

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

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**FORM 10-Q**

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(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2013

Or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 001-35817

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**CANCER GENETICS, INC.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**04-3462475**  
(I.R.S. Employer  
Identification No.)

**201 Route 17 North 2<sup>nd</sup> Floor  
Rutherford, NJ 07070  
(201) 528-9200**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company)

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

As of May 8, 2013, there were 4,316,691 shares of common stock, par value \$0.0001 of Cancer Genetics, Inc. outstanding.

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(Unaudited)**

	March 31, 2013 (Unaudited)	December 31, 2012
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 216,872	\$ 819,906
Accounts receivable, net of allowance for doubtful accounts of \$36,000	1,124,893	850,545
Other current assets	598,631	489,278
<b>Total current assets</b>	<b>1,940,396</b>	<b>2,159,729</b>
<b>FIXED ASSETS, net of accumulated depreciation</b>	<b>899,049</b>	<b>964,923</b>
<b>OTHER ASSETS</b>		
Security deposits	1,564	1,564
Restricted cash	250,000	250,000
Loan guarantee and financing fees, net of accumulated amortization of 2013 \$1,334,610; 2012 \$929,498	1,516,631	1,907,502
Patents	329,309	324,764
Deferred initial public offering costs	2,473,763	3,343,289
	<b>4,571,267</b>	<b>5,827,119</b>
<b>Total Assets</b>	<b>\$ 7,410,712</b>	<b>\$ 8,951,771</b>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 4,885,145	\$ 4,578,761
Obligations under capital leases, current portion	20,464	17,158
Deferred revenue	676,327	468,010
Notes payable, current portion	4,530,640	3,836,567
Line of credit	2,989,577	2,871,200
<b>Total current liabilities</b>	<b>13,102,153</b>	<b>11,771,696</b>
Obligations under capital leases	—	7,490
Deferred rent payable	165,920	164,298
Notes payable, long-term	2,148,494	2,440,683
Line of credit	6,000,000	6,000,000
Warrant liability	7,518,000	12,549,000
<b>Total liabilities</b>	<b>28,934,567</b>	<b>32,933,167</b>
<b>STOCKHOLDERS' DEFICIT</b>		
Series A Preferred Stock, authorized 588,000 shares \$0.0001 par value (converted to common stock on April 10, 2013. Note 14.), 587,691 shares issued and outstanding	59	59
Series B Preferred Stock, authorized 2,000,000 shares \$0.0001 par value (converted to common stock on April 10, 2013. Note 14.), 1,821,600 shares issued and outstanding	182	182
Common stock, authorized 100,000,000 and 24,000,000 shares, respectively, \$0.0001 par value, 1,349,936 shares issued and outstanding	135	135
Additional paid-in capital	25,067,388	24,970,255
Treasury stock	—	(17,442)
Accumulated deficit	(46,591,619)	(48,934,585)
<b>Total Stockholders' Deficit</b>	<b>(21,523,855)</b>	<b>(23,981,396)</b>
<b>Total Liabilities and Stockholders' Deficit</b>	<b>\$ 7,410,712</b>	<b>\$ 8,951,771</b>

See Notes to Unaudited Consolidated Financial Statements.

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**Consolidated Statements of Operations**  
**(Unaudited)**

	Three Months Ended March 31,	
	2013	2012
<b>Revenue</b>	<b>\$ 1,218,667</b>	<b>\$ 834,752</b>
<b>Cost of revenues</b>	<b>1,070,020</b>	<b>823,052</b>
<b>Gross profit</b>	<b>148,647</b>	<b>11,700</b>
Operating expenses:		
Research and development	490,577	523,511
General and administrative	1,570,629	936,157
Sales and marketing	396,554	339,568
<b>Total operating expenses</b>	<b>2,457,760</b>	<b>1,799,236</b>
<b>Loss from operations</b>	<b>(2,309,113)</b>	<b>(1,787,536)</b>
Other income (expense):		
Interest expense	(1,293,985)	(864,981)
Interest income	606	—
Change in fair value of warrant liability	5,299,000	1,580,000
<b>Total other income (expense)</b>	<b>4,005,621</b>	<b>715,019</b>
<b>Income (loss) before income taxes</b>	<b>1,696,508</b>	<b>(1,072,517)</b>
Income tax provision (benefit)	(663,900)	—
<b>Net income (loss)</b>	<b>\$ 2,360,408</b>	<b>\$(1,072,517)</b>
Basic net income (loss) per share	\$ 1.75	\$ (0.81)
Diluted net loss per share	\$ (2.18)	\$ (1.85)
Basic Weighted Average Shares Outstanding	1,349,936	1,329,279
Diluted Weighted Average Shares Outstanding	1,349,936	1,433,182

See Notes to Unaudited Consolidated Financial Statements.

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**Consolidated Statements of Cash Flows**  
**(Unaudited)**

	Three Months Ended March 31,	
	2013	2012
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net income (loss)	\$ 2,360,408	\$(1,072,517)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation	77,783	82,963
Amortization	3,807	3,807
Provision for bad debts	—	48,931
Equity-based consulting and compensation expenses	97,133	276,867
Change in fair value of warrant liability	(5,299,000)	(1,580,000)
Amortization of loan guarantee and financing fees	407,871	244,336
Accretion of discount on debt	538,911	404,150
Deferred rent	1,622	1,997
Deferred initial public offering costs expensed	617,706	—
Change in working capital components:		
Accounts receivable	(274,348)	(110,000)
Other current assets	10,647	(152,969)
Accounts payable, accrued expenses and deferred revenue	897,521	(1,350,859)
<b>Net cash (used in) operating activities</b>	<b>(559,939)</b>	<b>(3,203,294)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Purchase of fixed assets	(11,909)	(7,677)
Patent costs	(8,352)	(43,201)
Increase in restricted cash	—	(50,000)
<b>Net cash (used in) investing activities</b>	<b>(20,261)</b>	<b>(100,878)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Principal payments on capital lease obligations	(4,184)	(10,569)
Payment of equity issuance costs	—	(688,969)
Proceeds from warrant exercises	—	619,980
Proceeds from borrowings on notes payable	—	3,000,000
Principal payments on notes payable	(18,650)	—
<b>Net cash provided by (used in) financing activities</b>	<b>(22,834)</b>	<b>2,920,442</b>
<b>Net (decrease) in cash and cash equivalents</b>	<b>(603,034)</b>	<b>(383,730)</b>
<b>CASH AND CASH EQUIVALENTS</b>		
Beginning	819,906	2,417,256
Ending	\$ 216,872	\$ 2,033,526
<b>SUPPLEMENTAL CASH FLOW DISCLOSURE</b>		
Cash paid for interest	\$ 128,215	\$ 241,987
<b>SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES</b>		
Warrants issued for financing fees	\$ 47,000	\$ —
Warrants issued with debt	—	940,000
Warrants issued for debt guarantee fee	—	1,061,000
Accrued IPO costs	601,430	—
Payment of accrued IPO costs	—	162,878
IPO costs discounted	733,250	—
IPO costs reclassified to accounts receivable	120,000	—
Accrued expenses reclassified as derivative warrant liability	221,000	—
Accrued expenses recorded as financing fees	—	147,000
Retirement of treasury stock	17,442	—

See Notes to Unaudited Consolidated Financial Statements.

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### **Notes to Unaudited Consolidated Financial Statements**

#### ***Note 1. Organization, Description of Business, Reverse Stock Splits and Initial Public Offering***

We were incorporated in the State of Delaware on April 8, 1999 and have offices and a laboratory located in Rutherford, New Jersey. Our wholly owned subsidiary, Cancer Genetics Italia SRL (“CGI Italia”), manufactures DNA probes. CGI Italia had approximately \$251,000 and \$329,000 in total assets at March 31, 2013 and December 31, 2012, respectively, and approximately \$44,000 and \$15,000 in total revenue for the three months ended March 31, 2013 and 2012, respectively.

We are a diagnostics company focused on developing and commercializing proprietary genomic tests and services to improve the diagnosis, prognosis and response to treatment of cancer (theranosis). Our proprietary tests target cancers where prognosis information is critical and where predicting treatment outcomes using currently available techniques is limited. These cancers include hematological, urogenital and HPV-associated cancers. We have commercially launched MatBA® -CLL and -SLL, our first proprietary microarray diagnostic tests, and seek to provide our tests and services to oncologists and pathologists at hospitals, cancer centers and physician offices, as well as to biopharmaceutical companies and clinical research organizations for their clinical trials.

#### ***Reverse Stock Splits***

On February 8, 2013, we filed a charter amendment with the Secretary of State for the State of Delaware and effected a 1-for-2 reverse stock split of our common stock. On March 1, 2013, we filed another charter amendment with the Secretary of State for the State of Delaware and effected a 1-for-2.5 reverse stock split of our common stock. All shares and per share information referenced throughout the consolidated financial statements have been retroactively adjusted to reflect both reverse stock splits.

#### ***Initial Public Offering***

On April 10, 2013, we sold 690,000 shares of common stock at a public offering price of \$10.00 per share and completed our initial public offering (“IPO”) with gross proceeds of \$6.9 million (net proceeds of \$5 million) (Note 14). Upon the closing of the IPO, all shares of our then-outstanding Series A and Series B convertible preferred stock automatically converted into an aggregate of 1,287,325 shares of common stock. Concurrent with the IPO, certain derivative warrants with a fair value of \$7 million were reclassified into equity due to the lapsing of anti-dilution provisions in the warrants. Also concurrent with the IPO, \$9.6 million of debt converted into 963,430 shares of common stock. All references to our Series A convertible preferred stock in this quarterly report on Form 10-Q refer collectively to the Series A and Series A-1 convertible preferred shares.

#### ***Note 2. Significant Accounting Policies***

***Basis of presentation:*** The accompanying unaudited financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and with the instructions for interim reporting as they are prescribed by the Securities and Exchange Commission. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary to make the financial statements not misleading have been included. As such, the information included in this quarterly report on Form 10-Q should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2012 that are included in our prospectus filed with the SEC pursuant to Rule 424(b) under the Securities Act of 1933, as amended, on April 5, 2013 (Prospectus). The consolidated balance sheet as of December 31, 2012, included herein was derived from the audited financial statements as of that date, but does not include all disclosures including notes required by GAAP. Operating results for the three-month period ended March 31, 2013 are not necessarily indicative of the results that may be expected for the year ending December 31, 2013.

***Liquidity/Going Concern:*** Our primary sources of liquidity have been funds generated from debt financing, the sale of shares of common and preferred stock, grants in lieu of federal income tax credits, National Institute of Health grants and sales of

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state NOL carryforwards. We believe our current cash resources, including proceeds from our IPO on April 10, 2013, are sufficient to satisfy our liquidity requirements at our current level of operations through August 31, 2013. We intend to attempt to raise additional financing in the third quarter of 2013, which might not be available on favorable terms, if at all. We can provide no assurances that any additional sources of financing will be available to us on favorable terms, if at all. If we are unable to secure additional financing we would scale back our general and administrative activities and certain of our research and development activities.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company has suffered recurring losses from operations, has negative working capital and a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Refer to the section entitled "Capital Resources and Expenditure Requirements" in Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Form 10-Q of which these financial statements are a part.

*Principles of consolidation:* The accompanying consolidated financial statements include the accounts of Cancer Genetics, Inc. and our wholly owned subsidiary, Cancer Genetics Italia SRL. All significant intercompany account balances and transactions have been eliminated in consolidation.

*Use of estimates and assumptions:* 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 and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates made by management include, among others, realization of amounts billed, realization of long-lived assets, realization of intangible assets, accruals for registration payments and assumptions used to value stock options and warrants. Actual results could differ from those estimates.

*Risks and uncertainties:* We operate in an industry that is subject to intense competition, government regulation and rapid technological change. Our operations are subject to significant risk and uncertainties including financial, operational, technological, regulatory and other risks, including the potential risk of business failure.

*Cash and cash equivalents:* Highly liquid investments with original maturities of three months or less when purchased are considered to be cash equivalents. Financial instruments which potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents. We maintain cash and cash equivalents with high-credit quality financial institutions. At times, such amounts may exceed insured limits. We have not experienced any losses in such accounts and believe we are not exposed to any significant credit risk on our cash and cash equivalents.

*Revenue recognition:* Revenue is recognized in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 605, *Revenue Recognition*, and ASC 954-605 Health Care Entities, *Revenue Recognition* which requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred and title and the risks and rewards of ownership have been transferred to the customer or services have been rendered; (3) the price is fixed or determinable; and (4) collectability is reasonably assured. In determining whether the price is fixed or determinable, we consider payment limits imposed by insurance carriers and Medicare and the amount of revenue recorded takes into account the historical percentage of revenue we have collected for each type of test for each payor category. Periodically, an adjustment is made to revenue to record differences between our anticipated cash receipts from insurance carriers and Medicare and actual receipts from such payors. For the periods presented, such adjustments were not significant. For direct bill customers (including clinical trials customers), revenue is recorded based upon the contractually agreed upon fee schedule. When assessing collectability, we consider whether we have sufficient payment history to reliably estimate a payor's individual payment patterns. For new tests where there is no evidence of payment history at the time the tests are completed, we only recognize revenues once reimbursement experience can be established. We then recognize revenue equal to the amount of cash received. Sales of probes are recorded on the shipping date. We do not bill customers for shipping and handling fees and do not collect any sales or other taxes.

Revenues from grants to support product development are recognized when costs and expenses under the terms of the grant have been incurred and payments under the grants become contractually due.

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*Accounts receivable:* Accounts receivable are carried at original invoice amount less an estimate for contractual adjustments and doubtful receivables, the amounts of which are determined by an analysis of individual accounts. Our policy for assessing the collectability of receivables is dependent upon the major payor source of the underlying revenue. For direct bill clients, an assessment of credit worthiness is performed prior to initial engagement and is reassessed periodically. If deemed necessary, an allowance is established on receivables from direct bill clients. For insurance carriers where there is not an established pattern of collection, revenue is not recorded until cash is received. For receivables where insurance carriers have made payments to patients instead of directing payments to the Company, an allowance is established for a portion of such receivables. After reasonable collection efforts are exhausted, amounts deemed to be uncollectible are written off against the allowance for doubtful accounts. Since the Company only recognizes revenue to the extent it expects to collect such amounts, bad debt expense related to receivables from patient service revenue is recorded in general and administrative expense in the consolidated statement of operations. Recoveries of accounts receivable previously written off are recorded when received.

*Deferred IPO costs:* Deferred IPO costs represent legal, accounting and other direct costs related to our effort to raise capital through an IPO. Future costs related to our IPO activities will be deferred until the completion of the IPO, at which time they will be reclassified to additional paid-in capital as a reduction of the IPO proceeds. During the three months ended March 31, 2013, \$617,706 in deferred IPO costs were expensed. Additionally, \$733,250 in deferred IPO costs were reduced due to discounts given by vendors associated with that offering, and \$120,000 expected to be refunded was reclassified to other current assets.

*Warrant liability:* We have issued certain warrants which contain an exercise price adjustment feature in the event we issue additional equity instruments at a price lower than the exercise price of the warrant. The warrants are described herein as derivative warrants. We account for these derivative warrants as liabilities. These common stock purchase warrants do not trade in an active securities market, and as such, we estimate the fair value of these warrants using the binomial lattice valuation pricing model with the assumptions as follows: The risk-free interest rate for periods within the contractual life of the warrant is based on the U.S. Treasury yield curve. The expected life of the warrants is based upon the contractual life of the warrants. Volatility is estimated based on an average of the historical volatilities of the common stock of four entities with characteristics similar to those of the Company. The measurement date fair value of the underlying common shares is based upon an external valuation of our shares. (See Notes 8 and 9).

We compute the fair value of the warrant liability at each reporting period and the change in the fair value is recorded as non-cash expense or non-cash income. The key component in the value of the warrant liability is our stock price, which is subject to significant fluctuation and is not under our control. The resulting effect on our net income (loss) is therefore subject to significant fluctuation and will continue to be so until the warrants are exercised, amended or expire. Assuming all other fair value inputs remain constant, we will record non-cash expense when the stock price increases and non-cash income when the stock price decreases.

*Income taxes:* Income taxes are provided for the tax effects of transactions reported in the consolidated financial statements and consist of taxes currently due plus deferred income taxes. Deferred income taxes are recognized for temporary differences between the financial statement and tax bases of assets and liabilities that will result in taxable or deductible amounts in the future. Deferred income taxes are also recognized for net operating loss carryforwards that are available to offset future taxable income and research and development credits. On January 22, 2013, we sold certain state net operating loss carryforwards. The proceeds of \$663,900 are included in our income tax benefit for the three months ended March 31, 2013.

*Registration payment arrangements:* We account for our obligations under registration payment arrangements in accordance with ASC 825-20, *Registration Payment Arrangements*. ASC 825-20 requires us to record a liability if we determine a registration payment is probable and if it can reasonably be estimated. As of March 31, 2013 and December 31, 2012, we have an accrued liability of \$300,000 and \$541,000, respectively, related to the issuance of Series B preferred stock and certain notes payable.

*Stock-based compensation:* Stock-based compensation is accounted for in accordance with the provisions of ASC 718, *Compensation-Stock Compensation*, which requires the measurement and recognition of compensation expense for all stock-based awards made to employees and directors based on estimated fair values on the grant date. We estimate the fair value of stock-based awards on the date of grant using the Black-Scholes option pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods using the straight-line method. See additional information in Note 7.



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All issuances of stock options or other issuances of equity instruments to employees as the consideration for services received by us are accounted for based on the fair value of the equity instrument issued.

We account for stock-based compensation awards to non-employees in accordance with ASC 505-50, *Equity Based Payments to Non-Employees*. Under ASC 505-50, we determine the fair value of the warrants or stock-based compensation awards granted as either the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable. Stock-based compensation awards issued to non-employees are recorded in expense and additional paid-in capital in stockholders' deficit over the applicable service periods based on the fair value of the awards or consideration received at the vesting date.

*Subsequent events:* We have evaluated potential subsequent events through May 15, 2013, which is the date the financial statements were issued.

*Earnings (loss) per share:* Basic earnings (loss) per share is computed by dividing net income (loss) available to common stockholders by the weighted average number of common shares assumed to be outstanding during the period of computation. Diluted earnings per share is computed similar to basic earnings per share except that the numerator is adjusted for the change in fair value of the warrant liability (only if dilutive) and the denominator is increased to include the number of dilutive potential common shares outstanding during the period using the treasury stock method.

Basic net income (loss) and diluted net loss per share data were computed as follows:

	<u>Three Months Ended March 31,</u>	
	<u>2013</u>	<u>2012</u>
<b>Numerator:</b>		
Net income (loss) for basic earnings per share	<b>\$ 2,360,408</b>	\$(1,072,517)
Less change in fair value of warrant liability	<b>5,299,000</b>	1,580,000
Net (loss) for diluted earnings per share	<b><u>\$(2,938,592)</u></b>	<b><u>\$(2,652,517)</u></b>
<b>Denominator:</b>		
Weighted-average basic common shares outstanding	<b>1,349,936</b>	1,329,279
<b>Assumed conversion of dilutive securities:</b>		
Common stock purchase warrants	<u>—</u>	<u>103,903</u>
Potentially dilutive common shares	<u>—</u>	<u>103,903</u>
Denominator for diluted earnings per share – adjusted weighted-average shares	<b><u>1,349,936</u></b>	<b><u>1,433,182</u></b>
Basic net income (loss) per share	<b><u>\$ 1.75</u></b>	<b><u>\$ (0.81)</u></b>
Diluted net loss per share	<b><u>\$ (2.18)</u></b>	<b><u>\$ (1.85)</u></b>

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The following table summarizes potentially dilutive adjustments to the weighted average number of common shares which were excluded from the calculation:

	At March 31,	
	2013	2012
Common stock purchase warrants	<b>1,111,588</b>	925,612
Stock options	<b>548,007</b>	559,840
Common shares issuable upon conversion of Series A Preferred Stock	<b>352,614</b>	352,614
Common shares issuable upon conversion of Series B Preferred Stock	<b>364,320</b>	364,320
	<b><u>2,376,529</u></b>	<b><u>2,202,386</u></b>

### **Note 3. Revenue and Accounts Receivable**

Revenue by payor type for the three months ended March 31, 2013 and 2012 is comprised of the following:

	Three Months Ended March 31,	
	2013	2012
Medicare	<b>\$ 257,063</b>	\$ 138,767
Direct bill (including clinical trials)	<b>511,347</b>	340,132
Grants and royalty	—	10,500
Insurance carrier and all others	<b>450,257</b>	345,353
	<b><u>\$ 1,218,667</u></b>	<b><u>\$ 834,752</u></b>

Accounts receivable by payor type at March 31, 2013 and December 31, 2012 consists of the following:

	March 31,	December 31,
	2013	2012
Medicare	<b>\$ 347,773</b>	\$ 193,024
Direct bill (including clinical trials)	<b>270,454</b>	339,763
Insurance carrier and all others	<b>542,666</b>	353,758
Allowance for doubtful accounts	<b>(36,000)</b>	(36,000)
	<b><u>\$1,124,893</u></b>	<b><u>\$ 850,545</u></b>

We have historically derived a significant portion of our revenue from a limited number of test ordering sites. The test ordering sites are largely hospitals, cancer centers, reference laboratories, physician offices and clinical trial clients. Oncologists and pathologists at these sites order the tests on behalf of the needs of their oncology patients or as part of a clinical trial sponsored by a biopharmaceutical company in which the patient is being enrolled. The top five test ordering sites during the three months ended March 31, 2013 and 2012 accounted for 58% and 62% respectively, of our clinical testing volumes, with 30% and 43% respectively, of the volume coming from community hospitals. During the three months ended March 31, 2013, there were three sites which each accounted for approximately 10% or more of our revenue. A clinical trial client accounted for approximately 21%, a university teaching center accounted for approximately 12%, and a community oncology practice accounted for approximately 12%. During the three months ended March 31, 2012, there were two sites which each accounted for more than 10% of our clinical revenue: a community hospital and a clinical trial client accounted for approximately 15% and 13% of revenue, respectively. We generally do not enter into formal written agreements with such testing sites and, as a result, we may lose these significant test ordering sites at any time.

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### *Note 4. Notes Payable and Lines of Credit*

Below is a summary of our short-term and long-term debt obligations as of March 31, 2013 and December 31, 2012:

	<u>March 31, 2013</u>	<u>December 31, 2012</u>
December 2011 Financing Transaction	\$ 4,000,000	\$ 4,000,000
2012 Convertible Debt Financing Transaction	3,000,000	\$ —
Secured Note Payable, short-term	83,515	79,867
Unamortized debt discount	<u>(2,552,875)</u>	<u>(243,300)</u>
Notes Payable, Current Portion	<u>\$ 4,530,640</u>	<u>\$ 3,836,567</u>
Line of Credit, Principal Balance	\$ 3,000,000	\$ 3,000,000
Unamortized Debt Discount	<u>(10,423)</u>	<u>(128,800)</u>
Line of Credit, Current Portion	<u>\$ 2,989,577</u>	<u>\$ 2,871,200</u>
December 2011 Financing Transaction	\$ 2,000,000	\$ 2,000,000
2012 Convertible Debt Financing Transaction	—	3,000,000
December 2012 Bridge Financing Transaction	1,000,000	1,000,000
Other Note Payable	100,000	100,000
Secured Note Payable	—	22,298
Unamortized debt discount	<u>(951,506)</u>	<u>(3,681,615)</u>
Notes Payable, Long-Term	<u>\$ 2,148,494</u>	<u>\$ 2,440,683</u>
Lines of Credit, Long-Term	<u>\$ 6,000,000</u>	<u>\$ 6,000,000</u>

#### *December 2011 Financing Transaction*

As of March 31, 2013 and December 31, 2012, we had \$6 million outstanding under a Credit Agreement dated as of December 21, 2011, as amended and restated as of February 13, 2012. The Credit Agreement is with John Pappajohn and Andrew Pecora (indirectly through an investment company), both members of our board of directors, and NNJCA Capital, LLC (“NNJCA”), a limited liability company of which Dr. Pecora is a member. Mr. Pappajohn provided \$4.0 million of financing, NNJCA provided \$1.5 million of financing and Dr. Pecora provided \$500,000 of financing under the Credit Agreement.

The loan bears an annual interest rate equal to the prime rate plus 6.25% (9.50% at March 31, 2013) with \$2.0 million maturing April 1, 2014 and \$4.0 million maturing August 15, 2013. We have accrued a fee due to Pecora and NNJCA of \$130,000 which will be paid upon repayment or conversion of the notes. The lenders may require that the loan be repaid within 30 days should we complete our IPO and receive gross proceeds of at least \$15 million. In the event that any lender requires payment upon completion of our IPO and certain other maturity events, and we fail to make payment, the annual interest rate on any unpaid balance shall increase to 12%. The loan is secured by all of our assets, including our intellectual property, subject to prior first and second liens in favor of Wells Fargo Bank and DAM Holdings, LLC (“DAM”). Pursuant to an intercreditor agreement, the lenders have agreed that all amounts due to DAM are to be paid prior to payment to the lenders under this Credit Agreement, but that as between such lenders, following an event of default, all of the security granted by us is to be applied first to repay obligations due to Pecora and NNJCA, and then to Mr. Pappajohn after they have been paid in full. As Mr. Pappajohn has guaranteed the Wells Fargo debt, in essence under the intercreditor agreement, NNJCA and Pecora will be junior only to DAM.

Mr. Pappajohn and NNJCA agreed to convert \$4.5 million of the outstanding principal due to them to common stock at the IPO price upon consummation of our offering. The conversion price of the notes and the exercise price of the warrants are subject to standard anti-dilution protection in the event of stock splits, stock dividends, stock combinations, reclassifications and the like. The conversion price of the notes and the exercise price of the warrants equal the lesser of (i) \$42.50 per share or (ii) the IPO price per share (\$10.00).

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### *2012 Convertible Debt Financing Transaction*

As of March 31, 2013 and December 31, 2012, we had \$3 million outstanding under a Restated Credit Agreement, (\$1,750,000 provided by Mr. Pappajohn and \$1,250,000 provided by Mr. Oman) which requires interest at the prime rate plus 6.25% (9.50% at March 31, 2013) and matures on February 26, 2014. The Restated Credit Agreement requires the lenders to convert the principal amount of the loan as of the closing of an IPO into shares of our common stock at a conversion price equal to the lesser of \$42.50 or our IPO price and as a result all debt was converted on April 10, 2013 at the IPO price of \$10 per share.

In February 2013, the lenders received ten-year warrants to purchase an aggregate of 7,059 shares of our common stock (issued in proportion to their respective funding amounts) with an exercise price equal to the lesser of (i) \$42.50 per share or (ii) the IPO price per share. The warrant exercise price is subject to standard anti-dilution protection in the event of stock splits, stock dividends, stock combinations, reclassifications and the like and a share and price adjustment feature in the event of issuances of more than \$5 million of securities at prices below the exercise price prior to the completion of our IPO. The warrants are also subject to anti-dilution adjustment if the IPO price per share is less than \$42.50 per share.

### *December 2012 Bridge Financing Transaction*

As of March 31, 2013 and December 31, 2012, we had \$1 million outstanding under a credit agreement with Mr. Pappajohn, a stockholder, bearing interest at the prime rate plus 6.25% (9.50% at March 31, 2013) maturing June 7, 2014. The credit agreement requires Mr. Pappajohn to convert the outstanding principal balance into shares of our common stock at a conversion price equal to the lesser of \$42.50 or our IPO price and as a result all debt was converted on April 10, 2013 at the IPO price of \$10 per share. In March 2013, Mr. Pappajohn received ten-year warrants to purchase an aggregate of 2,353 shares of our common stock with an exercise price equal to the lesser of (i) \$42.50 per share or (ii) the IPO or merger price per share because we did not consummate our IPO by March 7, 2013. The warrant exercise price is subject to standard anti-dilution protection in the event of stock splits, stock dividends, stock combinations, reclassifications and the like and a share and price adjustment feature in the event of issuances of more than \$5 million of securities at prices below the exercise price at or prior to the completion of our IPO.

### *Business Lines of Credit*

At March 31, 2013 and December 31, 2012, we have fully utilized a line of credit with Wells Fargo Bank which provides for maximum borrowings of \$6 million. Interest on the line of credit is due monthly equal to 1.75% above the Daily One Month LIBOR rate (1.95% at March 31, 2013). The line of credit requires the repayment of principal, and any unpaid interest, in a single payment due upon maturity. The line of credit matures April 1, 2014, is guaranteed by Mr. Pappajohn, and is collateralized by a first lien on all of our assets including the assignment of our approved and pending patent applications.

