14 and one warrant to acquire an equal number of shares of common stock at $0.19.

In August 2008, the Company issued 515,384 shares of common stock to certain investors, pursuant to the terms of the Securities Purchase Agreement dated August 15, 2007, for no additional consideration. The Company recorded expense of $36,076 or $0.07 per share. The Company did not issue any other shares during the twelve months ended December 31, 2008.

Series A Preferred Stock

The shares of Series A Preferred Stock may be converted into common stock of the Company at any time without the payment of additional consideration. The Series A Preferred Stock must be converted into common stock of the Company when the trading value of the common stock of the Company exceeds $0.12 per share for a period of 30 consecutive calendar days. The holder of the Series A Preferred Stock has the right to receive dividends, the right to vote on matters presented to the common stockholders, and a preference right in the event of liquidation in an amount equal to $594,975, which is the amount of debt converted, plus any declared but unpaid dividends. The Company has a right to redeem the shares of Series A Preferred Stock upon the fifth anniversary of the issue date at a redemption price of $0.08 per share.

HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note L - RELATED PARTY TRANSACTIONS

The Company previously leased the location used as the principle executive office from a company owned by the wife of the Company's Chief Executive Officer. The term of the principle executive office lease was month-to-month and the rent expense associated with this lease was $1,036 per month. This arrangement terminated in June 2007. Rent expense under this lease arrangement amounted to approximately $6,644 in 2007.

The Company acquired a specialized cryogenic freezer system used to keep tissue samples from the Chief Executive Officer on July 11, 2008 for $9,752.

In July 2008, the Company and DCL Medical Laboratories, LLC, a full-service clinical reference laboratory focused on women's health, entered into a Development and License Agreement for the collaborative development and commercialization of SVM-based computer assisted diagnostic tests for the independent detection of ovarian, cervical and endometrial cancers. Dr. Hanbury, one of the Company's directors, is currently President, CEO and a shareholder of DCL Medical Laboratories. Pursuant to the Development and License Agreement, HDC will own any developed intellectual property and DCL Medical Laboratories will have a sole use license relating to applications and new mathematical tools developed during the course of the Development and License Agreement. In connection with the Development and License Agreement, HDC will receive 50% of the profits from screening services performed by DCL Medical Laboratories. If HDC commercializes an application and offers services as permitted by the Development and License Agreement, HDC will pay DCL Medical Laboratories 25% of HDC's profits.

In August 2008, the Company entered into a licensing agreement with Smart Personalized Medicine, LLC, a company founded by our former director, Dr. Richard Caruso. Under the terms of this agreement, we will work to develop a superior breast cancer prognostic test using our SVM technology in collaboration with a prominent cancer research hospital. In exchange for a license to use our SVM technology, the Company will receive a 15% equity position in Smart Personalized Medicine, LLC (which will remain undiluted until there is at least $5 million in investment from investors in Smart Personalized Medicine, LLC) and a per test royalty up to 7.5% based on net proceeds received from the sale of the new breast cancer prognostic test.

On August 14, 2008, the Company and Dr. Richard Caruso entered into an Amendment to Stock Purchase Warrant. The Amendment permits Dr. Caruso's warrants, which were previously granted to Dr. Caruso in 2007 for his services as a director, to continue to vest so long as he serves the Company as an advisor. The amendment was subsequently rescinded by the Company and Dr. Caruso. The Company granted 1,250,000 options to Dr. Caruso during the third quarter of 2008. These options will continue to vest so long as Dr. Caruso is an advisor to the Company.

Note M – GOING CONCERN

The accompanying financial statements have been prepared in conformity with principles of accounting applicable to a going concern, which contemplates the realization of assets and the liquidation of liabilities in the normal course of business. Limited revenue has been derived since inception, and the Company has not yet generated sufficient working capital to support its operations. The Company's ability to continue as a going concern is dependent, among other things, on its ability to reduce certain costs and obtain additional revenues to eventually attain a profitable level of operations.

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HEALTH DISCOVERY CORPORATION

Notes to Financial Statements, continued

Note M – GOING CONCERN, continued

The Company initiated licensing the technology underlying several of its patents and is providing supporting services related to the application of such technology that is resulting in ongoing revenue. In addition, management has successfully raised additional equity investment and negotiated agreements with its debt holders, which resulted in the conversion of this debt to equity. Based on these developments, management believes revenue generation will continue, additional licensing agreements will be obtained in the near-term, and non-revenue generating costs will be controlled. There are no assurances that management will be able to successfully generate revenue or reduce expenses, attain profitability, or continue to attract the capital necessary to support the business.

