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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2014

or

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

Commission file number: 001-36536

CareDx, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**94-3316839**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

3260 Bayshore Boulevard
Brisbane, California 94005
(Address of principal executive offices)

(415) 287-2300
Registrant's telephone number, including area code

N/A
(Former name, former address and former fiscal year, if changed since last report)

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 Exchange Act). Yes ☐ No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

There were 11,792,746 shares of the registrant's Common Stock issued and outstanding as of August 26, 2014.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

CareDx, Inc.
Consolidated Condensed Balance Sheets
(In thousands, except share and per share data)

	June 30, 2014 (Unaudited)	December 31, 2013 (Note 2)
Assets		
Current assets:		
Cash and cash equivalents	$ 7,872	$ 5,128
Accounts receivable	1,725	2,270
Inventory	614	518
Prepaid and other assets	3,319	255
Total current assets	13,530	8,171
Property and equipment, net	1,665	1,553
Intangible assets, net	6,650	—
Goodwill	12,005	—
Restricted cash	147	147
Other noncurrent assets	—	2
Total assets	$ 33,997	$ 9,873
Liabilities, convertible preferred stock, and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 1,741	$ 618
Accrued payroll liabilities	1,190	1,386
Accrued and other liabilities	3,649	1,048
Accrued royalties	3,526	—
Deferred revenue	674	80
Current portion of long-term debt, and subordinated convertible note	10,434	4,461
Total current liabilities	21,214	7,593
Accrued royalties	—	2,804
Deferred rent, net of current portion	1,784	1,885
Deferred revenue, net of current portion	1,006	1,623
Long-term debt, net of current portion	8,338	10,914
Convertible preferred stock warrant liability	808	525
Contingent consideration	2,313	—
Total liabilities	35,463	25,344
Commitments and contingencies (Note 8)		
Convertible preferred stock: $0.001 par value; 7,501,370 and 6,417,954 shares authorized at June 30, 2014 and December 31, 2013, respectively; 6,043,808 and 5,155,673 shares issued and outstanding at June 30, 2014 and December 31, 2013, respectively; liquidation value of $156,567 and $137,221 at June 30, 2014 and December 31, 2013, respectively	149,444	135,202
Stockholders' deficit:		
Common stock: $0.001 par value; 10,000,000 and 7,737,226 shares authorized at June 30, 2014 and December 31, 2013, respectively; 1,012,959 and 1,010,711 shares issued and outstanding at June 30, 2014 and December 31, 2013, respectively	1	1
Additional paid-in capital	9,672	9,482
Accumulated deficit	(160,583)	(160,156)
Total stockholders' deficit	(150,910)	(150,673)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 33,997	$ 9,873

The accompanying notes are an integral part of these consolidated condensed financial statements.

CareDx, Inc.
Consolidated Condensed Statements of Operations
(unaudited)
(In thousands, except share and per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Revenue:				
Testing revenue	$ 6,710	$ 5,333	$ 12,544	$ 10,142
Collaboration and license revenue	66	124	156	296
Total revenue	6,776	5,457	12,700	10,438
Operating expenses:				
Cost of testing	2,403	2,119	4,565	4,243
Research and development	792	846	1,512	1,848
Sales and marketing	1,610	1,548	3,084	3,117
General and administrative	2,316	1,200	4,111	2,264
Total operating expenses	7,121	5,713	13,272	11,472
Loss from operations	(345)	(256)	(572)	(1,034)
Interest expense, net	(644)	(541)	(1,192)	(1,106)
Other income (expense), net	366	(5)	(163)	(10)
Loss before income taxes	(623)	(802)	(1,927)	(2,150)
Income tax benefit	1,500	—	1,500	—
Net income (loss)	$ 877	$ (802)	$ (427)	$ (2,150)
Net income (loss) per share (Note 3):				
Basic	$ 0.87	$ (0.79)	$ (0.42)	$ (2.13)
Diluted	$ 0.13	$ (0.79)	$ (0.42)	$ (2.13)
Shares used to compute net income (loss) per share				
Basic	1,013,128	1,011,123	1,012,769	1,011,116
Diluted	6,939,568	1,011,123	1,012,769	1,011,116

The accompanying notes are an integral part of these consolidated condensed financial statements.

CareDx, Inc.
Consolidated Condensed Statements of Cash Flows
(unaudited)
(In thousands)

	Six Months Ended June 30, 2014	2013
Operating activities		
Net loss	$ (427)	$(2,150)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	222	415
Stock-based compensation	185	38
Amortization of deferred revenue	(23)	(125)
Amortization of debt discount and noncash interest expense	349	300
Revaluation of warrants to estimated fair value	283	—
Gain on remeasurement of embedded derivative	(118)	—
Non-cash income tax benefit	(1,500)	—
Changes in operating assets and liabilities:		
Accounts receivable	545	(1,637)
Inventory	(96)	(42)
Prepaid and other assets	(2,152)	(126)
Accounts payable	1,123	506
Accrued payroll liabilities	(196)	56
Accrued royalties	721	593
Deferred revenue	—	1,083
Accrued and other liabilities	2,117	(188)
Net cash provided by (used in) operating activities	1,033	(1,277)
Investing activities		
Purchase of property and equipment	(164)	(36)
Payment for acquisitions, net of cash acquired (Note 4)	(376)	—
Net cash used in investing activities	(540)	(36)
Financing activities		
Payment of initial public offering costs	(909)	—
Proceeds from subordinated convertible debt, net of issuance costs	4,982	—
Principal payments on debt	(1,827)	(32)
Proceeds from exercise of stock options	5	—
Net cash provided by (used in) financing activities	2,251	(32)
Net increase (decrease) in cash and cash equivalents	2,744	(1,345)
Cash and cash equivalents at beginning of period	5,128	5,830
Cash and cash equivalents at end of period	$ 7,872	$ 4,485

The accompanying notes are an integral part of these consolidated condensed financial statements.

CareDx, Inc.
Notes to Unaudited Interim Consolidated Condensed Financial Statements

1. ORGANIZATION

CareDx, Inc., ("CareDx" or the "Company") is a commercial stage company that develops, markets and delivers a diagnostic surveillance solution for heart transplant recipients to help clinicians make personalized treatment decisions throughout a transplant patient's lifetime. The Company's commercialized testing solution, the AlloMap heart transplant molecular test ("AlloMap"), an FDA-cleared test, is a blood-based test used to monitor for acute cellular rejection in heart transplant recipients. The Company was incorporated in Delaware in December 1998, as Hippocratic Engineering, Inc. In April 1999, the Company changed its name to BioCardia, Inc., in June 2002 to Expression Diagnostics, Inc., in July 2007 to XDx, Inc. and in March 2014 to CareDx, Inc. The Company's operations are based in Brisbane, California and it operates in one segment.

Initial Public Offering

The Company completed an initial public offering (IPO) of its common stock in July 2014. See Note 13 - *Subsequent Events*, for disclosures related to the IPO and other related transactions. The consolidated condensed financial statements including share and per share amounts, do not give effect to the IPO. See Note 13, Subsequent Events, for pro forma balance sheet data reflecting the IPO and related adjustments as of June 30, 2014.

Reverse Stock Split

On July 1, 2014, the Company's Board of Directors approved an amendment to the Company's Certificate of Incorporation to reflect a 1 for 6.85 reverse stock split (the "Reverse Stock Split") of the Company's outstanding common stock and convertible preferred stock and increase the authorized common stock to 10,000,000 shares, after giving effect to the Reverse Stock Split. The Reverse Stock Split became effective July 14, 2014. The par value per share was not adjusted as a result of the Reverse Stock Split. All authorized, issued and outstanding shares of common stock, convertible preferred stock, options and warrants to purchase common or preferred stock and related per share amounts contained in the financial statements have been retroactively adjusted to reflect the Reverse Stock Split for all periods presented and the increase in authorized common stock to 10,000,000 shares for the period ended June 30, 2014. On July 22, 2014, following the Company's IPO, further revisions were made to the Company's Certificate of Incorporation that are not reflected in these financial statements. See Note 13 for a description of these changes.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying unaudited consolidated condensed financial statements include the accounts of CareDx, Inc. and, effective June 10, 2014, its wholly-owned subsidiary, ImmuMetrix, Inc. (see Note 4, Business Combination). All significant intercompany accounts and transactions have been eliminated in consolidation.

The accompanying unaudited consolidated condensed financial statements have been prepared in accordance with U.S, generally accepted accounting principles ("U.S. GAAP"), and following the requirements of the Securities and Exchange Commission ("SEC") for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by U.S. GAAP can be condensed or omitted. These financial statements have been prepared on the same basis as the Company's annual financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments that are necessary for a fair statement of the Company's financial information. The results of operations for the three and six months ended June 30, 2014 are not necessarily indicative of the results to be expected for the year ending December 31, 2014 or for any other interim period or for any other future year. The consolidated condensed balance sheet as of December 31, 2013 has been derived from audited financial statements at that date but does not include all of the financial information required by U.S. GAAP for complete financial statements.

The accompanying consolidated condensed financial statements and related financial information should be read in conjunction with the audited financial statements and the related notes thereto for the year ended December 31, 2013 included in the Company's Prospectus filed pursuant to Rule 424(b)(4) on July 18, 2014 with the SEC (the "Prospectus").

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses in the financial statements and accompanying notes. On an ongoing basis, management evaluates its estimates, including those related to (i) revenue recognition, (ii) the differences between amounts billed and estimated receipts from payers, (iii) the determination of the accruals for clinical studies, (iv) the determination of refunds to be requested by third-party payers,(v) the fair value of assets and liabilities, (vi) the valuation of warrants to purchase convertible preferred stock, (vii) the determination of fair value of the Company's common stock, (viii) the contingent consideration in a business acquisition, (ix) the fair value of the embedded derivative associated with the subordinated convertible note, (x) the determination of the valuation allowance and estimated tax benefit associated with deferred tax assets and net deferred tax liability, (xi) any impairment of long-lived assets including in-process technology and goodwill and (xii) legal contingencies. Actual results could differ from those estimates.

Concentration of Credit Risk

The Company is subject to credit risk from its accounts receivable which are derived from revenue earned from AlloMap tests provided for patients located in the U.S. and billed to various third-party payers. For the three months ended June 30, 2014 and 2013, approximately 49% and 57%, respectively, of testing revenue was derived from Medicare. For the six months ended June 30, 2014 and 2013, approximately 49% and 55%, respectively, of testing revenue was derived from Medicare. No other payer represented more than 10% of testing revenue for these periods. At June 30, 2014, approximately 72% of accounts receivable were from Medicare. No other payer represented more than 10% of accounts receivable at June 30, 2014.

Fair Value of Financial Instruments

Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining fair value, the Company considers the principal or most advantageous market in which the Company would transact, and it takes into consideration the assumptions that market participants would use when pricing the asset or liability. The Company's assessment of the significance of a particular input to the fair value measurement of an asset or liability requires management to make judgments and to consider specific characteristics of that asset or liability.

The carrying amounts of certain of the Company's financial instruments, including cash equivalents, accounts receivable, accounts payable, and accrued liabilities, approximate fair value due to their short maturities. The carrying amount of the convertible preferred stock warrant liability and the subordinated convertible note equity call option liability (see Note 10) also represent their fair value.

