

NEOGENOMICS INC  
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April 14, 2011  
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Registration No. 333-155784

PROSPECTUS  
NEOGENOMICS, INC.  
6,500,000 Shares of Common Stock

This prospectus relates to the sale of up to 6,500,000 shares of the common stock, par value \$0.001 per share, of NeoGenomics, Inc., a Nevada corporation, by the selling stockholders named in this prospectus in the section "Selling Stockholders". Unless the context otherwise requires, in this prospectus we refer to NeoGenomics, Inc., a Nevada corporation, individually as the "Parent Company" and collectively with all of its subsidiaries as "Company," "we," "us," "our" and "NeoGenomics".

The Company is not selling any shares of common stock in this offering and therefore will not receive any proceeds from this offering. All costs associated with this registration will be borne by the Company. The prices at which the selling stockholders may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions.

Our common stock is quoted on the Over-The-Counter Bulletin Board under the symbol "NGNM.OB". On March 10, 2011, the last reported sale price of our common stock was \$1.42 per share.

One of the selling stockholders, Fusion Capital Fund II, LLC, is an "underwriter" within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

These securities are speculative and involve a high degree of risk. Please refer to "Risk Factors" beginning on page 12 for a discussion of these risks.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is April 14, 2011.

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## PROSPECTUS SUMMARY

The following is only a summary of the information, financial statements and the notes thereto included in this prospectus. You should read the entire prospectus carefully, including “Risk Factors” and our consolidated financial statements and the notes thereto before making any investment decision. Unless the context otherwise requires, NeoGenomics, Inc. is referred to herein individually as the “Parent Company” or, collectively with all of its subsidiaries, as the “Company”, “NeoGenomics”, or “we”, “us”, or “our”.

### Overview

NeoGenomics operates a network of cancer-focused testing laboratories whose mission is to improve patient care through exceptional cancer genetic diagnostic, prognostic and predictive testing services. Our vision is to become America’s premier cancer testing laboratory by delivering uncompromising quality, exceptional service and innovative products and solutions. The Company’s laboratory network currently offers the following types of testing services:

- a) cytogenetics testing, which analyzes human chromosomes;
- b) Fluorescence In-Situ Hybridization (“FISH”) testing, which analyzes abnormalities at the chromosomal and gene levels;
- c) flow cytometry testing, which analyzes gene expression of specific markers inside cells and on cell surfaces;
- d) immunohistochemistry testing, which analyzes the distribution of tumor antigens in specific cell and tissue types, and
- e) molecular testing which involves analysis of DNA and RNA to diagnose and predict the clinical significance of various genetic sequence disorders.

All of these testing services are widely utilized in the diagnosis and prognosis of various types of cancer and to help predict a patient’s potential response to specific therapies.

### Market Opportunity

The medical testing laboratory market can be broken down into three primary segments:

- Clinical Pathology (“CP”) lab testing,
- Anatomic Pathology (“AP”) testing, and
- Genetic and Molecular Diagnostic (“Mdx”) testing.

CP testing laboratories are typically engaged in high volume, highly automated, lower complexity tests on easily procured specimens such as blood and urine. Clinical lab tests often involve testing of a less urgent nature, for example, cholesterol testing and testing associated with routine physical exams.

AP testing involves evaluation of tissue, as in surgical pathology, or cells as in cytopathology. The most widely performed AP procedures include the preparation and interpretation of pap smears, skin biopsies, and tissue biopsies.

Mdx testing typically involves analyzing chromosomes, genes or DNA/RNA sequences for abnormalities. New tests are being developed at an accelerated pace, thus this market niche continues to expand rapidly. Genetic and molecular testing requires highly specialized equipment and credentialed individuals (typically MD or PhD level) to certify

results and typically yields the highest reimbursement levels of the three market segments.

The market for cancer testing is growing rapidly. Key factors influencing this growth are: (i) cancer is primarily a disease of the elderly and now that the baby boomer generation has started to turn sixty, the U.S. is experiencing a significant increase in the number of senior citizens, (ii) the American Cancer Society estimates that one in four senior citizens will develop some form of cancer during the rest of their lifetime, and (iii) every year more and more genes are implicated in development and/or clinical course of cancer. These associations fuel the development of new genetic or molecular tests. We estimate that the Company addresses a \$5-6 billion total United States market opportunity, about half of which is derived from genetic and molecular testing with the other half derived from more traditional anatomic pathology testing services that are complementary to and often ordered with the genetic testing services we offer.

## Our Focus

NeoGenomics' primary focus is to provide high complexity laboratory testing for hospitals and community-based pathology practices throughout the United States. The high complexity cancer testing services we offer to community-based pathologists and hospitals are designed to be a natural extension of, and complementary to, the services that our pathologist clients perform within their own practices. We currently perform analyses of bone marrow and/or peripheral blood for the diagnosis of blood and lymphoid tumors (leukemias and lymphomas) and archival tissue referred for analysis of solid tumors such as breast, lung and colon cancer.

We believe our relationship as a non-competitive partner to the community-based pathologist empowers these pathologists to expand their breadth of testing and provide a menu of services that matches or exceeds the level of service found in academic centers of excellence around the country.

In geographic areas where we do not provide services to the community based pathology practice, we may call directly on community based oncology, dermatology and urology practices. We serve community-based urologists by providing a FISH-based genetic test for the diagnosis of bladder cancer and early detection of recurrent disease. We serve community based dermatologists by providing a FISH-based genetic test for the diagnosis of malignant melanoma. We also believe that we can provide a competitive choice to those larger oncology practices that prefer to have a direct relationship with a laboratory for cancer genetic testing services. Our regionalized approach allows us strong interactions with clients and our innovative Genetic Pathology Solutions ("GPS") report summarizes all relevant case data on one summary report.

## Competitive Strengths

### Turnaround Times

At NeoGenomics, we strive to provide industry leading turnaround times to our clients nationwide and to provide information so that physicians can provide their patients with the correct treatment as soon as possible.