At March 31, 2013 and December 31, 2012, \$3 million was outstanding under a line of credit agreement with DAM. Pursuant to an intercreditor agreement between Mr. Pappajohn and DAM (the "Intercreditor Agreement"), we were required to use the proceeds from our IPO to repay the full amount outstanding under the DAM Loan Agreement before any proceeds can be used to repay any debt outstanding under the Wells Fargo Line of Credit. On March 19, 2013, \$2 million of the DAM debt was extended to mature on August 15, 2013. The DAM debt bears an annual interest rate of 10% payable in equal monthly installments and expires upon the earlier of the following: (i) \$1 million on April 1, 2013 and \$2 million on August 15, 2013, (ii) the occurrence of an IPO of our equity securities in which we receive gross proceeds in the amount of \$10 million or more, or (iii) the consummation of a transaction in which we either merge with a reporting company under the Securities Exchange Act of 1934, as amended, or a public company acquires all or substantially all of our Company, and the survivor of such merger of the public company receives gross proceeds from the sale of the survivors securities or the public company's securities in the amount of \$10 million or more. If certain maturity events do occur prior to April 1, 2013 for \$1 million and August 15, 2013 for \$2 million and the line of credit is not repaid on the date of the maturity event, then the interest rate will increase to 18% per annum. On February 13, 2013, DAM agreed to convert \$1.0 million due April 1, 2013 of outstanding indebtedness into shares of common stock at the IPO price per share, effective upon the consummation of our IPO. We have accrued a fee due to DAM of \$52,500 which will be paid upon repayment or conversion of the line of credit.

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### *Secured Note Payable*

On September 25, 2012, we entered into a note payable secured by lab equipment due March 25, 2014. The note requires monthly payments of principal and interest at 18% per annum. At March 31, 2013, \$83,515 was outstanding under the note. At December 31, 2012, \$102,165 was outstanding under the note.

### *Other Note Payable*

At March 31, 2013, notes payable included a \$100,000 note payable to Dr. Chaganti, our Chairman of the Board. The note is due on April 1, 2014 and bears interest at 8.5% per annum. Accrued interest at March 31, 2013 and December 31, 2012 was approximately \$34,300. On February 13, 2013, Dr. Chaganti agreed to convert the total amount of principal and interest owed to him into shares of common stock at the IPO price per share, effective upon the consummation of our IPO.

### *Subsequent Events*

On April 10, 2013, we completed our IPO. In connection with the conversion of debt into common stock in April 2013, we expensed the applicable remaining debt discounts of \$3.5 million, financing fees of \$419,000 and a contingently recognizable beneficial conversion feature in the converted debt of \$3 million and converted the following indebtedness into shares of common stock at the IPO price of \$10.00 per share:

	<u>Converted Amount</u>	<u>Common Shares</u>
December 2011 Financing Transaction	\$ 4,500,000	450,000
2012 Convertible Debt Financing Transaction	3,000,000	300,000
December 2012 Bridge Financing Transaction	1,000,000	100,000
Business Lines of Credit (DAM)	1,000,000	100,000
Other Note Payable and accrued interest	134,300	13,430
	<u>\$ 9,634,300</u>	<u>963,430</u>

After conversion of the above debt, we have indebtedness of \$6,000,000 outstanding under a line of credit with Wells Fargo, \$2,000,000 outstanding under a line of credit with DAM, \$1,500,000 outstanding under a note agreement with NNJCA, and \$83,515 outstanding under the secured note payable.

### **Note 5. Letter of Credit**

In connection with the facility lease, the lessor required the establishment of a stand-by letter of credit in the amount of \$450,000 to use as a guarantee for a security deposit. In February 2011, we allowed the letter of credit to expire. On April 6, 2012, we reached an agreement with the landlord which requires us to provide a letter of credit in the amount of \$250,000 and in exchange, the landlord agreed to forebear taking action to enforce our obligation to maintain the \$450,000 letter of credit. The landlord also agreed to reduce our security deposit requirement to a \$300,000 letter of credit upon a capital raise of at least \$5.0 million by April 30, 2013. On April 10, 2013, we completed an IPO sufficient to meet this requirement.

### **Note 6. Capital Stock**

We were authorized to issue 588,000 shares of Series A Convertible Preferred Stock ("Series A") and 2,000,000 shares of Series B Convertible Preferred Stock ("Series B"). The holders of the Series A and Series B shares were entitled to participate in any dividend declared by the Board of Directors on the Common Stock on a pro-rata basis with holders of the Common Stock. The Series A holders had a liquidation preference equal to the original Series A purchase price of \$8.46 per share (or \$4,971,866) and the Series B holders had a liquidation preference equal to the Series B original purchase price of \$5.00 per share (or \$9,108,000) subject to adjustment for stock splits, stock dividends and combinations and similar adjustments to capitalization. Alternatively, the preferred stockholders could have elected to convert the Series A and Series B into Common Stock and participate ratably with holders of Common Stock in the distribution of assets upon liquidation of the Company. The holders of Series A and Series B had the right to convert their shares into Common Stock at any time. The initial conversion rate was the original purchase price of the Series A or Series B shares divided by the conversion price in effect at the time of conversion. The initial conversion price equaled the original purchase price paid by the holder for a share of Series A or series B, as applicable.

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The conversion price was subject to adjustment in the event of stock dividends, stock splits, combinations and similar adjustments to capitalization. The prices of each series of preferred stock were also subject to a price adjustment feature in the event that we issued additional equity securities at a per share price less than the applicable conversion price for each such series of preferred stock. The conversion price in effect at the time of the IPO for the Series A was \$14.10 and for the Series B was \$25.00. Accordingly, since the Series A and B were to convert to common stock at the time the IPO was completed at \$10.00 per share, Series A shares converted into 376,525 shares of common stock and Series B shares converted into 910,800 shares of common stock. All references to the Company's Series A preferred stock in these financial statements refer collectively to the Series A and Series A-1 preferred shares. The Company issued the Series A-1 preferred stock in exchange for the Series A to cure possible technical deficiencies with respect to the original issuance of the Series A preferred stock, but five holders of Series A did not respond to requests to exchange their shares, which represent approximately 9.01% of the Series A and A-1 that is outstanding.

The Series B purchase agreement provides for the payment of a semiannual cash penalty payable to each holder of Series B if we fail to complete a merger with a corporation whose shares were registered for issuance pursuant to the Securities Act of 1933, as amended (the "Securities Act"), within 9 months of the closing of the Series B offering (or August 19, 2011) (the "Merger Period"). The penalty shall be equal to 1% of the original purchase price for a share of Series B for the first 30 day period following the expiration of the Merger Period if a merger shall not have been consummated and an additional 2% of the original purchase price for a share of Series B for each successive 30 day period following the first penalty period, pro-rated daily up to a maximum penalty of 11% of the original purchase price for a share of Series B per annum. The maximum potential consideration to be transferred under the terms of the purchase agreement is unlimited. In September 2011, we solicited holders of the Series B to execute an amendment and waiver to the Series B purchase agreement, which provided for (i) a waiver of the cash penalties and (ii) an amendment extending the Merger Period to March 31, 2012 and providing for (A) the tolling of the Merger Period if we file a registration statement with the Securities and Exchange Commission with respect to an IPO and (B) elimination of penalties if we consummate the IPO. As of March 31, 2013, holders of 1,522,600 shares of Series B Convertible Preferred Stock have agreed to the waiver.

On February 8, 2013, we filed a charter amendment with the Secretary of State for the State of Delaware and effected a 1-for-2 reverse stock split of our common stock and increased the authorized shares of common stock to 100,000,000. On March 1, 2013, we filed another charter amendment with the Secretary of State for the State of Delaware and effected a 1-for-2.5 reverse stock split of our common stock. All shares and per share information referenced throughout the consolidated financial statements have been retroactively adjusted to reflect both reverse stock splits.

### *Subsequent Events*

On April 10, 2013, we completed our IPO in which we issued and sold 690,000 shares of common stock (including the underwriter's over-allotment of 90,000 shares) at a public offering price of \$10.00 per share. In connection with the offering, all outstanding shares of Series A preferred stock were converted into 376,525 shares of common stock, and all outstanding shares of Series B preferred stock were converted into 910,800 shares of common stock.

Concurrent with the IPO, we issued 2,000 shares of common stock to Cleveland Clinic pursuant to our license agreement with Cleveland Clinic.

### **Note 7. Stock Option Plans**

We have two equity incentive plans: the 2008 Stock Option Plan (the "2008 Plan") and the 2011 Equity Incentive Plan (the "2011 Plan", and together with the 2008 Plan, the "Stock Option Plans"). The 2011 Plan was approved by the Board of Directors on June 30, 2011 and was subsequently ratified by stockholders. The 2011 Plan authorizes the issuance of up to 350,000 shares of common stock under several types of equity awards including stock options, stock appreciation rights, restricted stock awards and other awards defined in the 2011 Plan. There have been no awards under the 2011 Plan.

The Board of Directors adopted the 2008 Plan on April 29, 2008 and reserved 251,475 shares of common stock for issuance under the plan. On April 1, 2010, the stockholders voted to increase the number of shares reserved by the plan to 550,000. The 2008 Plan is meant to provide additional incentive to officers, employees and consultants to remain in our employment. We are authorized to issue incentive stock options or non-statutory stock options to eligible participants. Options granted are generally exercisable for up to 10 years.

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At March 31, 2013, 81,993 shares remain available for future awards under the 2008 Plan and 350,000 shares remain available for future awards under the 2011 Plan.

Additionally, of the shares available for future awards at March 31, 2013, 53,500 shares have been approved to be issued at an exercise price equal to the offering price of our common stock in an IPO. Recognition of compensation expense related to these options will begin at the IPO date when the exercise price is set and employees begin to benefit from, or be adversely affected by, changes in the Company's stock price.

As of March 31, 2013, no stock appreciation rights, restricted stock, or awards other than stock options had been awarded under the Stock Option Plans.

We have also issued 80,000 options outside of the Stock Option Plans.

The Board of Directors authorized an offer to certain employee options holders on the following terms: those employees holding stock options with a strike price of \$25.00 or more had the opportunity to exchange their options for 60% of the number of options currently held with an exercise price equal to our initial public offering price, and those employees holding stock options with a strike price of \$12.50 have the opportunity to exchange their options for 80% of the number of options currently held with an exercise price equal to our initial public offering price. At March 31, 2013, 137,517 options were outstanding with a strike price of \$25.00 or more and 201,650 options were outstanding with a strike price of \$12.50. The employees had until the effective date of our initial public offering to accept the exchange offer. On April 10, 2013, our initial public offering became effective and 336,300 options with exercise prices ranging from \$12.50 to \$33.80 were exchanged for 242,070 options with an exercise price of \$10.00. No adjustment in the number of options or the weighted average exercise price of our outstanding options has been made in these financial statements to reflect the acceptance of the exchange by the option holders. In addition, 53,500 options which were approved to be issued and priced at the IPO price were issued to employees with an exercise price of \$10.00 per share.

On April 17, 2013, the Board of Directors approved the issuance of 5,850 options to employees with an exercise price equal to the fair market value of the common stock at the grant date.

On October 12, 2012, the Board of Directors also voted to amend the 2011 Plan. The amendment increases the number of shares available for grant under the 2011 Plan from 150,000 to 350,000 shares. This amendment has been ratified by our stockholders.

A summary of employee and nonemployee stock option activity for year ended December 31, 2012 and the three months ended March 31, 2013 is as follows:

	Options Outstanding		Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
	Number of Shares	Weighted-Average Exercise Price		
Outstanding January 1, 2012	559,990	\$ 12.85	8.10	\$11,737,710
Granted	2,400	33.80		
Cancelled or expired	(9,050)	23.43		
Outstanding December 31, 2012	553,340	\$ 12.76	7.13	\$ 1,142,432
Cancelled or expired	(5,333)	33.80		
Outstanding March 31, 2013	548,007	\$ 12.56	6.87	\$ 1,163,316
Exercisable, March 31, 2013	420,068	\$ 11.44	6.74	\$ 1,109,460

Aggregate intrinsic value represents the difference between the estimated fair value of our common stock and the exercise price of outstanding, in-the-money options. The estimated fair value of our common stock was \$9.70 and \$9.60 as of March 31, 2013 and December 31, 2012, respectively. No options were exercised during the three months ended March 31, 2013 and 2012.



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As of March 31, 2013 and December 31, 2012, total unrecognized compensation cost related to nonvested stock options granted to employees was \$657,121 and \$846,810, respectively, which we expect to recognize over the next 2.48 and 2.61 years, respectively.

As of March 31, 2013 and December 31, 2012, total unrecognized compensation cost related to nonvested stock options granted to non-employees was \$54,700 and \$190,500, respectively, which we expect to recognize over the next 0.25 and 0.50 years, respectively. The estimate of unrecognized nonemployee compensation is based on the fair value of the nonvested options as of March 31, 2013 and December 31, 2012.

The following table summarizes information about outstanding and vested stock options granted to employees and non-employees as of March 31, 2013 as follows:

Exercise Price	Options Outstanding			Options Vested and Exercisable		Pro Forma Options Outstanding (1)	
	Number of Shares Outstanding	Weighted-Average Remaining Contractual Life (in years)	Weighted-Average Exercise Price	Number of Shares	Weighted-Average Exercise Price	Number of Shares	Weighted-Average Exercise Price
4.00	175,000	6.08	\$ 4.00	175,000	\$ 4.00	175,000	\$ 4.00
4.80	33,840	6.80	4.80	22,849	4.80	33,840	4.80
10.00	—	—	—	—	—	295,570	10.00
12.50	201,650	7.02	12.50	127,499	12.50	200	12.50
25.00	130,200	7.60	25.00	90,896	25.00	—	—
31.65	2,250	8.51	31.65	637	31.65	—	—
33.80	5,067	8.80	33.80	3,187	33.80	2,667	33.80
Total	548,007	6.87	\$ 12.56	420,068	\$ 11.44	507,277	\$ 7.71

- (1) Upon consumation of the IPO, 336,300 options with exercise prices ranging from \$12.50 – \$33.80 were exchanged for 242,070 options with an exercise price of \$10.00 per share. 53,500 additional options were issued in conjunction with the IPO with an exercise price equal to the IPO price of \$10.00 per share.

The fair value of options granted to employees is estimated on the grant date using the Black-Scholes option valuation model. This valuation model for stock-based compensation expense requires us to make assumptions and judgments about the variables used in the calculation, including the fair value of our common stock (see Note 9), the expected term (the period of time that the options granted are expected to be outstanding), the volatility of our common stock, a risk-free interest rate, and expected dividends. We also estimate forfeitures of unvested stock options. To the extent actual forfeitures differ from the estimates, the difference will be recorded as a cumulative adjustment in the period estimates are revised. No compensation cost is recorded for options that do not vest. We use the simplified calculation of expected life described in the SEC's Staff Accounting Bulletin No. 107, *Share-Based Payment*, and volatility is based on an average of the historical volatilities of the common stock of four entities with characteristics similar to those of the Company. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. We use an expected dividend yield of zero, as we do not anticipate paying any dividends in the foreseeable future. Expected forfeitures are assumed to be zero due to the small number of plan participants and the plan design which has monthly vesting after an initial cliff vesting period.



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The following table presents the weighted-average assumptions used to estimate the fair value of options granted to employees during the periods presented:

	<u>Three Months Ended</u> <u>March 31,</u> <u>2012</u>
Volatility	77.39%
Risk free interest rate	1.43%
Dividend yield	0.00%
Term (years)	6.50
Weighted-average fair value of options granted during the period	\$ 23.35

In 2010, we issued an aggregate of 80,000 options to non-employees with an exercise price of \$25.00. The following table presents the weighted-average assumptions used to estimate the fair value of options reaching their measurement date for non-employees during the periods presented:

	<u>Three Months Ended March 31,</u>	
	<u>2013</u>	<u>2012</u>
Volatility	75.86%	74.87%
Risk free interest rate	1.25%	1.46%
Dividend yield	0.00%	0.00%
Term (years)	7.71	8.60

The following table presents the effects of stock-based compensation related to stock option awards to employees and nonemployees on our Statement of Operations during the periods presented:

	<u>Three Months Ended March 31,</u>	
	<u>2013</u>	<u>2012</u>
Cost of revenues	\$ 2,212	\$ 3,240
Research and development	34,836	139,575
General and administrative	58,153	74,410
Sales and marketing	1,932	59,642
Total stock-based compensation	<u>\$ 97,133</u>	<u>\$ 276,867</u>

### **Note 8. Warrants**

We have issued certain warrants which contain an exercise price adjustment feature in the event we issue additional equity instruments at a price lower than the exercise price of the warrant. The warrants are described herein as derivative warrants. For all derivative warrants, in the event equity instruments are issued at a price lower than the exercise price of the warrant, the exercise price is adjusted to the price of the new equity instruments issued (price adjustment feature). For certain of these warrants, the number of shares underlying the warrant is also adjusted to an amount computed by dividing the proceeds of the warrant under its original terms by the revised exercise price (share adjustment feature). These warrants are initially recorded as a warrant liability at fair value with a corresponding entry to the loan guarantee fee asset, debt discount, additional paid-in capital or expense dependent upon the service provided in exchange for the warrant grant. Subsequently, any change in fair value is recognized in earnings until such time as the warrants are exercised, amended or expire.

In connection with the 2012 Convertible Debt Financing Transaction, we granted 4,118 warrants to Mr. Pappajohn and 2,941 warrants to Mr. Oman on February 22, 2013. The warrants have a ten-year term and an exercise price equal to the lesser of (i) \$42.50 per share or (ii) the IPO or merger price per share. These warrants were initially recorded at fair value as a financing fee asset and will be amortized over the period of the note to interest expense. The issue date fair value of these warrants was \$221,000.

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In connection with the December 2012 Bridge Financing Transaction, we granted 2,353 ten-year warrants with an exercise price equal to the lesser of (i) \$42.50 per share or (ii) the IPO or merger price per share to Mr. Pappajohn on March 7, 2013. These warrants were initially recorded at fair value as a financing fee asset and will be amortized over the period of the note to interest expense. The issue date fair value of these warrants was \$47,000.

On February 11, 2013, John Pappajohn agreed to limit certain anti-dilution rights in his warrants to purchase shares of the Company's common stock. Subject to the consummation of an IPO prior to April 13, 2013, Mr. Pappajohn agreed that if the final IPO price is below \$15.00, the exercise price of the warrants held by him would adjust to \$15.00 and the number of shares underlying the warrants would be adjusted as if the IPO price were \$15.00 and then there would be no further adjustment to the price or number of shares covered by warrants held by him. In February 2013, certain warrant holders agreed to waive the price and share adjustment provisions of their warrants, except for the anti-dilution provisions related to stock splits, subdivisions and combinations, with respect to an aggregate of 114,030 shares of common stock underlying such warrants, effective immediately following the consummation of our IPO.

The following table summarizes the warrant activity for the three months ended March 31, 2013:

Issued With / For	Exercise Price	Warrants	2013 Warrants Issued	Warrants	Pro Forma (E)	
		Outstanding January 1, 2013		Outstanding March 31, 2013	Exercise Price	Warrants Outstanding
Debt Guarantee	\$ 4.00	228,288	—	228,288	\$ 4.00	228,288
Series A Pref. Stock	14.10	65,329	—	65,329	14.10	65,329
	6.25	293,617	—	293,617	6.25	293,617
Financing	25.00 <sup>B</sup>	60,000	—	60,000	10.00	60,000
Financing	42.50 <sup>BCD</sup>	75,294	—	75,294	15.00	75,294
Financing	42.50 <sup>AD</sup>	54,314	2,941	57,255	10.00	243,334
Financing	42.50 <sup>ACD</sup>	120,865	6,471	127,336	15.00	360,786
Debt Guarantee	25.00 <sup>AC</sup>	212,000	—	212,000	15.00	353,333
Debt Guarantee	25.00 <sup>AD</sup>	100,000	—	100,000	10.00	250,000
Debt Guarantee	32.45 <sup>AC</sup>	40,000	—	40,000	15.00	86,533
Debt Guarantee	42.50 <sup>ACD</sup>	38,392	—	38,392	15.00	108,779
Debt Guarantee	42.50 <sup>BCD</sup>	37,000	—	37,000	15.00	37,000
Series B Pref. Stock	25.00 <sup>B</sup>	52,464	—	52,464	10.00	52,464
Consulting	12.50 <sup>AD</sup>	4,030	—	4,030	10.00	5,037
Consulting	14.10 <sup>AD</sup>	10,000	—	10,000	10.00	14,100
Consulting	25.00 <sup>B</sup>	200	—	200	10.00	200
Consulting	25.00 <sup>A</sup>	4,000	—	4,000	10.00	10,000
	32.34	808,559	9,412	817,971	13.08	1,656,860
	<u>\$25.45</u>	<u>1,102,176</u>	<u>9,412</u>	<u>1,111,588</u>	<u>\$12.05</u>	<u>1,950,477</u>

<sup>A</sup> These warrants are subject to fair value accounting and contain exercise price and number of share adjustment features. See Note 9.

<sup>B</sup> These warrants are subject to fair value accounting and contain an exercise price adjustment feature. See Note 9.

<sup>C</sup> On February 11, 2013, these warrants held by John Pappajohn were amended to limit the adjustment feature(s) to \$15.00 per share in an initial public offering (totaling 530,022 warrants).

<sup>D</sup> The exercise price and/or number of share adjustment features of these warrants expire and will no longer be subject to fair value accounting after an initial public offering.

<sup>E</sup> On April 10, 2013 the Company completed the IPO at \$10.00 per share. The shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2013 increased to 1,950,477 shares and the exercise prices of 1,656,860 warrants were adjusted as a result of the share and exercise price adjustment features described above.

### *Subsequent Event*

On April 10, 2013, the Company completed an equity offering at \$10.00 per share. The shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2013 increased to 1,950,477 shares and the exercise prices of 1,656,860 warrants were adjusted as a result of the share and exercise price adjustment features described above, so that the 1,950,477 warrants outstanding had a weighted average exercise price of \$12.05 per share on April 10, 2013.

On April 29, 2013, the Company received \$96,000 from shareholders who exercised warrants to purchase 24,000 shares of common stock at \$4.00 per share.

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**Note 9. Fair Value of Warrants**

The following tables summarize the assumptions used in computing the fair value of derivative warrants subject to fair value accounting at the date of issue during the three months ended March 31, 2013 and 2012 and at March 31, 2013 and December 31, 2012. In computing the fair value of the warrants, if the stated exercise price of the warrants exceeded the assumed value of the Company stock at the date the fair value was being computed, the exercise price and number of shares (if applicable) underlying the warrants were adjusted to reflect an assumed trigger of the price and/or share adjustment features related to the applicable warrants:

<b>Debt Guarantee</b>	Issued During the Three Months Ended <u>March 31, 2012</u>	As of <u>March 31, 2013</u>	As of <u>December 31, 2012</u>
Exercise Price	\$ 42.50	\$ 13.76	\$ 9.60
Expected life (years)	4.73	2.39	2.66
Expected volatility	80.47%	65.58%	67.71%
Risk-free interest rate	0.90%	0.32%	0.37%
Expected dividend yield	0.00%	0.00%	0.00%

<b>Series B</b>	As of <u>March 31, 2013</u>	As of <u>December 31, 2012</u>
Exercise Price	\$ 9.70	\$ 9.60
Expected life (years)	2.67	2.92
Expected volatility	60.66%	61.44%
Risk-free interest rate	0.36%	0.36%
Expected dividend yield	0.00%	0.00%

<b>Consulting</b>	As of <u>March 31, 2013</u>	As of <u>December 31, 2012</u>
Exercise Price	\$ 9.70	\$ 9.60
Expected life (years)	2.23	2.48
Expected volatility	63.61%	63.29%
Risk-free interest rate	0.26%	0.28%
Expected dividend yield	0.00%	0.00%

<b>Financing</b>	Issued During the Three Months Ended <u>March 31,</u>		As of <u>March 31, 2013</u>	As of <u>December 31, 2012</u>
	<u>2013</u>	<u>2012</u>		
Exercise Price	\$ 13.34	\$ 42.50	\$ 13.06	\$ 9.60
Expected life (years)	9.78	4.82	6.51	6.66
Expected volatility	74.70%	79.41%	69.11%	73.38%
Risk-free interest rate	1.95%	0.83%	1.12%	1.06%
Expected dividend yield	0.00%	0.00%	0.00%	0.00%

The assumed Company stock price used in computing the warrant fair value for warrants issued during the three months ended March 31, 2013 was \$9.60 – \$9.70 and \$31.60 – \$33.80 for the three months ended March 31, 2012. In determining the fair value of warrants issued at each reporting date, the assumed Company stock price was \$9.70 at March 31, 2013 and \$9.60 at December 31, 2012.

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The following table summarizes the derivative warrant activity subject to fair value accounting for the three months ended March 31, 2013:

<u>Issued with/for</u>	<u>Fair value of warrants outstanding as of December 31, 2012</u>	<u>Fair value of warrants issued</u>	<u>Change in fair value of warrants</u>	<u>Fair value of warrants outstanding as of March 31, 2013</u>
Series B Preferred Stock	\$ 230,000	\$ —	\$ (15,000)	\$ 215,000
Debt Guarantee	5,679,000	—	(3,211,000)	2,468,000
Consulting	147,000	—	(34,000)	113,000
Financing	6,493,000	268,000	(2,039,000)	4,722,000
	<u>\$ 12,549,000</u>	<u>\$ 268,000</u>	<u>\$(5,299,000)</u>	<u>\$ 7,518,000</u>

### Note 10. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The Fair Value Measurements and Disclosures Topic of the FASB Accounting Standards Codification requires the use of valuation techniques that are consistent with the market approach, the income approach and/or the cost approach. Inputs to valuation techniques refer to the assumptions that market participants would use in pricing the asset or liability. Inputs may be observable, meaning those that reflect the assumptions market participants would use in pricing the asset or liability developed based on market data obtained from independent sources, or unobservable, meaning those that reflect our own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. In that regard, the Topic establishes a fair value hierarchy for valuation inputs that give the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

Level 1: Quoted prices (unadjusted) for identical assets or liabilities in active markets that we have the ability to access as of the measurement date.

Level 2: Significant other observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3: Significant unobservable inputs that reflect our own assumptions about the assumptions that market participants would use in pricing an asset or liability.

The following table summarizes the financial liabilities measured at fair value on a recurring basis segregated by the level of valuation inputs within the fair value hierarchy utilized to measure fair value:

	<u>March 31, 2013</u>			
	<u>Total</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Warrant liability	<u>\$7,518,000</u>	<u>—</u>	<u>—</u>	<u>\$7,518,000</u>
	<u>December 31, 2012</u>			
	<u>Total</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Warrant liability	<u>\$12,549,000</u>	<u>—</u>	<u>—</u>	<u>\$12,549,000</u>

The warrant liability consists of stock warrants we issued that contain an exercise price adjustment feature. In accordance with derivative accounting for warrants, we calculated the fair value of warrants and the assumptions used are described in Note 9, "Fair Value of Warrants". Realized and unrealized gains and losses related to the change in fair value of the warrant liability are included in Other income (expense) on the Statement of Operations.

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The following table reflects the activity for liabilities measured at fair value using Level 3 inputs for the three months ended March 31:

	2013	2012
Balance as of January 1	<u>\$12,549,000</u>	<u>\$11,113,000</u>
Issuances of derivative financial instruments	<u>268,000</u>	<u>2,001,000</u>
Unrealized (gain) loss related to change in fair value	<u>(5,299,000)</u>	<u>(1,580,000)</u>
Balance as of March 31	<u>\$ 7,518,000</u>	<u>\$11,534,000</u>

### **Note 11. Joint Venture Agreement**

On November 7, 2011, we entered into an agreement with the Mayo Foundation for Medical Education and Research (“Mayo”) pursuant to which we agreed to form a joint venture with Mayo in March 2013 (or such later date that we may negotiate with Mayo). The joint venture will take the form of a limited liability company, with each party initially holding fifty percent of the issued and outstanding membership interests of the new entity (the “JV”). In exchange for the membership interests in the JV, we will make capital contributions of at least \$2.0 million (and potentially up to \$6.0 million, subject to the joint venture entity’s achievement of certain operational milestones) over the next three years. In exchange for its membership interests, Mayo’s capital contribution will take the form of cash, staff, services, hardware and software resources, laboratory space and instrumentation, the fair market value of which will be approximately equal to \$6 million. Mayo’s continued contribution will also be conditioned upon the JV’s achievement of certain milestones. We are currently negotiating an amendment to our agreement to form a joint venture to extend the dates and our payment schedule.