Note N – SUBSEQUENT EVENTS

On January 30, 2009, the Company entered into a license agreement with Abbott Molecular Inc. (“Abbott”), pursuant to which the Company granted Abbott an exclusive, royalty-bearing license to certain intellectual property rights related to the Company’s prostate cancer biomarkers. In consideration of the Company granting the license to Abbott, in January 2009 Abbott paid to the Company a one-time initial signing fee of $100,000. In addition, Abbott will also pay milestone payments and royalties to the Company in accordance with the terms of the license agreement.

On January 30, 2009, the Company entered into a license agreement with Quest Diagnostics Incorporated (“Quest”), pursuant to which the Company granted to Quest a non-exclusive license to certain intellectual property rights related to the development of a test for and performing clinical laboratory diagnostic testing using gene biomarkers to differentiate clinically significant prostate cancer from other prostate conditions. In consideration of granting the license to Quest, Quest paid a license fee to the Company and will pay running royalty payments, certain milestone payments, and development fees.

On March 30, 2009, the Company filed Articles of Amendment (the “Amendment”) with the Secretary of State of the State of Georgia to amend our Articles of Incorporation. The Amendment sets forth the rights and preferences of the Series B Preferred Stock, including the right to receive dividends, including special dividends, the right to vote on matters presented to holders of common stock, a preference right in the event of liquidation, and the right to convert the Series B Preferred Stock into common stock. The Amendment was authorized by the Board of Directors on March 20, 2009. The Company is in the process of raising capital through an offering of this Series B Preferred Stock and has raised $200,000 subsequent to year end.

Note O – COMMITMENTS AND CONTINGENCIES

The Company is subject to various claims primarily arising in the normal course of business. Although the outcome of these matters cannot be determined, the Company does not believe it is probable, in accordance with SFAS No. 5, “Accounting for Contingencies,” that any such claims will result in material costs and expenses.

70,549,868 Shares of
Common Stock To Be Issued Upon Exercise Of Warrants
352,746 Shares of Common Stock

HEALTH DISCOVERY CORPORATION

PROSPECTUS

April ____, 2009

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, to be paid in connection with the sale of shares of our common stock being registered, all of which will be paid by us. All amounts are estimates except the registration fee.

Securities and Exchange Commission registration fee	$ 668.41
Legal fees and expenses	7500.00
Accounting fees and expenses	1000.00
Transfer Agent and Registrar fees	0.00
Blue Sky fees and expenses	550.00
Printing and engraving expenses	0.00
Miscellaneous	0.00
Total	$ 9718.41

Item 14. Indemnification of Directors and Officers

Our articles of incorporation provide that we will indemnify, to the fullest extent permitted by the Georgia Business Corporation Code, our directors and officers against expenses and liabilities arising from such director or officer being named as an individual party to a proceeding by reason of having served in the role of director or officer. Our bylaws provide that advances against expenses shall be made so long as the person seeking indemnification gives the Company a written affirmation that he or she in good faith believes that he or she has met the standard of conduct for indemnification and agrees to refund the advances if it is ultimately determined that he or she is not entitled to indemnification. A determination of whether indemnification of a director or officer is proper because he or she met the applicable standard of conduct shall be made (1) by our board of directors or a committee duly designated thereby, (2) in particular circumstances, by independent legal counsel in a written opinion or (3) by the affirmative vote of a majority of the shares entitled to vote.

In addition, Article 7 of our articles of incorporation, subject to limited exceptions, eliminates the potential personal liability of a director for monetary damages to Health Discovery Corporation and to our shareholders for breach of duty as a director, except for liability for (1) breach of duty involving appropriation of business opportunity of Health Discovery Corporation, (2) an act of omission not in good faith or involving intentional misconduct or a knowing violation of law, (3) a transaction from which the director derives an improper material tangible personal benefit or (4) the types of liability set forth in Section 14-2-832 of the Georgia Business Corporation Code dealing with unlawful distributions of corporate assets to shareholders.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, we have been informed 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. In the event that a claim for indemnification against such liabilities (other than the payment by us of expenses incurred or paid by a director, officer or controlling person of our company in the successful defense of any action, suit or proceeding) is asserted by that director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether this indemnification by us is against public policy as expressed in such Act and will be governed by the final adjudication of such issue.