Cash Equivalents

The Company considers all highly liquid investments that are readily convertible into cash having maturities at the time of purchase of three months or less to be cash equivalents. Cash equivalents include money market funds, obligations of U.S. government agencies, and government-sponsored entities which are carried at fair value.

Deferred Offering Costs

Deferred offering costs, which primarily consist of direct incremental legal, accounting and printing fees relating to the IPO, were capitalized. The deferred offering costs will be offset against IPO proceeds upon the consummation of the offering in July 2014. As of June 30, 2014 and December 31, 2013, $2.8 million and $0, respectively, of deferred offering costs were capitalized in prepaid and other assets on the consolidated condensed balance sheets.

Testing Revenue

The Company recognizes revenues for tests delivered when the following criteria are met: (i) persuasive evidence that an arrangement exists; (ii) delivery has occurred or services rendered; (iii) the fee is fixed or determinable; and (iv) collectability is reasonably assured.

The first criteria is satisfied when a third-party payer makes a coverage decision or enters into a contractual arrangement with the Company for the test. The second criteria is satisfied when the Company performs the test and delivers the test result to the ordering physician. The third criteria is satisfied if the third-party payer's coverage decision or reimbursement contract specifies a price for the test. The fourth criteria is satisfied based on management's judgments regarding the collectability of the fees charged under the arrangement. Such judgments include review of past payment history. AlloMap testing may be considered investigational by some payers and not covered under their reimbursement policies. Others may cover the test, but not pay a set or determinable amount. As a result, in the absence of a reimbursement agreement or sufficient payment history, collectability cannot reasonably be assured so revenue is not recognized at the time the test is delivered.

If all criteria set forth above are met, revenue is recognized. When the first, third or fourth criteria are not met but third-party payers make a payment to the Company for tests performed, the Company recognizes revenue on the cash basis in the period in which the payment is received.

Revenue is recognized on the accrual basis net of adjustments for differences between amounts billed and the estimated receipts from payers. The amount the Company expects to collect may be lower than the agreed upon amount due to several factors, such as the amount of patient co-payments, the existence of secondary payers and claim denials. Estimated receipts are based upon historical payment practices of payers. Differences between estimated and actual cash receipts are recorded as an adjustment to revenue, which have been immaterial to date.

Collaboration and License Revenue

The Company generates revenue from collaboration and license agreements. Collaboration and license agreements may include non-refundable upfront payments, partial or complete reimbursement of research and development costs, contingent payments based on the occurrence of specified events under the agreements, license fees and royalties on sales of products or product candidates if they are successfully commercialized. The Company's performance obligations under the collaborations may include the transfer of intellectual property rights in the form of licenses, obligations to provide research and development services and obligations to participate on certain development committees with the collaboration partners. The Company makes judgments that affect the periods over which it recognizes revenue. The Company periodically reviews its estimated periods of performance based on the progress under each arrangement and accounts for the impact of any change in estimated periods of performance on a prospective basis.

The Company recognizes contingent consideration received from the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved, which the Company believes is more consistent with the substance of its performance under its various license and collaboration agreements. The Company did not recognize any milestones during the three months or six month periods ended June 30, 2014 or 2013.

Cost of Testing

Cost of testing reflects the aggregate costs incurred in delivering the Company's AlloMap test results to clinicians. The components of cost of testing are materials and service costs, direct labor costs, including stock-based compensation, equipment and infrastructure expenses associated with testing samples, shipping, logistics and specimen processing charges to collect and transport samples and allocated overhead including rent, information technology, equipment depreciation and utilities and royalties. Costs associated with performing tests (except royalties) are recorded as the test is processed regardless of whether and when revenue is recognized with respect to that test. As a result, our cost of testing as a percentage of revenue may vary significantly from period to period because we do not recognize all revenue in the period in which the associated costs are incurred. Royalties for licensed technology, calculated as a percentage of test revenues, are recorded as license fees in cost of testing at the time the test revenues are recognized.

Business Combinations

In accordance with ASC 805, *Business Combinations*, the Company determines and allocates the purchase price of an acquired business to the tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values as of the business combination date, including identifiable intangible assets which either arise from a contractual or legal right or are separable from goodwill. The Company bases the estimated fair value of identifiable intangible assets acquired in a business combination on independent valuations that use information and assumptions provided by management, which consider management's best estimates of inputs and assumptions that a market participant would use. The Company allocates any excess purchase price over the estimated fair value assigned to the net tangible and identifiable intangible assets acquired and liabilities assumed to goodwill. The use of alternative valuation assumptions, including estimated revenue projections, growth rates, royalty rates, cash flows, discount rates, estimated useful lives and probabilities surrounding the achievement of contingent milestones could result in different purchase price allocations and amortization expense in current and future periods.

Goodwill and indefinite-lived intangible assets including acquired in-process technology are reviewed for impairment on an annual basis or more frequently if events or circumstances indicate that goodwill or indefinite-lived intangible assets may be impaired. The Company's goodwill evaluation is based on both qualitative and quantitative assessments regarding the fair value of goodwill relative to its carrying value. The Company assesses qualitative factors to determine if its sole reporting unit's fair value is more likely than not to exceed its carrying value, including goodwill. In the event the Company determines that it is more likely than not that its reporting unit's fair value is less than its carrying amount, quantitative testing is performed comparing recorded values to estimated fair values. If the fair value exceeds the carrying value, goodwill is not impaired. If the carrying value exceeds the fair value, then the Company would calculate the potential impairment loss by comparing the implied fair value of goodwill with the carrying value. If the implied fair value of goodwill is less than the carrying value, then an impairment charge would be recorded. The Company performs its annual evaluation of goodwill during the fourth quarter of each fiscal year. Impairment losses on indefinite-lived intangible assets are recognized based solely on a comparison of the fair value of the asset to its carrying value, without consideration of any recoverability test.

In those circumstances where an acquisition involves a contingent consideration arrangement that meets the definition of a liability under ASC 480, *Distinguishing Liabilities from Equity*, the Company recognizes a liability equal to the fair value of the contingent payments the Company expects to make as of the acquisition date. The Company remeasures this liability each reporting period and records changes in the fair value as a component of operating expenses.

Transaction costs associated with these acquisitions are expensed as incurred in general and administrative expenses. Results of operations and cash flows of acquired companies are included in the Company's operating results from the date of acquisition.

Stock–Based Compensation

The Company uses the Black-Scholes valuation model, which requires the use of estimates such as stock price volatility and expected option lives, to value employee stock options. The Company estimates the expected option lives using historical data, volatility using data of similar companies in the diagnostics industry, and risk-free rates based on the implied yield currently available in the U.S. Treasury zero-coupon issues with a remaining term equal to the expected option lives, and dividend yield based on the Company's historical data.

The Company uses the straight-line attribution method for recognizing compensation expense. Compensation expense is recognized on awards ultimately expected to vest and reduced for forfeitures that are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures are estimated based on the Company's historical experience.

Equity instruments granted to nonemployees are valued using the Black-Scholes valuation model and are subject to periodic revaluation over their vesting terms. Nonemployee stock compensation is recognized upon vesting of the stock options which is commensurate with the period over which services are provided.

Impairment

The Company evaluates its long-lived assets for indicators of possible impairment when events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. The Company then compares the carrying amounts of the assets with the future net undiscounted cash flows expected to be generated by such asset. Should an impairment exist, the impairment loss would be measured based on the excess carrying value of the asset over the asset's fair value determined using discounted estimates of future cash flows. The Company has not identified any such impairment losses to date.

Warrants

The Company has freestanding warrants enabling counterparties to purchase shares of its convertible preferred stock and common stock. In accordance with the accounting guidance regarding distinguishing liabilities from equity, freestanding warrants for convertible preferred stock that are contingently redeemable are classified as liabilities on the balance sheets and recorded at their estimated fair value. These warrants are remeasured at each balance sheet date and any change in estimated fair value is recognized in other income (expense), net on the statements of operations. The Company adjusts the liability for changes in estimated fair value until the earlier of the exercise or expiration of the warrants or the completion of a liquidation event, including the completion of an initial public offering, at which time all preferred stock warrants would be converted into warrants to purchase common stock, and, accordingly, the liability would be reclassified to equity.

The Company accounts for its warrants for shares of common stock as equity in accordance with the accounting guidance distinguishing liabilities from equity.

Comprehensive Loss

Net loss and comprehensive loss are the same for all periods presented.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU 2014-09"), which amends the existing accounting standards for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount an entity expects to be entitled when products are transferred to customers. ASU 2014-09 will be effective for the Company beginning in its first quarter of 2017. Early adoption is not permitted. The new revenue standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. The Company is currently evaluating the impact of adopting the new revenue standard on its consolidated financial statements.

In July 2013, the Financial Accounting Standards Board issued Accounting Standards Update No. 2013-11, *Presentation of an Unrecognized Tax Benefit when a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists (a consensus of the FASB Emerging Issues Task Force).* The amendments in this ASU provide guidance on the financial statements presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. An unrecognized tax benefit should be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward with certain exceptions, in which case such an unrecognized tax benefit should be presented in the financial statements as a liability. The amendments in this ASU do not require new recurring disclosures and are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The Company adopted this guidance during the first quarter of 2014 and such adoption did not have a material impact on our condensed financial statements.

3. NET INCOME (LOSS) PER SHARE

Basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted-average number of shares of common stock outstanding during the period, without consideration for common share equivalents.

Diluted net income (loss) per common share is computed by dividing the net income (loss) by the sum of the weighted-average quantities of common shares and common share equivalents outstanding during the period, to the extent that such common share equivalents are dilutive. Our common share equivalents include convertible preferred stock, the subordinated convertible note, and options and warrants to purchase common and convertible preferred stock. Common share equivalents for convertible preferred stock and the subordinated convertible note are determined using the if-converted method. Common share equivalents for options and warrants to purchase common and convertible preferred stock are determined using the treasury-stock method.

For the three months ended June 30, 2014, common share equivalents have been included in diluted net income per share, as the effect to net income per share is dilutive. For the six months ended June 30, 2014, and for the three and six months ended June 30, 2013, all common share equivalents have been excluded from diluted net loss per share as the effect to net loss per share would be antidilutive.

The following tables set forth the computation of the Company's basic and diluted net income (loss) per common share (in thousands, except per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Numerator:				
Net income (loss)	$ 877	$ (802)	$ (427)	$ (2,150)
Add: interest expense related to subordinated convertible note, less gain on change in fair value of derivative related to subordinated convertible note	15	—	—	—
Net income (loss) attributable to common stockholders	$ 892	$ (802)	$ (427)	$ (2,150)
Denominator:				
Weighted-average shares used to compute basic net income (loss) per common share	1,013,128	1,011,123	1,012,769	1,011,116
Effect of potentially dilutive securities:				
Employee stock options	381,434	—	—	—
Convertible preferred stock	5,355,280	—	—	—
Subordinated convertible note	189,726	—	—	—
Weighted-average shares used to compute diluted net income (loss) per common share	6,939,568	1,011,123	1,012,769	1,011,116
Net income (loss) per share				
Net income (loss) per common share - basic	$ 0.87	$ (0.79)	$ (0.42)	$ (2.13)
Net income (loss) per common share - diluted	$ 0.13	$ (0.79)	$ (0.42)	$ (2.13)

The following potentially dilutive securities have been excluded from diluted net income (loss) per common share, because their effect would be antidilutive:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Options to purchase common stock	469,163	505,043	907,318	505,043
Warrants to purchase common stock	82,190	82,190	82,190	82,190
Warrants to purchase convertible preferred stock	541,613	541,613	541,613	541,613
Subordinated convertible note	—	—	233,311	—
Convertible preferred stock	—	5,160,085	6,048,220	5,160,085
Total	1,092,966	6,288,931	7,812,652	6,288,931

The assumed conversion of Series G convertible preferred stock issuable in connection with the subordinated convertible note (see Note 10) was calculated based upon its $5.0 million principal balance plus accrued interest at a conversion price of $21.78 per share.