We believe our average 4-5 day turn-around time for our cytogenetics testing services and our average 3-4 day turn-around time for FISH testing services continue to be industry-leading benchmarks for national laboratories. The consistent timeliness of results is a competitive strength in cytogenetics and FISH testing and a driver of additional testing requests by our referring physicians. Quick turn-around times for cytogenetics and FISH testing allows for the performance of other tests to augment or confirm results and improve patient care. Without rapid turnaround times, there is an increased chance that the test results will not be returned within an acceptable diagnostic window when other adjunctive diagnostic test results are required. We believe our turn-around times result in our referring physicians requesting more of our testing services and give us a significant competitive advantage in marketing our services against those of other competing laboratories.

### National Direct Sales Force

NeoGenomics has assembled a direct sales force. Our sales representatives ("Territory Business Managers") are organized into three regions (Northeast, Southeast, and West). These sales representatives are trained extensively in cancer genetic testing and consultative selling skills. As of January 31, 2011, we had twenty-one Territory Business Managers, one Director of Corporate Accounts and three Regional Managers..

### Strategic Supply Agreement with Abbott Molecular

In July 2009, we entered into a Strategic Supply Agreement with Abbott Molecular, Inc, a wholly-owned subsidiary of Abbott Laboratories. Under the terms of this agreement, NeoGenomics has the rights to develop and launch three laboratory developed tests (LDTs) based on intellectual property developed and/or licensed by Abbott. We launched the first of these tests in February 2010, a FISH test for the diagnosis of melanoma (called Melanosite™), and we are currently working on other potential new FISH assays under the agreement.

#### Client Care

NeoGenomics Customer Care Specialists (“CCS”) are organized by region into territories that service not only our external clients, but also work very closely with and support our sales team. A client receives personalized assistance when dealing with their dedicated CCS because each CCS understands their clients’ specific needs. CCS’s handle everything from arranging specimen pickup to delivering the results to fulfill NeoGenomics’ objective of delivering exceptional services to our clients.

## Geographic Locations

Many high complexity laboratories within the cancer testing niche have frequently operated a core facility on one or both coasts to service the needs of their customers around the country. We believe that our clients and prospects desire to do business with a laboratory with national breadth and a local presence. NeoGenomics' has four facilities. We have three main laboratory locations in Fort Myers, Florida; Irvine, California; and Nashville, Tennessee and all facilities have the appropriate state licenses and Clinical Laboratory Improvement Act, as amended ("CLIA"), and College of American Pathologists ("CAP") accreditations and are currently receiving specimens. The Chatsworth California location is a small office laboratory for our pathologists. As situations dictate and opportunities arise, we will continue to develop and open new laboratories, linked together by our optimized Laboratory Information System ("LIS"), to better meet the regionalized needs of our clients.

## Laboratory Information System

NeoGenomics has what we believe is a state of the art LIS that interconnects our locations and provides flexible reporting options, including images, to clients. This system allows us to deliver uniform test results throughout our network, regardless of where the lab that performs any specific test is located. This allows us to move specimens between locations to better balance our workload. Our LIS also allows us to offer highly specialized services to certain sub-segments of our client base. For instance, our tech-only NeoFISHTM and NeoFLOWTM applications allow our community-based pathologist clients to tailor individual reports to their own customizable report templates. This feature has been well-received by our tech-only clients.

## Scientific Pipeline

The field of cancer genetics is rapidly evolving, and we are committed to developing and offering new tests to meet the needs of the marketplace based on the latest scientific discoveries. One of the fastest growing areas of cancer diagnostic testing is in the area of "Personalized Medicine" or "Pharmacogenomics". In the past two years we have observed a rapid increase in tests that are tied to a therapeutic. Although for many years clinicians and researchers alike have known that not all drugs are equally effective in all individuals, the molecular basis for these differences have not been well understood. This is changing very dramatically. Pharmacogenomics is the study of how genetic variation affects a patient's response to a treatment. During 2010, in addition to the validation work performed for our exclusive Melanoma FISH test, the Company introduced two molecular tests, KRAS and BRAF, which help predict a patient's response to a certain class of drugs called tyrosine kinase inhibitors ("TKIs"). We believe that by adding additional Personalized Medicine tests to our product offering, we will be able to increase our testing volumes through our existing client base as well as more easily attract new clients via the ability to package our testing services more appropriately to the needs of the market. We expect to launch several new molecular tests in fiscal year 2011 including but not limited to EGFR Mutation Analysis for lung cancer and JAK2-Exon12 and MPL W515 Mutation Analysis for myeloproliferative neoplasms. We also expect to add several new FISH tests to complement our current FISH menu.

## Competition

We operate in segments of the medical testing laboratory industry that are highly competitive and we expect it to get even more competitive. In the past several months, two large competitors have entered the testing community. General Electric Healthcare purchased Clariant, Inc. during 2010 and on January 24, 2011 it was announced that Novartis AG was going to purchase Genoptix, Inc. Competitive factors in the genetic and molecular testing business generally include the reputation of the laboratory, range of services offered, pricing, convenience of sample collection and pick-up, quality of analysis and reporting, medical staff, timeliness of delivery of completed reports (i.e. turnaround times) and post-reporting follow-up for clients.



Our competitors in the United States are numerous and include major medical testing laboratories, in-house physician and hospital laboratories. Many of these competitors have greater financial resources and production capabilities. These companies may succeed in developing service offerings that are more effective than any that we have or may develop, and may also prove to be more successful than we are in marketing such services. In addition, technological advances or different approaches developed by one or more of our competitors may render our products obsolete, less effective or uneconomical.

We estimate that the United States market for genetic and molecular testing is divided among approximately 300 laboratories. Approximately 80% of these laboratories are attached to academic institutions and primarily provide clinical services to their affiliate university hospitals. We believe that the remaining 20% is quite fragmented and that less than 20 laboratories market their services nationally. We estimate that the top 20 laboratories account for approximately 50% of market revenues for genetic and molecular testing.

We intend to continue to gain market share by offering industry-leading turnaround times, a broad service menu, high-quality test reports, bringing new tests to market, and enhanced post-test consultation services through our direct sales force. In addition, we have a fully integrated and interactive internet-enabled LIS that enables us to report real time results to clients in a secure environment.