### **Note 12. Related Party Transactions**

John Pappajohn, a member of the Board of Directors and stockholder, personally guarantees our revolving line of credit with Wells Fargo Bank. As consideration for his guarantee, as well as each of the eight extensions of this facility through March 31, 2013, Mr. Pappajohn received warrants to purchase an aggregate of 1,051,506 shares of common stock. At March 31, 2013, 327,392 of these warrants were outstanding. After adjustment pursuant to the terms of the warrants in conjunction with our IPO, the number of warrants outstanding was 585,645 at \$15.00 per share.

In addition, John Pappajohn also has loaned us an aggregate of \$6,750,000. In connection with these loans, Mr. Pappajohn received warrants to purchase an aggregate of 202,630 shares of common stock. After adjustment pursuant to the terms of the warrants in conjunction with our IPO, the number of warrants outstanding was 436,080 at \$15.00 per share.

On May 19, 2006, we issued a convertible promissory note in favor of our Chairman and founder, Dr. Chaganti, the holder, which obligates us to pay the holder the sum of \$100,000, together with interest at the rate of 8.5% per annum, due April 1, 2014. Interest expense totaled \$2,100 for each of the three months ended March 31, 2013 and 2012. (see Note 4 for additional information and subsequent event). Dr. Chaganti also received stock options under a consulting and advisory agreement to purchase a total of 60,000 shares of common stock at price of \$25.00 per share which vest over a two year period. Total expenses under the consulting agreement for the three months ended March 31, 2013 and 2012 were \$27,350 and \$132,500, respectively, expensed under the stock option plan.

On August 15, 2010, we entered into a two-year consulting agreement with Dr. Pecora, a member of our board of directors, pursuant to which Dr. Pecora receives \$5,000 per month for providing consulting and advisory services. Dr. Pecora also received stock options under the consulting and advisory agreement to purchase a total of 20,000 shares of common stock at price of \$25.00 per share which vests over a two year period. The cash component of this agreement was terminated by mutual consent in 2011. Total expenses under the consulting agreement for the three months ended March 31, 2013 and 2012 were \$0 and \$58,440, respectively, expensed under the stock option plan.

In August 2010, we entered into a consulting agreement with Equity Dynamics, Inc., an entity controlled by John Pappajohn, pursuant to which Equity Dynamics, Inc. receives a monthly fee of \$10,000 plus reimbursement of expenses. Total expenses for the three months ended March 31, 2013 and 2012 were \$30,000. As of March 31, 2013, we owed Equity Dynamics, Inc. \$169,596.

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### **Note 13. Contingencies**

In the normal course of business, the Company may become involved in various claims and legal proceedings. In the opinion of management, the ultimate liability or disposition thereof is not expected to have a material adverse effect on our financial condition, results of operations, or liquidity.

### **Note 14. Subsequent Events**

The unaudited pro forma balance sheet information below assumes the following transactions that were completed subsequent to March 31, 2013 as if the transactions had occurred on March 31, 2013:

- On April 10, 2013, we sold 690,000 shares of common stock (including the underwriter's over-allotment of 90,000 shares) at a public offering price of \$10.00 per share and completed our IPO. Net proceeds of \$5 million were available to us from the IPO after deducting underwriting discounts, commissions and expenses of \$637,000 and unpaid offering costs of \$1.3 million. In addition, the Company had incurred and paid as of March 31, 2013, \$1.2 million of offering costs, which are included in deferred initial public offering costs in the accompanying balance sheets at March 31, 2013.
- Upon the closing of the IPO, all shares of our then-outstanding Series A and Series B convertible preferred stock automatically converted into an aggregate of 1,287,325 shares of common stock.
- Concurrent with the IPO, certain derivative warrants with a fair value of \$7 million were reclassified into equity due to the lapsing of anti-dilution provisions in the warrants.
- Also concurrent with the IPO, \$9.6 million of debt converted into 963,430 shares of common stock. In connection with the conversion of debt into common stock in April 2013, we expensed the applicable remaining debt discounts of \$3.5 million, financing fees of \$419,000 and a contingently recognizable beneficial conversion feature in the converted debt of \$3 million.

Pro forma net proceeds from our IPO were determined as follows:

Gross proceeds (including over-allotment)	\$ 6,900,000
Underwriting discounts, expenses and commissions	(637,007)
Estimated total offering costs	(2,473,763)
Offering costs paid as of March 31, 2013	<u>1,174,832</u>
Pro forma net proceeds	<u>\$ 4,964,062</u>

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The following table summarizes certain actual balance sheet data and pro forma balance sheet data to reflect the activities related to our IPO noted above, as of March 31, 2013:

	<u>March 31, 2013</u>	<u>Pro forma March 31, 2013</u>
Cash and cash equivalents	\$ 216,872	\$ 5,180,934
Loan guarantee and financing fees	1,516,631	1,085,438
Deferred initial public offering costs	2,473,763	—
Accounts payable and accrued expenses	4,885,145	3,551,914
Notes payable, current portion	4,530,640	1,583,515
Line of credit	2,989,577	1,989,577
Notes payable, long-term	2,148,494	—
Warrant liability	7,518,000	518,000
Series A Preferred Stock	59	—
Series B Preferred Stock	182	—
Common stock	135	429
Additional paid-in capital	25,067,388	48,452,631
Accumulated deficit	\$(46,591,619)	\$(53,488,959)

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### **Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations**

As used herein, the “Company,” “we,” “us,” “our” or similar terms, refer to Cancer Genetics, Inc. and its wholly owned subsidiary, Cancer Genetics Italia, S.R.L. except as expressly indicated or unless the context otherwise requires. The following Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) is intended to help facilitate an understanding of our financial condition and our historical results of operations for the periods presented. This MD&A should be read in conjunction with the accompanying unaudited consolidated financial statements and the audited consolidated financial statements and notes thereto included in our Prospectus filed with the SEC pursuant to Rule 424 (b) under the Securities Exchange Act of 1933. This MD&A may contain forward-looking statements that involve risks and uncertainties. See “Forward-Looking Statements” below.

#### **Overview**

We are an early-stage diagnostics company focused on developing and commercializing proprietary genomic tests and services to improve and personalize the diagnosis, prognosis and response to treatment (theranosis) of cancer. Our proprietary tests target cancers that are complicated to prognose and for which it is difficult to predict treatment outcomes using currently available mainstream techniques. These cancers include hematological, urogenital and HPV-associated cancers. We provide our proprietary tests and services along with a comprehensive range of non-proprietary oncology-focused tests and laboratory services, to oncologists and pathologists at hospitals, cancer centers, reference laboratories and physician offices, as well as to biopharmaceutical companies and clinical research organizations for their clinical trials. To date, we have engaged in only limited sales and marketing activities and have generated most of our revenue through sales of our non-proprietary testing services to a limited number of oncologists, pathologists, and community hospitals located mostly in the eastern and midwestern United States. Our non-proprietary laboratory testing services include molecular testing, sequencing, mutational analysis, flow cytometry testing, histology testing and cytology testing. We are currently offering our tests and laboratory services in our 17,936 square foot state-of-the-art laboratory located in Rutherford, New Jersey, which has been accredited by the College of American Pathologists, which is one of six approved accreditation methods under the Clinical Laboratory Improvement Amendments of 1988 (“CLIA”), to perform high complexity testing.

Our proprietary tests are based principally on our expertise in specific cancer types, test development methodologies and proprietary algorithms correlating genetic events with disease specific information. We have commercially launched MatBA<sup>®</sup>-CLL, our first proprietary microarray test for chronic lymphocytic leukemia (“CLL”) for use in our CLIA-accredited clinical laboratory. In January 2012, we received CLIA approval for MatBA<sup>®</sup>-SLL, our proprietary microarray for risk stratification in small lymphocytic lymphoma (“SLL”), and we are currently offering MatBA<sup>®</sup>-SLL in our laboratory. In February 2013, we received CLIA approval for MatBA<sup>®</sup>-DLBCL, our proprietary microarray for diagnosis, prognosis and patient monitoring in diffuse large B cell lymphoma (“DLBCL”). In May 2013, we commercially launched UroGenRA<sup>™</sup>, our proprietary microarray for the diagnosis and prognosis of patients with kidney cancer for use in our CLIA-accredited clinical laboratory. In addition, we are developing a series of other proprietary genomic tests in our core oncology markets. Through December 31, 2011, revenues from MatBA<sup>®</sup>-CLL were immaterial to our results of operations. Revenues from our proprietary MatBA<sup>®</sup> test represented approximately 4% of our 2012 revenues. However, due to the recent introduction of this test, the small numbers involved in our revenues, and the variability expected with the adoption of any new tests, no assurance or prediction can be given with respect to the level of revenues from our proprietary tests in the future.

We have established collaborative relationships with key thought leaders in oncology, which enable us to develop and validate the effectiveness and utility of our tests in a clinical setting and which provide us access to clinically-robust patient data. For example, we agreed to form a joint venture in March 2013 (or such later date that we may negotiate with Mayo) with Mayo Foundation for Medical Education and Research focused on developing oncology diagnostic services and tests utilizing next-generation sequencing. Additionally, we agreed to a research collaboration with Memorial Sloan-Kettering Cancer Center and the Cleveland Clinic to validate our renal-cancer microarray, UroGenRA<sup>™</sup>-Renal.

The non-proprietary testing services we offer are entirely focused on specific oncology categories where we are developing our proprietary arrays and probe panels. We believe that there is significant synergy in developing and marketing a complete set of tests and services that are disease-focused and delivering those tests and services in a comprehensive manner to help with treatment decisions. The insight that we develop in delivering the non-proprietary services are often leveraged in the development of our proprietary programs and now increasingly in the validation of our proprietary programs (such as MatBA<sup>®</sup>) for clinical use.



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We believe that we can be successful by offering cancer professionals a fully-integrated menu of oncology-focused proprietary and non-proprietary tests and customized laboratory services. Based on our discussions with leading researchers in the oncology field and interactions with our collaborators, as well as information we learn through performing the non-proprietary genetic diagnostic testing services, which are focused on the specific oncology categories where we are developing our proprietary tests, we believe our proprietary tests provide superior diagnostic and prognostic values than currently available tests. In particular, our proprietary tests deliver a level of genomic information not provided by other currently available tests. For example, the majority of current cytogenetic analysis for CLL and SLL that is available in clinical laboratories today assesses gain and loss in genomic material at four specific sites. There are two other marketed arrays for CLL (Combimatrix and Quest) of which we are aware. Both of these arrays report out gains and losses at four to five genomic sites. MatBA<sup>®</sup>-CLL, on the other hand, reports out gains and losses at nine genomic sites and MatBA<sup>®</sup>-SLL reports out gains and losses at seven genomic sites. We believe our ability to rapidly translate research insights about the genetics and molecular mechanisms of cancer into the clinical setting will improve patient treatment and management and that this approach will become a key component in the standard of care for personalized cancer treatment.

We will offer our proprietary tests in the United States as laboratory developed tests (“LDTs”) and internationally as CE-marked in vitro diagnostic products. In addition, as part of our long-term strategy we plan to seek Food and Drug Administration (“FDA”) clearance or approval to expand the commercial use of our tests to other laboratories and testing sites. We believe it would likely take two years or more to conduct the studies and trials necessary to obtain approval from FDA to commercially launch our propriety tests outside of our clinical laboratory. Our sales strategy is focused on direct sales to oncologists and pathologists at hospitals, cancer centers, and physician offices in the United States and expanding our relationships with leading distributors and medical facilities in emerging markets. We intend to emphasize partnering with community hospitals, where nearly 85% of all cancers are initially diagnosed, through our program called Expand Dx<sup>™</sup>, which was specifically designed to meet the needs of community hospitals. We believe our proprietary tests and services will enable community hospitals to optimize and expand their oncology services to better serve their cancer patients.

We expect to continue to incur significant losses for the near future. Although we earned net income of \$2.4 million for the three months ended March 31, 2013, we incurred losses of \$6.7 million, \$19.9 million and \$8.4 million for fiscal years ended December 31, 2012, 2011 and 2010, respectively. As of March 31, 2013, we had an accumulated deficit of \$46.6 million. Changes in fair value of some of our common stock warrants have significantly impacted our results in recent periods. In particular, changes in the fair value of some of our common stock warrants accounted for a large portion of our losses in 2011 and 2010, whereas in 2012 and the first quarter of 2013 we recognized non-cash income as a result of the change in fair value of such warrants. Accounting rules require us to record certain of our warrants as a liability, measure the fair value of these warrants each quarter and record changes in that value in earnings. Due to the significant number of warrants that we have outstanding, we may be exposed to significant non-cash charges, or we may record significant amounts of non-cash income, as a result of this warrant exposure in future periods. During 2012 we borrowed additional funds and restructured certain of our outstanding debt obligations, and issued additional warrants to our debt holders. As a result of these borrowings and restructurings, we incurred a significant one-time, non-cash debt and warrant restructuring charge and increased interest expense in 2012 and may incur additional non-cash income or expense related to our outstanding warrants in future periods. For the three months ended March 31, 2013, the change in the fair value of our warrant liability resulted in \$5.3 million in non-cash income. The fair market value of certain of our outstanding common stock warrants that we are required to account for as liabilities decreased during the three months ended March 31, 2013. The decrease principally resulted from a shareholder, Mr. John Pappajohn, limiting certain anti-dilution rights in his warrants to purchase shares of the Company’s common stock resulting in a lower fair value of the warrant liability and non-cash income during this period.

### **Recent Developments**

On April 10, 2013, we sold 690,000 shares of common stock at a public offering price of \$10.00 per share and completed our IPO with net proceeds of \$5 million. Upon the closing of the IPO, all shares of our then-outstanding Series A and Series B convertible preferred stock automatically converted into an aggregate of 1,287,325 shares of common stock. Concurrent with the IPO, certain derivative warrants with a fair value of \$7 million were reclassified into equity due to the lapsing of anti-dilution provisions in the warrants. Also concurrent with the IPO, \$9.6 million of debt converted into 963,430 shares of common stock. Refer to Notes 1, 4, 6 and 14 to the Consolidated Financial Statements for further details regarding this transaction.

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### **Key Factors Affecting our Results of Operations and Financial Condition**

Our overall long-term growth plan is predicated on our ability to develop and commercialize our proprietary tests outside of our clinical laboratory and to increase comprehensive oncology testing volumes in our laboratory. We launched MatBA®-CLL in the first quarter 2011 for use in our clinical laboratory, we received CLIA approval for MatBA®-SLL in January 2012, we received CLIA approval for MatBA®-DLBCL in February 2013, we commercially launched UroGenRA™ in May 2013 for use in our clinical laboratory and we are developing additional proprietary tests. In order to market our tests to independent laboratories and testing facilities, we believe we will need to obtain approvals or clearances from the appropriate regulatory authorities, including FDA. Without these approvals, the success of these commercialization efforts will be limited. To obtain these approvals and facilitate market adoption of our proprietary tests, we anticipate having to successfully complete additional studies with clinical samples and publish our results in peer-reviewed scientific journals. Our ability to complete such studies is dependent upon our ability to leverage our collaborative relationships with leading institutions to facilitate our research and obtain data for our quality assurance and test validation efforts.

We believe that the factors discussed in the following paragraphs have had and are expected to continue to have a material impact on our results of operations and financial condition.

### **Revenues**

Our revenue in 2012 was generated principally through our clinical laboratory services, with approximately 13% of our revenue from government research grants such as the National Cancer Institute, and approximately 2% of our revenue from sales of our DNA probes, which are only sold outside the United States. The clinical laboratory industry is highly competitive, and our relationship with the decision-maker at hospitals, cancer centers or physician offices is a critical component of securing their business. Consequently, our ability to attract and maintain productive sales personnel that have and can grow these relationships will largely determine our ability to grow our clinical services revenue. In order to grow our clinical laboratory revenue, we must continue to pursue validation studies and work with oncology thought leaders to develop data that is helpful in supporting the need for our tests and services.

Due to the early stage nature of our business and our limited sales and marketing activities to date, we have historically derived a significant portion of our revenue from a limited number of test ordering sites, although the test ordering sites that generate a significant portion of our revenue have changed from period to period. Our test ordering sites are largely hospitals, cancer centers, reference laboratories and physician offices. Oncologists and pathologists at these sites order the tests on behalf of the needs of their oncology patients or as part of a clinical trial sponsored by a biopharmaceutical company in which the patient is being enrolled. For the year ended 2012, our top five test ordering sites accounted for 58% of our clinical testing volume with approximately 46% of the volume coming from community hospitals. For the year ended December 31, 2011, our top five test ordering sites represented approximately 63% of our clinical testing volume, with approximately 29% of the volume coming from community hospitals. Our top five test ordering sites for the year ended December 31, 2010 accounted for 60% of our clinical testing volumes, with approximately 15% of the volume coming from community hospitals. In particular, during the year ended December 31, 2010, there were three sites which each accounted for 10% or more of our revenue: one community hospital accounted for approximately 12% of our revenue; a regional reference laboratory accounted for approximately 11% of our revenue and a community oncology practice accounted for another approximately 11% of our revenue. For the year ended December 31, 2011, we generated revenue from two test ordering sites that represented 10% or more of our revenue: a community hospital accounted for approximately 18% of our revenue and a community oncology practice accounted for approximately 11% of our revenue. For the year ended December 31, 2012, three test ordering sites accounted for 10% or more of our revenue; a university teaching center accounted for approximately 11%; a clinical trial client accounted for approximately 13% and a community hospital accounted for approximately 10%. The loss of any one of these test ordering sites would not materially adversely affect our results of operations. The top five test ordering sites during the three months ended March 31, 2013 and 2012 accounted for 58% and 62% respectively, of our clinical testing volumes, with 30% and 43% respectively, of the volume coming from community hospitals. During the three months ended March 31, 2013, there were three sites which each accounted for approximately 10% or more of our revenue. A clinical trial client accounted for approximately 21%, a university teaching center accounted for approximately 12%, and a community oncology practice accounted for approximately 12%. During the three months ended March 31, 2012, there were two sites which each accounted for more than 10% of our clinical revenue: a community hospital and a clinical trial client accounted for approximately 15% and 13% of revenue, respectively.

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We receive revenue for our clinical lab services from private insurance carriers and other non-Medicare payors (such as unions and self-insured plans), Medicare, “direct bill” customers, and grants. Direct bill customers are institutions that choose, generally at the beginning of our relationship, to pay for our laboratory services directly, as opposed to having patients (or their insurers) pay for those services and providing us with the patients’ insurance information. For instance, bio-pharmaceutical companies generally are direct bill customers. A hospital may elect to be a direct bill customer, and pay our bills directly, or may provide us with patient information so that their patients pay our bills, in which case we generally look to payment from their private insurance carrier or Medicare. In a few instances, we have arrangements where a hospital may have two accounts with us, so that certain tests are direct billed to the hospital, and certain tests are billed to and paid by a patient’s insurer. The billing arrangements generally are dictated by our customers and in accordance with state and federal law. In 2012, private insurance accounted for approximately 30% of our total revenue, Medicare accounted for approximately 18% of our total revenue, direct bill clients accounted for 37% of our total revenue and the balance of our revenue was attributable to grants and sales of our DNA probes. In 2011, private insurance accounted for approximately 51% of our total revenue, Medicare accounted for approximately 24% of our total revenue, direct-bill clients comprised approximately 12% of our total revenue and the balance of our revenue was attributable to grants and sales of our DNA probes. As we expand our portfolio of tests and services, our sales activities and our ExpandDX™ program, we expect the percentage of revenue from direct-bill customers may decrease over the long term. However, during 2012 we started working with a community hospital that preferred the direct bill model and a new direct bill clinical trial services customer, which resulted in a significant increase in direct bill customers as a percentage of revenue for 2012. It is too early in our development to predict whether our experience during 2012 indicates a reversal in the trend we had seen in prior years or simply a variation as we attempt to expand our business and introduce new community hospitals, regional laboratories or clinical trial services customers in a particular period. On average, we generate less revenue per test from direct-bill customers than from other third-party payors but we also have reduced sales cost associated with direct bill clients and significantly reduced collections risk from direct-bill customers and have not experienced any significant collection issues or expenses as a result. Typically, we negotiate discounts in the range of 5% to 20% with direct bill clients depending on the volume of business in a twelve month period.

### ***Cost of Revenues***

Our cost of revenues consists principally of internal personnel costs, including stock-based compensation, laboratory consumables, shipping costs, overhead and other direct expenses, such as specimen procurement and third party validation studies. We are pursuing various strategies to reduce and control our cost of revenues, including automating our processes through more efficient technology, attempting to negotiate improved terms with our suppliers and exploring relocating our manufacturing operations to a lower cost-base country.

### ***Operating Expenses***

We classify our operating expenses into three categories: research and development, sales and marketing, and general and administrative. Our operating expenses principally consist of personnel costs, including stock-based compensation, outside services, laboratory consumables and overhead, development costs, marketing program costs and legal and accounting fees.

*Research and Development Expenses.* We incur research and development expenses principally in connection with our efforts to develop our proprietary tests. Our primary research and development expenses consist of direct personnel costs, laboratory equipment and consumables and overhead expenses. We anticipate that research and development expenses will increase in the near-term, principally as a result of hiring additional personnel to develop and validate tests in our pipeline and to perform work associated with our research collaborations. In addition, we expect that our costs related to collaborations with research and academic institutions will increase. For example, we recently entered into an affiliation agreement to form a joint venture with the Mayo Foundation for Medical Education and Research. All research and development expenses are charged to operations in the periods they are incurred.

*Sales and Marketing Expenses.* Our sales and marketing expenses consist principally of personnel and related overhead costs for our sales team and their support personnel, travel and entertainment expenses, and other selling costs including sales collaterals and trade shows. We expect our sales and marketing expenses to increase significantly after we complete our initial public offering as we expand into new geographies and add new clinical tests and services.

*General and Administrative Expenses.* General and administrative expenses consist principally of personnel-related expenses, professional fees, such as legal, accounting and business consultants, occupancy costs, bad debt and other general expenses. We expect that our general and administrative expenses will increase as we expand our business

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operations. We further expect that general and administrative expenses will increase significantly due to increased information technology (“IT”), legal, insurance, accounting and financial reporting expenses associated with being a public company.

### *Seasonality*

Our business experiences decreased demand during spring vacation season, summer months and the December holiday season when patients are less likely to visit their health care providers. We expect this trend in seasonality to continue for the foreseeable future.

### **Results of Operations**

#### *Three Months Ended March 31, 2013 and 2012*

The following table sets forth certain information concerning our results of operations for the periods shown:

	<b>Three Months Ended March 31,</b>		<b>Change</b>	
	<b>2013</b>	<b>2012</b>	<b>\$</b>	<b>%</b>
<i>(dollars in thousands)</i>				
Revenue	\$ 1,219	\$ 835	\$ 384	46%
Cost of revenues	1,070	823	247	30%
Research and development expenses	491	524	(33)	(6%)
Sales and marketing expenses	396	340	56	16%
General and administrative expenses	1,571	936	635	68%
<b>Total Operating Loss</b>	<b>(2,309)</b>	<b>(1,788)</b>	<b>521</b>	<b>29%</b>
Interest income (expense)	(1,294)	(865)	429	50%
Change in fair value of warrant liability	5,299	1,580	3,719	235%
<b>Income (loss) before income taxes</b>	<b>1,697</b>	<b>(1,073)</b>	<b>2,770</b>	<b>258%</b>
Income tax (benefit) expense	(664)	—	664	100%
<b>Net income (loss)</b>	<b>\$ 2,360</b>	<b>\$ (1,073)</b>	<b>\$3,433</b>	<b>320%</b>

### *Revenue*

Revenue increased 46%, or \$384,000, to \$1.2 million for the three months ended March 31, 2013, from \$835,000 for the three months ended March 31, 2012, due to an increase in test volume and average revenue per test. Our average revenue (excluding grant revenue and probe revenue) per test increased by 23% to \$615 per test for the three months ended March 31, 2013, from \$502 per test for the three months ended March 31, 2012, principally due to an increase in the average revenue per test attributable to direct bill revenue. Our test volume increased by 19% to 1,911 for the three months ended March 31, 2013, from 1,610 for the three months ended March 31, 2012. Grant revenue decreased \$10,500 to \$0 for the three months ended March 31, 2013, from the three months ended March 31, 2012, due to the completion of scheduled drawdowns. MatBA® revenue for the three months ended March 31, 2013 was \$132,000 or 11% of revenue, compared to \$92,000 or 11% of revenue for the three months ended March 31, 2012.

Revenue from private insurance carriers and other non-Medicare payors increased 23%, or \$76,000, to \$406,000 for the three months ended March 31, 2013, from \$330,000 for the three months ended March 31, 2012, principally due to an increase in testing volume. Revenue from private insurance carriers and other non-Medicare payors as a percentage of total revenue decreased to 33% of total revenue for the three months ended March 31, 2013, from 40% of total revenue for the three months ended March 31, 2012. Revenue from DNA probe sales by CGI Italia increased 193%, or \$29,000, to \$44,000 for the three months ended March 31, 2013, from \$15,000 for the three months ended March 31, 2012, principally due to an increase in sales volume. Revenue from Medicare increased 85%, or \$118,000, to \$257,000 for the three months ended March 31, 2013, from \$139,000 for the three months ended March 31, 2012, principally due to a higher number of Medicare reimbursed tests, as well as test mix. Revenue from Medicare as a percentage of total revenue increased to 21% for the three months ended March 31, 2013, from 17% for the three months ended March 31, 2012. Revenue from direct bill customers increased 50%, or \$171,000, to \$511,000 for the three months ended March 31, 2013, from \$340,000 for the three months ended March 31, 2012, principally due to an increase in clinical trial services. Revenue from direct bill customers as a percentage of total revenue increased marginally to 42% for the three months ended March 31, 2013, from 41% for the three months ended March 31, 2012.

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### ***Cost of Revenues***

Cost of revenues increased 30%, or \$247,000, to \$1.1 million for the three months ended March 31, 2013, from \$823,000 for the three months ended March 31, 2012, principally due to clinical supply costs related to higher test volumes.

### ***Operating Expenses***

*Research and Development Expenses.* Research and development expenses decreased 6%, or \$33,000, to \$491,000 for the three months ended March 31, 2013, from \$524,000 for the three months ended March 31, 2012, principally as a result of a decrease in non-employee stock-based compensation related expenses of \$136,000 partially offset by an increase in supplies expense of \$108,000.

*Sales and Marketing Expenses.* Sales and marketing expenses increased 16%, or \$56,000, to \$396,000 for the three months ended March 31, 2013, from \$340,000 for the three months ended March 31, 2012, principally due to an increase in compensation costs associated with increased headcount.

*General and Administrative Expenses.* General and administrative expenses increased 68%, or \$635,000 to \$1.6 million for the three months ended March 31, 2013, from \$936,000 for the three months ended March 31, 2012, principally due to a write-off of \$618,000 of deferred IPO costs.

### ***Interest Income and Expense***

Interest expense increased 50%, or \$429,000, to \$1.3 million for the three months ended March 31, 2013, from \$865,000 for the three months ended March 31, 2012, principally due to interest related to \$3.0 million in new loans received in February 2012, \$2.1 million in new loans received during the quarter ended September 30, 2012, and \$2.0 million in new loans received during the quarter ended December 31, 2012.

### ***Change in Fair Value of Warrant Liability***

The change in the fair value of our warrant liability resulted in \$5.3 million in non-cash income for the three months ended March 31, 2013, as compared to non-cash income of \$1.6 million for the three months ended March 31, 2012. The fair market value of certain of our outstanding common stock warrants that we are required to account for as liabilities decreased during the three months ended March 31, 2013, which principally resulted from a shareholder, Mr. John Pappajohn, limiting certain anti-dilution rights in his warrants to purchase shares of the Company's common stock resulting in a lower fair value of the warrant liability and non-cash income during this period. Because our stock price decreased from December 31, 2011 to March 31, 2012, our warrant liability decreased in that period, resulting in significant non-cash income of \$1.6 million.

### ***Income Taxes***

During the three months ended March 31, 2013, we received \$664,000 in cash for the sale of certain state NOL carryforwards.