Shares issuable upon the achievement of a future milestone in conjunction with the business combination (see Note 4) are not included in the above chart due to the uncertainty of the Company achieving this performance metric.

Note 13 also describes shares issued in conjunction with the Company's IPO subsequent to June 30, 2014 and the conversion of the above convertible preferred stock and subordinated convertible note.

4. BUSINESS COMBINATION

Description of the Transaction

On June 10, 2014, in accordance with an Agreement and Plan of Merger ("Agreement"), the Company acquired ImmuMetrix, Inc. ("IMX"), a privately held development stage company working in new technologies using cell-free donor DNA ("cfDNA") technology for the diagnosis, treatment and management of transplant rejection, immune disorders and diseases, including the development of a new, non-invasive test designed to detect the early stages of solid organ transplant rejection. The Company acquired all IMX assets associated with transplant diagnostics, including related immune repertoire and infectious diseases. An IMX successor company retained the limited assets not associated with transplant diagnostics. The acquisition was structured as a tax-free reorganization.

The Company acquired all of the issued and outstanding capital stock of IMX for the total estimated purchase price of $17.2 million consisting of i) $600,000 in cash; ii) 911,364 shares of the Company's Series G convertible preferred stock with an estimated fair value of $14.2 million, including 23,229 shares of the Company's Series G convertible preferred stock with an estimated fair value of $0.4 million as a result of the Company's assumption of IMX outstanding stock options; and iii) an additional payment of 227,845 shares of CareDx Series G convertible preferred stock if a future milestone is achieved. The Agreement provides that the milestone will be achieved if the Company completes 2,500 commercial tests involving the measurement of cfDNA in organ transplant recipients in the United States no later than six years after the closing date of the acquisition. The additional shares to be paid for the achievement of the milestone will be common stock as a result of the Company's IPO in July 2014 (see Note 13). The fair value of this contingent consideration is $2.3 million at the acquisition date and at June 30, 2014.

The intellectual property acquired includes an exclusive license from Stanford University to a patent relating to the diagnosis of rejection in organ transplant recipients using cfDNA.

Basis of Presentation

The acquisition has been accounted for using the purchase method of accounting. Under the purchase method of accounting, the total purchase price was allocated to the assets acquired and liabilities assumed based on their estimated fair values as of the acquisition date, including identifiable intangible assets which either arise from a contractual or legal right or are separable from goodwill. The excess of purchase price over the estimated fair value assigned to the net tangible and identifiable intangible assets acquired and liabilities assumed is considered goodwill. The Company's results of operations included the activities of IMX from the date of the acquisition.

Purchase Price Allocation

In accordance with ASC 805, *Business Combinations*, the Company recorded the assets acquired and liabilities assumed at their respective estimated fair values as of the acquisition date. The total estimated purchase price of $17.2 million was allocated to the assets acquired and liabilities assumed based on their estimated fair values, including identifiable intangible assets that either arise from a contractual or legal right or are separable from goodwill. There were no tangible assets acquired from IMX.

The estimated fair value of the Series G convertible preferred stock issued as consideration in the acquisition was derived based primarily on an independent third-party valuation. The fair value measurements were based on significant inputs not observable in the market and thus represent a Level 3 fair value measurement as defined in ASC 820, *Fair Value Measurements and Disclosures* (see Note 5).

The Company recorded its estimate of the fair value of the contingent consideration based on its evaluation of the probability of the achievement of the contractual conditions that would result in the payment of the contingent consideration. The fair value of the contingent consideration was estimated using the fair value of the shares to be paid if the contingency is met multiplied by management's 65% estimate of the probability of success. This represents a Level 3 fair value measurement under the fair value hierarchy. The significant inputs in the Level 3 measurement not supported by market activity include the Company's probability assessments of the milestone being met, as well as the estimated fair value of the Series G stock to be paid. The contingent consideration payable in the Company's stock represents a liability in accordance with ASC 480-10, *Distinguishing Liabilities from Equity*. The Company will remeasure this liability each reporting period and record changes in the estimated fair value as a component of operating expenses until the milestone contingency is paid or is no longer achievable.

The following table summarizes the purchase consideration (in thousands):

Cash paid upon executing agreement and to be paid upon end of objection period	$ 600
Estimated fair value of Series G preferred stock issued	13,873
Estimated fair value of stock options assumed by the Company	369
Contingent consideration - Series G convertible preferred stock to be issued upon the achievement of a future milestone	2,313
Total estimated purchase consideration	$17,155

The estimated portion of assumed stock options that is subject to future service requirements and will therefore be expensed in the financial statements rather than included in purchase consideration is $32,000.

The following table provides the allocation of the estimated purchase consideration (in thousands):

Identifiable intangible assets - In-process technology	$ 6,650
Goodwill	12,005
Deferred tax liability, net	(1,500)
Total estimated assets acquired and liabilities assumed	$17,155

The total purchase consideration previously estimated in the prospectus was $19.1 million. The amounts allocated to goodwill and deferred tax liability, net, in the prospectus were $14.1 million and $1.6 million, respectively. Differences between the amounts in the tables above and the amounts in the prospectus result from a change in the estimated fair value of the Series G convertible preferred stock purchase consideration, from the date when the acquisition was considered probable to the acquisition date.

Identifiable Intangible Assets and Liabilities

As part of the purchase price allocation, the Company determined that IMX's separately identifiable intangible asset was its in-process technology.

The Company used the Relief from Royalty Approach to value the in-process technology. This method estimates the fair value of an asset by determining the present value of cash flows, net of taxes, associated with incremental profits as a result of relief from royalty on the acquired in-process technology. The baseline data for this analysis was technology-related revenue estimates generated by management, which were utilized to generate the present value of cash flows. A net estimated royalty rate of 12% was applied to the forecasted revenue to estimate the income associated with the asset.

Cash flows forecasted for the in-process technology were discounted based on a discount rate of 18%. This discount rate was benchmarked with reference to the implied rate of return on assets, as well as an estimate of a market participant's weighted-average cost of capital.

The in-process technology is recorded as an indefinite-life intangible asset until it reaches technological feasibility and will be tested for impairment in accordance with ASC 350, *Intangibles-Goodwill and Other*. Amortization into earnings will begin once the research and development activities are complete and the technology is proven to work, at which time technological feasibility will have been achieved. The Company expects that will occur at approximately the time when revenue is generated in the marketplace, currently estimated to be during the fourth quarter of 2015.

Amortization will be based on the estimated remaining useful life of the patent when the product is proven feasible, estimated to be 15 years. Amortization will be recorded using the straight line method.

In estimating the useful life of the acquired identified intangible assets, the Company considered ASC 350-30-35, *Intangibles-Goodwill and Other*, and reviewed the following: the expected use by the combined company of the assets acquired, legal, regulatory or other contractual provisions that may limit the useful life of an acquired asset or may enable the extension of the useful life of an acquired asset without substantial cost, the effects of obsolescence, demand, competition and other economic factors, and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

The amortization of the completed technology is not expected to be deductible for tax purposes, as the transaction was structured as a tax-free reorganization. Accordingly, a deferred tax liability was recorded for the difference between the financial reporting and tax basis of the acquired in-process technology. While the in-process technology is considered an indefinite lived intangible asset, the life will become definite as it will be amortized or impaired prior to the expiration of net operating loss carryforwards available to the Company. As a result, a tax benefit was recorded for the net deferred tax liability of $1.5 million.

The goodwill is not expected to be deductible for tax purposes.

Financial Statements of IMX and Pro Forma Impact of the Acquisition of IMX

IMX audited financial statements for the years ended December 31, 2012 and 2013, unaudited financial statements for the three months ended March 31, 2013 and 2014 and unaudited pro forma condensed combined financial information are presented in the Company's Prospectus filed on July 18, 2014 with the SEC.

IMX's post-acquisition results of operations for the period from June 11, 2014 through June 30, 2014 are included in the Company's consolidated condensed statements of operations.

The following table presents pro forma results of operations and gives effect to the IMX transaction as if the transaction had been consummated on January 1, 2013. The unaudited pro forma results of operations have been prepared for comparative purposes only and are not necessarily indicative of what would have occurred had the business combination been completed at the beginning of the period or of the results that may occur in the future. Furthermore, the pro forma financial information does not reflect the impact of any reorganization or operating efficiencies resulting from combining the two companies (in thousands, except per share data).

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Net revenue	$6,776	$ 5,457	$12,700	$10,438
Net loss	$ (518)	$(1,169)	$ (2,288)	$ (1,746)
Net loss per common share - basic and diluted	$ (0.51)	$ (1.16)	$ (2.26)	$ (1.73)

The unaudited pro forma consolidated financial information was prepared using the acquisition method of accounting and are based on the historical financial information of the Company and IMX, reflecting the Company's and IMX's results of operations for the three and six month periods ending June 30, 2014 and 2013. The historical financial information has been adjusted to give effect to the pro forma events that are: (i) directly attributable to the acquisition, (ii) factually supportable and (iii) expected to have a continuing impact on the combined results. The unaudited pro forma consolidated financial information reflects: (a) the removal of acquisition-related costs of $1.6 million and $1.7 million incurred by both CareDx and IMX for the three and six months ended June 30, 2014, respectively, including the removal of $0.2 million of IMX stock-based compensation expense that resulted from modifications to options in anticipation of the acquisition; (b) the removal of a $1.5 million tax benefit for the three and six months ended June 30, 2014 that resulted from the acquisition; (c) the addition of salaries, benefits and fees for IMX employees and consultants retained after the acquisition; and (d) the addition of the $1.5 million acquisition-related tax benefit for the six months ended June 30, 2013, as if the acquisition had occurred on January 1, 2013 and the benefit had been recognized during the three months ended March 31, 2013. Acquisition related expenses are primarily included in general and administrative expenses.

5. FAIR VALUE MEASUREMENTS

The Company's financial instruments are measured and recorded at fair value except for its debt, which is recorded at amortized cost. The three levels of inputs that are used to measure fair value are classified into the following hierarchy:

Level 1—Unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2—Unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are active, or inputs other than prices that are observable for the assets or liabilities.

Level 3—Unobservable inputs for the assets or liabilities.