#### Global Products

We offer a full set of global services to meet the needs of our clients to improve patient care. In our global service offerings, our lab performs the technical component of tests, and our M.D.s and Ph.D.'s interpret the test results for our clients (known as the professional component). This product line provides a comprehensive testing service to those clients who are not credentialed and trained in interpreting genetic and molecular tests. Global products also allow NeoGenomics to derive a higher level of reimbursement than would otherwise be possible with a tech-only test. This product also services the needs of physicians who are looking for ways to save their time.

We currently employ four full-time MDs as our medical directors and pathologists, two PhDs as our scientific directors and cytogeneticists, and one part-time MD acting as a consultant and backup pathologist for case sign out purposes. We have plans to contract with more pathologists in 2011 as our testing menu continues to expand and our overall testing volumes increase.

#### Tech-Only Products

In 2006, NeoGenomics launched what we believe was the first technical component only ("tech-only") FISH product offering in the United States. Tech-only products allow our community-based pathology clients that are properly trained and credentialed to provide services to clinicians based on established and trusted relationships. These pathologist clients perform the professional interpretation of results themselves and bill for such work under the physician fee schedule. For tech-only FISH, NeoGenomics performs the technical component of the test (specimen set-up, staining, sorting and categorization of cells, chromosomes, genes or DNA, etc) and the pathology client performs the professional component. This allows NeoGenomics to partner with its pathology clients and provides for close collaboration in meeting market needs. Prior to the advent of tech-only products, pathologists who did not have a genetic lab would have had to send all of the work out to a reference lab. Utilizing NeoFISHTM, pathologist clients are empowered to extend the outreach efforts of their practices and exert a high level of involvement in the delivery of high quality patient care.

NeoFLOWTM tech-only flow cytometry was launched as a companion service to NeoFISHTM in late 2007. We believe the NeoFLOWTM service offering will continue to be a key growth driver for the Company in 2011. Moreover, the combination of NeoFLOWTM and NeoFISHTM strengthens and differentiates NeoGenomics

and allows us to compete more favorably against larger, more entrenched competitors in our testing niche.

#### Sales and Marketing

We continue to grow our testing volumes and revenue due to our investment in sales and marketing. As of January 31, 2011, NeoGenomics' sales and marketing team totaled 40 individuals, including 21 Territory Business Managers (sales representatives), 1 Director of National Accounts, three Regional Managers, five marketing and management professionals and 10 customer care specialists. During 2010, we made significant investments in sales and marketing training programs and we expect to realize the positive effects of those investments in 2011.

We experienced 17% year-over-year revenue growth to \$34.4 million in 2010 from \$29.5 million in 2009. Our average revenue/test decreased 7% to approximately \$600 in 2010 from \$645 in 2009 as a result of contracts signed with three managed care organizations over the last year that had lower average unit pricing than what we had previously been experiencing.

	FY 2010	FY 2009	% Increase
Client Requisitions Received (Cases)	38,443	31,638	22 %
Number of Tests Performed	57,332	45,675	26 %
Average Number of Tests/Requisition	1.49	1.44	3 %
Total Testing Revenue	\$ 34,371,000	\$ 29,469,000	17 %
Average Revenue/Requisition	\$ 894	\$ 931	(4)%
Average Revenue/Test	\$ 600	\$ 645	(7)%

Within the subspecialty field of hematopathology, our scientific expertise and product offering allow us to be able to perform multiple tests on each specimen received if ordered by our physician clients. Many physicians believe that a comprehensive approach to the diagnosis and prognosis of blood and lymph node disease to be the standard of care throughout the country. As the average number of tests per requisition changes, then the average revenue would change accordingly.

#### Seasonality

The majority of our testing volume is dependent on patients being treated by hematology/oncology professionals and other healthcare providers. The volume of our testing services generally declines during the summer vacation season, year-end holiday periods and other major holidays, particularly when those holidays fall during the middle of the week. In addition, the volume of our testing tends to decline due to adverse weather conditions, such as excessively hot or cold spells, heavy snow, hurricanes or tornados in certain regions, consequently reducing revenues and cash flows in any affected period. Therefore, comparison of the results of successive periods may not accurately reflect trends for future periods.

#### Distribution Methods

The Company currently performs the vast majority of its testing services at each of its three main clinical laboratory locations: Fort Myers, Florida, Nashville, Tennessee and Irvine, California, and then produces a report for the requesting physician. We also have a facility for our California medical staff in Chatsworth, California. Services performed in-house include cytogenetics, FISH, flow cytometry, morphology, immunohistochemistry, and some molecular testing. Molecular testing currently comprises less than 10% of the Company's testing volume and the Company currently outsources approximately a third of this molecular testing to third parties. The Company expects to validate and perform the majority of this currently outsourced testing in-house during 2011 to better meet client demands and quality requirements.

#### Suppliers

The Company orders its laboratory and research supplies from large national laboratory supply companies such as Abbott Laboratories, Fisher Scientific, Invitrogen, Cardinal Health, Ventana and Beckman Coulter. Other than as discussed below, we do not believe any disruption from any one of these suppliers would have a material effect on our business. The Company orders the majority of its FISH probes from Abbott Laboratories and as a result of their dominance of that marketplace and the absence of any competitive alternatives, if there was a disruption in the supply of these probes, and we did not have inventory available, it could have a material effect on our business. This risk cannot be completely offset due to the fact that Abbott Laboratories has patent protection which limits other vendors from supplying these probes.

#### Dependence on Major Clients

We currently market our services to pathologists, oncologists, urologists, hospitals and other clinical laboratories. During 2010, we performed 57,332 individual tests. Ongoing sales efforts have decreased dependence on any given source of revenue. For the years ended December 31, 2010 and 2009, one client with multiple locations accounted for 3% and 10% respectively, of total revenue. All others were less than 5% of total revenue individually.

#### Payor Mix

In 2010, approximately 50% of our revenue was derived from Medicare claims, 25% from commercial insurance companies, 24% from clients such as hospitals and other reference laboratories, and 1% from all others including patients. In 2009, approximately 49% of our revenue was derived from Medicare claims, 26% from commercial insurance companies, 24% from clients such as hospitals and other reference laboratories, and 1% from all others including patients. There is no other significant concentration in our payor mix.