## **Liquidity and Capital Resources**

### ***Sources of Liquidity***

Our primary sources of liquidity have been funds generated from our debt financings and equity financings. In addition, we have generated funds from the following sources: (i) the grants received in lieu of federal income tax credits under the Qualifying Therapeutic Discovery Project Program; (ii) grants from the National Institutes of Health and (iii) cash payments generated from operations.

During January 2013, we received \$664,000 in cash in from sales of state NOL's.

On April 10, 2013, we sold 690,000 shares of common stock at a public offering price of \$10.00 per share and completed our IPO with net proceeds of \$5 million. Upon the closing of the IPO, all shares of our then-outstanding Series A and Series B convertible preferred stock automatically converted into an aggregate of 1,287,325 shares of common stock. Concurrent with the IPO, certain derivative warrants with a fair value of \$7 million were reclassified into equity due to the lapsing of anti-dilution provisions in the warrants. Also concurrent with the IPO, \$9.6 million of debt converted into 963,430 shares of common stock. Refer to Notes 1, 4, 6 and 14 to the Consolidated Financial Statements for further details regarding this transaction.

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On April 29, 2013, the Company received \$96,000 from a shareholder who exercised warrants to purchase 24,000 shares of common stock at \$4.00 per share.

In general, our primary uses of cash are providing for working capital purposes (which principally represent payroll costs, the purchase of supplies, rent expense and insurance costs) and servicing debt. As of March 31, 2013, we have maximized our borrowings under our revolving credit lines at \$9 million. Our largest source of operating cash flow is cash collections from our customers.

### **Cash Flows**

Our net cash flow from operating, investing and financing activities for the periods below were as follows:

	Three Months Ended	
	March 31	
	2013	2012
<i>(in thousands)</i>		
Cash provided by (used in):		
Operating activities	\$ (560)	\$ (3,203)
Investing activities	(20)	(101)
Financing activities	(23)	2,920
Net increase (decrease) in cash and cash equivalents	<u>\$ (603)</u>	<u>\$ (384)</u>

We had cash and cash equivalents of \$217,000 at March 31, 2013, and \$820,000 at December 31, 2012. The \$603,000 decrease in cash and cash equivalents for the three months ended March 31, 2013, was principally the result of our \$560,000 net cash used in operations which includes \$128,000 in cash interest payments, \$19,000 in principal payments on notes payable and \$12,000 in purchases of fixed assets. At March 31, 2013, we had total indebtedness of \$19.2 million. The \$384,000 decrease in cash and cash equivalents from December 31, 2011, to March 31, 2012, was principally the result of our \$3.2 million net cash used in operations offset by \$3.6 million in net proceeds from borrowings under new notes payable and warrant exercises.

#### *Cash Used in Operating Activities*

Net cash used in operating activities was \$560,000 for the three months ended March 31, 2013, consisting primarily of \$2.6 million in net income during the period after non-cash income from a change in fair value of warrant liability of \$5.3 million offset by an increase in accounts payable, accrued expenses and deferred revenue of \$897,000, non-cash debt costs of \$947,000 and the write-off of deferred IPO costs of \$618,000. Additionally, during the three months ended March 31, 2013, we received \$664,000 in cash from the sale of certain state NOL carryforwards.

Net cash used in operating activities was \$3.2 million for the three months ended March 31, 2012, consisting primarily of a \$1.1 million net loss during the period after non-cash income from a change in fair value of warrant liability of \$1.6 million and a decrease in accounts payable and accrued expenses of \$1.4 million, partially offset by non-cash debt costs of \$0.6 million. Cash used in operations for the three months ended March 31, 2012 included approximately \$2.1 million in one-time payments, including the payment of a \$1.0 million settlement fee to Office of Inspector General, related litigation costs, and \$432,000 in accounting and legal fees.

#### *Cash Used in Investing Activities*

Net cash used in investing activities was \$20,000 for the three months ended March 31, 2013 due to an increase of \$12,000 in purchases of fixed assets and \$8,000 in patent application costs.

Net cash used in investing activities was \$101,000 for the three months ended March 31, 2012 due to an increase in our restricted cash related to an increase in the letter of credit related to our lease and payment of patent application costs.



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Pursuant to the terms of our lease for our Rutherford facility, we were required to maintain a letter of credit in the amount of \$450,000 to use as a guarantee for the security deposit. In February 2011, we allowed the letter of credit to expire. On April 6, 2012, we reached an agreement with the landlord which requires us to provide a letter of credit in the amount of \$250,000 and in exchange, the landlord agreed to forebear taking action to enforce our obligation to maintain the \$450,000 letter of credit.

### *Cash Provided by Financing Activities*

Net cash used in financing activities was \$23,000 for the three months ended March 31, 2013, principally due to \$19,000 in principal payments on notes payable and \$4,000 in payments on capital lease obligations.

Net cash provided by financing activities was \$2.9 million for the three months ended March 31, 2012, principally due to our receipt of \$3.0 million in net proceeds from the December 2011 financing transaction which closed in February 2012 and \$620,000 in net proceeds from the exercise of certain warrants both of which were offset by payments of \$668,000 in legal and accounting fees associated with our planned public offering.

### *Capital Resources and Expenditure Requirements*

We expect to continue to incur substantial operating losses in the future. It may take several years, if ever, to achieve positive operational cash flow. Until we can generate a sufficient amount of revenues to finance our cash requirements, which we may never do, we will need to continue to raise additional capital to fund our operations. We expect that we will use a portion of the net proceeds from our IPO, our revenues from operations and our existing cash and cash equivalents to finance further research and development and commercialization of our technology and tests, to expand our clinical laboratory, to fund collaborations, and for general working capital and other corporate purposes, including the increased costs associated with being a public company.

Including the net proceeds from the IPO, we believe our current cash resources, are sufficient to satisfy our liquidity requirements at our current level of operations through August 31, 2013. In addition, we will need to raise additional capital to repay the approximately \$3.5 million in outstanding indebtedness that matures on August 15, 2013 and the approximately \$6.0 million in outstanding indebtedness that matures on April 1, 2014 or to negotiate further extensions of the maturity dates for such indebtedness. We have commenced negotiations with Wells Fargo and with Mr. Pappajohn, who serves as a guarantor for such outstanding indebtedness, to further extend the April 1, 2014 maturity date. However, there can be no assurances that we will be able to negotiate an extension of the \$6.0 million Wells Fargo debt on satisfactory terms or at all.

We expect that we will need to raise additional financing in the third quarter of 2013, which might not be available on favorable terms, if at all. We can provide no assurances that any additional sources of financing will be available to us on favorable terms, if at all. If we are unable to secure additional financing we would scale back our general and administrative activities and certain of our research and development activities. We can provide no assurances that any additional sources of financing will be available to us on favorable terms, if at all. Our forecast of the period of time through which our current financial resources will be adequate to support our operations and the costs to support our general and administrative, sales and marketing and research and development activities are forward-looking statements and involve risks and uncertainties. Actual results could vary materially and negatively as a result of a number of factors, including:

- our ability to secure financing and the amount thereof;
- the timing of and the costs involved in obtaining regulatory approvals and clearances for our tests;
- the costs of operating and enhancing our laboratory facilities;
- if our new diagnostic tests are approved, our commercialization activities;
- the scope, progress and results of our research and development programs;
- the scope, progress, results, costs, timing and outcomes of the clinical trials of our diagnostic tests;
- our ability to manage the costs for manufacturing our microarrays and probes;
- the costs of maintaining, expanding and protecting our intellectual property portfolio, including potential litigation costs and liabilities;

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- our ability to obtain adequate reimbursement from governmental and other third-party payors for our tests and services;
- revenues received from sales of our tests, if approved by FDA and accepted by the market;
- the costs of additional general and administrative personnel, including accounting and finance, legal and human resources, as a result of becoming a public company;
- the costs of developing our anticipated internal sales, marketing and distribution capabilities;
- our ability to collect revenues; and
- other risks discussed in the section entitled “Risk Factors”.

Pursuant to the terms of our lease for our Rutherford facility, we anticipate that during the second fiscal quarter of 2013 we will need to restrict an additional \$50,000 in cash in addition to the \$250,000 that is currently restricted in order to secure a \$300,000 letter of credit in favor of our landlord.

We entered into an affiliation agreement to form a joint venture with the Mayo Foundation for Medical Education and Research pursuant to which we expect to make capital contributions of at least \$2.0 million (and potentially up to \$6.0 million, subject to the joint venture entity’s achievement of certain operational milestones) over the next three years, subject to our concluding our negotiation for an extension of that agreement, and our schedule for making payments thereunder. We currently anticipate that we will reach a satisfactory arrangement for the extension of the initial \$2.0 million capital contribution but we may need to raise additional capital to fully fund this venture.

Furthermore, we will need to raise additional capital to expand our business to meet our long-term business objectives. We expect that our operating expenses and capital expenditures will increase in the future as we expand our business. We plan to increase our sales and marketing headcount to promote our new clinical tests and services and to expand into new geographies and to increase our research and development headcount to develop and validate the proprietary tests currently in our pipeline, to expand our pipeline and to perform work associated with our research collaborations. We also expect that our costs of collaborations with research and academic institutions will increase in the future as such institutions begin to view us as a commercial company. For example, in 2011 we entered into an affiliation agreement to form a joint venture with the Mayo Foundation for Medical Education and Research pursuant to which we expect to make capital contributions of up to \$6.0 million over the next three years, subject to negotiating an extension of that agreement, which negotiations have commenced, and the joint venture entity’s achievement of certain operational milestones. Until we can generate a sufficient amount of revenues to finance our cash requirements, which we may never do, we will need to continue to raise additional capital to fund our operations.

We may raise additional capital to fund our current operations and to fund expansion of our business to meet our long-term business objectives through public or private equity offerings, debt financings, borrowings or strategic partnerships coupled with an investment in our company or a combination thereof. If we raise additional funds through the issuance of convertible debt securities, or other debt securities, these securities could be secured and could have rights senior to those of our common stock. In addition, any new debt incurred by the Company could impose covenants that restrict our operations. The issuance of any new equity securities will also dilute the interest of our current stockholders. Given the risks associated with our business, including our unprofitable operating history and our ability to develop additional proprietary tests, additional capital may not be available when needed on acceptable terms, or at all. If adequate funds are not available, we will need to curb our expansion plans or limit our research and development activities, which would have a material adverse impact on our business prospects and results of operations. For further discussion of the impact of our present indebtedness and access to future financing on our business, see the section of our Prospectus entitled “*Risk Factors—Risks Related to Our Business and Strategy—We have a substantial amount of indebtedness, which could have a material adverse effect on our financial condition and our ability to fund operations, obtain additional financing and react to changes in our business.*”

### **Income Taxes**

Over the past several years we have generated operating losses in all jurisdictions in which we may be subject to income taxes. As a result, we have accumulated significant net operating losses and other deferred tax assets. Because of our history of losses and the uncertainty as to the realization of those deferred tax assets, a full valuation allowance has been recognized. We do not expect to report a provision for income taxes until we have a history of earnings, if ever, that would support the realization of our deferred tax assets.



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### **Off-Balance Sheet Arrangements**

Since inception, we have not engaged in any off balance sheet activities as defined in Item 303(a)(4) of Regulation S-K.

### **Critical Accounting Policies and Significant Judgment and Estimates**

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates based on historical experience and make various assumptions, which management believes to be reasonable under the circumstances, which form the basis for judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Section 107 of the JOBS Act provides that an "emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an "emerging growth company" can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we are choosing to "opt out" of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

The notes to our audited consolidated financial statements, which are included in our Prospectus, contain a summary of our significant accounting policies. We consider the following accounting policies critical to the understanding of the results of our operations:

- Revenue recognition;
- Accounts receivable and bad debts;
- Stock-based compensation; and
- Warrant liability.

### **Forward-Looking Statements**

Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential," or the negative of those terms, and similar expressions and comparable terminology intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties including those set forth below under Part II, Item 1A, "Risk Factors" in this quarterly report on Form 10-Q. Given these uncertainties, you should not place undue reliance on these forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the date of this quarterly report on Form 10-Q and, except as required by law, we undertake no obligation to update or review publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this quarterly report on Form 10-Q. You should read this quarterly report on Form 10-Q and the documents referenced in this quarterly report on Form 10-Q and filed as exhibits completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements. Such statements may include, but are not limited to, statements concerning the following:

- our ability to achieve profitability by increasing sales of our laboratory tests and services and to continually develop and commercialize novel and innovative genomic-based diagnostic tests and services for cancer patients;
- our ability to raise additional capital to meet our liquidity needs, including the repayment of \$3.5 million of indebtedness due in August 2013;
- our ability to clinically validate our pipeline of genomic microarray tests currently in development;
- our ability to execute on our marketing and sales strategy for our genomic tests and gain acceptance of our tests in the market;
- our ability to keep pace with a rapidly advancing market;

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- our ability to satisfy U.S. (including FDA) and international regulatory requirements with respect to our tests and services, many of which are new and still evolving;
- our ability to obtain reimbursement from governmental and other third-party payors for our tests and services;
- competition from clinical laboratory services companies, genomic-based diagnostic tests currently available or new tests that may emerge;
- our ability to maintain our clinical collaborations and enter into new collaboration agreements with highly regarded organizations in the cancer field so that, among other things, have access to thought leaders in the field and to a robust number of samples to validate our genomic tests;
- our ability to maintain our present customer base and retain new customers;
- potential product liability or intellectual property infringement claims;
- our dependency on third-party manufacturers to supply or manufacture our products;
- our ability to attract and retain a sufficient number of scientists, clinicians, sales personnel and other key personnel with extensive experience in oncology, who are in short supply;
- our ability to obtain or maintain patents or other appropriate protection for the intellectual property in our proprietary tests and services;
- our dependency on the intellectual property licensed to us or possessed by third parties;
- our ability to expand internationally and launch our tests in emerging markets, such as India and Brazil; and
- our ability to adequately support future growth.

### **Item 3. Quantitative and Qualitative Disclosures About Market Risk**

Our exposure to market risk is limited to our cash, cash equivalents and marketable securities, all of which have maturities of one year or less. The goals of our investment policy are preservation of capital, fulfillment of liquidity needs and fiduciary control of cash and investments. We also seek to maximize income from our investments without assuming significant risk. To achieve our goals, we maintain a portfolio of cash equivalents and investments in a variety of securities that management believes to be of high credit quality. The securities in our investment portfolio are not leveraged, are classified as available for sale and are, due to their short-term nature, subject to minimal interest rate risk. We currently do not hedge interest rate exposure. Because of the short-term maturities of our investments, we do not believe that an increase in market rates would have a material negative impact on the value of our investment portfolio.

We do not have any material foreign currency exposure.

### **Item 4. Controls and Procedures**

#### *Evaluation of Disclosure Controls and Procedures*

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to the issuer's management, including the principal executive officer and principal financial officer, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. As of March 31, 2013, we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of March 31, 2013.

#### *Changes in Internal Control over Financial Reporting*

There were no changes in our internal control over financial reporting during the three months ended March 31, 2013 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

**PART II — OTHER INFORMATION**

**Item 1. Legal Proceedings**

None.

**Item 1A. Risk Factors**

**Risks Relating to Our Financial Condition and Capital Requirements**

*We are an early stage company with a history of net losses; we expect to incur net losses in the future, and we may never achieve sustained profitability.*

We have historically incurred substantial net losses. Although we earned net income of \$2.4 million for the three months ended March 31, 2013, we incurred losses of \$6.7 million, \$19.9 million and \$8.4 million for fiscal years ended December 31, 2012, 2011 and 2010, respectively. From our inception in April 1999 through March 31, 2013, we had an accumulated deficit of \$46.6 million. We expect our losses to continue as a result of ongoing research and development expenses and increased sales and marketing costs. These losses have had, and will continue to have, an adverse effect on our working capital, total assets and stockholders' equity. Because of the numerous risks and uncertainties associated with our research, development and commercialization efforts, we are unable to predict when we will become profitable, and we may never become profitable. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our inability to achieve and then maintain profitability would negatively affect our business, financial condition, results of operations and cash flows.

*Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.*

Our auditors have issued a going concern opinion on our 2012 financial statements, expressing substantial doubt that we can continue as an ongoing business for the next twelve months after issuance of their report. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. If we cannot continue as a viable entity, our stockholders may lose some or all of their investment in us.

*We will need to raise additional capital.*

We believe our current cash resources are sufficient to satisfy our liquidity requirements at our current level of operations only through August 31, 2013. We expect that we will need to raise additional financing in the near term to repay certain indebtedness and fund our current level of operations. We have indebtedness of approximately \$3.5 million due on August 15, 2013. We will need to secure additional financing to make those payments or obtain further extensions of time. Even if further extensions are obtained, we anticipate that we will need to secure additional financing to provide sufficient cash for normal operations within six months of the consummation of this financing. We also may need to raise additional capital to satisfy indebtedness of approximately \$6.0 million due on April 1, 2014. We can provide no assurances that any additional sources of financing will be available to us on favorable terms, if at all. Our forecast of the period of time through which our current financial resources will be adequate to support our operations and the costs to support our general and administrative, sales and marketing and research and development activities are forward-looking statements and involve risks and uncertainties.

We will also need to raise additional capital to expand our business to meet our long-term business objectives. Additional financing, which is not in place at this time, may be from the sale of equity or convertible or other debt securities in a public or private offering, from an additional credit facility or strategic partnership coupled with an investment in us or a combination of both. We may be unable to raise sufficient additional financing on terms that are acceptable to us, if at all. Our failure to raise additional capital and in sufficient amounts may significantly impact our ability to expand our business. For further discussion of our liquidity requirements as they relate to our long-term plans, see the section entitled "Liquidity and Capital Resources—Capital Resources and Expenditure Requirements".

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### ***Second quarter 2013 operating results may be adversely affected by transactions effected to facilitate the IPO.***

As a result of the conversion of debt to common stock to facilitate our IPO, the Company expects to have certain non-recurring non-cash charges unfavorably affect the results of operations for the second quarter of 2013, including the write-off of unamortized debt discounts and fees of \$3.9 million and contingently recognizable beneficial conversion expense of \$3.0 million.

### **Risks Relating to Our Business and Strategy**

***If we are unable to increase sales of our laboratory tests and services or to successfully develop and commercialize other proprietary tests, our revenues will be insufficient for us to achieve profitability.***

We currently derive substantially all of our revenues from our laboratory testing services. We have recently begun offering our MatBA®-CLL, MatBA®-SLL, MatBA®-DLBCL and UroGenRA™ Kidney microarrays through our CLIA-accredited and state licensed laboratory. We are in varying stages of research and development for other diagnostic tests that we may offer. If we are unable to increase sales of our laboratory tests and services or to successfully develop and commercialize other diagnostic tests, we will not produce sufficient revenues to become profitable.

***Our business depends on our ability to successfully develop and commercialize novel cancer diagnostic tests and services, which is time consuming and complex, and our development efforts may fail.***

Our current business strategy focuses on discovering, developing and commercializing molecular diagnostic tests and services. We believe the success of our business depends on our ability to fully commercialize our existing diagnostic tests and services and to develop and commercialize new diagnostic tests. We have multiple tests in development, but research, development and commercialization of diagnostic tests is time-consuming, uncertain and complex. Our current diagnostic test pipeline includes: UroGenRA™ microarray, UGenRA™ microarray, FReCaD™ Renal Cancer Test, FHACT™ HPV-associated Cancer Test and expansion of the MatBA® microarray as a prognostic tool in FL and MCL. Tests such as these, or any additional technologies that we may develop, may not succeed in reliably diagnosing or predicting the recurrence of cancers with the sensitivity and specificity necessary to be clinically useful, and thus may not succeed commercially.

In addition, prior to commercializing our diagnostic tests, we must undertake time-consuming and costly development activities, sometimes including clinical studies, and obtain regulatory clearance or approval, which may be denied. This development process involves a high degree of risk, substantial expenditures and will occur over several years. Our development efforts may fail for many reasons, including:

- failure of the tests at the research or development stage;
- difficulty in accessing archival tissue samples, especially tissue samples with known clinical results; or
- lack of clinical validation data to support the effectiveness of the test.

Tests that appear promising in early development may fail to be validated in subsequent studies, and even if we achieve positive results, we may ultimately fail to obtain the necessary regulatory clearances or approvals. There is substantial risk that our research and development projects will not result in commercial tests, and that success in early clinical trials will not be replicated in later studies. At any point, we may abandon development of a test or be required to expend considerable resources repeating clinical trials, which would adversely impact the timing for generating potential revenues from that test. In addition, as we develop tests, we will have to make significant investments in research, development and marketing resources. If a clinical validation study of a particular test then fails to demonstrate the outlined goals of the study, we might choose to abandon the development of that test. Further, our ability to develop and launch diagnostic tests will likely depend on our receipt of additional funding. If our discovery and development programs yield fewer commercial tests than we expect, we may be unable to execute our business plan, which may adversely affect our business, financial condition and results of operations.

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***If we are unable to obtain regulatory clearance or approvals in the United States, if we experience delays in receiving clearance or approvals, or if we do not gain acceptance from other laboratories of any cleared or approved diagnostic tests at their facilities, our growth strategy may not be successful.***

We currently offer our proprietary tests in conjunction with our comprehensive panel of laboratory services in our CLIA-accredited laboratory. Because we currently offer these tests and services solely for use within our laboratory, we believe we may market the tests as LDTs. Under current FDA enforcement policies and guidance, LDTs generally do not require FDA premarket clearance or approval before commercialization, and we have marketed our LDTs on that basis. However, an element of our long-term strategy is to place molecular diagnostic tests on-site with other laboratories to broaden access to our technology and increase demand for our tests and any future diagnostic tests that we may develop. FDA regulates diagnostic kits sold and distributed through interstate commerce as medical devices. Unless an exemption applies, generally, before a new medical device or a new use for a medical device may be sold or distributed in the United States, the medical device must receive either FDA clearance of a 510(k) pre-market notification or pre-market approval. As a result, before we can market or distribute our DNA probes or microarray tests in the United States for use by other clinical testing laboratories, we must first obtain pre-market clearance or pre-market approval from FDA. We have not yet applied for clearance or approval from FDA, and need to complete additional validations before we are ready to apply. We believe it would likely take two years or more to conduct the studies and trials necessary to obtain approval from FDA to commercially launch MatBA®-CLL, MatBA®-SLL, MatBA®-DLBCL and UroGenRA™ Kidney microarrays outside of our clinical laboratory. Once we do apply, we may not receive FDA clearance or approval for the commercial use of our tests on a timely basis, or at all. If we are unable to achieve clearance or approval or if clinical diagnostic laboratories do not accept our tests, our ability to grow our business by deploying our tests could be compromised.

***If we are unable to execute our marketing strategy for our cancer diagnostic tests and are unable to gain acceptance in the market, we may be unable to generate sufficient revenue to sustain our business.***

We are an early-stage company and have engaged in only limited sales and marketing activities for the diagnostic tests and services offered in our clinical laboratory. To date, we have received very limited revenue from sales of our probes and microarrays. While we are in the process of launching several of our DNA probes outside of the United States, we have limited experience in marketing these probes and we need to develop relationships with third-party distributors in the emerging market countries where we are targeting our selling efforts.

Although we believe that our diagnostic tests represent promising commercial opportunities, our tests may never gain significant acceptance in the marketplace and therefore may never generate substantial revenue or profits for us. We will need to establish a market for our diagnostic tests and build that market through physician education and awareness programs. Gaining acceptance in medical communities requires publication in leading peer-reviewed journals of results from studies using our tests. The process of publication in leading medical journals is subject to a peer review process and peer reviewers may not consider the results of our studies sufficiently novel or worthy of publication. Failure to have our studies published in peer-reviewed journals would limit the adoption of our tests.

Our ability to successfully market the diagnostic tests that we may develop will depend on numerous factors, including:

- whether healthcare providers believe our diagnostic tests provide clinical utility;
- whether the medical community accepts that our diagnostic tests are sufficiently sensitive and specific to be meaningful in patient care and treatment decisions; and
- whether health insurers, government health programs and other third-party payors will cover and pay for our diagnostic tests and, if so, whether they will adequately reimburse us.

Failure to achieve widespread market acceptance of our diagnostic tests would materially harm our business, financial condition and results of operations.

***If we cannot develop tests to keep pace with rapid advances in technology, medicine and science, our operating results and competitive position could be harmed.***

In recent years, there have been numerous advances in technologies relating to the diagnosis and treatment of cancer. There are several new cancer drugs under development that may increase patient survival time. There have also been

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advances in methods used to analyze very large amounts of genomic information. We must continuously develop new tests and enhance our existing tests to keep pace with evolving standards of care. Our tests could become obsolete unless we continually innovate and expand them to demonstrate benefit in patients treated with new therapies. New cancer therapies typically have only a few years of clinical data associated with them, which limits our ability to perform clinical studies and correlate sets of genes to a new treatment's effectiveness. If we cannot adequately demonstrate the applicability of our tests to new treatments, sales of our tests and services could decline, which would have a material adverse effect on our business, financial condition and results of operations.

***If our tests do not continue to perform as expected, our operating results, reputation and business will suffer.***

Our success depends on the market's confidence that we can continue to provide reliable, high-quality diagnostic tests. We believe that our customers are likely to be particularly sensitive to test defects and errors. As a result, the failure of our tests or services to perform as expected would significantly impair our reputation and the public image of our tests and services, and we may be subject to legal claims arising from any defects or errors.

***We have a substantial amount of indebtedness, which could have a material adverse effect on our financial condition and our ability to fund operations, obtain additional financing and react to changes in our business.***

We have substantial indebtedness for borrowed money. As of March 31, 2013, we had indebtedness for borrowed money in the aggregate principal amount of \$19.2 million of which \$9.0 million was outstanding under our existing lines of credit with Wells Fargo Bank, N.A. ("Wells Fargo") and DAM, \$6.0 million was outstanding under a secured term loan credit agreement dated December 2011 as amended in February 2012, with two of our directors or their affiliates and \$3.0 million was outstanding under the restated credit agreement with Mr. Pappajohn and an independent third party investor, and an additional \$1.0 million from Mr. Pappajohn on the same terms as the restated credit agreement. Upon consummation of our initial public offering on April 10, 2013, an aggregate of \$9.6 million of outstanding indebtedness converted to common stock at \$10.00 per share, which was the initial public offering price per share including \$1.0 million under our business line of credit with DAM, \$4.5 million due under the December 2011 credit agreement, \$3.0 million due under the October 2012 restated credit agreement and \$1.0 million due to Mr. Papajohn under the same terms as the restated credit agreement.

Following conversions of debt to equity described above, we have approximately \$9.5 million in outstanding indebtedness, which consists of \$6.0 million under our existing line of credit with Wells Fargo, \$1.5 million due to Dr. Pecora and NNJCA under the December 2011 financing transaction and \$2.0 million due to DAM. Substantially all of our assets, including our intellectual property, are pledged as collateral under our existing lines of credit and the term loans. Our significant debt could limit our ability to satisfy our obligations, limit our ability to operate our business and impair our competitive position. For example, it could:

- require us to dedicate a substantial portion of our cash flow from operations to payments on our debt, reducing the availability of our cash flow from operations to fund working capital, capital expenditures or other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and industry;
- place us at a disadvantage compared to competitors that may have proportionately less debt; and
- increase our cost of borrowing.

***We will need to raise additional capital to repay indebtedness, to fund our existing operations and to develop and commercialize new tests and technologies and expand our operations.***

We will need to raise additional capital to repay approximately \$3.5 million in outstanding indebtedness that matures on August 15, 2013. Even if such indebtedness were further extended, we need to secure additional financing to provide cash for normal operations in the near term. We may need to raise additional capital to satisfy indebtedness of approximately \$6.0 million due on April 1, 2014. Additionally, we will need to raise capital to expand our business to meet our long-term business objectives, including to:

- increase our sales and marketing efforts to drive market adoption and address competitive developments;
- fund development and marketing efforts of any future tests;



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- further expand our clinical laboratory operations;
- expand our technologies into other types of cancer;
- acquire, license or invest in technologies;
- acquire or invest in complementary businesses or assets;
- if our joint venture with Mayo is formed and if formed it achieves certain operational milestones, fund our subsequent contributions of \$4.0 million to our joint venture with Mayo; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our ability to achieve revenue growth;
- our rate of progress in establishing reimbursement arrangements with domestic and international third-party payors;
- the cost of expanding our laboratory operations and offerings, including our sales and marketing efforts;
- our rate of progress in, and cost of the sales and marketing activities associated with, establishing adoption of and reimbursement for our microarray tests and probes;
- our rate of progress in, and cost of research and development activities associated with, products in research and early development;
- the effect of competing technological and market developments;
- costs related to international expansion; and
- the potential cost of and delays in test development as a result of any regulatory oversight applicable to our tests.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, dilution to our stockholders could result. Any equity securities issued also could provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our technologies or tests, or grant licenses on terms that are not favorable to us.