The tables below presents the fair value of the Company's financial assets and liabilities, by level, within the fair value hierarchy that are measured at fair value on a recurring basis (in thousands):

	June 30, 2014			
	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$7,847	$ —	$ —	$7,847
Liabilities				
Contingent consideration liability	$ —	$ —	$2,313	$2,313
Convertible preferred stock warrants	—	—	808	808
Derivative liability related to subordinated convertible note	—	—	120	120
Total liabilities	$ —	$ —	$3,241	$3,241

	December 31, 2013			
	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$5,204	$ —	$ —	$5,204
Liabilities				
Convertible preferred stock warrants	$ —	$ —	$ 525	$ 525

Investments in money market funds are classified within Level 1. At June 30, 2014 and December 31, 2013, money market funds were included on the balance sheets in cash and cash equivalents and in restricted cash. The Company recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers between Level 1, Level 2 and Level 3 categories during the periods presented.

The Company's liabilities classified as Level 3 were valued based on unobservable inputs and management's judgment due to the absence of quoted market prices, inherent lack of liquidity and, in the case of the contingent consideration liability and convertible preferred stock warrants, the long-term nature of such financial instruments.

The significant unobservable inputs used in the fair value measurement of the contingent consideration liability are the Company's estimated fair value of Series G preferred stock issued and the evaluation of the probability of the achievement of the contractual conditions that would result in the payment of the contingent consideration. Generally, increases (decreases) in the estimation of the fair value of the stock or of the probability percentage would result in a directionally similar impact to the fair value measurement of the contingent consideration liability. Any change in estimated fair value of the contingent consideration liability is recognized in operating expenses. At June 30, 2014, the estimated fair value of Series G preferred stock was $15.62, and the estimated probability of achievement of the contractual conditions that would result in the payment of the contingent consideration was 65%.

The Company's convertible preferred stock warrants are classified as Level 3 because they were valued based on unobservable inputs and management's judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such financial instruments. These assumptions are inherently subjective and involve significant management judgment. The significant unobservable input used in the fair value measurement of the warrant liability is the fair value of the underlying common stock at the valuation remeasurement date. Generally, increases (decreases) in the fair value of the underlying common stock would result in a directionally similar impact to the fair value measurement of the preferred stock warrants. Any change in estimated fair value is recognized in other income or expense on the statements of operations.

The estimated fair value of the convertible preferred stock warrant liability was determined using the Black-Scholes option pricing model using the following assumptions:

	As of June 30, 2014	As of December 31, 2013
Estimated fair value of common stock	$ 11.44	$ 12.40
Risk-free interest rate	0.9% - 1.6%	0.8% - 2.1%
Volatility	41% - 43%	40% - 45%
Estimated term equal to the remaining contractual term	2.8 - 5.1 years	3.3 - 5.6 years
Expected dividend yield	—	—

The significant unobservable input used in the fair value measurement of the derivative liability related to the subordinated convertible note is the probability assigned to the various scenarios. Generally, increases (decreases) in the probability of the factors primarily impacting the valuation would result in a directionally similar impact to the fair value measurement of the derivative liability. Any change in estimated fair value is recognized in other income (expense) on the statements of operations.

The following table presents the changes in the Company's Level 3 financial instruments that are measured at fair value on a recurring basis (in thousands):

	Level 3			
	Contingent Consideration Liability	Convertible Preferred Stock Warrants	Derivative Liability Related to Subordinated Convertible Note	Total
Balance as of December 31, 2013	$ —	$ 525	$ —	$ 525
Issuance of financial instruments	2,313	—	239	2,552
Change in fair value	—	283	(119)	164
Balance as of June 30, 2014	$ 2,313	$ 808	$ 120	$3,241

6. INVENTORY

The following table summarizes the Company's inventory (in thousands):

	June 30, 2014	December 31, 2013
Finished goods	$ 261	$ 230
Raw materials	353	288
Total inventory	$ 614	$ 518

7. ACCRUED AND OTHER LIABILITIES

The following table represents the components of accrued and other liabilities (in thousands):

	June 30, 2014	December 31, 2013
Accrued IPO costs	$1,126	$ —
Professional fees	890	175
Test sample processing fees	306	195
Accrued overpayments and refunds	183	215
Bifurcated derivative associated with subordinated convertible note	120	—
Clinical studies	108	84
Deferred rent – current portion	173	145
Capital leases – current portion	81	43
Other accrued expenses	662	191
Total accrued and other liabilities	$3,649	$ 1,048

8. COMMITMENTS AND CONTINGENCIES

Royalty Commitments

In 2004, the Company entered into a license agreement with Roche Molecular Systems, Inc., or Roche, amended in 2006 and 2007, whereby the Company uses licensed technology to perform certain clinical laboratory services. The Company incurs royalty expenses that are based on a mid-single digit percentage of test revenues. Royalties are recorded as a component of cost of testing on the statements of operations.

On February 11, 2014 Roche filed a demand for arbitration with the American Arbitration Association seeking a declaration that the Company has materially breached the Roche license agreement by failing to report and pay royalties owing to Roche in respect of licensed services that the Company performed after July 1, 2011. Roche seeks damages in the form of unpaid royalties from July 1, 2011 to March 31, 2013 of $1.8 million plus interest of $85,000 and royalties in an unspecified amount from April 1, 2013 to present, which, based upon the royalty rate currently stated in the license agreement, the Company estimates to be an additional $1.6 million through June 30, 2014. While management believes it has meritorious defenses to these claims, which it plans to fully pursue in the arbitration, the Company has fully reserved the amount of these unpaid royalties on its balance sheet, and the amount of these unpaid royalties has been reflected as an expense in the Company's statements of operations in the periods to which the royalties relate.

Arbitration for this matter has now been scheduled for early 2015. As a result, the Company has reclassified the $3.5 million as of June 30, 2014 to current liabilities.

9. COLLABORATION AND LICENSING AGREEMENTS

Laboratory Corporation of America Holdings ("LabCorp")

In April 2012, the Company entered into a Collaboration and License Agreement with LabCorp for the purpose of developing a lupus flare predictor test. The Company and LabCorp share equally the costs and expenses of developing the lupus flare predictor test; however LabCorp's share of the development cost is subject to certain limits at each stage of the arrangement.

Under this agreement, LabCorp paid the Company a nonrefundable and non-creditable upfront license fee payment of $1,000,000.

For the deliverables under the agreement without stand-alone value, the allocated consideration is being recognized as a combined unit of accounting ratably over the Company's estimated period of performance. During the three months ended June 30, 2014 and 2013, the Company recognized $1,800 and $104,100, respectively, in revenue under this arrangement, which consisted of amortization of upfront license fee of $0 and $62,500, respectively, and reimbursement of research and development expenses of $1,800 and $41,600, respectively. During the six months ended June 30, 2014 and 2013, the Company recognized $31,200 and $267,300, respectively, in revenue under this arrangement, which consisted of amortization of upfront license fee of $15,000 and $125,000, respectively, and reimbursement of research and development expenses of $16,200 and $142,300, respectively. Such revenues are included in collaboration and license revenue on the statements of operations.

Phase 1 of the project was completed in the first quarter of 2014. The remaining $611,000 of the upfront license fee is included in current deferred revenue at June 30, 2014, based on management's current expectation that the revenue will be realized within the next twelve months.

Included in research and development expenses were $3,600 and $83,000 for the three months ended June 30, 2014 and 2013, respectively, for development costs with respect to Phase 1. Such amounts were $32,000 and $284,000 for the six months ended June 30, 2014 and 2013, respectively.

Diaxonhit ("DHT")

In June 2013, the Company entered into an exclusive Distribution and Licensing Agreement with DHT, a French public company, whereby DHT will have the AlloMap test performed in a European laboratory and commercialize the test in the European Economic Area ("EEA"). The agreement will expire at the later of the last-to-expire patent in the EEA or ten years from the first commercial sale of the test in the EEA, which is expected to occur in late 2014 or early 2015.

Consideration under the agreement includes an upfront cash payment of approximately €387,500 ($503,000) that is designated to offset royalties earned by the Company in the first three years following the first commercial sale. The Company is entitled to receive royalties from DHT as a percent of net sales, as defined in the agreement, of AlloMap tests in the mid to high teens. Approximately €250,000 ($344,000) of the upfront payments is refundable under certain circumstances. Upon confirmation that the CE mark was in place, the Company also received an equity payment of DHT common stock with a value of €387,500 ($503,000). These shares were promptly sold by the Company in July 2013 for total consideration of $467,000.

Other consideration that may be earned by the Company includes agreed-upon per unit pricing for the supply of AlloMap products, and additional royalties that are payable upon the achievement of various sales milestones by DHT. In this arrangement, there is one combined unit of accounting.

Since commercial sales have not yet begun in the EEA, the Company has yet to deliver AlloMap products or related services to DHT. Accordingly, no revenue from this arrangement has been recognized as of June 30, 2014.

CardioDx-Related Party

In 2005, the Company entered into a services agreement with a related party, CardioDx, Inc. ("CDX"), whereby the Company provided CDX with biological samples and related data and performed laboratory services on behalf of CDX. Each company granted the other a worldwide license under certain of its intellectual property rights. Pursuant to this agreement, CDX pays royalties to the Company of a low single-digit percentage of the cash collected from sales of CDX licensed products. In 2009, CDX terminated the services portion of this agreement, however, the royalty obligation from CDX continues until the tenth anniversary of the first commercial sale of a CDX licensed product. The first commercial sale of such product by CDX occurred in 2009, therefore the royalty obligation to the Company continues until 2019. Two board members of CDX serve on the Company's board of directors and are affiliated with stockholders of the Company. Royalty revenues, recorded when earned, were $59,000 and $21,000 for the three months ended June 30, 2014 and 2013, respectively. Such amounts were $117,000 and $30,000 for the six months ended June 20, 2014 and 2013, respectively. The Company had receivable balances from CDX of $59,000 and $37,000 at June 30, 2014 and December 31, 2013, respectively.

10. SUBORDINATED CONVERTIBLE NOTE

On April 17, 2014, the Company issued a $5.0 million Subordinated Convertible Promissory Note to Illumina, Inc. (the "Note") which provides for interest at an annual rate of 8.0%. The Note matures one year following its issuance with principal and unpaid interest due at that time unless the Note is converted into equity prior to the maturity date. As described below, conversion is mandatory in the event of a Qualified Initial Public Offering. As described in Note 13, Subsequent Events, our Initial Public Offering closed on July 22, 2014 and the Note converted into 510,777 shares of our common stock in accordance with its terms.

The features of the Note include five different and mutually exclusive conversion/settlement provisions.

In accordance with ASC 815, "*Derivatives and Hedging*" and ASC 470, "*Debt*", the Company determined whether any features of the Note constitute embedded derivatives that require bifurcation between the derivative and the host instrument, whether there is a beneficial conversion feature, as well as determining the fair value of relevant elements.

The Company determined that the optional conversion or repayment upon a Change in Control is an equity call option with a potentially variable value to be received and meets the definition of a derivative which would be required to be bifurcated. The Note provided that in the event of a Change in Control closing prior to a Qualified Financing or Qualified IPO, at Illumina's option, either (i) the Company shall pay Illumina 1.5X the principal and accrued interest under the Note, which shall constitute full repayment of the Note, or (ii) the principal and accrued interest may be converted immediately prior to the consummation of the Change of Control into that number of shares of common stock as is yielded when the principal and accrued interest under the Note is divided by a pre-determined amount. "Change of Control" means (a) (i) the sale, conveyance or disposal of all or substantially all of the Company's assets in one transaction or a series of related transactions, (ii) the acquisition of the Company by merger, consolidation with any other corporation or any other transaction or series of related transactions in which more than 50% of the voting power of the Company is not retained by the holders of capital stock of the Company, or (b) the approval by the board of directors and stockholders of a plan of liquidation of the Company.