Item 15. Recent Sales of Unregistered Securities

On March 9, 2005, we completed the private sale of 30,703,125 shares of restricted common stock to certain institutional investors and individual accredited investors at an offering price of $0.16 per share for a total of $4,912,500. For every share of common stock purchased, each investor received warrants to purchase one share of the Company's common stock at $0.24 per share, exercisable until December 31, 2008. This could result in the issuance of up to 30,703,125 additional restricted common shares upon exercise. We entered into purchase agreements with each of the investors. Under each agreement, the Company agreed to use its best efforts to file a registration statement to register the shares of common stock and the shares underlying the warrants issued and sold to the investors by May 9, 2005, and to use its best efforts to cause the registration statement to be declared effective by July 6, 2005. Shares totaling 540,000 were issued in 2005 under the terms of the agreement. The securities issued in the private placement were not registered under the Securities Act of 1933, as amended, and until they were registered the securities could not be offered or sold in the United States absent registration or the availability of an applicable exemption from registration. On March 10, 2005, we filed registration statement No. 333-124750 for 18,609,375 shares of restricted common stock and the equivalent number of warrants. On December 14, 2005, the Company filed registration statement 333-124750 wherein 31,622,749 shares of stock and 32,638,436 warrants were registered with the Securities and Exchange Commission. On July 12, 2007, we filed a Post-Effective Amendment to Form SB-2 to deregister the shares registered on registration statement No. 333-124750.

Effective September 7, 2007, the Company issued 31,937,500 shares of restricted common stock in return for $2.55 million in cash to certain institutional investors and individual accredited investors. Each purchaser of common stock also received one warrant to acquire an equal number of shares at $0.14 (the "Tranche 1 Warrants") and one warrant to acquire an equal number of shares at $0.19 (the "Tranche 2 Warrants"). The holders must exercise fifty percent of the Tranche 1 Warrants if the market price for the Company's common stock is $0.17 for a period of thirty consecutive calendar days. The holders must exercise fifty percent of the Tranche 2 Warrants if the market price for the Company's common stock is $0.24 for a period of thirty consecutive calendar days. The common shares were valued at $0.07 each, and the warrants were valued at $0.005 each for a total of $0.08. Under the securities purchase agreement, the Company agreed to use its best efforts to file a registration statement to register the shares of common stock and the shares underlying the warrants issued and sold to the investors by May 15, 2008, and to use its best efforts to cause the registration statement to be declared effective by August 28, 2008. Shares totaling 515,384 were issued in 2008 under the terms of the agreement. The securities issued in the private placement were not registered under the Securities Act of 1933, as amended, and until they are registered the securities could not be offered or sold in the United States absent registration or the availability of an applicable exemption from registration.

The Company also issued 19,601,322 shares of common stock and 7,437,184 shares of Series A Preferred Stock in a conversion of secured debt to equity to certain institutional investors and individual accredited investors. The amount of debt converted to common stock and warrants was approximately $1.6 million and the amount of debt converted to Series A Preferred Stock was $594,975. Each share of common stock issued in the conversion was accompanied by one warrant to acquire an equal number of shares of common stock at $0.14 and one warrant to acquire an equal number of shares of common stock at $0.19. The holders must exercise fifty percent of the Tranche 1 Warrants if the market price for the Company's common stock is $0.17 for a period of thirty consecutive calendar days. The holders must exercise fifty percent of the Tranche 2 Warrants if the market price for the Company's common stock is $0.24 for a period of thirty consecutive calendar days.

The shares of Series A Preferred Stock may be converted into common stock of the Company at any time without the payment of additional consideration. The Series A Preferred Stock must be converted into common stock of the Company when the trading value of the common stock of the Company exceeds $0.12 per share for a period of 30 consecutive calendar days. The holder of the Series A Preferred Stock has the right to receive dividends, the right to vote on matters presented to the common shareholders, and a preference right in the event of liquidation in an amount

equal to $594,975, which is the amount of debt converted, plus any declared but unpaid dividends. The Company has a right to redeem the shares of Series A Preferred Stock upon the fifth anniversary of the issue date at a redemption price of $0.08 per share.