The credit markets and the financial services industry have experienced a period of unprecedented turmoil and upheaval characterized by the bankruptcy, failure, collapse or sale of various financial institutions and an unprecedented level of intervention from the United States federal government. These events have generally made equity and debt financing more difficult to obtain. Accordingly, additional equity or debt financing might not be available on reasonable terms, if at all. If we cannot secure additional funding when needed, we may have to delay, reduce the scope of or eliminate one or more research and development programs or sales and marketing initiatives. In addition, we may have to work with a partner on one or more of our development programs, which could lower the economic value of those programs to us.

***If our sole laboratory facility becomes damaged or inoperable, or we are required to vacate the facility, our ability to provide services and pursue our research and development efforts may be jeopardized.***

We currently derive substantially all of our revenues from our laboratory testing services. We do not have any clinical reference laboratory facilities outside of our facility in Rutherford, New Jersey. Our facilities and equipment could be harmed or rendered inoperable by natural or man-made disasters, including fire, flooding and power outages, which may render it difficult or impossible for us to perform our tests or provide laboratory services for some period of time. The inability to perform our tests or the backlog of tests that could develop if our facility is inoperable for even a short period of time may result in the loss of customers or harm to our reputation or relationships with collaborators, and we may be unable to regain those customers or repair our reputation in the future. Furthermore, our facilities and the equipment we use to perform our research and development work could be costly and time-consuming to repair or replace.

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Additionally, a key component of our research and development process involves using biological samples and the resulting data sets and medical histories, as the basis for our diagnostic test development. In some cases, these samples are difficult to obtain. If the parts of our laboratory facility where we store these biological samples are damaged or compromised, our ability to pursue our research and development projects, as well as our reputation, could be jeopardized. We carry insurance for damage to our property and the disruption of our business, but this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

Further, if our laboratory became inoperable we may not be able to license or transfer our proprietary technology to a third-party, with established state licensure and CLIA accreditation under the scope of which our diagnostic tests could be performed following validation and other required procedures, to perform the tests. Even if we find a third-party with such qualifications to perform our tests, such party may not be willing to perform the tests for us on commercially reasonable terms.

***If we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenues or achieve and sustain profitability.***

Our principal competition comes from the existing mainstream diagnostic methods that pathologists and oncologists use and have used for many years. It may be difficult to change the methods or behavior of the referring pathologists and oncologists to incorporate our molecular diagnostic testing in their practices. We believe that we can introduce our diagnostic tests successfully due to their clinical utility and the desire of pathologists and oncologists to find solutions for more accurate diagnosis, prognosis and personalized treatment options for cancer patients.

We also face competition from companies that currently offer or are developing products to profile genes, gene expression or protein biomarkers in various cancers. Personalized genetic diagnostics is a new area of science, and we cannot predict what tests others will develop that may compete with or provide results superior to the results we are able to achieve with the tests we develop. Our competitors include public companies such as CombiMatrix Corporation, Quest Diagnostics, Abbott Laboratories, Inc., Johnson & Johnson, Roche Molecular Systems, Inc., bioTheragnostics, Inc. (part of bioMérieux SA), Genomic Health, Inc., Myriad Genetics Inc., Qiagen N.V. and Response Genetics, Inc., and many private companies, including Agendia B.V., and Foundation Medicine, Inc. We expect that pharmaceutical and biopharmaceutical companies will increasingly focus attention and resources on the personalized diagnostic sector as the potential and prevalence increases for molecularly targeted oncology therapies approved by FDA along with companion diagnostics. For example, FDA has recently approved two such agents—Xalkori crizotinib from Pfizer Inc. along with its companion anaplastic lymphoma kinase FISH test from Abbott Laboratories, Inc. and Zelboraf vemurafenib from Genentech USA Incorporated and Daiichi-Sankyo Inc. along with its companion B-RAF kinase V600 mutation test from Roche Molecular Systems, Inc. These two recent FDA approvals are only the second and third instances of simultaneous approvals of a drug and companion diagnostic, the first being the 1998 approval of Genentech, Inc.'s Herceptin trastuzumab for HER2 positive breast cancer along with the HercepTest from partner Dako A/S.

With respect to our clinical laboratory sciences business we face competition from companies such as Genoptix, Inc. (a Novartis AG Company), Clariant, Inc. (a division of GE Healthcare, a unit of General Electric Company), Bio-Reference Laboratories, Inc., and Genzyme Genetics (a LabCorp Specialty Testing Group).

Many of our present and potential competitors have widespread brand recognition and substantially greater financial and technical resources and development, production and marketing capabilities than we do. Others may develop lower-priced, less complex tests that payors, pathologists and oncologists could view as functionally equivalent to our tests, which could force us to lower the list price of our tests and impact our operating margins and our ability to achieve profitability. In addition, technological innovations that result in the creation of enhanced diagnostic tools may enable other clinical laboratories, hospitals, physicians or medical providers to provide specialized diagnostic services similar to ours in a more patient-friendly, efficient or cost-effective manner than is currently possible. If we cannot compete successfully against current or future competitors, we may be unable to increase market acceptance and sales of our tests, which could prevent us from increasing or sustaining our revenues or achieving or sustaining profitability.



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***A small number of test ordering sites account for most of the sales of our tests and services. If any of these sites orders fewer tests from us for any reason, our revenues could decline.***

Due to the early stage nature of our business and our limited sales and marketing activities to date, we have historically derived a significant portion of our revenue from a limited number of test ordering sites, although the test ordering sites that generate a significant portion of our revenue have changed from period to period. For example, there was one site which represented more than 10% of our revenue for the year ended December 31, 2010 that generated less than 10% of our revenue for the year ended December 31, 2011. Our test ordering sites are largely hospitals, cancer centers, reference laboratories and physician offices. Oncologists and pathologists at these sites order the tests on behalf of the needs of their oncology patients or as part of a clinical trial sponsored by a biopharmaceutical company in which the patient is being enrolled. For the year ended December 31, 2012, our top five test ordering sites accounted for 58% of our clinical testing volume with approximately 46% of the volume coming from community hospitals. For the year ended December 31, 2011, our top five test ordering sites represented approximately 63% of our clinical testing volume, with approximately 29% of the volume coming from community hospitals. Our top five test ordering sites for the year ended December 31, 2010 accounted for 60% of our clinical testing volumes, with approximately 15% of the volume coming from community hospitals. In particular, during the year ended December 31, 2010, there were three sites which each accounted for 10% or more of our revenue: one community hospital accounted for approximately 12% of our revenue; a regional reference laboratory accounted for approximately 11% of our revenue and a community oncology practice accounted for another approximately 11% of our revenue. For the year ended December 31, 2011, we generated revenue from two test ordering sites that represented 10% or more of our revenue: a community hospital accounted for approximately 18% of our revenue and a community oncology practice accounted for approximately 11% of our revenue. For the year ended December 31, 2012, three test ordering sites accounted for 10% or more of our revenue; a university teaching center accounted for approximately 11%; a clinical trial client accounted for approximately 13% and a community hospital network accounted for approximately 10%. We generally do not enter into formal written agreements with such test ordering sites and, as a result, we may lose these significant test ordering sites at any time.

***We expect to continue to incur significant expenses to develop and market our diagnostic tests, which could make it difficult for us to achieve and sustain profitability.***

In recent years, we have incurred significant costs in connection with the development of our diagnostic tests. For the year ended December 31, 2012, our research and development expenses were \$2.1 million, which was 49% of our net revenues, and our sales and marketing expenses were \$1.4 million, which was 33% of revenue. For the year ended December 31, 2011, our research and development expenses were \$2.1 million, which was 69% of our net revenues and our sales and marketing expenses were \$1.6 million, which was 52% of revenue. For the year ended December 31, 2010, our research and development expenses were \$1.2 million, which was 46% of revenue, and our sales and marketing expenses were \$716,000, which was 28% of revenue. We expect our expenses to continue to increase, in absolute dollars, for the foreseeable future as we seek to expand the clinical utility of our diagnostic tests, drive adoption of and reimbursement for our diagnostic tests and develop new tests. As a result, we will need to generate significant revenues in order to achieve sustained profitability.

***If pathologists and oncologists decide not to order our diagnostic tests, we may be unable to generate sufficient revenue to sustain our business.***

To generate demand for our molecular diagnostic tests and services, we will need to educate oncologists and pathologists on the clinical utility, benefits and value of each type of test we provide through published papers, presentations at scientific conferences and one-on-one education sessions by members of our sales force. In addition, we will need to assure oncologists and pathologists of our ability to obtain and maintain adequate reimbursement coverage from third-party payors. We may need to hire additional commercial, scientific, technical and other personnel to support this process. If we cannot convince medical practitioners to order our diagnostic tests or other future tests we develop, we will likely be unable to create demand for our tests in sufficient volume for us to achieve sustained profitability.

***We depend on certain collaborations with third parties for the supply of certain tissue samples and biological materials that we use in our research and development efforts. If the costs of such collaborations increase after we complete our initial public offering or our third party collaborators terminate their relationship with us, our business may be materially harmed.***

Under standard clinical practice in the United States, tumor biopsies removed from patients are chemically preserved, embedded in paraffin wax and stored. Our clinical development relies on our ability to access these archived tumor biopsy samples, as well as information pertaining to their associated clinical outcomes. Other companies often

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compete with us for access. Additionally, the process of negotiating access to archived samples is lengthy, because it typically involves numerous parties and approvals to resolve complex issues such as usage rights, institutional review board approval, privacy rights, publication rights, intellectual property ownership and research parameters.

We have collaborative relationships with Memorial Sloan-Kettering Cancer Center, Mayo, North Shore—Long Island Jewish Health System, the National Cancer Institute, the Cleveland Clinic and other institutions who provide us with tissue samples and other biological materials that we use in developing and validating our tests. We do not have any written arrangement with certain third party collaborators, and in many of the cases in which the arrangements are in writing, our collaborative relationships are terminable on 30 days notice or less. If one or more collaborators terminate their relationship with us, we will need to identify other third parties to provide us with tissue samples and biological materials, which could result in a delay in our research and development activities and negatively affect our business. In addition, as we grow, our collaborators that are research and academic institutions will begin to seek additional financial contributions from us, which may negatively affect our results of operations.

***The loss of our Chairman or key members of our executive management team could adversely affect our business.***

Our success in implementing our business strategy depends largely on the skills, experience and performance of our Chairman of our board of directors, Dr. Raju Chaganti, key members of our executive management team and others in key management positions, including Panna L. Sharma, our Chief Executive Officer, Elizabeth A. Czerepak, our Chief Financial Officer, and Jane Houldsworth, Ph.D., our Vice President of Research and Development. The collective efforts of each of these persons working as a team will be critical to us as we continue to develop our technologies, tests and research and development and sales programs. As a result of the difficulty in locating qualified new management, the loss or incapacity of existing members of our executive management team could adversely affect our operations. If we were to lose one or more of these key employees, we could experience difficulties in finding qualified successors, competing effectively, developing our technologies and implementing our business strategy. Our Chief Executive Officer, Chief Financial Officer and Vice President of Research and Development have employment agreements, however, the existence of an employment agreement does not guarantee retention of members of our executive management team and we may not be able to retain those individuals for the duration of or beyond the end of their respective terms. We do not maintain “key person” insurance on any of our employees except our Chief Executive Officer.

In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

***There is a scarcity of experienced professionals in our industry. If we are not able to retain and recruit personnel with the requisite technical skills, we may be unable to successfully execute our business strategy.***

The specialized nature of our industry results in an inherent scarcity of experienced personnel in the field. Our future success depends upon our ability to attract and retain highly skilled personnel (including medical, scientific, technical, commercial, business, regulatory and administrative personnel) necessary to support our anticipated growth, develop our business and perform certain contractual obligations. Given the scarcity of professionals with the scientific knowledge that we require and the competition for qualified personnel among life science businesses, we may not succeed in attracting or retaining the personnel we require to continue and grow our operations. The loss of a key employee, the failure of a key employee to perform in his or her current position or our inability to attract and retain skilled employees could result in our inability to continue to grow our business or to implement our business strategy.

***Our inability to attract, hire and retain a sufficient number of qualified sales professionals would hamper our ability to increase demand for our tests, to expand geographically and to successfully commercialize any other diagnostic tests or products we may develop.***

Our success in selling our clinical laboratory services, diagnostic tests and any other tests or products that we are able to develop will require us to expand our sales force in the United States and internationally by recruiting additional sales representatives with extensive experience in oncology and close relationships with medical oncologists, surgeons, pathologists and other hospital personnel. To achieve our marketing and sales goals, we will need to substantially expand our sales and commercial infrastructure, with which to date we have had little experience. Sales professionals with the necessary technical and business qualifications are in high demand, and there is a risk that we may be unable to attract, hire and retain the number of sales professionals with the right qualifications, scientific backgrounds and relationships with decision-makers

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at potential customers needed to achieve our sales goals. We may face competition from other companies in our industry, some of whom are much larger than us and who can pay greater compensation and benefits than we can, in seeking to attract and retain qualified sales and marketing employees. If we are unable to hire and retain qualified sales and marketing personnel, our business will suffer.

***International expansion of our business exposes us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.***

Our business strategy incorporates international expansion, including establishing and maintaining clinician marketing and education capabilities outside of the United States and expanding our relationships with distributors and manufacturers. Doing business internationally involves a number of risks, including:

- multiple, conflicting and changing laws and regulations such as tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us or our distributors to obtain regulatory approvals for the sale or use of our tests in various countries, including failure to achieve “CE Marking,” a conformity mark which is required to market in vitro diagnostic medical devices in the European Economic Area and which is broadly accepted in other international markets;
- difficulties in managing foreign operations;
- complexities associated with managing multiple payor-reimbursement regimes or self-pay systems;
- logistics and regulations associated with shipping tissue samples, including infrastructure conditions and transportation delays;
- limits on our ability to penetrate international markets if our diagnostic tests cannot be processed by an appropriately qualified local laboratory;
- financial risks, such as longer payment cycles, difficulty enforcing contracts and collecting accounts receivable and exposure to foreign currency exchange rate fluctuations;
- reduced protection for intellectual property rights;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions; and
- failure to comply with the Foreign Corrupt Practices Act, including its books and records provisions and its anti-bribery provisions, by maintaining accurate information and control over sales and distributors’ activities.

Any of these risks, if encountered, could significantly harm our future international expansion and operations and, consequently, have a material adverse effect on our financial condition, results of operations and cash flows.

***Our dependence on distributors for foreign sales of our FISH-based DNA probes could limit or prevent us from selling our probes in foreign markets and from realizing long-term international revenue growth.***

We intend to grow our business internationally, and to do so we must enter into agreements with local distributors to sell our FISH-based DNA probes. These agreements generally contain exclusivity provisions and generally cannot be terminated without cause during the term of the agreement. We may need to attract additional distributors to expand the territories in which we sell our probes. These distributors may not commit the necessary resources to market and sell our probes to the level of our expectations, and we may be unable to locate suitable alternatives should we terminate our agreement with such distributors or if such distributors terminate their agreement with us. If current or future distributors do not perform adequately, or we are unable to locate distributors in particular geographic areas, we may not realize long-term international revenue growth.

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***We currently rely on a single third-party to produce our microarrays and any problems experienced by this vendor could result in a delay or interruption in the supply of our microarrays to us until the problem is cured by such vendor or until we locate and qualify an alternative source of supply.***

The design of our microarrays is currently optimized on a family of instruments referred to as the Agilent Microarray Platform, which is currently produced solely by Agilent Technologies Inc. ("Agilent"). We currently purchase these components from Agilent under purchase orders and do not have a long-term contract with Agilent. If Agilent were to delay or stop producing our microarrays, or if the prices Agilent charges us were to increase significantly, we would need to identify another supplier and optimize our microarrays on a new technology platform. We could experience delays in manufacturing the microarrays while finding another acceptable supplier, which could impact our results of operations. The changes could also result in increased costs associated with migrating to the new technology platform and in increased manufacturing costs. Further, any prolonged disruption in Agilent's operations could have a significant negative impact on the supply of our microarrays.

***If we were sued for product liability or professional liability, we could face substantial liabilities that exceed our resources.***

The marketing, sale and use of our tests could lead to the filing of product liability claims were someone to allege that our tests failed to perform as designed. We may also be subject to liability for errors in the test results we provide to pathologists and oncologists or for a misunderstanding of, or inappropriate reliance upon, the information we provide. A product liability or professional liability claim could result in substantial damages and be costly and time-consuming for us to defend.

Although we believe that our existing product and professional liability insurance is adequate, our insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could damage our reputation, result in the recall of our tests, or cause current clinical partners to terminate existing agreements and potential clinical partners to seek other partners, any of which could impact our results of operations.

***If we use biological and hazardous materials in a manner that causes injury, we could be liable for damages.***

Our activities currently require the controlled use of potentially harmful biological materials and hazardous materials and chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject to, on an on going basis, federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant and could have a material adverse effect on our financial condition, results of operations and cash flows. In the event of an accident or if we otherwise fail to comply with applicable regulations, we could lose our permits or approvals or be held liable for damages or penalized with fines.

***We may acquire other businesses or form joint ventures or make investments in other companies or technologies that could harm our operating results, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.***

As part of our business strategy, we may pursue acquisitions of businesses and assets. We also may pursue strategic alliances and joint ventures that leverage our core technology and industry experience to expand our offerings or distribution. For example, we agreed to enter into a joint venture in March 2013 (or such later date that we may negotiate with Mayo) with Mayo Foundation for Education and Research. We have no experience with acquiring other companies and limited experience with forming strategic alliances and joint ventures. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could have a material adverse effect on our financial condition, results of operations and cash flows. Integration of an acquired company also may disrupt ongoing operations and require management resources that would otherwise focus on developing our existing business. We may experience losses related to investments in other companies, which could have a material negative effect on our results of operations. We may not identify or complete these transactions in a timely manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, technology license, strategic alliance or joint venture.

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To finance any acquisitions or joint ventures, we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other companies or fund a joint venture project using our stock as consideration. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all.

### ***Our agreement with Mayo may not proceed successfully.***

In November 2011 we entered into an affiliation agreement with the Mayo Foundation for Medical Education and Research. The agreement contemplates that we would form a joint venture prior to March 31, 2013 to focus on developing oncology diagnostic services and tests utilizing next generation sequencing. The agreement also contemplates an initial \$2.0 million capital contribution by us, and total capital contributions by us of up to \$6.0 million over the next three years subject to the joint venture achieving certain operational milestones. We have been in discussions with Mayo and believe we will be able to negotiate a formal extension of the March 31 date and the timetable for us to fund our initial \$2 million capital contribution. However, no assurances can be given that any such extensions will be on terms favorable to us. If we fail to negotiate an extension with Mayo, or if the joint venture entity otherwise is not formed or funded for any reason, we will either need to find another business partner to pursue this business objective, which may delay our progress, or lose a potentially significant development opportunity, which may have an adverse effect on achieving our long term business objectives.

### ***If we cannot support demand for our tests, including successfully managing the evolution of our technology and manufacturing platforms, our business could suffer.***

As our test volume grows, we will need to increase our testing capacity, implement increases in scale and related processing, customer service, billing, collection and systems process improvements and expand our internal quality assurance program and technology to support testing on a larger scale. We will also need additional certified laboratory scientists and other scientific and technical personnel to process these additional tests. Any increases in scale, related improvements and quality assurance may not be successfully implemented and appropriate personnel may not be available. As additional tests are commercialized, we will need to bring new equipment on line, implement new systems, technology, controls and procedures and hire personnel with different qualifications. Failure to implement necessary procedures or to hire the necessary personnel could result in a higher cost of processing or an inability to meet market demand. We cannot assure you that we will be able to perform tests on a timely basis at a level consistent with demand, that our efforts to scale our commercial operations will not negatively affect the quality of our test results or that we will respond successfully to the growing complexity of our testing operations. If we encounter difficulty meeting market demand or quality standards for our tests, our reputation could be harmed and our future prospects and business could suffer, which may have a material adverse effect on our financial condition, results of operations and cash flows.

### ***We may encounter manufacturing problems or delays that could result in lost revenue.***

We currently manufacture our proprietary DNA probes outside the United States at a third party fully compliant facility and intend to continue to manufacture our probes outside the United States. We currently have limited manufacturing capacity for our probes. If demand for our probes increases significantly, we will need to either expand our manufacturing capabilities or outsource to other manufacturers. If we or third party manufacturers engaged by us fail to manufacture and deliver our probes in a timely manner, our relationships with our customers could be seriously harmed. We cannot assure you that manufacturing or quality control problems will not arise as we attempt to increase the production of our probes or that we can increase our manufacturing capabilities and maintain quality control in a timely manner or at commercially reasonable costs. If we cannot manufacture our probes consistently on a timely basis because of these or other factors, it could have a significant negative impact on the supply of our DNA probes.

### ***Declining general economic or business conditions may have a negative impact on our business.***

Continuing concerns over United States health care reform legislation and energy costs, geopolitical issues, the availability and cost of credit and government stimulus programs in the United States and other countries have contributed to increased volatility and diminished expectations for the global economy. These factors, combined with low business and consumer confidence and high unemployment, precipitated an economic slowdown and recession. If the economic climate does not improve or continues to deteriorate, our business, including our access to patient samples and the addressable market

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for diagnostic tests that we may successfully develop, as well as the financial condition of our suppliers and our third-party payors, could be adversely affected, resulting in a negative impact on our business, financial condition and results of operations.

***We depend on our information technology and telecommunications systems, and any failure of these systems could harm our business.***

We depend on information technology and telecommunications systems for significant aspects of our operations. In addition, our third-party billing and collections provider depends upon telecommunications and data systems provided by outside vendors and information we provide on a regular basis. These information technology and telecommunications systems support a variety of functions, including test processing, sample tracking, quality control, customer service and support, billing and reimbursement, research and development activities and our general and administrative activities. Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious human acts and natural disasters. Moreover, despite network security and back-up measures, some of our servers are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that could affect our information technology and telecommunications systems, failures or significant downtime of our information technology or telecommunications systems or those used by our third-party service providers could prevent us from processing tests, providing test results to pathologists, oncologists, billing payors, processing reimbursement appeals, handling patient or physician inquiries, conducting research and development activities and managing the administrative aspects of our business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have an adverse effect on our business.

### **Regulatory Risks Relating to Our Business**

***Healthcare policy changes, including recently enacted legislation reforming the U.S. health care system, may have a material adverse effect on our financial condition, results of operations and cash flows.***

In March 2010, U.S. President Barack Obama signed the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (collectively, "PPACA"), which makes a number of substantial changes in the way health care is financed by both governmental and private insurers. Among other things, the PPACA:

- Requires each medical device manufacturer to pay a sales tax equal to 2.3% of the price for which such manufacturer sells its medical devices, beginning in 2013. This tax may apply to some or all of our current products and products which are in development.
- Mandates a reduction in payments for clinical laboratory services paid under the Medicare Clinical Laboratory Fee Schedule of 1.75% for the years 2011 through 2015. In addition, a productivity adjustment is made to the fee schedule payment amount. These changes in payments apply to some or all of the clinical laboratory test services we furnish to Medicare beneficiaries.
- Establishes an Independent Payment Advisory Board to reduce the per capita rate of growth in Medicare spending. The Independent Payment Advisory Board has broad discretion to propose policies, which may have a negative impact on payment rates for services, including clinical laboratory services, beginning in 2016, and for hospital services beginning in 2020.

Although some of these provisions may negatively impact payment rates for clinical laboratory services, the PPACA also extends coverage to approximately 32 million previously uninsured people, which may result in an increase in the demand for our tests and services. The mandatory purchase of insurance has been strenuously opposed by a number of state governors, resulting in lawsuits challenging the constitutionality of certain provisions of the PPACA. On June 28, 2012, the Supreme Court upheld the constitutionality of the health care reform law, with the exception of certain provisions dealing with the expansion of Medicaid coverage under the law. Therefore, most of the law's provisions will go into effect in 2013 and 2014. Congress has also proposed a number of legislative initiatives, including possible repeal of the PPACA. At this time, it remains unclear whether there will be any changes made to the PPACA, whether to certain provisions or its entirety.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. Recently, on August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, creates the Joint Select Committee on Deficit Reduction to recommend proposals in spending reductions to Congress. The Joint Select



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Committee did not achieve a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. The full impact on our business of the PPACA and the new law is uncertain. In addition, on February 22, 2012, the President signed the Middle Class Tax Relief and Job Creation Act of 2012 ("MCTRJCA"), which, among other things, mandated an additional change in Medicare reimbursement for clinical laboratory services. This legislation requires a rebasing of the Medicare clinical laboratory fee schedule to effect a 2% reduction in payment rates otherwise determined for 2013. This will serve as a base for 2014 and subsequent years. As a result of the changes mandated by PPACA and MCTRJCA, CMS projects laboratory services for 2013 will be reduced by approximately 3%.

Certain of our laboratory services are paid under the Medicare Physician Fee Schedule and, under the current statutory formula, the rates for these services are updated annually. For the past several years, the application of the statutory formula would have resulted in substantial payment reductions if Congress failed to intervene. In the past, Congress passed interim legislation to prevent the decreases. On November 1, 2012, the Centers for Medicare & Medicaid Services (CMS) issued its 2013 Physician Fee Schedule Final Rule ("the Final Rule"). In the Final Rule, CMS called for a reduction of approximately 26.5% in the 2013 conversion factor that is used to calculate physician reimbursement. However, the American Taxpayer Relief Act of 2012, which was signed into law on January 2, 2013, prevents this proposed cut and keeps the current reimbursement rate in effect until December 31, 2013. If Congress fails to act in future years to offset similar proposed reductions, the resulting decrease in payment could adversely impact our revenues and results of operations.

In addition, many of the Current Procedure Terminology ("CPT") procedure codes that we use to bill our tests were recently revised by the AMA, effective January 1, 2013. In the Final Rule, CMS announced that it has decided to keep the new molecular codes on the Clinical Laboratory Fee Schedule (CLFS), rather than move them to the Physician Fee Schedule as some stakeholders had urged. CMS has also announced that for 2013 it will price the new codes using a "gapfilling" process by which it will refer the codes to the Medicare contractors to allow them to determine an appropriate price. In addition, it has also stated that it will not recognize certain of the new codes for Multi-analyte Assays for Algorithmic Assays (MAAAs) because it does not believe they qualify as clinical laboratory tests. Our reimbursement could be adversely affected by CMS' action in this area. If it reduces reimbursement for the new test codes or does not pay for our new MAAA codes, then our revenues will be adversely affected. There can be no guarantees that Medicare and other payers will establish positive or adequate coverage policies or reimbursement rates.

We cannot predict whether future health care initiatives will be implemented at the federal or state level, or how any future legislation or regulation may affect us. The taxes imposed by the new federal legislation and the expansion of government's role in the U.S. health care industry as well as changes to the reimbursement amounts paid by payors for our products or our medical procedure volumes may reduce our profits and have a materially adverse effect on our business, financial condition, results of operations and cash flows. Moreover, Congress has proposed on several occasions to impose a 20% coinsurance on patients for clinical laboratory tests reimbursed under the clinical laboratory fee schedule, which would require us to bill patients for these amounts. Because of the relatively low reimbursement for many clinical laboratory tests, in the event that Congress were to ever enact such legislation, the cost of billing and collecting for these services would often exceed the amount actually received from the patient and effectively increase our costs of billing and collecting.

***Our commercial success could be compromised if third-party payors, including managed care organizations and Medicare, do not provide coverage and reimbursement, breach, rescind or modify their contracts or reimbursement policies or delay payments for our molecular diagnostic tests.***

Pathologists and oncologists may not order our molecular diagnostic tests unless third-party payors, such as managed care organizations and government payors such as Medicare and Medicaid, pay a substantial portion of the test price. Coverage and reimbursement by a third-party payor may depend on a number of factors, including a payor's determination that tests using our technologies are:

- not experimental or investigational;
- medically necessary;
- appropriate for the specific patient;
- cost-effective;
- supported by peer-reviewed publications; and
- included in clinical practice guidelines.



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Uncertainty surrounds third-party payor reimbursement of any test incorporating new technology, including tests developed using our DNA probes and microarrays. Technology assessments of new medical tests and devices conducted by research centers and other entities may be disseminated to interested parties for informational purposes. Third-party payors and health care providers may use such technology assessments as grounds to deny coverage for a test or procedure. No technology assessments have been performed on our tests to date.