The estimated fair value of this embedded derivative was affected by the estimated probability assigned to the various scenarios for the host instrument. As of April 17, 2014, management estimated repayment upon a change in control within the loan term as a 10% probability.

As of June 30, 2014 management estimated repayment upon a change in control within the loan term a 5% probability. The estimated fair value of the bifurcated embedded derivative liability was $0.2 million at April 17, 2014 and was remeasured at June 30, 2014 to $0.1 million. The original estimated fair value of the embedded derivative is accounted for as a debt discount to the subordinated convertible note payable on the consolidated condensed balance sheet at June 30, 2014 and is remeasured at each reporting period and amortized to interest expense to the maturity date. The estimated fair value of the embedded derivative liability is included in accrued and other liabilities on the consolidated condensed balance sheets. Amortization of the debt discount was $51,000 for the period from April 17, 2014 to June 30, 2014. Remeasurement of the embedded derivative at June 30, 2014 resulted in other income of approximately $0.1 million for the quarter ended June 30, 2014.

11. STOCK OPTION PLANS

Prior to it IPO the Company had one active stock option plan, the 2008 Equity Incentive Plan, and one terminated stock option plan, the 1998 Stock Plan.

The following table summarizes option activity and related information during the six months ended June 30, 2014 under the 2008 Equity Incentive Plan and for options which remain outstanding under the 1998 Stock Plan:

	Shares Available for Grant	Options Outstanding	
		Number of Shares	Weighted-average Exercise Price
Balance at December 31, 2013	332,995	466,965	$ 1.99
Increase in shares reserved for issuance	102,189	—	$ —
Granted	(461,795)	461,795	$ 12.40
Exercised	—	(2,199)	$ 2.56
Forfeited	14,532	(14,532)	$ 10.46
Expired	12,079	(12,079)	$ 2.96
Balance at June 30, 2014	—	899,950	$ 7.22

The weighted-average grant-date fair value of options granted during the six months ended June 30, 2014 using the Black-Scholes valuation model was $4.94 per share.

Options outstanding and exercisable that have vested and are expected to vest at June 30, 2014 are as follows:

	Number of Shares	Weighted-average Exercise Price	Weighted-average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Vested	367,706	$ 2.69	6.25	$ 3,219
Expected to vest	532,244	$ 10.32	9.49	606
Total	899,950	$ 7.22	8.17	$ 3,825

In the table above, aggregate intrinsic value represents the difference between the exercise price and the estimated fair value of the Company's common stock of $11.44 per share, as determined by the Board of Directors, as of June 30, 2014.

The Company's results of operations include expense relating to employee and nonemployee stock-based payment awards as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Cost of testing	$ 9	$ 1	$ 9	$ 2
Research and development	21	2	22	4
Sales and marketing	8	1	9	2
General and administrative	99	15	145	30
	$ 137	$ 19	$ 185	$ 38

Valuation Assumptions

The fair value of stock-based awards was estimated using the Black-Scholes option-pricing model using the following weighted-average assumptions:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Risk-free interest rate	1.74%	1.02%	1.70%	1.02%
Volatility	42.18%	45.29%	41.84%	45.41%
Expected term, in years	5.3	6.0	5.1	6.0
Expected dividend yield	0.0%	0.0%	0.0%	0.0%

At June 30, 2014, there was approximately $2.2 million of total unrecognized stock-based compensation, net of estimated forfeitures, related to nonvested employee stock option awards granted that will be recognized on a straight-line basis over the remaining vesting period of 3.7 years.

12. INCOME TAXES

In conjunction with the acquisition of IMX a tax benefit of $1.5 million was recognized during the three months ended June 30, 2014. This benefit resulted from the expectation that amortization of the in-process technology acquired, when completed and placed in service, is not expected to be deductible for tax purposes, as the transaction was structured as a tax-free reorganization. Accordingly, a deferred tax liability was recorded at the acquisition date for the difference between the financial reporting and tax basis of the acquired in-process technology. While the in-process technology is considered an indefinite lived intangible asset, this asset is expected to be amortized or impaired prior to the expiration of net operating loss carryforwards available to the Company.

13. SUBSEQUENT EVENTS

Authorized Share Capital

Effective July 22, 2014, the Company's certificate of incorporation was amended and restated to provide for 100,000,000 authorized shares of common stock with a par value of $0.001 per share, and 10,000,000 authorized shares of preferred stock with a par value of $0.001 per share.

Initial Public Offering

On July 16, 2014, the Company's registration statement on Form S-1 (File No. 333-196494) relating to the IPO of its common stock was declared effective by the SEC. The IPO closed on July 22, 2014, at which time the Company sold 4,000,000 shares, and in August 2014 the underwriters partially exercised their overallotment option, at which time the Company sold an additional 220,000 shares. The Company received net cash proceeds of approximately $35.5 million from the IPO, including the overallotment exercise, net of underwriting discounts and commissions and expenses paid by the Company.

Pro Forma Selected Balance Sheet Data

The selected balance sheet data below presents, on a pro forma basis, the impact of the Company's IPO on the Company's consolidated condensed balance sheet as of June 30, 2014. Specifically, the pro forma consolidated condensed balance sheet data gives effect to the following in connection with the completion of the IPO: (i) the sale of 4,220,000 shares of common stock at a price to the public of $10.00 per share, before underwriting discounts and estimated offering costs, (ii) the conversion of all of the Company's outstanding shares of convertible preferred stock into an aggregate of 6,048,220 shares of common stock, (iii) the issuance of 510,000 shares upon conversion of the subordinated convertible note described in Note 10 above, and (iv) the reclassification of the convertible preferred stock warrant liability of $0.8 million to additional paid-in capital.

(in thousands)	As of June 30, 2014	
	Actual	Pro Forma
	(Unaudited)	
Selected Balance Sheet Data:		
Cash and cash equivalents	$ 7,872	$ 44,327
Total debt	18,772	13,977
Convertible preferred stock	149,444	—
Total stockholders' (deficit) equity	(150,910)	39,885

The Company has evaluated subsequent events through August 28, 2014, the date these unaudited interim consolidated condensed financial statements are considered issued.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with the consolidated condensed financial statements and related notes included elsewhere in Item 1 of Part I of this Quarterly Report on Form 10-Q and with the audited financial statements and the related notes included in our final prospectus filed with the Securities and Exchange Commission on July 18, 2014, which we refer to as the Prospectus.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements contained in this Quarterly Report on Form 10-Q other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, and our objectives for future operations, are forward-looking statements. The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect" and the negative and plural forms of these words and similar expressions are intended to identify forward-looking statements.

These forward-looking statements may include, but are not limited to, statements concerning the following:

- our ability to generate revenue from sales of AlloMap and future solutions, if any, and our ability to increase the commercial success of AlloMap;
- our plans and ability to develop and commercialize new solutions, including cell-free DNA, or cfDNA, solutions for the surveillance of heart and kidney transplant recipients;
- our ability to achieve, maintain and expand reimbursement coverage from payers for AlloMap and future solutions, if any;
- the outcome or success of our clinical trial collaborations and observational studies;
- our compliance with federal, state and foreign regulatory requirements;
- the favorable review of AlloMap and our future solutions, if any, in peer-reviewed publications;
- our ability to protect and enforce our intellectual property rights, our strategies regarding filing additional patent applications to strengthen our intellectual property rights, and our ability to defend against intellectual property claims that may be brought against us;
- our anticipated cash needs and our anticipated uses of our funds, including our estimates regarding operating expenses and capital requirements;
- anticipated trends and challenges in our business and the markets in which we operate; and
- our ability to comply with the requirements of being a public company.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the section entitled "Risk Factors" in the Prospectus and elsewhere in this report. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

You should read this report and the documents that we reference in this report and have filed with the SEC as exhibits with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect. We qualify all forward-looking statements by these cautionary statements.

Overview and Recent Developments

We are a commercial stage company that develops, markets and delivers a diagnostic surveillance solution for heart transplant recipients to help clinicians make personalized treatment decisions throughout a patient's lifetime. Our product, the AlloMap heart transplant molecular test, is a blood-based test used to monitor heart transplant recipients for acute cellular rejection. We believe the use of AlloMap, in conjunction with other clinical indicators, can help healthcare providers and their patients better manage long-term care following a heart transplant. In particular, we believe AlloMap can improve patient care by helping healthcare providers to avoid the use of unnecessary, invasive surveillance biopsies and to determine the appropriate dosage levels of immunosuppressant drug therapy. We believe that there is a significant unmet need for post-transplant surveillance solutions and are applying our expertise in molecular diagnostics and transplantation towards the development of additional solutions for other organ transplant recipients, including recipients of heart and kidney transplant patients.

Since the launch of AlloMap in January 2005 we have performed more than 58,000 commercial AlloMap tests, including approximately 5,800 tests in first half of 2014 in our Brisbane, California laboratory.

On June 10, 2014, we acquired ImmuMetrix, Inc. for 888,135 shares of our Series G preferred stock, assumed stock options that will be exercisable for 23,229 shares of Series G preferred stock and $600,000 in cash, of which $400,000 was paid by us on May 19, 2014. All such shares of Series G preferred stock and options to acquire Series G preferred stock converted into common stock and options to acquire common stock immediately prior to the closing of our initial public offering. ImmuMetrix was a privately held development-stage company working on cfDNA-based solutions in transplantation and other fields. Through this acquisition, we added to our existing know-how, expertise and intellectual property in applying cfDNA technology to the surveillance of transplant recipients. The intellectual property rights of ImmuMetrix include an exclusive license from Stanford University to a patent relating to the

diagnosis of rejection in organ transplant recipients using cfDNA. In connection with this acquisition, we entered into a consulting agreement with ImmuMetrix founder and Stanford University professor Dr. Stephen Quake.

The agreement pursuant to which we acquired ImmuMetrix provides that if we complete 2,500 commercial tests involving the measurement of cfDNA in organ transplant recipients within six years of the acquisition closing date, we will issue an additional 227,845 shares of our common stock to the former stockholders of ImmuMetrix. Such shares will be issuable whether or not ImmuMetrix technology is included in such commercial tests. cfDNA tests performed without charge in parallel with a commercialized test will be considered commercial tests for this purpose.

On July 22, 2014, we completed our initial public offering ("IPO") of 4,000,000 shares of our common stock. In August 2014, the underwriters partially exercised their overallotment option, at which time we sold an additional 220,000 shares. We received net cash proceeds of approximately $35.5 million from the IPO, net of underwriting discounts and commissions and expenses paid by us. See Note 13, Subsequent Events to the unaudited consolidated condensed financial statements elsewhere in this quarterly report.