#### Trademarks

The “NeoGenomics” name and logo has been trademarked with the United States Patent and Trademark Office. We have also trademarked the brand names MelanoSITE and DermFISH related to our melanoma FISH test. We have also trademarked [www.neogenomics.com](http://www.neogenomics.com).

#### About Us

Our principal executive offices are located at 12701 Commonwealth Drive, Suite 5, Fort Myers, Florida 33913. Our telephone number is (239) 768-0600. Our website can be accessed at [www.neogenomics.com](http://www.neogenomics.com).

## THE OFFERING

This prospectus relates to the offer and sale of up to 6,500,000 shares of our common stock by the selling stockholders described below.

### Fusion Capital

On November 5, 2008, the Company and Fusion Capital Fund II, LLC, an Illinois limited liability company (“Fusion Capital”), entered into a Common Stock Purchase Agreement (the “Purchase Agreement”), and a Registration Rights Agreement (the “Registration Rights Agreement”). Under the Purchase Agreement, Fusion Capital is obligated, under certain conditions, to purchase shares from us in an aggregate amount of \$8.0 million from time to time over a thirty (30) month period. Under the terms of the Purchase Agreement, Fusion Capital has received a commitment fee consisting of 400,000 shares of our common stock. As of March 10, 2011, there were 42,817,255 shares outstanding and 31,234,067 shares held by non-affiliates) excluding the 3,000,000 shares offered by Fusion Capital pursuant to this prospectus which it has not yet purchased from us. If all of such 3,000,000 shares offered hereby were issued and outstanding as of the date hereof, the 3,000,000 shares would represent 7% of the total common stock outstanding or 9.6% of the non-affiliates shares outstanding as of the date hereof.

Under the Purchase Agreement and the Registration Rights Agreement we are required to register and have included in the offering pursuant to this prospectus (1) 400,000 shares which have already been issued as a commitment fee, (2) 17,500 shares which we have issued to Fusion Capital as an expense reimbursement and (3) at least 3,000,000 shares which we may sell to Fusion Capital in the future. All 3,417,500 shares, 10.6% of our outstanding on November 5, 2008, the date of the Purchase Agreement, are being offered pursuant to this prospectus. Under the Purchase Agreement, we have the right but not the obligation to sell more than the 3,000,000 shares to Fusion Capital. As of the date hereof, we do not currently have any plans or intent to sell to Fusion Capital any shares beyond the 3,000,000 shares offered hereby. However, if we elect to sell more than the 3,000,000 shares (which we have the right but not the obligation to do), we must first register such additional shares under the Securities Act before we can elect to sell such additional shares to Fusion Capital. In the event we elect to do so, this could cause substantial dilution to our shareholders. The number of shares ultimately offered for sale by Fusion Capital is dependent upon the number of shares purchased by Fusion Capital under the Purchase Agreement.

We do not have the right to commence any sales of our shares to Fusion Capital until the SEC has declared effective the registration statement of which this prospectus is a part. The registration statement was declared effective on February 5, 2009 and the conditions to commence funding were satisfied. Generally, we have the right but not the obligation from time to time to sell our shares to Fusion Capital in amounts between \$50,000 and \$1.0 million depending on certain conditions. We have the right to control the timing and amount of any sales of our shares to Fusion Capital. The purchase price of the shares will be determined based upon the market price of our shares without any fixed discount at the time of each sale. Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any business day that the price of our common stock is below \$0.45. There are no negative covenants, restrictions on future fundings, penalties or liquidated damages in the Purchase Agreement or the Registration Rights Agreement. The Purchase Agreement may be terminated by us at any time at our discretion without any cost to us. The Purchase Agreement provides that neither party has the ability to amend the Purchase Agreement and the obligations of both parties are non-transferable. The Purchase Agreement will automatically terminate on July 27, 2011 without any notice or action by any party pursuant to its terms.

### Other Selling Stockholders

· Aspen Select Healthcare, LP (“Aspen”), which intends to sell up to 2,130,364 shares of common stock previously issued and sold by the Company to Aspen on April 15, 2003 (the “2003 Aspen Placement”). Aspen

received registration rights with respect to these shares and therefore, such shares are being registered hereunder.

·Mary S. Dent, the spouse of Dr. Michael Dent, who is our founder, who intends to sell up to 553,488 shares of common stock previously issued and sold by the Company to Dr. Dent as founder shares. Such shares were subsequently transferred to Mary Dent in February 2007. Dr. Dent received registration rights with respect to these shares and therefore, such shares are being registered hereunder.

·Those shareholders other than Aspen and Mary Dent who are set forth in the section herein entitled “Selling Stockholders” who intend to sell up to an aggregate of 398,648 shares of common stock which they received in a distribution from Aspen in September 2007. All of such shares were originally purchased by Aspen in the 2003 Aspen Placement. Aspen received registration rights with respect to these shares and has assigned such rights to these selling stockholders and therefore, such shares are being registered hereunder.

Please refer to “Selling Stockholders” beginning on page 26.

The Company is not selling any shares of common stock in this offering and therefore will not receive any proceeds from this offering. All costs associated with this registration will be borne by the Company. The prices at which the selling stockholders may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions.

Our common stock is quoted on the Over-The-Counter Bulletin Board under the symbol “NGNM.OB”. On March 10, 2011, the last reported sale price of our common stock on the Over-The-Counter Bulletin Board was \$1.42 per share.

Common Stock Offered	6,500,000 shares by selling stockholders
Offering Price	Market price
Common Stock Currently Outstanding	42,817,255 shares as of March 10, 2011
Use of Proceeds	We will not receive any proceeds of the shares offered by the selling stockholders. See “Use of Proceeds”.
Risk Factors	The securities offered hereby involve a high degree of risk. See “Risk Factors” beginning on page 12 for a discussion of these risks.