Because each payor generally determines for its own enrollees or insured patients whether to cover or otherwise establish a policy to reimburse our diagnostic tests, seeking payor approvals is a time-consuming and costly process. We cannot be certain that coverage for our tests will be provided in the future by additional third-party payors or that existing contracts, agreements or policy decisions or reimbursement levels will remain in place or be fulfilled under existing terms and provisions. If we cannot obtain coverage and reimbursement from private and governmental payors such as Medicare and Medicaid for our current tests, or new tests or test enhancements that we may develop in the future, our ability to generate revenues could be limited, which may have a material adverse effect on our financial condition, results of operations and cash flow. Further, we have experienced in the past, and will likely experience in the future, delays and temporary interruptions in the receipt of payments from third-party payors due to missing documentation and other issues, which could cause delay in collecting our revenue.

***We depend on Medicare and a limited number of private payors for a significant portion of our revenues and if these or other payors stop providing reimbursement or decrease the amount of reimbursement for our tests, our revenues could decline.***

For the year ended December 31, 2012, we derived approximately 32% of our total revenue from private insurance, including managed care organizations and other health care insurance providers, 18% from government payor programs, most of which was derived from Medicare and 37% from direct-bill customers, including hospitals and other laboratories. In addition, for the year ended December 31, 2011, we derived approximately 13% of revenue from grants. Medicare and other third-party payors may withdraw their coverage policies or cancel their contracts with us at any time, review and adjust the rate of reimbursement or stop paying for our tests altogether, which would reduce our total revenues.

Payors have increased their efforts to control the cost, utilization and delivery of health care services. In the past, measures have been undertaken to reduce payment rates for and decrease utilization of the clinical laboratory industry generally. Because of the cost-trimming trends, third-party payors that currently cover and provide reimbursement for our tests may suspend, revoke or discontinue coverage at any time, or may reduce the reimbursement rates payable to us. Any such action could have a negative impact on our revenues, which may have a material adverse effect on our financial condition, results of operations and cash flows.

In addition, we are currently considered a “non-contracting provider” by a number of private third-party payors because we have not entered into a specific contract to provide our specialized diagnostic services to their insured patients at specified rates of reimbursement. If we were to become a contracting provider in the future, the amount of overall reimbursement we receive is likely to decrease because we will be reimbursed less money per test performed at a contracted rate than at a non-contracted rate, which could have a negative impact on our revenues. Further, we typically are unable to collect payments from patients beyond that which is paid by their insurance and will continue to experience lost revenue as a result.

***Because of certain Medicare billing rules, we may not receive reimbursement for all tests provided to Medicare patients.***

Under current Medicare billing rules, claims for our tests performed on Medicare beneficiaries who were hospital inpatients when the tumor tissue samples were obtained and whose tests were ordered less than 14 days from discharge must be incorporated in the payment that the hospital receives for the inpatient services provided. Accordingly, we must bill individual hospitals for tests performed on Medicare beneficiaries during these timeframes in order to receive payment for our tests. Because we generally do not have a written agreement in place with these hospitals that purchase these tests, we may not be paid for our tests or may have to pursue payment from the hospital on a case-by-case basis. In addition, currently we are permitted to bill globally for certain anatomic pathology services we furnish to grandfathered hospitals, i.e. we bill both the technical component and the professional component to Medicare. As part of the Middle Class Tax Relief and Job Creation Act of 2012, Congress extended the special provision for “grandfathered” hospitals through July 1, 2012. Therefore, as of that date we were required to bill the grandfathered hospitals for the technical component of all anatomic pathology services we furnish to their patients, which may be difficult and/or costly for us.

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Further, the Medicare Administrative Contractors who process claims for Medicare also can impose their own rules related to coverage and payment for laboratory services provided in their jurisdiction. Recently, Palmetto GBA, the Medicare Administrative Contractor for California and surrounding areas, announced a comprehensive new billing policy and a coverage policy applicable to molecular diagnostic tests, such as ours. Under coverage policy, Palmetto will deny payment for molecular diagnostic tests, unless it has issued a positive coverage determination for the test. If any of our tests are subject to the Palmetto policy and/or the Palmetto policy is adopted by other contractors that process claims with hospitals or laboratories that purchase and bill for our tests, our business could be adversely impacted.

***Complying with numerous regulations pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties.***

We are subject to CLIA, a federal law regulating clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. Our clinical laboratory must be accredited under CLIA in order for us to perform testing on human specimens. In addition, our proprietary tests must also be recognized as part of our accredited programs under CLIA so that we can offer them in our laboratory. CLIA is intended to ensure the quality and reliability of clinical laboratories in the United States by mandating specific standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. We have a current certificate of accreditation under CLIA to perform high complexity testing and our laboratory is accredited by the College of American Pathologists (“CAP”), one of six CLIA-approved accreditation organizations. To renew this certificate, we are subject to survey and inspection every two years. Moreover, CLIA inspectors may make periodic inspections of our clinical reference laboratory outside of the renewal process.

The law also requires us to maintain a state laboratory license to conduct testing in that state. Our laboratory is located in New Jersey and must have a New Jersey state license; as we expand our geographic focus, we may need to obtain laboratory licenses from additional states. New Jersey laws establish standards for day-to-day operation of our clinical reference laboratory, including the training and skills required of personnel and quality control. In addition, several other states require that we hold licenses to test specimens from patients in those states. Other states may have similar requirements or may adopt similar requirements in the future. Finally, we may be subject to regulation in foreign jurisdictions as we seek to expand international distribution of our tests.

If we were to lose our CLIA accreditation or New Jersey laboratory license, whether as a result of a revocation, suspension or limitation, we would no longer be able to offer our tests, which would limit our revenues and harm our business. If we were to lose our license in other states where we are required to hold licenses, we would not be able to test specimens from those states.

***If FDA were to begin requiring approval or clearance of our tests, we could incur substantial costs and time delays associated with meeting requirements for pre-market clearance or approval or we could experience decreased demand for, or reimbursement of, our tests.***

Although FDA maintains that it has authority to regulate the development and use of LDTs, such as ours, as medical devices, it has not exercised its authority with respect to most LDTs as a matter of enforcement discretion. FDA does not generally extend its enforcement discretion to reagents or software provided by third parties and used to perform LDTs, and therefore these products must typically comply with FDA medical device regulations, which are wide-ranging and govern, among other things: product design and development, product testing, product labeling, product storage, pre-market clearance or approval, advertising and promotion and product sales and distribution.

We believe that our DNA probe and microarray tests, as utilized in our laboratory testing, are LDTs. As a result, we believe that pursuant to FDA’s current policies and guidance that FDA does not require that we obtain regulatory clearances or approvals for our LDTs. The container we provide for collection and transport of tumor samples from a pathology laboratory to our clinical reference laboratory may be a medical device subject to FDA regulation but is currently exempt from pre-market review by FDA. While we believe that we are currently in material compliance with applicable laws and regulations, we cannot assure you that FDA or other regulatory agencies would agree with our determination, and a determination that we have violated these laws, or a public announcement that we are being investigated for possible violations of these laws, could adversely affect our business, prospects, results of operations or financial condition.

Moreover, FDA guidance and policy pertaining to diagnostic testing is continuing to evolve and is subject to ongoing review and revision. A significant change in any of the laws, regulations or policies may require us to change our

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business model in order to maintain regulatory compliance. At various times since 2006, FDA has issued guidance documents or announced draft guidance regarding initiatives that may require varying levels of FDA oversight of our tests. For example, in June 2010, FDA announced a public meeting to discuss the agency's oversight of LDTs prompted by the increased complexity of LDTs and their increasingly important role in clinical decision-making and disease management, particularly in the context of personalized medicine. FDA indicated that it was considering a risk-based application of oversight to LDTs and that, following public input and discussion, it might issue separate draft guidance on the regulation of LDTs, which ultimately could require that we seek and obtain either pre-market clearance or approval of LDTs, depending upon the risk-based approach FDA adopts. The public meeting was held in July 2010 and further public comments were submitted to FDA through September 2010. FDA has stated it is continuing to develop draft guidance in this area. Section 1143 of the Food and Drug Administration Safety and Innovation Act, signed by the U.S. President on July 9, 2012, requires FDA to notify U.S. Congress at least 60 days prior to issuing a draft or final guidance regulating LDTs and provide details of the anticipated action.

We cannot provide any assurance that FDA regulation, including pre-market review, will not be required in the future for our tests, whether through additional guidance issued by FDA, new enforcement policies adopted by FDA or new legislation enacted by Congress. We believe it is possible that legislation will be enacted into law or guidance could be issued by FDA which may result in increased regulatory burdens for us to continue to offer our tests or to develop and introduce new tests. Given the attention Congress continues to give to these issues, legislation affecting this area may be enacted into law and may result in increased regulatory burdens on us as we continue to offer our tests and to develop and introduce new tests.

In addition, the Secretary of the Department of Health and Human Services requested that its Advisory Committee on Genetics, Health and Society make recommendations about the oversight of genetic testing. A final report was published in April 2008. If the report's recommendations for increased oversight of genetic testing were to result in further regulatory burdens, they could negatively affect our business and delay the commercialization of tests in development.

The requirement of pre-market review could negatively affect our business until such review is completed and clearance to market or approval is obtained. FDA could require that we stop selling our tests pending pre-market clearance or approval. If FDA allows our tests to remain on the market but there is uncertainty about our tests, if they are labeled investigational by FDA or if labeling claims FDA allows us to make are very limited, orders or reimbursement may decline. The regulatory approval process may involve, among other things, successfully completing additional clinical trials and making a 510(k) submission, or filing a pre-market approval application with FDA. If FDA requires pre-market review, our tests may not be cleared or approved on a timely basis, if at all. We may also decide voluntarily to pursue FDA pre-market review of our tests if we determine that doing so would be appropriate.

Additionally, should future regulatory actions affect any of the reagents we obtain from vendors and use in conducting our tests, our business could be adversely affected in the form of increased costs of testing or delays, limits or prohibitions on the purchase of reagents necessary to perform our testing.

***If we were required to conduct additional clinical trials prior to continuing to offer our proprietary genetic-based tests or any other tests that we may develop as LDTs, those trials could lead to delays or failure to obtain necessary regulatory approval, which could cause significant delays in commercializing any future products and harm our ability to achieve sustained profitability.***

If FDA decides to require that we obtain clearance or approvals to commercialize our proprietary genetic-based tests, we may be required to conduct additional pre-market clinical testing prior to submitting a regulatory notification or application for commercial sales. In addition, as part of our long-term strategy we plan to seek FDA clearance or approval so we can sell our proprietary tests outside our laboratory; however, we need to conduct additional clinical validation activities on our proprietary tests before we can submit an application for FDA approval or clearance. Clinical trials must be conducted in compliance with FDA regulations or FDA may take enforcement action or reject the data. The data collected from these clinical trials may ultimately be used to support market clearance or approval for our tests. We believe it would likely take two years or more to conduct the studies and trials necessary to obtain approval from FDA to commercially launch MatBA®-CLL and MatBA®-SLL outside of our clinical laboratory. Even if our clinical trials are completed as planned, we cannot be certain that their results will support our test claims or that FDA or foreign authorities will agree with our conclusions regarding our test results. Success in early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior trials and studies. If we are required to conduct pre-market clinical trials, whether using prospectively acquired samples or archival samples, delays in the commencement or completion

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of clinical testing could significantly increase our test development costs and delay commercialization. Many of the factors that may cause or lead to a delay in the commencement or completion of clinical trials may also ultimately lead to delay or denial of regulatory clearance or approval. The commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites and the eligibility criteria for the clinical trial. Moreover, the clinical trial process may fail to demonstrate that our tests are effective for the proposed indicated uses, which could cause us to abandon a test candidate and may delay development of other tests.

We may find it necessary to engage contract research organizations to perform data collection and analysis and other aspects of our clinical trials, which might increase the cost and complexity of our trials. We may also depend on clinical investigators, medical institutions and contract research organizations to perform the trials properly. If these parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, or if the quality, completeness or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or for other reasons, our clinical trials may have to be extended, delayed or terminated. Many of these factors would be beyond our control. We may not be able to enter into replacement arrangements without undue delays or considerable expenditures. If there are delays in testing or approvals as a result of the failure to perform by third parties, our research and development costs would increase, and we may not be able to obtain regulatory clearance or approval for our tests. In addition, we may not be able to establish or maintain relationships with these parties on favorable terms, if at all. Each of these outcomes would harm our ability to market our tests or to achieve sustained profitability.

***We are subject to federal and state healthcare fraud and abuse laws and regulations and could face substantial penalties if we are unable to fully comply with such laws.***

We are subject to health care fraud and abuse regulation and enforcement by both the federal government and the states in which we conduct our business. These health care laws and regulations include, for example:

- the federal Anti-kickback Statute, which prohibits, among other things, persons or entities from soliciting, receiving, offering or providing remuneration, directly or indirectly, in return for or to induce either the referral of an individual for, or the purchase order or recommendation of, any item or services for which payment may be made under a federal health care program such as the Medicare and Medicaid programs;
- the federal physician self-referral prohibition, commonly known as the Stark Law, which prohibits physicians from referring Medicare or Medicaid patients to providers of “designated health services” with whom the physician or a member of the physician’s immediate family has an ownership interest or compensation arrangement, unless a statutory or regulatory exception applies;
- the federal Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), which established federal crimes for knowingly and willfully executing a scheme to defraud any health care benefit program or making false statements in connection with the delivery of or payment for health care benefits, items or services;
- federal false claims laws, which, prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent, and which may apply to entities like us to the extent that our interactions with customers may affect their billing or coding practices; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws, which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

We have adopted policies and procedures designed to comply with these laws, including policies and procedures relating to financial arrangements between us and physicians who refer patients to us. In the ordinary course of our business, we conduct internal reviews of our compliance with these laws. Our compliance is also subject to governmental review. The government alleged that we engaged in improper billing practices in the past and we may be the subject of such allegations in the future as the growth of our business and sales organization may increase the potential of violating these laws or our internal policies and procedures. See the section entitled “Legal Proceedings” for a detailed description of the government’s prior allegations. The risk of our being found in violation of these laws and regulations is further increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Further, the PPACA, among other things, amends the intent requirement of the federal anti-kickback and criminal health care fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the government may assert that a claim including items or services resulting from a

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violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the false claims statutes. Any action brought against us for violation of these laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of these laws and regulations, we may be subject to any applicable penalty associated with the violation, including civil and criminal penalties, damages and fines, and/or exclusion from participation in Medicare, Medi-Cal or other state or federal health care programs, we could be required to refund payments received by us, and we could be required to curtail or cease our operations. Any of the foregoing consequences could seriously harm our business and our financial results.

### ***We settled a government claim related to operations at our former Milford, Massachusetts laboratory from 2003 to 2004.***

From 2000 to 2004, we operated a clinical laboratory in Milford, Massachusetts providing cancer screening services, principally chromosome karyotyping. The clinical laboratory participated in the Medicare program. The Office of the Inspector General of the U.S. Department of Health and Human Services and the United States Department of Justice (together, the "Government") informed us in February 2009 that they were contemplating commencing a civil False Claims Act action against us with respect to certain alleged improper billing practices and overpayments relating to operations at the Milford, Massachusetts clinical laboratory. While we did not and do not admit any liability nor concede that the claims of the Government are well founded, we entered into a settlement agreement and paid the Government \$1 million in exchange for a release only of all common law claims. No release is specifically given with respect to other liabilities, including liabilities under the False Claims Act, and administrative liabilities, including mandatory and permissive exclusion from federal health care programs. Based on our understandings with government officials with whom we have negotiated such settlement, we do not expect the government to pursue any further claims with respect to the matters described above, but no assurances can be given.

### ***We are required to comply with laws governing the transmission, security and privacy of health information that require significant compliance costs, and any failure to comply with these laws could result in material criminal and civil penalties.***

Under the administrative simplification provisions of HIPAA, the U.S. Department of Health and Human Services has issued regulations which establish uniform standards governing the conduct of certain electronic health care transactions and protecting the privacy and security of Protected Health Information used or disclosed by health care providers and other covered entities. Three principal regulations with which we are currently required to comply have been issued in final form under HIPAA: privacy regulations, security regulations and standards for electronic transactions.

The privacy regulations cover the use and disclosure of Protected Health Information by health care providers. It also sets forth certain rights that an individual has with respect to his or her Protected Health Information maintained by a health care provider, including the right to access or amend certain records containing Protected Health Information or to request restrictions on the use or disclosure of Protected Health Information. We have also implemented policies, procedures and standards to comply appropriately with the final HIPAA security regulations, which establish requirements for safeguarding the confidentiality, integrity and availability of Protected Health Information, which is electronically transmitted or electronically stored. The HIPAA privacy and security regulations establish a uniform federal "floor" and do not supersede state laws that are more stringent or provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing Protected Health Information. As a result, we are required to comply with both HIPAA privacy regulations and varying state privacy and security laws.

Moreover, the Health Information Technology for Economic and Clinical Health Act ("HITECH"), among other things, established certain health information security breach notification requirements. A covered entity must notify any individual whose protected health information is breached.

These laws contain significant fines and other penalties for wrongful use or disclosure of Protected Health Information. We have implemented practices and procedures to meet the requirements of the HIPAA privacy regulations and state privacy laws. In addition, we are in the process of taking necessary steps to comply with HIPAA's standards for electronic transactions, which establish standards for common health care transactions. Given the complexity of the HIPAA, HITECH and state privacy restrictions, the possibility that the regulations may change, and the fact that the regulations are subject to changing and potentially conflicting interpretation, our ability to comply with the HIPAA, HITECH and state privacy requirements is uncertain and the costs of compliance are significant. To the extent that we submit electronic health care claims and payment transactions that do not comply with the electronic data transmission standards established under HIPAA and HITECH, payments to us may be delayed or denied. Additionally, the costs of complying with any changes to the HIPAA, HITECH and state privacy restrictions may have a negative impact on our operations. We could be subject to criminal penalties and civil sanctions for failing to comply with the HIPAA, HITECH and state privacy restrictions, which could result in the incurrence of significant monetary penalties.



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### **Intellectual Property Risks Related to Our Business**

***Our rights to use technologies licensed from third parties are not within our control, and we may not be able to sell our products if we lose our existing rights or cannot obtain new rights on reasonable terms.***

Our ability to market certain of our tests and services, domestically and/or internationally, is in part derived from licenses to intellectual property which is owned by third parties. As such, we may not be able to continue selling our tests and services if we lose our existing licensed rights or sell new tests and services if we cannot obtain such licensed rights on reasonable terms. In particular, we in-license a biomarker used in our FHACT™ probe from the National Cancer Institute.

We may also need to license other technologies to commercialize future products. As may be expected, our business may suffer if (i) these licenses terminate; (ii) if the licensors fail to abide by the terms of the license, properly maintain the licensed intellectual property or fail to prevent infringement of such intellectual property by third parties; (iii) if the licensed patents or other intellectual property rights are found to be invalid or (iv) if we are unable to enter into necessary licenses on reasonable terms or at all. In return for the use of a third-party's technology, we may agree to pay the licensor royalties based on sales of our products as well as other fees. Such royalties and fees are a component of cost of product revenues and will impact the margins on our tests.

***We cannot sell our probes or any other tests that we may develop using blocking DNA in the United States until patents held by third parties expire.***

Vysis, a division of Abbott Laboratories, Inc., possesses an exclusive license from the University of California for a family of patents in the United States ("Abbott patents") directed broadly to the usage of blocking DNA. The Abbott patents present a barrier to our penetrating the United States market with certain of our probe-related tests because our probes are configured to use blocking DNA. The Abbott patents are due to expire in or about 2017. Unless we obtain a license from Abbott Laboratories, Inc. for use of blocking DNA or otherwise cross-license other satisfactory third party technology, we will not be able to sell our probes in the United States until the Abbott patents expire. Our current business plan does not involve developing U.S.-based sales for our DNA probe products; rather, we are currently focused entirely on growing our DNA probe business in higher growth emerging markets and select European markets.

***Our collaborators may assert ownership or commercial rights to inventions we develop from our use of the biological materials which they provide to us.***

We rely on certain third parties to provide us with tissue samples and biological materials that we use to develop our tests. In some cases we have written agreements with collaborators that provide that we must negotiate ownership and commercial rights with the third party collaborator if our use of such collaborator's materials results in an invention, or that limit our use of those materials to research/not for profit use. In other cases, we do not have written agreements, or the written agreements we have do not clearly deal with intellectual property rights. If we cannot successfully negotiate sufficient ownership and commercial rights to the inventions that result from our use of a third party collaborator's materials where required, or if disputes otherwise arise with respect to the intellectual property developed with the use of a collaborator's samples, we may be limited in our ability to capitalize on the market potential of these inventions.

***The U.S. government may have "march-in rights" to certain of our probe related intellectual property.***

Because federal grant monies were used in support of the research and development activities that resulted in our two issued U.S. patents, the federal government retains what are referred to as "march-in rights" to these patents.

In particular, the National Cancer Institute and the National Institutes of Health, each of which administered grant monies to us, technically retain the right to require us, under certain specific circumstances, to grant the U.S. government either a nonexclusive, partially exclusive or exclusive license to the patented invention in any field of use, upon terms that are reasonable for a particular situation. Circumstances that trigger march-in rights include, for example, failure to take, within a reasonable time, effective steps to achieve practical application of the invention in a field of use, failure to satisfy the health and safety needs of the public and failure to meet requirements of public use specified by federal regulations. National Cancer Institute and the National Institutes of Health can elect to exercise these march-in rights on their own initiative or at the request of a third-party.

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### ***If we are unable to maintain intellectual property protection, our competitive position could be harmed.***

Our ability to protect our proprietary discoveries and technologies affects our ability to compete and to achieve sustained profitability. Currently, we rely on a combination of U.S. and foreign patents and patent applications, copyrights, trademarks and trademark applications, confidentiality or non-disclosure agreements, material transfer agreements, licenses, work-for-hire agreements and invention assignment agreements to protect our intellectual property rights. We also maintain certain company know-how, trade secrets and technological innovations designed to provide us with a competitive advantage in the market place as trade secrets. Currently, we have only two issued U.S. patents and twelve pending patent applications, which includes both U.S. and foreign patent applications, relating to various aspects of our technology. While we intend to pursue additional patent applications, it is possible that our pending patent applications and any future applications may not result in issued patents. Even if patents are issued, third parties may independently develop similar or competing technology that avoids our patents. Further, we cannot be certain that the steps we have taken will prevent the misappropriation of our trade secrets and other confidential information as well as the misuse of our patents and other intellectual property, particularly in foreign countries where we have not filed for patent protection.

From time to time the U.S. Supreme Court, other federal courts, the U.S. Congress or the U.S. Patent and Trademark Office (“USPTO”) may change the standards of patentability and any such changes could have a negative impact on our business. For instance, on October 30, 2008, the Court of Appeals for the Federal Circuit issued a decision that methods or processes cannot be patented unless they are tied to a machine or involve a physical transformation. The U.S. Supreme Court later reversed that decision in *Bilski v. Kappos*, finding that the “machine-or-transformation” test is not the only test for determining patent eligibility. The Court, however, declined to specify how and when processes are patentable. Most recently, on March 20, 2012, in the case *Mayo v. Prometheus*, the U.S. Supreme Court reversed the Federal Circuit’s application of *Bilski* and invalidated a patent focused on a diagnostic process because the patent claim embodied a law of nature. It is unclear at this time whether the USPTO will amend its patent prosecution guidelines for determining patentability of diagnostic or other processes, and how lower courts will implement the decision. Some aspects of our technology involve processes that may be subject to this evolving standard and we can not guarantee that any of our pending process claims will be patentable as a result of such evolving standards.

More recently a suit brought in the U.S. District Court for the Southern District of New York by multiple plaintiffs, including the American Civil Liberties Union, against Myriad Genetics, Inc. and the USPTO may have an impact on the biotechnology industry. Specifically, the case involves certain of Myriad Genetics, Inc.’s U.S. patents related to the breast cancer susceptibility genes BRCA1 and BRCA2. Plaintiffs allege, among other things, that gene-related patents (as a whole) stifle diagnostic testing and research that could lead to cures in the future. In that regard, plaintiffs filed motions for summary judgment alleging, among other things, that breast cancer genes are not patentable subject matter. On March 29, 2010, the court granted summary judgment finding that BRCA1 and BRCA2 patents are invalid under the “machine-or-transformation” test discussed above. On July 29, 2011, the Federal Circuit upheld the lower court on the invalidity of all but one of the process claims as failing the “machine-or-transformation” test, but reversed the lower court’s decision as to isolated genes, holding them patentable. On March 26, 2012, the U.S. Supreme Court vacated the Federal Circuit decision, and ordered the appellate court to reconsider the case in light of the recent Supreme Court decision in *Mayo v. Prometheus* discussed above, and the validity of patents on isolated genes remains uncertain.

In addition, on February 5, 2010, the Secretary’s Advisory Committee on Genetics, Health and Society voted to approve a report entitled “Gene Patents and Licensing Practices and Their Impact on Patient Access to Genetic Tests.” That report defines “patent claims on genes” broadly to include claims to isolated nucleic acid molecules as well as methods of detecting particular sequences or mutations. The report also contains six recommendations, including the creation of an exemption from liability for infringement of patent claims on genes for anyone making, using, ordering, offering for sale or selling a test developed under the patent for patient care purposes, or for anyone using the patent-protected genes in the pursuit of research. The report also recommended that the Secretary should explore, identify and implement mechanisms that will encourage more voluntary adherence to current guidelines that promote nonexclusive in-licensing of diagnostic genetic and genomic technologies. It is unclear whether the U.S. Department of Health and Human Services will act upon these recommendations, or if the recommendations would result in a change in law or process that could negatively impact our patent portfolio or future research and development efforts.



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***We may face intellectual property infringement claims that could be time-consuming and costly to defend, and could result in our loss of significant rights and the assessment of treble damages.***

From time to time we may face intellectual property infringement (or misappropriation) claims from third parties. Some of these claims may lead to litigation. The outcome of any such litigation can never be guaranteed, and an adverse outcome could affect us negatively. For example, were a third-party to succeed on an infringement claim against us, we may be required to pay substantial damages (including up to treble damages if such infringement were found to be willful). In addition, we could face an injunction, barring us from conducting the allegedly infringing activity. The outcome of the litigation could require us to enter into a license agreement which may not be pursuant to acceptable or commercially reasonable or practical terms or which may not be available at all.

It is also possible that an adverse finding of infringement against us may require us to dedicate substantial resources and time in developing non-infringing alternatives, which may or may not be possible. In the case of diagnostic tests, we would also need to include non-infringing technologies which would require us to re-validate our tests. Any such re-validation, in addition to being costly and time consuming, may be unsuccessful.

Finally, we may initiate claims to assert or defend our own intellectual property against third parties. Any intellectual property litigation, irrespective of whether we are the plaintiff or the defendant, and regardless of the outcome, is expensive and time-consuming, and could divert our management's attention from our business and negatively affect our operating results or financial condition.

### **Risks Relating to Our Common Stock**

***Our common stock is quoted on the OTCBB, which limits the liquidity and price of our common stock more than if we were quoted on the Nasdaq Capital Market, the NYSE MKT or another national securities exchange and result in our stockholders not receiving the benefit of our being subject to the listing standards of a national securities exchange.***

Prior to our initial public offering, there was no public market for our common stock. Our common stock is quoted on the Over-the-Counter Bulletin Board, or the OTCBB. There is no guarantee an active trading market will develop or be sustained. If no market develops, the holders of our common stock may find it difficult or impossible to sell their shares. Further, even if a market develops, our common stock will be subject to fluctuations and volatility and the stock may be quoted or traded only to the extent that there is interest by broker-dealers in acting as a market maker in our common stock. Despite the Company's best efforts, it may not be able to convince any broker/dealers to act as a market-maker and make quotations on the OTCBB.

Quotation of our common stock on the OTCBB will limit the liquidity and price of our common stock more than if our common stock were quoted or listed on the Nasdaq Capital Market or the NYSE MKT, which are national securities exchanges. In light of the size of the initial public offering, and the relatively small number of purchasers in the initial public offering, the liquidity of our common stock is limited. Lack of liquidity will limit the price at which you may be able to sell your shares or your ability to sell your shares at all.