Financial Operations Overview

Testing Revenue

Our revenue is primarily derived from AlloMap tests, represented 99% and 98% of our revenue for the three months ended June 30, 2014 and 2013, respectively, and 99%, and 97% for the six months ended June 30, 2014 and 2013, respectively. This revenue depends on a number of factors, including (i) the number of tests performed; (ii) establishment of coverage policies by third-party insurers and government payers; (iii) our ability to collect from payers with whom we do not have positive coverage determination, which often requires that we pursue a case-by-case appeals process; (iv) our ability to recognize revenues on tests billed prior to the establishment of reimbursement policies, contracts or payment histories; (v) our ability to expand into markets outside of the United States; and (vi) how quickly we can successfully commercialize new product offerings.

We currently market AlloMap to healthcare providers through our direct sales force that targets transplant centers and their physicians, coordinators and nurse practitioners. The healthcare providers that order AlloMap are generally not responsible for the payment of these services. We generally bill third-party payers upon delivery of an AlloMap score report to the ordering physician. As such, we take the assignment of benefits and the risk of collection from the third-party payer and individual patients. As of June 30, 2014, the list price of AlloMap was $3,600 per test. However, amounts actually received by us vary from payer to payer based on each payer's internal coverage practices and policies.

Collaboration and License Revenue

Revenue from our collaboration and license agreements was less than 3% of total revenue for each period presented. Collaboration and license agreements may include non-refundable upfront payments, partial or complete reimbursement of research and development costs, contingent payments based on the occurrence of specified events under the agreements, license fees and royalties on sales of products or product candidates if they are successfully commercialized. Our performance obligations under the collaboration and license agreements may include the transfer of intellectual property rights in the form of licenses, obligations to provide research and development services and obligations to participate on certain development committees with the collaboration partners. We make judgments that affect the periods over which we recognize revenue. We periodically review our estimated periods of performance based on the progress under each arrangement and account for the impact of any change in estimated periods of performance on a prospective basis.

Cost of Testing

Cost of testing reflects the aggregate costs incurred in delivering our AlloMap test results to clinicians. The components of our cost of testing are materials and service costs, direct labor costs, including stock-based compensation, equipment and infrastructure expenses associated with testing samples, shipping, logistics and specimen processing charges to collect and transport samples and allocated overhead including rent, information technology, equipment depreciation and utilities and royalties. Costs associated with performing tests (except royalties) are recorded as the test is processed regardless of whether and when revenue is recognized with respect to that test. As a result, our cost of testing as a percentage of revenue may vary significantly from period to period because we do not recognize all revenue in the period in which the associated costs are incurred. Royalties for licensed technology, calculated as a percentage of test revenues, are recorded as license fees in cost of testing at the time the test revenues are recognized.

Royalties included in cost of testing are associated with a license from Roche Molecular Systems, Inc., or Roche. In February 2014, we received a demand for arbitration from Roche regarding our claim that the royalty rate being assessed under the Roche license should be reduced. See Legal Proceedings included elsewhere in this quarterly report regarding this arbitration. Liabilities recorded on our balance sheets of $3.5 million and $2.8 million as of June 30, 2014 and December 31, 2013, respectively, reflect the full amount of royalties owed at the stated royalty rate set forth in the agreement, plus interest. Our obligation under the Roche agreement expires on the date of the last to expire of the relevant patents included within the licensed technology that covers our tests.

We expect cost of testing to increase, in absolute dollars, as the number of tests we perform increases. However, due to the fixed nature of expenses associated with direct labor, equipment and infrastructure, we expect the cost per test will decrease over time as volume increases. Logistics, supplies and royalties are generally variable in nature and we expect these expenses to increase as test volume increases.

Research and Development Expenses

Research and development expenses represent costs incurred to develop new surveillance solutions as well as continued efforts related to our AlloMap test. These expenses include payroll and related expenses, consulting expenses, laboratory supplies, and certain allocated expenses as well as amounts incurred under certain collaborative agreements. Research and development costs are expensed as incurred. We record accruals for estimated study costs comprised of work performed by contract research organizations under contract terms. We expect our research and development expenses will increase in absolute dollars in future periods as we invest in research and discovery work to develop new surveillance solutions, as well as clinical outcomes studies for AlloMap.

Sales and Marketing Expenses

Sales and marketing expenses represent costs incurred to sell, promote and increase awareness of our AlloMap test to both clinicians and payers, including education of patients, clinicians and payers. Sales and marketing expenses include payroll and related expenses, educational and promotional expenses, and infrastructure expenses, including allocated facility and overhead costs. Compensation related to sales and marketing includes annual salaries and eligibility for quarterly or semi-annual commissions or bonuses based on the achievement of predetermined sales goals or other management objectives. We have infrastructure in place to cover most of the key transplant centers in the United States both for offerings of our existing AlloMap product as well as future products. We may increase our product range and our geographic reach in the future which would lead to an expansion of our sales and marketing efforts.

General and Administrative Expenses

General and administrative expenses include costs for our executive, finance, accounting and human resources functions. Costs consist primarily of payroll and related expenses, professional service fees related to billing and collection, accounting, legal and other contract and administrative services and related infrastructure expenses, including allocated facility and overhead costs. We expect to incur additional expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission and The NASDAQ Global Market, additional insurance expenses, investor relations activities and other administrative and professional services. We also expect our general and administrative expenses will increase in absolute dollars related to anticipated testing volume and collections growth.

Interest Expense, Net

Interest expense, net is associated with borrowings under our loan agreements.

Other Income (Expense), Net

Other income (expense), net is primarily associated with the remeasurement of the estimated fair value of the warrants to purchase shares of our convertible preferred stock and changes in the estimated fair value of derivative associated with our subordinated convertible debt.

Results of Operations

Comparison of the Three Months Ended June 30, 2014 and 2013

	Three Months Ended June 30,	
	2014	2013
Allomap results delivered	3,000	2,500
Revenue:		
Testing revenue	$ 6,710	$ 5,333
Collaboration and license revenue	66	124
Total revenue	6,776	5,457
Operating expenses:		
Cost of testing	2,403	2,119
Research and development	792	846
Sales and marketing	1,610	1,548
General and administrative	2,316	1,200
Total operating expenses	7,121	5,713
Loss from operations	(345)	(256)
Interest expense, net	(644)	(541)
Other income (expense), net	366	(5)
Loss before income taxes	(623)	(802)
Income tax benefit	1,500	—
Net income (loss)	$ 877	$ (802)

Testing Revenue

Allomap test results delivered increased by approximately 500 or 20% for the three months ended June 2014 as compared to the three months ended June 2013. Testing revenue increased by $1.4 million, or 26%, for the three months ended June 30, 2014 compared to the same period of 2013. The increase primarily reflects incremental cash collected from commercial, Medicaid and other cash payers of $1.0 million and additional volume of tests performed for accrual payers, including increased Medicare volume of $0.3 million.

Collaboration and License Revenue

Collaboration and license revenue decreased by $0.1 million, or 47%, for the three months ended June 30, 2014 compared to the same period in 2013 primarily due to decreased activity associated with our LabCorp collaboration, partially offset by an increase in royalties from CardioDx.

Cost of Testing

Cost of testing increased by $0.3 million, or 13% for the three months ended June 30, 2014 compared to the same period in 2013. The increase was primarily a result of increased testing volume resulting in increased variable costs, increased license fees as a result of increased cash revenues and allocated costs to cost of sales of $0.2 million. We expect to see our cost of testing increase in absolute dollars as we expect test volumes to increase in the future.

Research and Development

Research and development expenses were largely flat for the three months ended June 30, 2014 compared with the same period in 2013. The slight decrease was primarily due to lower expenses in conjunction headcount, materials and the LabCorp collaboration, partially offset by increases in cell-free DNA research and clinical expenses. We expect our research and development expenses will increase in absolute dollars in future periods as we invest in research and discovery work to develop new surveillance solutions, as well as clinical outcomes studies for AlloMap and new tests, when developed.

Sales and Marketing

Sales and marketing expenses were largely flat for the three months ended June 30, 2014 compared with the same period in 2013. We expect sales and marketing expenses to increase modestly in the future, until such time as we have an additional marketed product.

General and Administrative

General and administrative expenses increased by $1.1 million, or 93%, for the three months ended June 30, 2014 compared with the same period of 2013 primarily due to increased outside services of $0.4 million largely associated with the ImmuMetrix acquisition and audit work, $0.3 million of increased legal fees largely associated with our acquisition of ImmuMetrix, Inc., $0.2 million associated with increases in headcount and related items and $0.1 million consulting fees. Excluding one-time costs associated with our acquisition of ImmuMetrix, we anticipate our general and administrative expenses will increase as we operate as a public company,

Interest Expense, net

Interest expense, net increased by $0.1 million, or 19% for the three months ended June 30, 2014 compared with the same period of 2013, primarily due to interest associated with the $5.0 million Illumina subordinated convertible note issued in April 2014 with interest at 8% and expenses associated with our extension of the interest only period on our long-term debt by six months in August of 2013.

Other Income (Expense), Net

We recorded other income (expense), net of $0.4 million for the three months ended June 30, 2014, compared to a negligible amount of other (expense), net for the same period of 2013. This increase was due to our remeasurement of the estimated fair value of warrants to purchase shares of our convertible preferred stock of $0.3 million and $0.1 million for the derivative bifurcated from our Illumina debt.

Income Tax Benefit

In conjunction with the acquisition of IMX a tax benefit of $1.5 million was recognized during the three months ended June 30, 2014. This benefit resulted from the expectation that amortization of the in-process technology acquired, when completed and placed in service, is not expected to be deductible for tax purposes, as the transaction was structured as a tax-free reorganization. Accordingly, a deferred tax liability was recorded at the acquisition date for the difference between the financial reporting and tax basis of the acquired in-process technology. While the in-process technology is considered an indefinite lived intangible asset, this asset is expected to be amortized or impaired prior to the expiration of net operating loss carryforwards available to us.

Comparison of the Six Months Ended June 30, 2014 and 2013

	Six Months Ended June 30,	
	2014	**2013**
Revenue:		
Testing revenue	$12,544	$10,142
Collaboration and license revenue	156	296
Total revenue	12,700	10,438
Operating expenses:		
Cost of testing	4,565	4,243
Research and development	1,512	1,848
Sales and marketing	3,084	3,117
General and administrative	4,111	2,264
Total operating expenses	13,272	11,472
Loss from operations	(572)	(1,034)
Interest expense, net	(1,192)	(1,106)
Other income (expense), net	(163)	(10)
Loss before income taxes	(1,927)	(2,150)
Income tax benefit	1,500	—
Net loss	$ (427)	$ (2,150)

Testing Revenue

Allomap test results delivered increased by 1,100 or 23% for the six months ended June 30, 2013 as compared to the six months ended June 30, 2013. Testing revenue increased by $2.4 million or 24% for the six months ended June 30, 2014 compared to the same period in 2013 primarily due to additional cash collections of $1.3 million and additional volume with accrued payers of approximately $1.2 million.

Collaboration and License Revenue

Collaboration and license revenue decreased by $0.1 million or 47% for the six months ended June 30, 2014 compared to the same period in 2013 primarily due to decreased activities with LabCorp, partially offset by increased royalties from CardioDx.

Cost of Testing

Cost of testing increased $0.3 million, or 8% for the six months ended June 30, 2014 compared to the same period in 2013 primarily reflecting increased specimen processing and royalty costs as a result of increased volume and revenue. Royalty expense, included in cost of testing, was $0.7 million for the six months ended June 30, 2014 compared with $0.5 million for the same period in 2013.