During the first half of 2009, pursuant to a Securities Purchase Agreement (the “Purchase Agreement”), the Company completed the sale to individual investors to acquire shares of Series B Preferred Stock for $250,000 in cash. In connection with the Purchase Agreement, the Company may issue up to 6,250,000 shares of Series B Preferred Stock. The Series B Preferred Stock may be converted into Common Stock of the Company at the option of the holder, at a price of $0.08 per share (subject to adjustment) so long as the Company has a sufficient number of authorized shares to allow for the exercise of all of its outstanding derivative securities, and without the payment of additional consideration by the holder. The shares of Series B Preferred Stock must be converted into Common Stock of the Company upon the demand by the Company after the fifth anniversary of the date of issuance. The Series B Preferred Stock will not be immediately registered under either federal or state securities laws and must be held for at least six months from the time they are issued or until a registration statement covering such securities is declared effective by the Securities and Exchange Commission or other applicable exemption applies.

The shares and the warrants were offered and sold in each of the Company's private placements were offered and sold in reliance upon exemptions from registration pursuant to Section 4(2) under the Securities Act of 1933, as amended, and Regulation D promulgated thereunder. Based on the information provided by each of the investors, all investors qualify as accredited investors (as defined by Rule 501 under the Securities Act of 1933, as amended). There were no underwriters in connection with either of these transactions, and there were no underwriting discounts or commissions.

On September 8, 2008, the Company received a letter from an investor in the Company's 2007 private placement, claiming that it is entitled to receive additional shares of Company common stock. Pursuant to the terms of the securities purchase agreement in the 2007 private placement, the investors are entitled to receive shares of Company common stock in certain dilutive events, including extending the exercise period of warrants. The investor claims that its anti-dilution protections were triggered as a result of the amendment to an outstanding warrant, which amended the condition upon which the warrants would continue to vest. The investor asserts that this amendment was an extension of the exercise period of the warrant. The Company believes that the amendment was not an extension of the exercise period but rather a change to the condition on vesting, which would trigger anti-dilution protections under the securities purchase agreement. Notwithstanding the Company's belief that the investor's claim is without merit, the Company rescinded the amendment. If the investor's position is correct, the Company may be required under the terms of the securities purchase agreement to issue approximately 43,000,000 shares to the investor, and, if all of the other investors sought the same remedy as a result of the amendment to the warrant, the Company may be required to issue approximately 360,000,000 shares in the aggregate, which would exceed the number of shares the Company is authorized to issue.

Additional Issuance of Securities

During the first quarter of 2006, Mr. David Cooper was issued 600,000 shares of the Company's common stock in exchange for exercising his options, which had an exercise price of $0.01. On March 31, 2006, Mr. William F. Quirk, Jr. purchased 1,000,000 shares of the Company's common stock with accompanying warrants to acquire an equal number of shares. The purchase price for the common shares was $0.10 per share, and the exercise price of the warrants is $0.15 per share.

During January 2006, the Company issued 3,400,000 warrants to consultants and other service providers with a weighted-average exercise price of $0.12 per share. A total of $290,000 was charged to expense for Compensatory Warrants. The warrants became exercisable upon issuance.

The Company also issued 3,000,000 warrants to two directors in January 2006 with an exercise price of $0.13 per share. The grant date fair value of these warrants was $355,500. The warrants vest at a rate of 500,000 warrants (250,000 warrants for each director) after satisfactory completion of each 6 months of service until 3 years of service has been completed. The expense is being recorded over the service period.

During the second quarter of 2006, the Company issued 500,000 warrants to two members of its Scientific Advisory Board. These warrants vest over a one-year period and have an exercise price of $0.11. The Company also issued 200,000 warrants to a service provider in exchange for professional services. These warrants vest over a two-year period and have an exercise price of $0.10. During the second quarter of 2006, the Company issued 200,000 shares of stock for warrants exercised at $0.01 each. Proceeds of $2,000 were recorded in capital stock.

During the third quarter of 2006, the Company issued 10,000,000 warrants to purchase an equal number of shares of the Company's common stock to Mr. Quirk in connection with the loan Mr. Quirk made to the Company. These warrants vest over a period of nine months and have an exercise price of $0.16 per share. During the third quarter of 2006, the Company also issued 300,000 warrants to purchase an equal number of shares of the Company's common

stock in exchange for legal services provided to the Company. These warrants vest immediately and have an exercise price of $0.10 per share.

In addition, during the third quarter of 2006, the Company issued a warrant to purchase 500,000 shares of the Company's common stock to a member of the Company's Scientific Advisory Board for providing advisory services to the Company beyond which was expected in his capacity as a Scientific Advisory Board member. These warrants vest immediately and have an exercise price of $0.10 per share.

During the third quarter of 2006, the Company issued 230,000 shares of stock for warrants exercised at $0.08 each. Proceeds of $18,400 were recorded in capital stock.