***Since our securities will be quoted on the OTCBB, our securities holders may face significant restrictions on the resale of our securities due to state "Blue Sky" laws.***

Each state has its own securities laws, often called "blue sky" laws, which (i) limit sales of securities to a state's residents unless the securities are registered in that state or qualify for an exemption from registration, and (ii) govern the reporting requirements for broker-dealers doing business directly or indirectly in the state. Before a security is sold in a state, there must be a registration in place to cover the transaction, or the transaction must be exempt from registration. The applicable broker must be registered in that state. We do not know whether our common stock will be registered or exempt from registration under the laws of any state. Since our common stock is quoted on the OTCBB, a determination regarding registration will be made by those broker-dealers, if any, who agree to serve as the market-makers for our common stock. There may be significant state blue sky law restrictions on the ability of investors to sell, and on purchasers to buy, our common stock. You should therefore consider the resale market for our common stock to be limited, as you may be unable to resell your common stock without the significant expense of state registration or qualification.

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### ***If our shares become subject to the penny stock rules, this may make it more difficult to sell our shares.***

The SEC has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stocks are generally equity securities with a price of less than \$5.00 (other than securities registered on certain national securities exchanges or authorized for quotation on certain automated quotation systems, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system). The OTCBB does not meet such requirements and if the price of our common stock is less than \$5.00, our common stock will be deemed penny stocks. The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from those rules, to deliver a standardized risk disclosure document containing specified information. In addition, the penny stock rules require that prior to effecting any transaction in a penny stock not otherwise exempt from those rules, a broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive (i) the purchaser's written acknowledgment of the receipt of a risk disclosure statement; (ii) a written agreement to transactions involving penny stocks; and (iii) a signed and dated copy of a written suitability statement. These disclosure requirements may have the effect of reducing the trading activity in the secondary market for our common stock, and therefore stock holders may have difficulty selling their shares.

### ***The price of our common stock may be volatile.***

Our stock price may be volatile. Market prices for securities of early-stage life sciences companies have historically been particularly volatile. As a result of this volatility, you may not be able to sell your common stock at or above the initial public offering price per share. The factors that may cause the market price of our common stock to fluctuate include, but are not limited to:

- progress, or lack of progress, in developing and commercializing our proprietary tests;
- favorable or unfavorable decisions about our tests or services from government regulators, insurance companies or other third-party payors;
- our ability to recruit and retain qualified regulatory and research and development personnel;
- changes in investors' and securities analysts' perception of the business risks and conditions of our business;
- changes in our relationship with key collaborators;
- changes in the market valuation or earnings of our competitors or companies viewed as similar to us;
- changes in key personnel;
- depth of the trading market in our common stock;
- termination of the lock-up agreement or other restrictions on the ability of our existing stockholders to sell shares after this offering;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- the granting or exercise of employee stock options or other equity awards;
- realization of any of the risks described under this section entitled "Risk Factors"; and
- general market and economic conditions.

In addition, the equity markets have experienced significant price and volume fluctuations that have affected the market prices for the securities of newly public companies for a number of reasons, including reasons that may be unrelated to our business or operating performance. These broad market fluctuations may result in a material decline in the market price of our common stock and you may not be able to sell your shares at prices you deem acceptable. In the past, following periods of volatility in the equity markets, securities class action lawsuits have been instituted against public companies. Such litigation, if instituted against us, could result in substantial cost and the diversion of management attention.

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### ***You may be diluted by exercises of outstanding options and warrants.***

As of April 10, 2013, we had outstanding options to purchase an aggregate of 507,277 shares of our common stock at a weighted average exercise price of \$7.71 per share and warrants to purchase an aggregate of 1,950,477 shares of our common stock at a weighted average exercise price of \$12.05 per share. The exercise of such outstanding options and warrants will result in dilution of your investment. In addition, you may experience additional dilution if we issue common stock in the future. As a result of this dilution, you may receive significantly less than the full purchase price you paid for the shares in the event of liquidation.

### ***Future sales of our common stock, or the perception that future sales may occur, may cause the market price of our common stock to decline, even if our business is doing well.***

Sales of substantial amounts of our common stock in the public market after this offering, or the perception that these sales may occur, could materially and adversely affect the price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. The shares of common stock sold in this offering will be freely tradable, without restriction, in the public market, except for any shares sold to our affiliates.

In connection with our initial public offering, we have agreed, subject to limited exceptions, not to issue, sell or transfer any shares of common stock for 60 days after the date of the prospectus without the consent of Aegis Capital Corp. Our officers, directors and certain stockholders, have agreed prior to the commencement of our initial public offering, subject to limited exceptions, not to sell or transfer any shares of common stock for 180 days after the date of this prospectus without the consent of Aegis Capital Corp. However, Aegis Capital Corp. may release these shares from any restrictions at any time. We cannot predict what effect, if any, market sales of shares held by any stockholder or the availability of shares for future sale will have on the market price of our common stock.

Approximately 3,446,827 shares of common stock may be sold in the public market by existing stockholders on or about 181 days after the date of the prospectus, subject to volume and other limitations imposed under the federal securities laws. Sales of substantial amounts of our common stock in the public market after the completion of this offering, or the perception that such sales could occur, could adversely affect the market price of our common stock and could materially impair our ability to raise capital through offerings of our common stock.

In addition, as of April 10, 2013, we had outstanding options to purchase 507,277 shares of our common stock and outstanding warrants to purchase an aggregate of 1,950,477 shares of our common stock. We plan to register for offer and sale the shares of common stock that are reserved for issuance pursuant to outstanding options. Shares covered by such registration statements upon the exercise of stock options generally will be eligible for sale in the public market, except that affiliates will continue to be subject to volume limitations and other requirements of Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. The issuance or sale of such shares could depress the market price of our common stock.

### ***Reports published by securities or industry analysts, including projections in those reports that exceed our actual results, could adversely affect our common stock price and trading volume.***

We currently expect that securities research analysts, including those affiliated with our underwriters, will establish and publish their own periodic projections for our business. These projections may vary widely from one another and may not accurately predict the results we actually achieve. Our stock price may decline if our actual results do not match securities research analysts' projections. Similarly, if one or more of the analysts who writes reports on us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price could decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, our stock price or trading volume could decline. While we expect securities research analyst coverage, if no securities or industry analysts begin to cover us, the trading price for our stock and the trading volume could be adversely affected.

### ***Our directors and executive officers have substantial influence over us and could delay or prevent a change in corporate control.***

Our directors and executive officers, together with their affiliates, beneficially own approximately 55.0% of our outstanding common stock-based on the number of shares outstanding on May 1, 2013. These stockholders, acting together, have significant influence over the outcome of matters submitted to our stockholders for approval, including the election of

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directors and any merger, consolidation or sale of all or substantially all of our assets. In addition, these stockholders, acting together, have significant influence over our management and affairs. Accordingly, this concentration of ownership might harm the market price of our common stock by:

- delaying, deferring or preventing a change in control;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

***If we are unable to favorably assess the effectiveness of our internal control over financial reporting, or if our independent registered public accounting firm is not able to provide an unqualified attestation report on the effectiveness of our internal controls over financial reporting, investors may lose confidence in our financial reporting and our stock price could be materially adversely affected.***

As a private company, we were not subject to the requirements of Section 404 of the Sarbanes-Oxley Act of 2002. After completion of our initial public offering, we will be required to document and test our internal control over financial reporting. For the year ended December 31, 2011, our independent registered public accounting firm reported a material weakness in our internal control over financial reporting related to our monitoring of the performance of the third-party service providers we use in our revenue cycle. During 2011, we changed third-party service providers to improve our platform for future growth. After the conversion, we identified instances of delayed billings and collection efforts and procedural issues with the timely application of cash receipts. If we fail to remediate the material weaknesses identified or to remediate any significant deficiencies or material weaknesses that may be identified in the future, we may be unable to conclude that our internal control over financial reporting is effective and our independent registered public accounting firm may not be able to provide an attestation reporting on the effectiveness of our internal control over financial reporting to the extent such an attestation report would be required. On April 5, 2012, President Obama signed the JOBS Act. Under the JOBS Act, issuers that qualify as “emerging growth companies” under the JOBS Act will not be required to provide an auditor’s attestation report on internal controls for so long as the issuer qualifies as an emerging growth company. We currently qualify as an emerging growth company under the JOBS Act and we may choose not to provide an auditor’s attestation report on internal controls. However, if we cannot favorably assess the effectiveness of our internal control over financial reporting, or if we require an attestation report from our independent registered public accounting firm and that firm is unable to provide an unqualified attestation report on the effectiveness of our internal controls over financial reporting, investor confidence and, in turn, our stock price could be materially adversely affected. For a discussion on our remediation of our material weaknesses please see “Management’s Discussion and Analysis-Internal Control over Financial Reporting.”

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***We are an “emerging growth company,” and any decision on our part to comply only with certain reduced disclosure requirements applicable to “emerging growth companies” could make our common stock less attractive to investors.***

We are an “emerging growth company,” as defined in the JOBS Act, and, for as long as we continue to be an “emerging growth company,” we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to “emerging growth companies,” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as discussed above, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We could be an “emerging growth company” for up to five years, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenues exceed \$1 billion, (ii) the date that we become a “large accelerated filer” as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter, or (iii) the date on which we have issued more than \$1 billion in non-convertible debt during the preceding three year period. Except for our decision to “opt out” of the extended transition periods available under the JOBS Act for complying with new or revised accounting standards, we have not made a decision whether to take advantage of any or all of these exemptions, and if we do take advantage of these exemptions, we cannot predict if investors will find our common stock less attractive as a result. If some investors find our common stock less attractive as a result of any choices to take advantage of these reduced disclosure obligations, there may be a less active trading market for our common stock and our stock price may be more volatile.

***We will incur significantly increased costs and devote substantial management time as a result of operating as a public company particularly after we are no longer an “emerging growth company.”***

As a public company and particularly after we cease to be an “emerging growth company”, we will incur significant legal, accounting and other expenses that we did not incur as a private company. For example, in addition to being required to comply with certain requirements of the Sarbanes-Oxley Act of 2002, we will be required to comply with certain requirements of the Dodd Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC, including the establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. We expect that compliance with these requirements will increase our legal and financial compliance costs and will make some activities more time consuming and costly. In addition, we expect that our management and other personnel will need to divert attention from operational and other business matters to devote substantial time to these public company requirements.

However, for as long as we remain an “emerging growth company” as defined in the JOBS Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We may choose to take advantage of these reporting exemptions until we no longer qualify as an “emerging growth company.”

Under the JOBS Act, “emerging growth companies” can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to take advantage of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies.”

After we are no longer an “emerging growth company”, we expect to incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002 and the other rules and regulations of the SEC. We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of such costs. We also expect that operating as a public company will make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

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### ***Existing shareholders may view our initial public offering process unfavorably.***

The process of effecting an initial public offering has taken considerable time and involved two reverse stock splits. Some of our current shareholders have invested in our securities at prices which are at or above the initial public offering price per share. No assurances can be given as whether any shareholders will seek to take actions against the Company or the board with respect to our initial public offering process.

### ***Anti-takeover provisions of our certificate of incorporation, our bylaws and Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove the current members of our board and management.***

Certain provisions of our amended and restated certificate of incorporation and bylaws that will be in effect upon the completion of this offering could discourage, delay or prevent a merger, acquisition or other change of control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove members of our board of directors. These provisions also could limit the price that investors might be willing to pay in the future for our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. These provisions, among other things:

- allow the authorized number of directors to be changed only by resolution of our board of directors;
- authorize our board of directors to issue, without stockholder approval, preferred stock, the rights of which will be determined at the discretion of the board of directors and that, if issued, could operate as a “poison pill” to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that our board of directors does not approve;
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings; and
- limit who may call a stockholder meeting.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of the voting rights on our common stock, from merging or combining with us for a prescribed period of time.

### ***Because we do not expect to pay cash dividends for the foreseeable future, you must rely on appreciation of our common stock price for any return on your investment. Even if we change that policy, we may be restricted from paying dividends on our common stock.***

We do not intend to pay cash dividends on shares of our common stock for the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon results of operations, financial performance, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. Accordingly, you will have to rely on capital appreciation, if any, to earn a return on your investment in our common stock. Investors seeking cash dividends in the foreseeable future should not purchase our common stock.

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### ***Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.***

Our ability to utilize our federal net operating loss, carryforwards and federal tax credit may be limited under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended. The limitations apply if an “ownership change,” as defined by Section 382, occurs. Generally, an ownership change occurs if the percentage of the value of the stock that is owned by one or more direct or indirect “five percent shareholders” increases by more than 50 percentage points over their lowest ownership percentage at any time during the applicable testing period (typically three years). If we have experienced an “ownership change” at any time since our formation, we may already be subject to limitations on our ability to utilize our existing net operating losses and other tax attributes to offset taxable income. In addition, future changes in our stock ownership, which may be outside of our control, may trigger an “ownership change” and, consequently, Section 382 and 383 limitations. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards and other tax attributes to offset United States federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us.

### **Item 2. Unregistered Sales of Equity Securities and Use of Proceeds from Sales of Registered Securities**

#### Recent Sales of Unregistered Securities

There were no sales of unregistered equity securities during the three month period ended March 31, 2013.

#### Use of Proceeds

In connection with our IPO, we offered and sold 690,000 shares of common stock (including the over allotment option) at a price of \$10.00 per share. The offer and sale of the shares in the initial public offering were registered under the Securities Act of 1933, as amended, pursuant to a registration statement on Form S-1 effective on April 4, 2013. The underwriters in the offering were Aegis Capital Corp and Feltl and Company. After deducting underwriting discounts and commissions, transaction fees and offering related expenses not previously paid, our net proceeds from the initial public offering (including the over allotment option) were approximately \$5 million.

In connection with the offering, we paid underwriting discounts, expenses and commissions of approximately \$637,000, and paid approximately \$1.3 million in offering expenses.

Because the closing of the IPO occurred on April 10, 2013, as of March 31, 2013, we had not received the net proceeds from the sale of these securities and therefore had used none of the proceeds to fund operations, capital expenditures, working capital and other general corporate purposes.

### **Item 3. Defaults Upon Senior Securities**

None.

### **Item 4. Mine Safety Disclosures**

None.

### **Item 5. Other Information**

None.

### **Item 6. Exhibits**

See the Index to Exhibits immediately following the signature page hereto, which Index to Exhibits is incorporated herein by reference.



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**SIGNATURE**

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

**Cancer Genetics, Inc.**  
(Registrant)

Date: May 15, 2013

**/s/ Panna L. Sharma**

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**Panna L. Sharma**  
**President and Chief Executive Officer**  
**(Duly authorized signatory)**

Date: May 15, 2013

**/s/ Elizabeth Czerepak**

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**Elizabeth Czerepak**  
**Chief Financial Officer**  
**(Principal Financial and Accounting Officer)**

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**INDEX TO EXHIBITS**

<b><u>Exhibit No.</u></b>	<b><u>Description</u></b>
3.1	Amended and Restated Certificate of Incorporation of the Cancer Genetics, Inc.
3.2	Amended and Restated Bylaws of Cancer Genetics, Inc. (incorporated by reference to Exhibit 3.4 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.1	Amendment No. 2 to Affiliation Agreement between Cancer Genetics, Inc. and Mayo Foundation for Medical Education and Research, dated January 4, 2013 (incorporated by reference to Exhibit 10.61 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.2	Letter Agreement between Cancer Genetics, Inc. and John Pappajohn dated February 11, 2013 (incorporated by reference to Exhibit 10.63 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.3	Letter Agreement between Cancer Genetics, Inc. and John Pappajohn (on behalf of his spouse) dated February 13, 2013 (incorporated by reference to Exhibit 10.64 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.4	Letter Agreement between Cancer Genetics, Inc. and NNJCA Capital, LLC dated as of February 13, 2013 (incorporated by reference to Exhibit 10.65 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.5	Letter Agreement between Cancer Genetics, Inc. and DAM Holdings, LLC dated February 13, 2013 (incorporated by reference to Exhibit 10.66 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.6	Letter Agreement between Cancer Genetics, Inc. and R.S.K. Chaganti, dated February 13, 2013 (incorporated by reference to Exhibit 10.67 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.7	Letter Agreement, between Meadows Office, L.L.C. and Cancer Genetics, Inc., dated March 8, 2013 (incorporated by reference to Exhibit 10.69 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.8	Form of Loan Extension Agreement for DAM dated March 19, 2013 (incorporated by reference to Exhibit 10.70 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
10.9	Form of Loan Extension Agreement for Dr. Pecora dated March 19, 2013 (incorporated by reference to Exhibit 10.71 of the Company's Registration Statement on Form S-1, as amended, originally filed on December 30, 2011 with the Securities and Exchange Commission).
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under The Securities Exchange Act of 1934, as amended
31.2	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under The Securities Exchange Act of 1934, as amended
32.1	Certifications of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002
32.2	Certifications of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002
101	The following materials from the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheet at December 31, 2012 and March 31, 2013 (unaudited), (ii) Consolidated Statements of Operations and Comprehensive Loss for the three month periods ended March 31, 2012 and 2013, (iii) Consolidated Statements of Cash Flows for the three month periods ended March 31, 2012 and 2013 (unaudited) and (iv) Notes to Consolidated Financial Statements (unaudited)

\* XBRL Interactive Data File will be filed by amendment to this Form 10-Q within 30 days of the filing date of this Form 10-Q, as permitted by Rule 405(a)(2)(ii) of Regulation S-T.

AMENDED AND RESTATED  
CERTIFICATE OF INCORPORATION  
OF  
CANCER GENETICS, INC.

Adopted in accordance with the  
provisions of Sections 228, 242 and 245  
of the General Corporation Law of the State of Delaware

Cancer Genetics, Inc. (hereinafter, the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "GCL"), does hereby certify as follows:

1. The name of the Corporation is Cancer Genetics, Inc.
2. The date of filing of the Corporation's original certificate of incorporation is April 8, 1999 (the "Certificate of Incorporation"). The Certificate of Incorporation was amended and restated on April 17, 2007, on April 12, 2010 and on December 5, 2011 (the "2011 Amended and Restated Certificate of Incorporation"). The 2011 Amended and Restated Certificate of Incorporation was amended on November 27, 2012, on February 8, 2013, on March 1, 2013 and on April 1, 2013.
3. This amended and restated certificate of incorporation ("Amended and Restated Certificate of Incorporation"), which restates, integrates and further amends the Corporation's Certificate of Incorporation, as amended and restated, has been duly adopted in accordance with Sections 228, 242 and 245 of the GCL.
4. The Corporation's Certificate of Incorporation, as amended and restated, hereby is amended and restated to read in its entirety as follows:

FIRST: The name of the Corporation is Cancer Genetics, Inc.

SECOND: The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the GCL.

THIRD: The registered office of the Corporation in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, County of New Castle. The registered agent of the Corporation at such address is The Corporation Trust Company.

FOURTH: The total number of shares of stock that the Corporation shall have authority to issue is 109,764,000 shares, which shall consist of two classes: (i) common stock, par value \$0.0001 per share ("Common Stock"); and (ii) preferred stock, par value \$0.0001 per share ("Preferred Stock"). The total number of shares of each class of capital stock which the Corporation shall have authority to issue is 100,000,000 shares of Common Stock and 9,764,000 shares of Preferred Stock. Subject to the rights of any series of Preferred Stock, the number of authorized shares of either of the Common Stock or Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority in voting power of the stock of the Corporation entitled to vote thereon irrespective of the provisions of Section 242(b)(2) of the GCL (or any successor provision thereto), and no vote of the holders of either of the Common Stock or Preferred Stock voting separately as a class shall be required therefor. The rights, preferences, privileges and powers and the restrictions, limitations and qualifications granted to and imposed on the Common Stock and Preferred Stock are as follows:

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## 1. Common Stock

### 1.1 Relative Rights

Each share of Common Stock shall have the same relative rights as and be identical in all respects to all the other shares of Common Stock.

### 1.2 Dividends

Dividends may be declared and paid on the Common Stock from funds lawfully available therefor if, as and when determined by the board of directors of the Corporation (the "Board of Directors"), subject to any provision of this Amended and Restated Certificate of Incorporation, as amended from time to time, and subject to the relative rights and preferences of any shares of Preferred Stock authorized and issued hereunder.

### 1.3 Dissolution, Liquidation, Winding Up

In the event of any dissolution, liquidation or winding up of the Corporation, whether voluntary or involuntary, the holders of the Common Stock, and holders of any class or series of stock entitled to participate therewith, in whole or in part, as to the distribution of assets in such event, shall become entitled to participate in the distribution of any assets of the Corporation remaining after the Corporation shall have paid, or provided for payment of, all debts and liabilities of the Corporation and after the Corporation shall have paid, or set aside for payment, to the holders of any class of stock having preferences over the Common Stock in the event of dissolution, liquidation or winding up the full preferential amounts, if any, to which they are entitled.

### 1.4 Voting Rights

Each holder of shares of Common Stock shall be entitled to attend all special and annual meetings of the stockholders of the Corporation and to cast one vote for each outstanding share of Common Stock so held upon any matter or thing (including, without limitation, the election of one or more directors) properly considered and acted upon by the stockholders. There shall be no cumulative voting. To the fullest extent permitted by law, holders of Common Stock, as such, shall have no voting power with respect to, and shall not be entitled to vote on, any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation relating to any Preferred Stock (a "Preferred Stock Designation")) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Amended and Restated Certificate of Incorporation (including any Preferred Stock Designation) or pursuant to the GCL.

## 2. Preferred Stock

### 2.1 Designation

(a) Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series A-1 Convertible Preferred Stock. The Preferred Stock shall be divided into series. The first series of Preferred Stock is designated and known as "Series A Convertible Preferred Stock" (the "Series A Preferred Stock") and shall consist of Five Hundred Eighty-Eight Thousand (588,000) shares. The second series of Preferred Stock is

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designated and known as “Series B Convertible Preferred Stock” (the “Series B Preferred Stock”) and shall consist of Two Million (2,000,000) shares. The third series of Preferred Stock is designated and known as “Series A-1 Convertible Preferred Stock” (the “Series A-1 Preferred Stock”) and shall consist of One Million Seven Hundred Sixty Four Thousand (1,764,000) shares.

(b) Designation of Additional Series of Preferred Stock. Except as otherwise provided in this Amended and Restated Certificate of Incorporation, the Board of Directors is expressly authorized to provide for the issue of all, or any, of the remaining shares of Preferred Stock in one or more series, and to fix the number of shares and to determine such voting powers, full or limited, or no voting powers, and such designations, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereon, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issue of such shares and as may be permitted by the GCL. Except as otherwise provided in this Amended and Restated Certificate of Incorporation, and any other agreements to which the Corporation is a party, the Board of Directors is also expressly authorized to increase the number of shares of any series of Preferred Stock, other than the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock subsequent to the issuance of shares of that series or to decrease (but not below the number of shares of such series then outstanding), the number of shares of any series of Preferred Stock subsequent to the issuance of shares of that series. In case the number of shares of any such series shall be so decreased, the shares constituting such decrease shall resume the status of authorized but unissued shares of Preferred Stock.

## 2.2 Rank

The Series A Preferred Stock, the Series A-1 Preferred Stock and the Series B Preferred Stock shall, with respect to dividend rights, and rights on liquidation, dissolution and winding up of the affairs of the Corporation, rank senior to the Common Stock and to all other classes and series of equity securities of the Corporation hereafter issued which are not by their terms expressly senior to, or on parity with, the Series A Preferred Stock, the Series A-1 Preferred Stock and the Series B Preferred Stock with respect to dividend rights, and rights on liquidation, dissolution and winding up of the affairs of the Corporation.

## 3. Dividend Rights

3.1 The holders of the then outstanding Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be entitled to receive dividends, when, as and if declared by the Board of Directors on the Common Stock, out of any funds and assets of the Corporation legally available therefor.

3.2 Whenever a dividend provided for in this Section 3 shall be payable in property other than cash, the value of such dividend shall be deemed to be the fair market value of such property as determined in good faith by the Board of Directors.

4. Liquidation Rights. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, the funds and assets that may be legally distributed to the Corporation’s stockholders (the “Available Funds and Assets”) shall be distributed to stockholders in the following manner:

4.1 Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock. The holder of each share of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock then outstanding shall be entitled to be paid, out of the Available Funds and Assets, and prior and in preference to any payment or distribution (or any setting apart of any payment or distribution) of any Available Funds and Assets on

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any shares of the Common Stock, an amount per share equal to the per share purchase price of the Series A Preferred Stock, the Series A-1 Preferred Stock and Series B Preferred Stock, as the case may be (the "Original Issue Price") (as adjusted for stock splits, stock dividends, combinations or the like) (the "Liquidation Preference"). For all purposes of this Amended and Restated Certificate of Incorporation, the Original Issue Price deemed to have been paid by holders of Series A-1 Preferred Stock shall be an amount equal to one-third of the Original Issue Price of the Series A Preferred Stock. If upon any liquidation, dissolution or winding up of the Corporation, the Available Funds and Assets shall be insufficient to permit the payment to holders of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock of their full preferential amount described in this Section 4.1, the entire Available Funds and Assets shall be distributed among the holders of the then outstanding Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock on a proportionate basis, calculated by dividing by the Original Issue Price paid by a holder of Series A Preferred Stock, Series A-1 Preferred Stock or Series B Preferred Stock, by the aggregate Original Issue Price paid by the holders of the Series A Preferred Stock, Series A-1 Preferred Stock and the Series B Preferred Stock. In lieu of the Liquidation Preference, the holders of Series A Preferred Stock, the Series A-1 Preferred Stock and Series B Preferred Stock may elect to convert their Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock into shares of Common Stock pursuant to Section 6, in which case they will share ratably in the distribution of the assets of the Corporation pursuant to Section 4.2 hereof.

4.2 Remaining Assets. If there are any Available Funds and Assets remaining after the payment or distribution (or the setting aside for payment or distribution) to the holders of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock of the Liquidation Preference described above in this Section 4, then all such remaining Available Funds and Assets shall be distributed pro rata among the holders of the Common Stock.

4.3 Merger or Sale of Assets. Any (a) reorganization, consolidation or merger (or similar transaction or series of transactions) of the Corporation with or into any other corporation or corporations in which the holders of the Corporation's outstanding shares immediately before such transaction or series of related transactions do not, immediately after such transaction or series of related transactions, retain stock representing a majority of the voting power of the surviving corporation (or its parent corporation if the surviving corporation is wholly owned by the parent corporation) of such transaction or series of related transactions, or (b) a sale of all, or substantially all, of the assets of the Corporation shall each be deemed to be a liquidation, dissolution or winding up of the Corporation as those terms are used in this Section 4 unless holders of a majority in voting power of the outstanding shares of Series A Preferred Stock and Series A-1 Preferred Stock, voting as a separate class, and the holders of a majority of the outstanding shares of Series B Preferred Stock, voting as a separate class, vote that this Section 4.3 shall not apply.

4.4 Non-Cash Consideration.

(a) If any assets of the Corporation distributed to stockholders in connection with any liquidation, dissolution, or winding up of the Corporation are other than cash or securities, then the value of such assets shall be their fair market value as determined by the Board of Directors, in good faith.

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(b) If any assets of the Corporation distributed to stockholders in connection with any liquidation, dissolution or winding up of the Corporation are securities then the value of such assets shall be determined by the Board of Directors in good faith:

(i) The method of valuation of securities not subject to investment letter or other similar restrictions on free marketability shall be as follows:

(A) unless otherwise specified in a definitive agreement for the acquisition of the Corporation, if the securities are then traded on a national securities exchange or listed on the Nasdaq National Market (or a similar national quotation system), then the value shall be deemed to be the average of the closing prices of the securities on such exchange or system over the thirty (30) day period ending three (3) days prior to the distribution; and

(B) if (A) above does not apply but the securities are actively traded over-the-counter, then, unless otherwise specified in a definitive agreement for the acquisition of the Corporation, the value shall be deemed to be the average of the closing bid prices over the thirty (30) calendar day period ending three (3) trading days prior to the distribution; and

(C) if there is no active public market, then the value shall be the fair market value thereof, as determined in good faith by the Board of Directors.

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability shall be to make an appropriate discount from the market value determined as above in Section 4.4(b)(i)(A), (B) or (C) to reflect the approximate fair market value thereof, as determined in good faith by the Board of Directors.

## 5. Voting Rights.

5.1 Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock. Each holder of shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be entitled to the number of votes equal to the number of whole shares of Common Stock into which such shares of Preferred Stock could be converted pursuant to the provisions of Section 6 below as of the record date for the determination of the stockholders entitled to vote on such matters or, if no such record date is established, the date such vote is taken or any written consent of stockholders is solicited.