Research and Development

Research and development expenses decreased by $0.3 million, or 17%, for the six months ended June 30, 2014 compared to the same period in 2013. The decrease largely reflects lower headcount and related costs of approximately $0.3 million.

Sales and Marketing

Sales and marketing expenses were flat for the six months ended June 30, 2014 compared to the same period in 2013.

General and Administrative

General and administrative expenses increased $1.8 million, or 82%, for the six months ended June 30, 2014 compared with the same period in 2013, primarily due to increased salaries and related items of $0.5 million, increased tax, audit and professional fees of $0.6 million as a result of our acquisition of ImmuMetrix and growth of the business, increased legal costs of $0.5 million largely as a result of our acquisition of ImmuMetrix and Roche arbitration and $0.2 million of increased consulting fees.

Interest Expense, Net

Interest expense, net increased by $0.1 million, or 8%, for the six months ended June 30, 2014 compared with the same period of 2013 primarily due to interest associated with the $5.0 million Illumina subordinated convertible note issued in April 2014 with interest at 8% (see Note 10 to our unaudited consolidated condensed interim financial statements appearing elsewhere in this quarterly report) and our extension of the interest only period on our long-term debt by six months in August of 2013.

Other Income (Expense), Net

We recorded other expense of $0.2 million for the six months ended June 30, 2014, compared to a negligible amount of other expense for the same period of 2013. This increase was primarily due to $0.3 million of other expense for remeasurement of the convertible preferred warrants, partially offset by $0.1 million of other income for remeasurement of the derivative associated with the Illumina subordinated convertible note.

Income Tax Benefit

In conjunction with the acquisition of IMX a tax benefit of $1.5 million was recognized during the three months ended June 30, 2014. This benefit resulted from the expectation that amortization of the in-process technology acquired, when completed and placed in service, is not expected to be deductible for tax purposes, as the transaction was structured as a tax-free reorganization. Accordingly, a deferred tax liability was recorded at the acquisition date for the difference between the financial reporting and tax basis of the acquired in-process technology. While the in-process technology is considered an indefinite lived intangible asset, this asset is expected to be amortized or impaired prior to the expiration of net operating loss carryforwards available to us.

Cash Flows for the Six Months Ended June 30, 2014 and 2013

The following table summarizes the primary sources and uses of cash for the periods presented:

(in thousands)	Six Months Ended June 30, 2014	2013
	(unaudited)	
Net cash provided by (used in):		
Operating activities	$1,033	$(1,277)
Investing activities	(540)	(36)
Financing activities	2,251	(32)
Net increase (decrease) in cash and cash equivalents	$2,744	$(1,345)

Operating Activities

Net cash provided by (used in) operating activities consisted of net losses adjusted for certain non-cash items and changes in operating assets and liabilities.

Net cash provided by operating activities for the six months ended June 30, 2014 was $1.0 million and reflected (i) the net loss of $0.4 million, (ii) net non-cash items using cash $0.6 million, including non-cash income tax benefit in conjunction with business combination of $1.5 million, partially offset by revaluation of warrants to estimated fair value of $0.3 million, amortization of debt discount and non-cash interest expense of $0.3 million and depreciation and amortization of $0.2 million, and (iii) a net cash inflow from changes in balances of operating assets and liabilities of $2.1 million. The most significant items comprising the changes in balances of operating assets and liabilities was an increase in unpaid deferred initial public offering costs of $1.9 million included in prepaid and other assets, offset by an increase in accrued and other liabilities of $2.1 million, primarily representing accrued initial public offering costs of $1.1 million, and increased professional fees of $0.7 million. Other significant items comprising the changes in balances of operating assets and liabilities were increased accounts payable of $1.1 million, increased royalties of $0.7 million and decreased accounts receivable of $0.5 million.

Net cash used in operating activities for the six months ended June 30, 2013 was $1.3 million and reflected the net loss of $2.1 million, partially offset by net non-cash items of $0.6 million consisting primarily of depreciation and amortization of $0.4 million and amortization of debt discount and non-cash interest expense of $0.3 million.

The largest contributors to the $2.3 million decrease in net cash used in operating activities for the six months ended June 30, 2014, compared with the same period of 2013, were a lower net loss of $1.7 million, a higher change in accounts receivable of $2.2 million and accrued and other liabilities of $2.3 million, partially offset by an increase in prepaid and other assets, which is largely comprised of deferred initial public offering costs, of $2.0 million, a non-cash tax benefit in connection with business combination of $1.5 million and a decreased change in deferred revenue of $1.1 million. Cash flows from operations in the first six months of 2014 and 2013 were aided by our suspension of royalty payments under our license agreement with Roche Molecular Systems, Inc. As described elsewhere in this quarterly report, we have had past dialogue with Roche regarding the appropriate amount of royalties to be paid under this agreement and are now in arbitration proceedings. The $3.5 million and $2.8 million accrued liability balances at June 30, 2014 and December 31, 2013 reflect the full amount of royalties owed at the stated royalty rate set forth in the agreement, plus interest at those respective dates. We now have an arbitration hearing scheduled for early 2015. As a result, we have reclassified the $3.5 million as of June 30, 2014 to current liabilities.

Investing Activities

During the six months ended June 30, 2014 we used $0.5 million for investing activities, primarily comprised of $0.4 million for our acquisition of ImmuMetrix and $0.2 million to purchase property and equipment. Net cash used for the six months ended June 30, 2013 for investing activities was negligible.

We expect capital expenditures to increase modestly as we expand our research and discovery work to develop new transplant surveillance solutions. We believe that we are not currently capacity constrained and that our current facility can support a substantial increase in testing volume and support new surveillance solutions currently being developed.

Financing Activities

Net cash provided by financing activities for the six months ended June 30, 2014 of $2.3 million was primarily due to $5.0 million of proceeds from our subordinated convertible debt, net of issuance costs, partially offset by principal payments on our term debt of $1.8 million and payment of initial public offering costs of $0.9 million.

Net cash used in financing activities for the six months ended June 30, 2013 was negligible and consisted of principal payments on capital lease obligations.

Liquidity and Funding Requirements

Since our inception, substantially all of our operations have been financed through the issuance of our convertible preferred stock, the incurrence of debt and cash received from AlloMap revenues. Through June 30, 2014, we have received net proceeds of $151 million from the issuances of preferred stock, including preferred stock issued on conversion of promissory notes, which preferred stock has a carrying value of $135 million, $15.0 million in proceeds from a venture debt loan and approximately $118 million from AlloMap revenues. As of June 30, 2014, we had cash and cash equivalents of $7.9 million and $18.8 million of debt outstanding on our venture debt loan, subordinated convertible debt and capital lease obligations.

In April 2014, we issued a $5.0 million subordinated convertible note (“convertible note”), to Illumina, Inc., which provides for interest at an annual rate of 8.0%. The convertible note matures one year following its issuance with principal and unpaid interest due at that time unless the convertible note is converted prior to the maturity date. Conversion is mandatory in the event of a qualified initial public offering, and the convertible note converted into shares of our common stock on our IPO in July 2014 at a conversion price per share equal to $10.00.

We expect to use the net proceeds of approximately $35.5 million from our IPO for research and development, including research aimed at expanding the clinical utility of AlloMap and the development of new solutions for the surveillance of heart and kidney transplant, sales and marketing activities, general and administrative expenses and for working capital and other general corporate purposes. A portion of the net proceeds may also be used to acquire or invest in complementary businesses, technologies, services or products. We have no current agreements or commitments with respect to any such acquisition or investment.

We currently anticipate that our cash and cash equivalents, cash receipts from AlloMap testing, and net proceeds from our IPO, will be sufficient to enable us to fund our operations for at least the next 18 months. We cannot be certain that any of our development of new transplant surveillance solutions will be successful or that we will be able to raise sufficient additional funds, if necessary, to see these programs through to a successful result.

Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risk and uncertainties, and actual results could vary as a result of a number of factors. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect.

Critical Accounting Policies and Significant Judgments and Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with United States generally accepted accounting principles, or U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. There have been no significant and material changes in our critical accounting policies during the three months ended June 30, 2014, as compared to those disclosed in “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Critical Accounting Policies and Significant Judgments and Estimates” in our Registration Statement on Form S-1/A for the year ended December 31, 2013 filed with the SEC.

Factors Affecting Our Performance

The Number of AlloMap Tests We Receive and Report

The growth of our business is tied to the number of AlloMap tests we receive and report. Historically, less than two percent of tests received are not reported due to improper sampling or damage in transit or other causes. We incur costs of collecting and shipping all samples and a portion of the costs where we cannot ultimately issue a score report. As a result, the number of samples received largely directly correlates to the number of score reports.

How We Recognize Revenue

Medicare and certain other payers with agreed upon reimbursement rates and a predictable history of collections allows us to recognize the related revenue on an accrual basis. For the three months ended June 30, 2014 and 2013 38% and 33% of our revenue was recognized when cash was received. For the six months ended June 30, 2014 and 2013 38% and 35% of our revenue was recognized when cash was received. Until we achieve our revenue recognition criteria for a larger number of payers, we will continue to recognize a large portion of our revenue when cash is received. Because we often need to appeal prior to being paid for certain tests, it can take over a year for a test to result in revenue being recorded, and for a portion of our tests, we may never realize revenue.

Additionally, as we commercialize new products, we will need to achieve our revenue recognition criteria for each payer for each new product prior to being able to recognize the related revenue on an accrual basis. Because the timing and amount of cash payments received from payers is difficult to predict, we expect our revenue may fluctuate significantly in any given quarter. In addition, even if we begin to accrue larger amounts of revenue related to AlloMap, when we introduce new products, we do not expect we will be able to recognize revenue from new products on an accrual basis for some period of time.

Continued Adoption of and Reimbursement for AlloMap

Our reimbursement rate has steadily increased over time since the launch of AlloMap, as payers adopt coverage policies and fewer payers consider AlloMap as experimental and investigational. The rate at which our tests are covered and reimbursed has, and is expected to continue to vary by payer. As of June 30, 2014, we had been reimbursed for approximately 79% of AlloMap results delivered in the twelve months ended December 31, 2013. Reimbursement performance is reviewed using a lagging metric of six months as any period less than this is considered not to be reflective of future performance, as the reimbursement process can take six months or more to complete depending on the payer. Revenue growth depends on our ability to achieve broader reimbursement from third party payers, to expand the number of tests per patient and the base of ordering physicians.

Development of Additional Products

We rely on sales of AlloMap to generate the majority of our revenue. Our product development pipeline includes other surveillance solutions for organ transplant recipients to help clinicians make personalized treatment decisions throughout a transplant patient’s lifetime. Accordingly, we expect to invest in research and development in order to develop additional products. Our success in developing new products will be important in our efforts to grow our business by expanding the potential market for our products and diversifying our sources of revenue.

Timing of Research and Development Expenses

Our spending on experiments may vary substantially from quarter to quarter. We also spend to secure clinical samples that can be used in discovery, product development, clinical validation, utility and outcome studies. The timing of these research and development activities is difficult to predict. If a substantial number of clinical samples are acquired in a given quarter or if a high-cost experiment is conducted in one quarter versus the next, the timing of these expenses can affect our financial results. We conduct clinical studies to validate our new products as well as on-going clinical and outcome studies to further the published evidence to support our commercialized AlloMap test. Spending on research and development for both experiments and studies, may vary significantly by quarter depending on the timing of these various expenses.