Over-the-Counter Bulletin Board SymbolNGNM.OB

## SUMMARY CONSOLIDATED FINANCIAL INFORMATION

The Summary Consolidated Financial Information set forth below was excerpted from the Company's Annual Report on Form 10-K for the year ended December 31, 2010 as filed with the SEC.

Statement of Operations Data (in thousands except per share data)

	For the year ended December 31,	
	2010	2009
NET REVENUE	\$ 34,371	\$ 29,469
COST OF REVENUE	18,588	14,254
GROSS MARGIN	15,783	15,215
OPERATING EXPENSES		
General and administrative	11,267	10,057
Sales and marketing	7,479	6,886
Total selling, general and administrative expenses	18,746	16,943
LOSS FROM OPERATIONS	(2,963 )	(1,728 )
OTHER INCOME/(EXPENSE):		
Other income	370	17
Interest expense	(710 )	(532 )
Other income / (expense) - net	(340 )	(515 )
NET (LOSS)	\$ (3,303 )	\$ (2,243 )
NET (LOSS) PER SHARE		
— Basic and diluted	\$ (0.09 )	\$ (0.06 )
WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING		
— Basic and diluted	37,328,940	34,638,502

## Balance Sheet Data (in thousands except share data)

	As of	
	December 31, 2010	December 31, 2009
<b>Assets:</b>		
Cash and cash equivalents	\$1,097	\$ 1,631
Restricted cash	500	1,000
Accounts receivable (net of allowance for doubtful accounts of \$1,459 and \$589, respectively)	5,236	4,632
Inventories	887	602
Other current assets	1,018	655
Total current assets	8,738	8,520
Property and equipment (net of accumulated depreciation of \$4,568 and \$2,787 respectively)	4,839	4,340
Other assets	74	85
Total Assets	\$13,651	\$ 12,945
<b>Liabilities &amp; Stockholders' Equity:</b>		
<b>Current Liabilities</b>		
Account payable	\$1,933	\$ 1,969
Accrued compensation	1,338	1,308
Accrued expenses and other liabilities	460	465
Short-term portion of equipment capital leases	1,995	1,482
Revolving credit line	3,442	552
Total current liabilities	9,168	5,776
<b>Long-Term Liabilities</b>		
Long-term portion of equipment capital leases	1,348	1,526
Total Liabilities	10,516	7,302
<b>Commitments and contingencies</b>		
<b>Stockholders' Equity:</b>		
Common Stock, \$0.001 par value, (100,000,000 shares authorized; 37,424,423 and 37,185,078 shares issued and outstanding at December 31, 2010 and 2009, respectively)	37	37
Additional paid-in capital	24,557	23,762
Accumulated deficit	(21,459 )	(18,156 )
Total stockholders' equity	3,135	5,643
Total Liabilities and Stockholders' Equity	\$13,651	\$ 12,945

## RISK FACTORS

We are subject to various risks that may materially harm our business, financial condition and results of operations. An investor should carefully consider the risks and uncertainties described below and the other information in this filing before deciding to purchase our common stock. If any of these risks or uncertainties actually occurs, our business, financial condition or operating results could be materially harmed. In that case, the trading price of our common stock could decline or we may be forced to cease operations.

### Risks Related To Our Business

#### We May Not Be Able To Implement Our Business Strategies Which Could Impair Our Ability To Continue Operations

Implementation of our business strategies will depend in large part on our ability to (i) attract and maintain a significant number of clients; (ii) effectively provide acceptable products and services to our clients; (iii) obtain adequate financing on favorable terms to fund our business strategies; (iv) maintain appropriate procedures, policies, and systems; (v) hire, train, and retain skilled employees and management; (vi) continue to operate with increasing competition in the medical laboratory industry; (vii) establish, develop and maintain name recognition; and (viii) establish and maintain beneficial relationships with third-party insurance providers and other third party payors. Our inability to obtain or maintain any or all these factors could impair our ability to implement our business strategies successfully, which could have material adverse effects on our results of operations and financial condition.

#### We May Be Unsuccessful In Managing Our Growth Which Could Prevent The Company From Becoming Profitable

Our recent growth has placed, and is expected to continue to place, a significant strain on our managerial, operational and financial resources. To manage our potential growth, we must continue to implement and improve our operational and financial systems and to expand, train and manage our employee base. We may not be able to effectively manage the expansion of our operations and our systems and our procedures or controls may not be adequate to support our operations. Our management may not be able to achieve the rapid execution necessary to fully exploit the market opportunity for our products and services. Any inability to manage growth could have a material adverse effect on our business, results of operations, potential profitability and financial condition. Part of our business strategy may be to acquire assets or other companies that will complement our existing business. At this time, we are unable to predict whether or when any material transaction will be completed should negotiations commence. If we proceed with any such transaction, we may not be able to effectively integrate the acquired operations with our own operations. We may also seek to finance any such acquisition by debt financings or issuances of equity securities and such financing may not be available on acceptable terms or at all.

#### We May Incur Greater Costs Than Anticipated, Which Could Result In Sustained Losses

We used reasonable efforts to assess and predict the expenses necessary to pursue our business plan. However, implementing our business plan may require more employees, capital equipment, supplies or other expenditure items than management has predicted. Similarly, the cost of compensating additional management, employees and consultants or other operating costs may be more than we estimate, which could result in ongoing and sustained losses.

We Rely On A Limited Number Of Third Parties For Manufacture And Supply Of Certain Of Our Critical Laboratory Instruments And Materials, And We May Not Be Able To Find Replacement Suppliers Or Manufacturers In A Timely Manner In The Event Of Any Disruption, Which Could Adversely Affect Our Business

We rely on third parties for the manufacture and supply of some of our critical laboratory instruments, equipment and materials that we need to perform our specialized diagnostic services, and rely on a limited number of suppliers for certain laboratory materials and some of the laboratory equipment with which we perform our diagnostic services. Generally, we do not have long-term contracts with our suppliers and manufacturers that commit them to supply equipment and materials to us. Because we cannot ensure the actual production or manufacture of such critical equipment and materials, or the ability of our suppliers to comply with applicable legal and regulatory requirements, we may be subject to significant delays caused by interruption in production or manufacturing. If any of our third party suppliers or manufacturers were to become unwilling or unable to provide this equipment or these materials in required quantities or on our required timelines, we would need to identify and acquire acceptable replacement sources on a timely basis. While we have developed alternate sourcing strategies for most of the equipment and materials we use, we cannot be certain that these strategies will be effective and even if we were to identify other suppliers and manufacturers for the equipment and materials we need to perform our specialized diagnostic services, there can be no assurance that we will be able to enter into agreements with such suppliers and manufacturers or otherwise obtain such items on a timely basis or on acceptable terms, if at all. In addition, some of the reagents we use to perform certain FISH tests are covered by a patent and thus are only available from one supplier. If we encounter delays or difficulties in securing necessary laboratory equipment or materials, including consumables, we would face an interruption in our ability to perform our specialized diagnostic services and experience other disruptions that would adversely affect our business, results of operations and financial condition.