5.2 Scope. Subject to the other provisions of this Amended and Restated Certificate of Incorporation, each holder of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall have full voting rights and powers equal to the voting rights and powers of the holders of Common Stock, and shall be entitled to notice of any stockholders' meeting in accordance with the by-laws of the Corporation (the "By-laws") (as in effect at the time in question) and applicable law, and shall be entitled to vote, together with the holders of Common Stock, with respect to any question upon which holders of Common Stock have the right to vote, except as may be otherwise provided by applicable law. Except as otherwise expressly provided herein, any other agreement to which the Corporation is a party or as required by law, the holders of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock and Common Stock shall vote together and not as separate classes.

5.3 Class Protective Provisions. So long as at least fifteen percent (15%) of the originally issued shares of the Series A-1 Preferred Stock and Series B Preferred Stock remain outstanding, the Corporation shall not, without the approval of the holders of a majority in voting power of the Series A Preferred Stock and Series A-1 Preferred Stock, voting together as a separate class, and the approval of the holders of sixty-six and two-thirds percent (66 2/3rd%) of the Series B Preferred Stock then outstanding, voting as a separate class:

(a) amend or change the rights, preferences or privileges of the Series A Preferred Stock, the Series A-1 Preferred Stock or Series B Preferred Stock; or



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(b) create any other class of capital stock of the Corporation having rights, preferences or privileges senior to, or on parity with, the shares of Series A Preferred Stock, Series A-1 Preferred Stock or Series B Preferred Stock.

6. Conversion Rights. The outstanding shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be convertible into Common Stock as follows:

6.1 Optional Conversion.

(a) At the option of the holder thereof, each share of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be convertible, at any time, or from time to time, into fully paid and nonassessable shares of Common Stock as provided herein.

(b) Each holder of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock who elects to convert the same into shares of Common Stock shall surrender the certificate(s) therefor, duly endorsed, at the office of the Corporation or any transfer agent for the Series A Preferred Stock, Series A-1 Preferred Stock, Series B Preferred Stock or Common Stock, and shall give written notice to the Corporation at such office that such holder elects to convert the same and shall state therein the number of shares of Preferred Stock being converted. Thereupon the Corporation shall promptly issue and deliver at such office to such holder a certificate(s) for the number of shares of Common Stock to which such holder is entitled upon such conversion. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the certificate(s) representing the shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock to be converted, and the person entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder of such shares of Common Stock on such date. If a conversion election under this Section 6.1 is made in connection with an underwritten offering of the Corporation's securities, or registration in connection with a reverse merger, pursuant to the Securities Act of 1933, as amended (the "Securities Act") (which underwritten offering does not cause an automatic conversion pursuant to Section 6.2 to take place), the conversion may, at the option of the holder tendering shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of the Corporation's securities pursuant to such offering, in which event the holders making such election who are entitled to receive Common Stock upon conversion of their Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall not be deemed to have converted such shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock until immediately prior to the closing of such sale of the Corporation's securities in the offering.

6.2 Automatic Conversion.

(a) Each share of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall automatically be converted into fully paid and nonassessable shares of Common Stock, as provided herein, upon the earlier of (i) the closing of an underwritten public offering pursuant to an effective registration statement, or (ii) the date which is twelve (12) months following the consummation of a reverse merger of the Corporation with a public company that files reports with the SEC under the Securities Exchange Act of 1934 and the shares are sellable under Rule 144, or (iii) the date of effectiveness of a registration statement of all of the Common Stock issuable upon the conversion of the Series B Preferred Stock, provided, however, to the extent that

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any underlying shares cannot be registered then the Series B Preferred Stock shall convert only to the extent of the registered convertible portion or (iv) upon the vote of the holders of not less than sixty-six and two-thirds percent (66 2/3rd%) of the then outstanding voting power of the shares of Series A Preferred Stock and Series A-1 Preferred Stock, voting as separate class, and not less than sixty-six and two-thirds percent (66 2/3rd%) of the then outstanding shares of Series B Preferred Stock, voting as a separate class.

(b) Upon the occurrence of any event specified in Section 6.2(a) (i), (ii), or (iii), the outstanding shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be converted into Common Stock automatically without the need for any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless the certificates evidencing such shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock are either delivered to the Corporation or its transfer agent as provided below, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. Upon the occurrence of such automatic conversion of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock, the holders of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall surrender the certificates representing such shares at the office of the Corporation or any transfer agent for the Series A Preferred Stock, Series A-1 Preferred Stock, Series B Preferred Stock or Common Stock. Thereupon, there shall be issued and delivered to such holder promptly at such office and in its name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock surrendered were convertible on the date on which such automatic conversion occurred.

6.3 Conversion Price. Each share of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be convertible in accordance with Section 6.1 or Section 6.2 above into the number of shares of Common Stock which results from dividing the Original Issue Price paid (or deemed to have been paid in the case of the Series A-1 Preferred Stock) for each such share of Series A Preferred Stock, Series A-1 Preferred Stock or Series B Preferred Stock (as the case may be) by the conversion price that is in effect at the time of conversion (the "Conversion Price"). The initial Conversion Price shall be the Original Issue Price paid (or deemed to have been paid in the case of the Series A-1 Preferred Stock) for the Series A Preferred Stock, the Series A-1 Preferred Stock and the Series B Preferred Stock (as the case may be). The Conversion Price shall be subject to adjustment from time to time as provided below. Following each adjustment of the Conversion Price, such adjusted Conversion Price shall remain in effect until a further adjustment of such Conversion Price hereunder.

6.4 Adjustment Upon Common Stock Event. Upon the happening of a Common Stock Event (as hereinafter defined), the Conversion Price shall, simultaneously with the happening of such Common Stock Event, be adjusted by multiplying the Conversion Price in effect immediately prior to such Common Stock Event by a fraction:

(a) the numerator of which shall be the number of shares of Common Stock issued and outstanding immediately prior to such Common Stock Event, and

(b) the denominator of which shall be the number of shares of Common Stock issued and outstanding immediately after such Common Stock Event.

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The Conversion Price for the Series A Preferred Stock, Series A-1 Preferred and the Series B Preferred Stock shall be readjusted in the same manner upon the happening of each subsequent Common Stock Event. As used herein, the term the “Common Stock Event” shall mean at any time or from time to time after the date on which the first share of Series A Preferred Stock is issued by the Corporation (the “Original Issue Date”), (i) the issue by the Corporation of additional shares of Common Stock as a dividend or other distribution on outstanding Common Stock, (ii) a subdivision of the outstanding shares of Common Stock into a greater number of shares of Common Stock, or (iii) a combination of the outstanding shares of Common Stock into a smaller number of shares of Common Stock.

6.5 Adjustments for Other Dividends and Distributions. If at any time, or from time to time, after the Original Issue Date, the Corporation pays a dividend or makes another distribution to the holders of the Common Stock payable in securities of the Corporation, other than an event constituting a Common Stock Event, then in each such event provision shall be made so that the holders of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall receive upon conversion thereof, in addition to the number of shares of Common Stock receivable upon conversion thereof, the amount of securities of the Corporation which they would have received had their Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock been converted into Common Stock on the date of such event (or such record date, as applicable) and had they thereafter, during the period from the date of such event (or such record date, as applicable) to and including the conversion date, retained such securities receivable by them as aforesaid during such period, subject to all other adjustments called for during such period under this Section 6 with respect to the rights of the holders of the Series A Preferred Stock, Series A-1 Preferred and Series B Preferred Stock or with respect to such other securities by their terms.

6.6 Adjustment for Reclassification, Exchange and Substitution. If at any time, or from time to time after the Original Issue Date, the Common Stock issuable upon the conversion of the Series A Preferred Stock, the Series A-1 Preferred Stock and Series B Preferred Stock is changed into the same or a different number of shares of any class or classes of stock, whether by recapitalization, reclassification or otherwise (other than by a Common Stock Event or a stock dividend, reorganization, merger, or consolidation provided for elsewhere in this Section 6), then in any such event each holder of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall have the right thereafter to convert such stock into the kind and amount of stock and other securities and property receivable upon such recapitalization, reclassification or other change by holders of the number of shares of Common Stock into which such shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock could have been converted immediately prior to such recapitalization, reclassification or change, all subject to further adjustment as provided herein or with respect to such other securities or property by the terms thereof.

6.7 Reorganizations, Mergers and Consolidations. If at any time, or from time to time, after the Original Issue Date, there is a reorganization of the Corporation (other than a recapitalization, subdivision, combination, reclassification or exchange of shares provided for elsewhere in this Section 6) or a merger or consolidation of the Corporation with or into another corporation (except an event which is governed under Section 4.3 in which the holders of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock have not elected to make Section 4.3 inapplicable), then, as a part of such reorganization, merger or consolidation, provision shall be made so that the holders of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock thereafter shall be entitled to receive, upon conversion of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock, the number of shares of stock or other securities or property of the Corporation, or of such successor corporation resulting from such reorganization, merger or consolidation, to which a holder of Common Stock deliverable upon conversion would have been entitled on such reorganization, merger or consolidation. In any such case, appropriate adjustment shall be made in the application of

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the provisions of this Section 6 with respect to the rights of the holders of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock after the reorganization, merger or consolidation to the end that the provisions of this Section 6 (including adjustment of the Conversion Price then in effect and number of shares issuable upon conversion of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock) shall be applicable after that event and be as nearly equivalent to the provisions hereof as may be practicable. This Section 6.7 shall similarly apply to successive reorganizations, mergers and consolidations. Notwithstanding anything to the contrary contained in this Section 6, if any reorganization, merger or consolidation is approved by the vote of stockholders required by Section 5 hereof, then such transaction and the rights of the holders of Series A Preferred Stock, Series A-1 Preferred Stock, Series B Preferred Stock and Common Stock pursuant to such reorganization, merger or consolidation will be governed by the documents entered into in connection with such transaction and not by the provisions of this Section 6.7.

6.8 Sale of Shares Below Conversion Price.

(a) No Adjustment of Conversion Price. No adjustment in the number of shares of Common Stock into which the shares of any Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock are convertible shall be made with respect to such series, by adjustment in the applicable Conversion Price thereof, or by reason of issuance or deemed issuance of Additional Shares of Common Stock (as defined in Section 6.8(c)(i)): (i) unless the consideration per share (determined pursuant to Section 4.4 for issued or deemed to be issued by the Corporation) is less than the applicable Conversion Price of the Series A Preferred Stock, Series A-1 Preferred Stock or Series B Preferred Stock, as the case may be, in effect on the date of, and immediately prior to, the issue of such Additional Shares of Common Stock, or (ii) if, prior to such issuance, the Corporation receives written notice from the holders of more than sixty-six and two-thirds percent (66 2/3rd%) of the then outstanding voting power of shares of each the Series A Preferred Stock and Series A-1 Preferred Stock, voting together as a class, and more than sixty-six and two-thirds percent (66 2/3rd%) of the then outstanding shares of the Series B Preferred Stock, voting separately as a class, that no such adjustment shall be made as the result of the issuance of Additional Shares of Common Stock.

(b) Adjustment Formula.

(i) If at any time, or from time to time, after the Original Issue Date of the Series A Preferred Stock, the Corporation issues or sells, or is deemed by the provisions of this Section 6.8 to have issued or sold, Additional Shares of Common Stock, otherwise than in connection with a Common Stock Event as provided in Section 6.4, a dividend or distribution as provided in Section 6.5, a recapitalization, reclassification or other change as provided in Section 6.6, or a reorganization, merger or consolidation as provided in Section 6.7, for an Effective Price (as defined in Section 6.8(c)(v)) that is less than the Conversion Price of the Series A Preferred Stock in effect immediately prior to such issue or sale (or deemed issue or sale), then, and in each such case, the Conversion Price of the Series A Preferred Stock shall be reduced, as of the close of business on the date of such issue or sale to the price obtained by multiplying such Conversion Price of the Series A Preferred Stock by a fraction:

(A) The numerator of which shall be the sum of (1) the number of Common Stock Equivalents Outstanding (as hereinafter defined) immediately prior to such issue or sale of Additional Shares of Common Stock, plus (2) the quotient obtained by dividing:

(x) the Aggregate Consideration Received (as hereinafter defined) by the Corporation for the total number of Additional Shares of Common Stock so issued or sold (or deemed so issued and sold), by

(y) the Conversion Price of the Series A Preferred Stock in effect immediately prior to such issue or sale;

and

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(B) The denominator of which shall be the sum of (1) the number of Common Stock Equivalents Outstanding immediately prior to such issue or sale, plus (2) the number of Additional Shares of Common Stock so issued or sold (or deemed so issued and sold).

(ii) If at any time or from time to time after the Original Issue Date of the Series B Preferred Stock, the Corporation issues or sells, or is deemed by the provisions of this Section 6.8 to have issued or sold, Additional Shares of Common Stock, otherwise than in connection with a Common Stock Event as provided in Section 6.4, a dividend or distribution as provided in Section 6.5, a recapitalization, reclassification or other change as provided in Section 6.6, or a reorganization, merger or consolidation as provided in Section 6.7, for an Effective Price (as defined in Section 6.8(c)(v)) that is less than the Conversion Price for the Series B Preferred Stock in effect immediately prior to such issue or sale (or deemed issue or sale), then, and in each such case, the Conversion Price of the Series B Preferred Stock shall be reduced, as of the close of business on the date of such issue or sale to the price paid for each share of Additional Shares of Common Stock issued or sold (or deemed so issued or sold).

(iii) If at any time, or from time to time, after the Original Issue Date of the Series A-1 Preferred Stock, the Corporation issues or sells, or is deemed by the provisions of this Section 6.8 to have issued or sold, Additional Shares of Common Stock, otherwise than in connection with a Common Stock Event as provided in Section 6.4, a dividend or distribution as provided in Section 6.5, a recapitalization, reclassification or other change as provided in Section 6.6, or a reorganization, merger or consolidation as provided in Section 6.7, for an Effective Price (as defined in Section 6.8(c)(v)) that is less than the Conversion Price of the Series A-1 Preferred Stock in effect immediately prior to such issue or sale (or deemed issue or sale), then, and in each such case, the Conversion Price of the Series A-1 Preferred Stock shall be reduced, as of the close of business on the date of such issue or sale to the price obtained by multiplying such Conversion Price of the Series A-1 Preferred Stock by a fraction:

(A) The numerator of which shall be the sum of (1) the number of Common Stock Equivalents Outstanding (as hereinafter defined) immediately prior to such issue or sale of Additional Shares of Common Stock, plus (2) the quotient obtained by dividing:

(x) the Aggregate Consideration Received (as hereinafter defined) by the Corporation for the total number of Additional Shares of Common Stock so issued or sold (or deemed so issued and sold), by

(y) the Conversion Price of the Series A-1 Preferred Stock in effect immediately prior to such issue or sale; and

(B) The denominator of which shall be the sum of (1) the number of Common Stock Equivalents Outstanding immediately prior to such issue or sale, plus (2) the number of Additional Shares of Common Stock so issued or sold (or deemed so issued and sold).

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(c) Certain Definitions. For the purpose of making any adjustment required under this Section 6.8:

(i) The “Additional Shares of Common Stock” shall mean all shares of Common Stock issued by the Corporation, whether or not subsequently reacquired or retired by the Corporation, other than:

(A) any shares of Common Stock issued or issuable upon conversion of the outstanding shares of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock;

(B) any shares of Common Stock (or Rights or Options (as defined in clause (vi)) granted or issued hereafter by the Board of Directors to employees, officers, directors, contractors, consultants or advisers to, the Corporation or any subsidiary pursuant to incentive agreements, stock purchase or stock option plans, stock bonuses or awards, warrants, contracts or other arrangements that are approved by the Board of Directors pursuant to the Stock Option Plan as defined herein, provided however, (other than 100,000 shares (in the form of options or other awards)) that any such awards under the Stock Option Plans are at a price of not less than the Conversion Price of the Series B Preferred Stock;

(C) (i) any shares of Common Stock or Preferred Stock (or Rights or Options) issued or issuable to parties that are non-affiliated strategic partners investing in connection with a material commercial transaction with the Corporation or (ii) up to 30,000 shares of Common Stock or Preferred Stock issuable to non-affiliated third party providing the Corporation with equipment leases, cash price reductions, under arrangements, in each case, approved by the Corporation’s Board of Directors;

(D) Intentionally Omitted;

(E) any shares of Common Stock or Preferred Stock issuable upon exercise of any options, warrants or rights to purchase any securities of the Corporation outstanding as of the date of this Amended and Restated Certificate of Incorporation and any securities issuable upon the conversion thereof;

(F) any shares of Common Stock issued pursuant to a transaction described in Section 6.4 hereof;

(G) any shares of Common Stock issued or issuable in a public offering prior to or in connection with which all outstanding shares of Preferred Stock will be converted to Common Stock; and

(H) any shares of Common Stock or Preferred Stock (or Rights or Options), issued or issuable hereafter that are (1) approved by the Board of Directors, and (2) approved by the vote of the holders of a at least 66 and 2/3 percent of the outstanding voting power of the Series A Preferred Stock and Series A-1 Preferred Stock, voting together as a class, and vote of the holders of a at least 66 and 2/3 percent of the Series B Preferred Stock, voting as a single class, as being excluded from the definition of “Additional Shares of Common Stock” under this Section 6.8(c).

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(ii) The “Aggregate Consideration Received” by the Corporation for any issue or sale (or deemed issue or sale) of securities shall (A) to the extent it consists of cash, be computed at the gross amount of cash received by the Corporation before deduction of any underwriting or similar commissions, compensation or concessions paid or allowed by the Corporation in connection with such issue or sale and without deduction of any expenses payable by the Corporation, (B) to the extent it consists of property other than cash, be computed at the fair value of that property as determined in a manner consistent with Section 4.4, and (C) if Additional Shares of Common Stock, Convertible Securities or Rights or Options to purchase either Additional Shares of Common Stock or Convertible Securities are issued or sold together with other stock or securities or other assets of the Corporation for a consideration which covers both, be computed as the portion of the consideration so received that may be reasonably determined in good faith by the Board of Directors to be allocable to such Additional Shares of Common Stock, Convertible Securities or Rights or Options.

(iii) The “Common Stock Equivalents Outstanding” shall mean the number of shares of Common Stock that is equal to the sum of (A) all shares of Common Stock of the Corporation that are outstanding at the time in question, plus (B) all shares of Common Stock of the Corporation issuable upon conversion of all shares of Preferred Stock or other Convertible Securities that are outstanding at the time in question, plus (C) all shares of Common Stock of the Corporation that are issuable upon the exercise of Rights or Options that are outstanding at the time in question assuming the full conversion or exchange into Common Stock of all such Rights or Options that are Rights or Options to purchase or acquire Convertible Securities.

(iv) The “Convertible Securities” shall mean stock or other securities convertible into or exchangeable for shares of Common Stock.

(v) The “Effective Price” of Additional Shares of Common Stock shall mean the quotient determined by dividing the total number of Additional Shares of Common Stock issued or sold, or deemed to have been issued or sold, by the Corporation under this Section 6.8, into the Aggregate Consideration Received, or deemed to have been received, by the Corporation under this Section 6.8, for the issue of such Additional Shares of Common Stock.

(vi) The “Rights or Options” shall mean warrants, options or other rights to purchase or acquire shares of Common Stock or Convertible Securities.

(vii) The “Stock Option Plan” shall mean the stock option plan of the Corporation as in effect of the date hereof, pursuant to which the Corporation has been permitted to reserve 2,750,000 shares of Common Stock.

(d) Deemed Issuances. For the purpose of making any adjustment to the Conversion Price of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock required under this Section 6.8, if the Corporation issues or sells any Rights or Options or Convertible Securities and if the Effective Price of the shares of Common Stock issuable upon exercise of such Rights or Options or the conversion or exchange of Convertible Securities (computed without reference to any additional or similar protective or antidilution clauses) is less than the Conversion Price then in effect for a series of Preferred Stock, then the Corporation shall be deemed to have issued, at the time of the issuance of such Rights, Options or Convertible Securities, that number of Additional Shares of Common Stock that is equal to the maximum number of shares of Common Stock issuable upon exercise or conversion of such Rights, Options or Convertible Securities upon their issuance and to have received, as the Aggregate Consideration Received for the issuance of such shares, an amount equal to the total amount of the consideration, if any, received by the Corporation for the issuance of such Rights or



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Options or Convertible Securities, plus, in the case of such Rights or Options, the minimum amounts of consideration, if any, payable to the Corporation upon the exercise in full of such Rights or Options, plus, in the case of Convertible Securities, the minimum amounts of consideration, if any, payable to the Corporation (other than by cancellation of liabilities or obligations evidenced by such Convertible Securities) upon the conversion or exchange thereof; provided that:

(i) if the minimum amounts of such consideration cannot be ascertained, but are a function of antidilution or similar protective clauses, then the Corporation shall be deemed to have received the minimum amounts of consideration without reference to such clauses;

(ii) if the minimum amount of consideration payable to the Corporation upon the exercise of Rights or Options or the conversion or exchange of Convertible Securities is reduced over time or upon the occurrence or non-occurrence of specified events other than by reason of antidilution or similar protective adjustments, then the Effective Price shall be recalculated using the figure to which such minimum amount of consideration is reduced; and

(iii) if the minimum amount of consideration payable to the Corporation upon the exercise of such Rights or Options or the conversion or exchange of Convertible Securities is subsequently increased, then the Effective Price shall again be recalculated using the increased minimum amount of consideration payable to the Corporation upon the exercise of such Rights or Options or the conversion or exchange of such Convertible Securities.

No further adjustment of the Conversion Price, adjusted upon the issuance of such Rights or Options or Convertible Securities, shall be made as a result of the actual issuance of shares of Common Stock on the exercise of any such Rights or Options or the conversion or exchange of any such Convertible Securities. If any such Rights or Options or the conversion rights represented by any such Convertible Securities shall expire without having been fully exercised, then the Conversion Price as adjusted upon the issuance of such Rights or Options or Convertible Securities shall be readjusted to the Conversion Price which would have been in effect had an adjustment been made on the basis that the only shares of Common Stock so issued were the shares of Common Stock, if any, that were actually issued or sold on the exercise of such Rights or Options or rights of conversion or exchange of such Convertible Securities, and such shares of Common Stock, if any, were issued or sold for the consideration actually received by the Corporation upon such exercise, plus the consideration, if any, actually received by the Corporation for the granting of all such Rights or Options, whether or not exercised, plus the consideration received for issuing or selling all such Convertible Securities actually converted or exchanged, plus the consideration, if any, actually received by the Corporation (other than by cancellation of liabilities or obligations evidenced by such Convertible Securities) on the conversion or exchange of such Convertible Securities, provided that such readjustment shall not apply to prior conversions of Series A Preferred Stock, Series A-1 Preferred and Series B Preferred Stock.

**6.9 Certificate of Adjustment.** In each case of an adjustment or readjustment of the Conversion Price, the Corporation, at its expense, shall cause its chief financial officer to compute such adjustment or readjustment in accordance with the provisions hereof and prepare a certificate showing such adjustment or readjustment, and shall mail such certificate(s), by first class mail, postage prepaid, to each registered holder of the Preferred Stock at the holder's address as shown in the Corporation's books.

**6.10 Fractional Shares.** No fractional shares of Common Stock shall be issued upon any conversion of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock. In lieu of any fractional share to which the holder would otherwise be entitled, the Corporation shall pay the holder cash equal to the product of such fraction multiplied by the Common Stock's fair market value as determined in good faith by the Board of Directors as of the date of conversion.

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6.11 Reservation of Stock Issuable Upon Conversion. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

6.12 Notices. Any notice required by the provisions of this Amended and Restated Certificate of Incorporation to be given to the holders of shares of the Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock shall be deemed given upon the earlier of actual receipt or deposit in the United States mail, by certified or registered mail, return receipt requested, postage prepaid, or delivery by a recognized express courier, fees prepaid, addressed to each holder of record at the address of such holder appearing on the books of the Corporation.

6.13 No Impairment. The Corporation shall not avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but shall at all times in good faith assist in carrying out all such action as may be reasonably necessary or appropriate in order to protect the conversion rights of the holders of the Preferred Stock against impairment.

6.14 No Adjustments. For the avoidance of doubt, notwithstanding any provision of this Amended and Restated Certificate of Incorporation to the contrary, (i) no adjustment to the Conversion Price of the Series A Preferred Stock, Series A-1 Preferred Stock or Series B Preferred Stock and (ii) no adjustment to the number of shares of Common Stock issuable upon conversion of the Series A Preferred Stock, Series A-1 Preferred Stock or Series B Preferred Stock shall be made in connection with (A) the reclassification of each share of Common Stock issued prior to October 29, 2008 into three (3) shares of Common Stock (the "Stock Split") or (B) the issuance of any shares of Common Stock or Series A-1 Preferred Stock by the Corporation in exchange for shares of Common Stock or Series A Preferred Stock, respectively, which may not have been validly issued pursuant to one or more Exchange Agreements entered into prior to or on or about the date of this Amended and Restated Certificate of Incorporation (collectively, the "Exchanges" and, with the Stock Split, the "Transactions").

FIFTH: The following provisions, each of which are subject to the limitations set forth herein and in such other agreements to which the Corporation is a party, are inserted for the management of the business and for the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

(a) The Board of Directors shall have the power to adopt, amend or repeal the bylaws of the Corporation; provided, however, that the fact that such power has been conferred upon the Board of Directors shall not divest the Corporation's stockholders of the power, nor limit their power to adopt, amend or repeal the bylaws of the Corporation.

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(b) The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors. In addition to the powers and authority expressly conferred upon them by statute or by this Amended and Restated Certificate of Incorporation or the bylaws of the Corporation as in effect from time to time, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

(c) Unless and except to the extent that the bylaws of the Corporation so require, the election of directors of the Corporation need not be by written ballot.

(d) Subject to the rights of the holders of any series of Preferred Stock, any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly held meeting of stockholders of the Corporation at which a quorum is present or represented and may not be effected by any consent in writing by such stockholders.

SIXTH: Subject to the rights of the holders of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of directors or any vacancies in the Board of Directors resulting from death, resignation, retirement, disqualification, removal from office or other cause may be filled only by a majority vote of the directors then in office even though less than a quorum, or by a sole remaining director. In the event of any decrease in the authorized number of directors, each director then serving as such shall nevertheless continue as a director until the expiration of his current term or his prior death, retirement, removal or resignation. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board of Directors until the vacancy is filled.

SEVENTH: Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the bylaws of the Corporation.

EIGHTH: The Corporation shall, to the fullest extent permitted by Section 145 of the GCL, as the same may be amended and supplemented, indemnify any and all directors and executive officers from and against any and all of the expenses, liabilities, or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director or executive officer and shall inure to the benefit of the heirs, executors, and administrators of such a person.

NINTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

TENTH: Subject to the limitations set forth herein, any of the provisions of this Amended and Restated Certificate of Incorporation may be amended, altered or repealed, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said laws, and all rights and powers at any time conferred herein on stockholders, directors and officers are subject to the provisions of this article.

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ELEVENTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by, or other wrongdoing by, any director, officer, employee or agent of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the GCL or the Corporation's certificate of incorporation or bylaws, (iv) any action to interpret, apply, enforce or determine the validity of the Corporation's certificate of incorporation or bylaws or (v) any action asserting a claim governed by the internal affairs doctrine, in each such case subject to said Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article ELEVENTH.

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IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by its duly authorized officer and the foregoing facts stated herein are true and correct as of this 4th day of April, 2013.

**CANCER GENETICS, INC.**

By: /s/ Panna L. Sharma

Name: Panna L. Sharma

Title: Chief Executive Officer

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Panna L. Sharma, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cancer Genetics, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: May 15, 2013

/s/ Panna L. Sharma

Panna L. Sharma  
President, Chief Executive Officer and Director  
(Principal Executive Officer)

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Elizabeth A. Czerepak, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cancer Genetics, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: May 15, 2013

/s/ Elizabeth A. Czerepak

Elizabeth A. Czerepak  
Chief Financial Officer  
(Principal Financial Officer)



CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Cancer Genetics, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2013 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Panna L. Sharma, President, Chief Executive Officer and Director of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 15, 2013

/s/ Panna L. Sharma

Panna L. Sharma

President, Chief Executive Officer and Director

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Cancer Genetics, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2013 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Elizabeth A. Czerepak, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 15, 2013

/s/ Elizabeth A. Czerepak

Elizabeth A. Czerepak  
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.