In January 2007, the Company issued 100,000 shares of stock for warrants exercised at $0.01 each. Proceeds of $1,000 were recorded in capital stock. In February 2007, the Company granted warrants to purchase 15,235,000 restricted shares of Company stock at a fixed price of $0.35 per share, exercisable until November 1, 2007. These warrants expired in November 2007. Also in February 2007, the Company issued warrants to purchase up to 500,000 shares of Company common stock to consultants, which vested immediately, and have an exercise price of $0.14. Additionally, the Company issued a warrant to purchase up to 100,000 shares of Company common stock to a consultant, which vests over ten months, and has an exercise price of $0.14.

During the second quarter of 2007, the Company issued warrants to purchase up to 500,000 shares of Company common stock to consultants, which vested immediately and had an exercise price of $0.11.

In July 2007, the Company issued 575,000 shares of common stock valued at $46,000 to a former employee as part of a termination agreement. In connection with that termination agreement, the Company also issued to the former employee a warrant to purchase 300,000 shares of Company common stock with an exercise price of $0.08. These warrants vested immediately and expire in three years. The Company also issued 400,000 shares of common stock valued at $32,000 as part of a litigation settlement in July 2007.

During the third quarter of 2007, the Company issued warrants to purchase 60,750 shares of Company common stock to a vendor as payment for professional services. These warrants expire on December 31, 2008, vested immediately, and have an exercise price of $0.10.

Two new directors were each awarded warrants to purchase 1,500,000 shares of Company common stock, which vest over three years and expire in six year. These warrants have an exercise price of $0.08, and will be charged as directors' fees over the vesting period. One director subsequently forfeited his warrant upon his resignation as a director.

In June 2008, our new director was awarded warrants to purchase 1,500,000 shares of Company common stock, which vest over three years and expire in six years. These warrants have an exercise price of $0.06, and will be charged as directors' fees over the vesting period.

In August 2008, in connection with entering into his employment agreement, Dr. Barnhill was also granted an option to purchase an aggregate of 6,000,000 shares of the Company's common stock at an exercise price of $0.08. The options vest over a two year period, assuming a minimum share price, and with respect to a portion of the options, the Company attaining certain performance metrics, as more fully described in the Option Award.

All of these issuances of equity securities in 2006, 2007 and 2008 were made in reliance upon exemptions from registration pursuant to Section 4(2) under the Securities Act of 1933, as amended.

Item 16. Exhibits and Financial Statement Schedules

The following exhibits are filed as part of this registration statement:

Exhibit Number	Description
3.1	Articles of Incorporation. Registrant incorporates by reference Exhibit 3.1 to Form 8-K filed July 18, 2007.

3.1(a) Articles of Amendment to Articles of Incorporation. Registrant incorporates by reference Exhibit 99.1 to Form 8-K filed October 10, 2007.

3.1(b)	Articles of Amendment to Articles of Incorporation. Registrant incorporates by reference Exhibit 3.1(b) to Form 10-K filed March 31, 2009.
3.2	By-Laws. Registrant incorporates by reference Exhibit 3.2 to Form 8-K filed July 18, 2007.
4.1	Copy of Specimen Certificate for shares of common stock. Registrant incorporates by reference Exhibit 4.1 to Registration Statement on Form SB-2, filed June 4, 2001.
4.1(a)	Copy of Specimen Certificate for shares of common stock. Registrant incorporates by reference Exhibit 4.1 (b) to Form 10-KSB, filed March 30, 2004.
4.1(b)	Copy of Specimen Certificate for shares of Series A Preferred Stock. Registrant incorporates by reference Exhibit 4.1(b) to Form 10-K filed March 31, 2008.
4.1(c)	Copy of Specimen Certificate for shares of Series B Preferred Stock. Registrant incorporates by reference Exhibit 4.1(c) to Form 10-K filed March 31, 2009.
5.1	Opinion of Powell Goldstein LLP. Registrant incorporates by reference Exhibit 5.1 to Registration Statement on Form S-1 filed September 25, 2008.
10.1	Employment Agreement between the Company and Stephen Barnhill dated August 15, 2008. Registrant incorporates by reference Exhibit 10.2 to Form 8-K filed August 18, 2008. *
10.2	Form of Warrant. Registrant incorporates by reference Exhibit 10.7 to Form 10-KSB, filed April 19, 2005.
10.3	Form of Warrant. Registrant incorporates by reference Exhibit 10.9 to Form 10-KSB, filed April 19, 2005.
10.4	Employment Agreement with Daniel R. Furth, dated as of December 5, 2005. Registrant incorporates by reference Exhibit 10.11 to Form SB-2/A, filed December 14, 2005. *
10.4(a)	First Amendment to Employment Agreement with Daniel R. Furth. Registrant incorporates by reference Exhibit 10.4(a) to Form 10-QSB filed August 16, 2007. *
10.4(b)	Second Amendment to Employment Agreement with Daniel R. Furth. Registrant incorporates by reference Exhibit 99.2 to Form 8-K filed September 10, 2007. *
10.5	Warrant Agreement by and between Registrant and William F. Quirk, Jr., dated as of September 1, 2006. Registrant incorporates by reference Exhibit 99.2 to Form 8-K, filed September 5, 2006.
10.6	License Agreement between the Company and Clarient, Inc. dated July 31, 2007. Registrant incorporates by reference Exhibit 10.1 to Form 8-K filed August 3, 2007.
10.6(a)	Amendment to License Agreement between Health Discovery Corporation and Clarient, Inc., dated January 13, 2009. Registrant incorporates by reference Exhibit 10.2 to Form 8-K filed February 5, 2009.