### We May Face Fluctuations In Results Of Operations Which Could Negatively Affect Our Business Operations And We Are Subject To Seasonality In Our Business

As a result of our limited operating history and the relatively limited information available on our competitors, we may not have sufficient internal or industry-based historical financial data upon which to calculate anticipated operating expenses. Management expects that our results of operations may also fluctuate significantly in the future as a result of a variety of factors, including, but not limited to: (i) the continued rate of growth, usage and acceptance of our products and services; (ii) demand for our products and services; (iii) the introduction and acceptance of new or enhanced products or services by us or by competitors; (iv) our ability to anticipate and effectively adapt to developing markets and to rapidly changing technologies; (v) our ability to attract, retain and motivate qualified personnel; (vi) the initiation, renewal or expiration of significant contracts with our major clients; (vii) pricing changes by us, our suppliers or our competitors; (viii) seasonality; and (ix) general economic conditions and other factors. Accordingly, future sales and operating results are difficult to forecast. Our expenses are based in part on our expectations as to future revenues and to a significant extent are relatively fixed, at least in the short-term. We may not be able to adjust spending in a timely manner to compensate for any unexpected revenue shortfall. Accordingly, any significant shortfall in relation to our expectations would have an immediate adverse impact on our business, results of operations and financial condition. In addition, we may determine from time to time to make certain pricing or marketing decisions or acquisitions that could have a short-term material adverse affect on our business, results of operations and financial condition and may not result in the long-term benefits intended. Furthermore, in Florida, currently our primary referral market for lab testing services, a meaningful percentage of the population, returns to homes in the Northern U.S. to avoid the hot summer months. This combined with the usual summer vacation schedules of our clients usually results in seasonality in our business. Because of all of the foregoing factors, our operating results could be less than the expectations of investors in future periods.

### We Substantially Depend Upon Third Parties For Payment Of Services, Which Could Have A Material Adverse Affect On Our Cash Flows And Results Of Operations

The Company is a clinical medical laboratory that provides medical testing services to doctors, hospitals, and other laboratories on patient specimens that are sent to the Company. In the case of most specimen referrals that are received for patients that are not in-patients at a hospital or institution or otherwise sent by another reference laboratory, the Company generally has to bill the patient's insurance company or a government program for its services. As such it relies on the cooperation of numerous third party payors, including but not limited to Medicare, Medicaid and various insurance companies, in order to get paid for performing services on behalf of the Company's clients. Wherever possible, the amount of such third party payments is governed by contractual relationships in cases where the Company is a participating provider for a specified insurance company or by established government reimbursement rates in cases where the Company is an approved provider for a government program such as Medicare. However, the Company does not have a contractual relationship with some of the insurance companies with whom it deals, nor is it necessarily able to become an approved provider for all government programs. In such cases, the Company is deemed to be a non-participating provider and there is no contractual assurance that the Company is able to collect the amounts billed to such insurance companies or government programs. Currently, the Company is not a participating provider with some of the insurance companies it bills for its services. Until such time as the Company becomes a participating provider with such insurance companies, there can be no contractual assurance that the Company will be paid for the services it bills to such insurance companies, and such third parties may change their reimbursement policies for non-participating providers in a manner that may have a material adverse effect on the Company's cash flow or results of operations.

### Our Business Is Subject To Rapid Scientific Change, Which Could Have A Material Adverse Affect On Our Business, Results of Operations And Financial Condition

The market for genetic and molecular testing services is characterized by rapid scientific developments, evolving industry standards and customer demands, and frequent new product introductions and enhancements. Our future success will depend in significant part on our ability to continually improve our offerings in response to both evolving demands of the marketplace and competitive service offerings, and we may be unsuccessful in doing so.

#### The Market For Our Services Is Highly Competitive, Which Could Have A Material Adverse Affect On Our Business, Results Of Operations And Financial Condition

The market for genetic and molecular testing services is highly competitive and competition is expected to continue to increase. We compete with other commercial medical laboratories in addition to the in-house laboratories of many major hospitals and physician practices. Many of our existing competitors have significantly greater financial, human, technical and marketing resources than we do. Some physicians and hospitals have made the decision to internalize testing rather than using an outsourced laboratory such as NeoGenomics. Our competitors may develop products and services that are superior to ours or that achieve greater market acceptance than our offerings. We may not be able to compete successfully against current and future sources of competition and in such case, this may have a material adverse effect on our business, results of operations and financial condition.

#### We Face The Risk of Capacity Constraints, Which Could Have A Material Adverse Affect On Our Business, Results Of Operations And Financial Condition

We compete in the market place primarily on three factors: a) the quality and accuracy of our test results; b) the speed or turn-around times of our testing services; and c) our ability to provide after-test support to those physicians requesting consultation. Any unforeseen increase in the volume of clients could strain the capacity of our personnel and systems, which could lead to inaccurate test results, unacceptable turn-around times, or customer service failures. In addition, as the number of clients and cases increases, our products, services, and infrastructure may not be able to scale accordingly. Any failure to handle higher volume of requests for our products and services could lead to the loss of established clients and have a material adverse effect on our business, results of operations and financial condition. If we produce inaccurate test results, our clients may choose not to use us in the future. This could severely harm our business, results of operations and financial condition. In addition, based on the importance of the subject matter of our tests, inaccurate results could result in improper treatment of patients, and potential liability for us.