10.7 Patent License and Settlement Agreement with Ciphergen Biosystems, Inc. Registrant incorporates by reference Exhibit 10.10 to Form 10-QSB filed August 16, 2007.

10.8 Securities Purchase Agreement by and among the Company, the Cash Purchasers and the Lender Purchasers. Registrant incorporates by reference Exhibit 10.11 to Form 10-QSB filed August 16, 2007.

10.9 Form of Warrant to Cash and Lender Purchasers. Registrant incorporates by reference Exhibit 10.14 to Form 10-K filed March 31, 2008.

10.10 Amendment to Stock Purchase Warrant with Dr. Richard Caruso. Registrant incorporates by reference Exhibit 10.1 to Form 8-K filed August 18, 2008. *

10.11 Option Award to Stephen D. Barnhill, M.D. dated August 15, 2008. Registrant incorporates by reference Exhibit 10.3 to Form 8-K filed August 18, 2008. *

10.12 License and Development Agreement by and between the Company and DCL Medical Laboratories, LLC dated July 14, 2008. Registrant incorporates by reference Exhibit 10.17 to Registration Statement on Form S-1 filed September 19, 2008.

10.13 License Agreement between Health Discovery Corporation and Abbott Molecular Inc., dated January 30, 2009. Registrant incorporates by reference Exhibit 10.13 to Form 10-K filed March 31, 2009. **

10.14 License Agreement between Health Discovery Corporation and Quest Diagnostics Incorporated, dated January 30, 2009. Registrant incorporates by reference Exhibit 10.3 to Form 8-K filed February 5, 2009. **

10.15 Form of Securities Purchase Agreement. Registrant incorporates by reference Exhibit 10.15 to Form 10-K filed March 31, 2009.

16.1 Letter from Porter Keadle Moore LLP regarding change in certifying accountant. Registrant incorporates by reference Exhibit 16.1 to Form 8-K, filed September 27, 2006.

21.1 Subsidiaries of the Registrant. Registrant incorporates by reference Exhibit 21.1 to Form 10-K filed March 31, 2009.

23.1 Consent of Hancock Askew & Co. LLP

23.2 Consent of Powell Goldstein LLP (contained in Exhibit 5.1) Registrant incorporates by reference Exhibit 5.1 to Registration Statement on Form S-1 filed September 25, 2008.

24.1 Power of Attorney (included with signature pages to this Registration Statement)

* Management contract or compensatory plan or arrangement

** Portions of exhibit have been omitted pursuant to a request for confidential treatment

Item 17. Undertakings

The undersigned registrant hereby undertakes that:

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

(i)

To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the 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 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Savannah, State of Georgia, on April 30, 2009

HEALTH DISCOVERY CORPORATION

By: /s/ Stephen D. Barnhill
Stephen D. Barnhill, M.D.
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each of the persons whose signature appears below appoints and constitutes Stephen D. Barnhill his or her true and lawful attorney-in-fact and agent, acting alone, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to execute any and all amendments (including post-effective amendments) to the within registration statement (as well as any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, together with all exhibits thereto and all other documents in connection therewith, with the Securities and Exchange Commission and such other agencies, offices and persons as may be required by applicable law, granting unto said attorney-in-fact and agent, acting alone, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, acting alone may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities stated and on the 30th day of April, 2009.

Signature	Capacity
/s/ Michael Hanbury Michael Hanbury	Director