#### We May Fail to Protect Our Facilities, Which Could Have A Material Adverse Affect On Our Business, Results Of Operations And Financial Condition

The Company's operations are dependent in part upon its ability to protect its laboratory operations against physical damage from fire, floods, hurricanes, earthquakes, power loss, telecommunications failures, break-ins and similar events. The Company does not presently have an emergency back-up generator in place at its Nashville, Tennessee or Irvine and Chatsworth, California laboratory locations that can mitigate to some extent the effects of a prolonged power outage. The occurrence of any of these events could result in interruptions, delays or cessations in service to clients, which could have a material adverse effect on our business, results of operations and financial condition.

#### The Steps Taken By The Company To Protect Its Proprietary Rights May Not Be Adequate, Which Could Result In Infringement Or Misappropriation By Third-Parties

We regard our copyrights, trademarks, trade secrets and similar intellectual property as critical to our success, and we rely upon trademark and copyright law, trade secret protection and confidentiality and/or license agreements with our employees, clients, partners and others to protect our proprietary rights. The steps taken by us to protect our proprietary rights may not be adequate or third parties may infringe or misappropriate our copyrights, trademarks, trade secrets and similar proprietary rights. In addition, other parties may assert infringement claims against us.

#### We Are Dependent On Key Personnel And Need To Hire Additional Qualified Personnel In Order For Our Business To Succeed

Our performance is substantially dependent on the performance of our senior management and key technical personnel. In particular, our success depends substantially on the continued efforts of our senior management team, which currently is composed of a small number of individuals. The loss of the services of any of our executive officers, our laboratory directors or other key employees could have a material adverse effect on our business, results of operations and our financial condition. Our future success also depends on our continuing ability to attract and retain highly qualified technical and managerial personnel. Competition for such personnel is intense and we may not be able to retain our key managerial and technical employees or may not be able to attract and retain additional highly qualified technical and managerial personnel in the future. The inability to attract and retain the necessary technical and managerial personnel could have a material adverse effect upon our business, results of operations and financial condition.

The Failure to Obtain Necessary Additional Capital To Finance Growth And Capital Requirements, Could Adversely Affect Our Business, Financial Condition And Results of Operations

We may seek to exploit business opportunities that require more capital than we have currently available. We may not be able to raise such capital on favorable terms or at all. If we are unable to obtain such additional capital, we may be required to reduce the scope of our anticipated expansion, which could adversely affect our business, financial condition and results of operations.

On February 1, 2008, we entered into a revolving credit facility with CapitalSource Finance, LLC (“CapitalSource”), which, as subsequently amended allows us to borrow up to \$5,000,000 based on a formula which is tied to our eligible accounts receivable that are aged less than 150 days. If we were unable to obtain sufficient working capital financing from CapitalSource or sell enough of our products, we would need to secure other sources of funding, including possibly equity financing, in order to satisfy our working capital needs. This line was originally set to expire on January 31, 2011 and has been extended until February 1, 2013. The CapitalSource credit facility line has financial covenants which are measured on a monthly basis and which must continue to be met by the Company. We failed to meet our fixed charge coverage ratio for the test periods ended January 31, 2010 and February 28, 2010 and received a waiver on March 26, 2010. In the event that we do not continue to meet the requirements of such financial covenants or we otherwise default on the terms of the CapitalSource credit facility and we are unable to obtain a waiver of such default or obtain Capital Source’s agreement to amend the facility, there is a risk that Capital Source could stop lending under the facility and demand that all amounts outstanding under the facility be paid immediately by the Company. As of December 31, 2010, we had cash and cash equivalents of approximately \$1,097,000, restricted cash of \$500,000 and we had approximately \$262,000 of availability under this credit facility.

On November 5, 2008, the Company and Fusion Capital Fund II, LLC, an Illinois limited liability company (“Fusion Capital”), entered into a Common Stock Purchase Agreement (the “Purchase Agreement”). We only have the right to receive \$50,000 every four business days under the Purchase Agreement unless our stock price equals or exceeds \$0.75, in which case we can sell greater amounts to Fusion Capital as the price of our common stock increases. Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any business day that the market price of our common stock is less than \$0.45. Since we registered 3,000,000 shares for sale under the Purchase Agreement by Fusion Capital pursuant to a registration statement on Form S-1 filed on November 28, 2008, the selling price of our common stock to Fusion Capital will have to average at least \$2.67 per share for us to receive the maximum proceeds of \$8.0 million. Assuming a purchase price of \$1.42 per share (the closing sale price of the common stock on March 10, 2011) and the purchase by Fusion Capital of the full 3,000,000 shares under the Purchase Agreement, proceeds to us would only be \$4,260,000 unless we choose to register more than 3,000,000 shares, which we have the right, but not the obligation, to do. Subject to approval by our board of directors, we have the right but not the obligation to sell more than 3,000,000 shares to Fusion Capital. In the event we elect to sell more than 3,000,000 shares to Fusion Capital, we will be required to file a new registration statement and have it declared effective by the U.S. Securities and Exchange Commission.

The extent we rely on Fusion Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. Specifically, Fusion Capital shall not have the right nor the obligation to purchase any shares of our common stock on any business days that the market price of our common stock is less than \$0.45. If obtaining sufficient financing from Fusion Capital were to prove unavailable or prohibitively dilutive and if we are unable to sell enough of our products, we will need to secure another source of funding in order to satisfy our working capital needs. As of March 10, 2011, other than shares of common stock issued as a commitment fee and as an expense reimbursement, we have not sold any shares to Fusion Capital. The Purchase Agreement will automatically terminate on July 27, 2011 without any notice or action by any party pursuant to its terms.

On January 12, 2011 the Company raised approximately \$3.0 million in a private equity transaction which has further added to our cash balance.

Even if we are able to access the full \$5.0 million from CapitalSource and the full \$8.0 million under the Purchase Agreement with Fusion Capital, we may still need additional capital to fully implement our business, operating and development plans. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, there could be a material adverse effect on our long-term business, operating results, financial condition and prospects.

### Proposed Government Regulation Of Laboratory Developed Tests (“LDT’s”) May Result In Delays To Certain Laboratory Tests and Increase Our Costs To Implement New Tests

We frequently develop testing procedures to provide diagnostic results to tests that are not available using Federal Drug Administration (“FDA”) approved methods. The FDA has been considering changes to the way that laboratories are allowed to offer these LDT’s. Currently all such tests are conducted and offered under CLIA and individual state licensing procedures. The FDA is considering requiring FDA approval on a portion of those currently offered non-FDA approved tests. There are currently no formal definitions, procedures or FDA processes on how such approvals would be handled but there is a risk that this could delay the offering of certain tests and result in additional validation costs to us as well as delay the launch of certain new tests. There is also an associated risk for NeoGenomics that some tests currently offered might need to be subject to approval by the FDA; there are currently no formal definitions, procedures or FDA processes on how such approvals would be handled.

### Healthcare Reform Programs May Impact Our Business And The Pricing We Receive For Our Services.

In March of 2010, health care reform legislation known as the “Patient Protection and Affordable Care Act” and the “Health Care and Education Reconciliation Act” were passed into law (the "Affordable Care Act"). The Affordable Care Act contains several provisions that seek to limit Medicare spending in the future. One key provision is the establishment of “Accountable Care Organizations” under which hospitals and physicians will be able to share savings that result from cost control efforts. Many of the details around these organizations have not yet been proposed, but rules to implement Accountable Care Organizations will be proposed and, in all likelihood, adopted and implemented. We cannot predict what the final business models will be, nor can we predict with certainty the future impact on our business. There is the possibility that these organizations will seek to lower reimbursement for the services which we provide and some may potentially restrict access to our services. These changes could have an adverse and material impact on our operations. In furtherance of health care reform and the reduction in health care expenditures, the Affordable Care Act contains numerous provisions to be implemented through 2018. There can be no assurance at this time that the implementation of these provisions will not have a material adverse effect on the business of the Company.

### Steps Taken By Government Payors, Such As Medicare And Medicaid To Control The Utilization and Reimbursement Of Healthcare Services, Including Esoteric Testing May Diminish Our Net Revenue

We face efforts by government payors to reduce utilization as well as reimbursement for laboratory testing services.

From time to time, Congress has legislated formulas adverse to sustainable payment rates, and has reduced, delayed, or modified updates to the Medicare Physician Fee Schedule. The Physician Fee Schedule assigns relative value units to each procedure or service, and a conversion factor is applied to calculate the reimbursement. The Physician Fee Schedule is subject to adjustment on an annual basis. The formula used to calculate the fee schedule conversion factor, known as the Sustainable Growth Rate, would have resulted in significant decreases in payment for most physician services for each year since 2003. However, since that time Congress has intervened repeatedly to prevent these payment reductions, and the conversion factor has been increased or frozen for the subsequent year. Decreases in payment will occur in future years unless Congress acts to change the formula used to calculate the fee schedule or continues to legislate modifications to the Sustainable Growth Rate each year. In late 2010, Congress acted to provide a slight increase in physician fee schedule payments in 2011 instead of a payment reduction of 21.2 %. The result for us of this was a 5-15% increase in our flow cytometry and FISH testing services excluding UroVysion which is further described below. In the event that the reduction in the Medicare physician fee schedule is not further modified prospectively, either by statutory intervention or by modifying the formula to determine the physician fee schedule, the Company could face a material reduction in the Medicare reimbursements it receives for certain of its laboratory tests. Reductions in the Medicare physician fee schedule could have a material adverse effect on our business,

operating results, financial condition and prospects.

In addition, certain other legislation which was set to expire on December 31, 2010 has been extended through December 31, 2011, which grandfathered the implementation of new reimbursement procedures for the technical component of Medicare tests performed for certain hospital clients (known as the "TC Grandfather" legislation). As a result, reference labs like the Company that meet the grandfathering criteria can bill Medicare directly for the technical component of laboratory tests for grandfathered hospitals. In the event that the TC Grandfather legislation is not further extended in 2012, the Company would be required to bill the hospitals ordering such services for the technical component of those tests the Company previously billed to Medicare. In such case, there can be no assurance that the hospital clients of the Company will contract to pay for such tests or will continue to order such tests from the Company in the same volumes as they have been historically, which could have a material adverse effect on our business, operating results, financial condition and prospects.

In addition beginning in fiscal year 2011, CMS has created a specific CPT code for UroVysion testing with a significant price decline in both the technical and professional component from its previous reimbursement codes. We may see some commercial payors decrease their reimbursement of this test as well.

CMS enacted a new condition in the 2011 Medicare Physician Fee Schedule Final Rule, effective commencing on January 1, 2011, that would require a physician's signature on paper requisitions for clinical laboratory and pathology services paid under the clinical laboratory fee schedule. Such a policy would be disruptive of patient care and the timely provision of medically necessary services provided by laboratories. The new policy was delayed initially for the first quarter of 2011 to enable CMS to develop an educational program. But, CMS officials indicated on Feb. 11, 2011 that the physician signature rule would be rescinded in response to objections from Members of Congress, the clinical laboratory industry, and professional trade associations. If physician signature rule is not rescinded, implementation could have a material adverse effect on the Company's business and its financial performance.

CMS adopts policies, from time to time, limiting or excluding coverage for certain of the tests that we perform. Many state governments are under budget pressures and are also considering reductions to their Medicaid fees. Further, Medicare can perform audits for overutilization of billed services. Even though all tests performed by us are ordered by our clients, who establish the medical necessity for the tests, we may be subject to recoupment of payments, as the recipient of Medicare payments for such tests, in the event that CMS determines that the tests failed to meet all applicable criteria for payment. When CMS revises its coverage policies, our costs increase due to the complexity and additional administrative requirements. Furthermore, Medicaid reimbursement and regulations vary by state, and we are subject to varying administrative and billing regulations, which affect the complexity of servicing such programs and our administrative costs.

During the last several years, the federal government has sponsored programs to expand the number of Medicare beneficiaries participating in managed care programs, called &#8