Contractual Obligations

During the three months ended June 30, 2014, there were no material changes to our contractual obligations and commitments described under Management’s Discussion and Analysis of Financial Condition and Results of Operations in the Prospectus.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements.

JOBS Act Accounting Election

We are an emerging growth company, as defined in the Jumpstart Our Business startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU 2014-09"), which amends the existing accounting standards for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount an entity expects to be entitled when products are transferred to customers. ASU 2014-09 will be effective for the Company beginning in its first quarter of 2017. Early adoption is not permitted. The new revenue standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. The Company is currently evaluating the impact of adopting the new revenue standard on our consolidated financial statements.

In July 2013, the Financial Accounting Standards Board issued Accounting Standards Update No. 2013-11, *Presentation of an Unrecognized Tax Benefit when a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists (a consensus of the FASB Emerging Issues Task Force).* The amendments in this ASU provide guidance on the financial statements presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. An unrecognized tax benefit should be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward with certain exceptions, in which case such an unrecognized tax benefit should be presented in the financial statements as a liability. The amendments in this ASU do not require new recurring disclosures and are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. We adopted this guidance during the first quarter of 2014 and such adoption did not have a material impact on our condensed financial statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business. These risks primarily relate to interest rates. We had cash and cash equivalents of $7.9 million at June 30, 2014, which consist of bank deposits and money market funds. Such interest-bearing instruments carry a degree of risk; however, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates. A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our financial statements.

All of our revenues are recognized in U.S. dollars. Upfront payments received from the collaboration agreement in the European Union (see Note 9 to our unaudited financial statements included elsewhere in this document) were paid in foreign currency and converted to U.S. dollars. As a result, factors such as changes in foreign currency exchange rates or weak economic conditions in foreign markets will affect our financial results. Although the impact of currency fluctuations on our financial results has been immaterial to date, there can be no guarantee the impact of currency fluctuations related to our international activities will not be material in the future.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Management, including our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)), as of the end of the period covered by this report. Based upon the evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports we file and submit under the Securities Exchange Act of 1934, as amended, is (i) recorded, processed, summarized and reported as and when required and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely discussion regarding required disclosure.

Prior to our initial public offering on July 16, 2014, we were a private company with limited accounting personnel and other resources with which to address our internal controls and procedures. In reviewing our preliminary purchase accounting and supporting analyses related to our pending acquisition of ImmuMetrix, Inc., we identified a material weakness in our internal control over financial reporting. The material weakness related to our internal controls over financial reporting pertaining to complex accounting in connection with a business combination. A “material weakness” is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected and corrected on a timely basis. The material weaknesses involved aspects of our proposed purchase accounting for our ImmuMetrix acquisition that required adjustment, including adjustments to valuation primarily relating to in-process technology, deferred income tax liability related to acquired in-process technology and goodwill.

We are in the process of implementing measures designed to improve our internal control over financial reporting. We hired a new Chief Financial Officer, added an experienced finance executive to our audit committee and have identified several potential candidates with experience preparing periodic reports under the Securities Exchange Act for the position of our controller. While we believe that our efforts will be sufficient to remediate the material weakness and prevent further internal control deficiencies, we cannot assure you that our remediation efforts will be successful.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the three month period covered by this Quarterly Report on Form 10-Q that have materially affected or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

In November 2004, we entered into a license agreement with Roche Molecular Systems, Inc., or Roche, that grants us the right to use PCR and quantitative real-time PCR for use in clinical laboratory services, including for use in connection with AlloMap. This is a non-exclusive license agreement in the United States covering the claims in multiple Roche patents. We have disputed the royalty rate Roche seeks to charge under the agreement, and we have been withholding payment of such royalties pending resolution of this matter. Among other things, we believe that Roche failed to adequately consult with us, as required under the agreement, prior to setting the royalty rate and that the royalty rate fails to reflect the value contributed by the licensed services. On February 11, 2014 Roche filed a demand for arbitration with the American Arbitration Association seeking a declaration that we have materially breached the Roche license agreement by failing to report and pay royalties owing to Roche in respect of licensed services performed by us after July 1, 2011. Roche seeks damages in the form of unpaid royalties from July 1, 2011 to March 31, 2013 of $1,805,775 plus interest of $84,928 and royalties in an unspecified amount from April 1, 2013 to present, which, based upon the royalty rate currently in the license agreement, we would estimate to be an additional $1,634,831 through June 30, 2014. We responded to the Roche demand on March 14, 2014. A preliminary conference with the arbitration panel was held on June 24, 2014 and a hearing has now been scheduled for early 2015. While we believe we have meritorious defenses to Roche's claims, which we plan to fully pursue in the arbitration, we have fully reserved the amount of these unpaid royalties on our balance sheets, and the amount of these unpaid royalties has been reflected as an expense in our income statements in the periods to which the royalties relate.

ITEM 1A. RISK FACTORS

We operate in a rapidly changing environment that involves a number of risks that could materially and adversely affect our business, financial condition, prospectus, operating results or cash flows. For a detailed discussion of the risk factors that should be understood by any investor contemplating an investment in our stock, you should carefully consider the factors discussed in the section entitled "Risk Factors" in the Prospectus, which are incorporated herein by reference. There have been no material changes from the risk factors previously disclosed in the Prospectus.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Sales of Unregistered Securities

On April 17, 2014, we issued and sold a subordinated convertible note in the aggregate principal amount of $5,000,000 to Illumina, Inc. Upon completion of this offering, this subordinated convertible note is convertible into the number of shares of common stock obtained by dividing the principal amount, plus accrued but unpaid interest, by the lesser of the initial public offering price per share and $21.78.

On June 10, 2014, we issued 888,135 shares of our Series G preferred stock in connection with our acquisition of ImmuMetrix, Inc. to 33 former stockholders of ImmuMetrix. This issuance did not involve underwriters, underwriting discounts or commissions or any public offering. We believe that this issuance was be exempt from the registration requirements of the Securities Act under Rule 506 of Regulation D promulgated under the Securities Act and Section 4(2) of the Securities Act as a transaction by an issuer not involving any public offering. There was no advertising, general promotion or other marketing undertaken in connection with the issuance. All stockholders confirmed that they were acquiring the securities for investment purposes only and not for the purpose of further distribution. We used investor suitability questionnaires to determine whether such stockholders had the financial ability to bear the risk of investing in a private company, and, either alone, or together with their purchaser representative, had the ability to evaluate the merits and risks of an investment in our stock. Each stockholder made representations and warranties to us with respect to its knowledge and experience in financial and business matters, its ability to bear the economic risk of its investment, its intent to hold the securities for its own account for investment and not with a view to or for resale, and the absence of a present intent to sell or distribute such securities. Restrictive legends were affixed to the stock certificates and instruments issued in this transaction. Also, in June 2014, we assumed options to purchase 23,229 shares of our Series G preferred stock in connection with the acquisition of ImmuMetrix.

Use of Proceeds from the Sale of Registered Securities

On July 16, 2014, our registration statement on Form S-1 (File No. 333-196494) relating to the initial public offering (the "IPO") of our common stock was declared effective by the SEC. The IPO closed on July 22, 2014, at which time we sold 4,000,000 shares, and in August 2014 the underwriters partially exercised their overallotment option, at which time we sold an additional 220,000 shares. We received net cash proceeds of approximately $35.5 million from the IPO, including the subsequent partial overallotment exercise, net of underwriting discounts and commissions and expenses paid by us. None of the expenses associated with the IPO were paid to directors, officers, persons owning 10% or more of any class of our equity securities, or to their associates, or to our affiliates. Piper Jaffray and Leerink Partners acted as joint book-running managers and Raymond James and Mizuho Securities acted as co-managers for the offering.

We hold the proceeds received from our initial public offering as cash, cash equivalents and marketable securities and intend to continue to invest the funds in short-term marketable securities, including U.S. government, government agency and corporate debt securities. There has been no material change in the planned use of proceeds from our initial public offering as described in our prospectus filed with the U.S. Securities and Exchange Commission on July 18, 2014 pursuant to Rule 424(b).

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

The exhibits listed in the Exhibit Index to this Quarterly Report on Form 10-Q are incorporated herein by reference.

SIGNATURES

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

CAREDX, INC.
(Registrant)

Date: August 28, 2014

By: /s/ Peter Maag
Peter Maag
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Kenneth E. Ludlum
Kenneth E. Ludlum
Chief Financial Officer
(Principal Accounting and Financial Officer)

EXHIBIT INDEX

Exhibit Number	Exhibit Description
2.1	Agreement and Plan of Merger, dated May 17, 2014, by and between the CareDx, Inc., Monitor Acquisition Corporation, ImmuMetrix, Inc. and Mattias Westman, as Holders' Agent. (incorporated by reference to the Company's Registration Statement on Form S-1 (No. 333-196494), filed on June 3, 2014).
2.2	Amendment No. 1 to Agreement and Plan of Merger, dated June 9, 2014, by and between the CareDx, Inc., Monitor Acquisition Corporation, ImmuMetrix, Inc. and Mattias Westman, as Holders' Agent. (incorporated by reference to the Company's Registration Statement on Form S-1 (No. 333-196494), filed on June 25, 2014).
3.1	Amended and Restated Certificate of Incorporation of CareDx, Inc.
3.4	Amended and Restated Bylaws of CareDx, Inc.
10.16	Subordinated Convertible Promissory Note, dated April 17, 2014, by and between the Registrant and Illumina, Inc. (incorporated by reference to the Company's Registration Statement on Form S-1 (No. 333-196494), filed on June 3, 2014).
31.1	Certification of Periodic Report by Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Periodic Report by Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification 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	Certification 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.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document*

* In accordance with Regulation S-T, the XBRL-related information in Exhibit 101 to this Quarterly Report on Form 10-Q shall be deemed to be "furnished" and not "filed".

Exhibit 3.1

AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION OF

CAREDX, INC.

CareDx, Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), certifies that:

A. The name of the corporation is CareDx, Inc. The corporation was originally incorporated under the name "Hippocratic Engineering, Inc.," and the date of filing the original Certificate of Incorporation of this corporation with the Secretary of State of the State of Delaware is December 21, 1998.

B. This Amended and Restated Certificate of Incorporation was duly adopted in accordance with Sections 242 and 245 of the General Corporation Law of Delaware, and restates, integrates and further amends the provisions of the Corporation's Certificate of Incorporation.

C. This Amended and Restated Certificate of Incorporation was duly approved by the stockholders of the Corporation in accordance with Section 228 of the General Corporation Law of Delaware.

D. The text of the Corporation's Certificate of Incorporation is amended and restated to read as set forth in EXHIBIT A attached hereto.

IN WITNESS WHEREOF, XDx, Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by Peter Maag, a duly authorized officer of the Corporation, on July 22, 2014.

/s/ Peter Maag

Peter Maag, Chief Executive Officer

EXHIBIT A

ARTICLE I

The name of the Corporation is CareDx, Inc.

ARTICLE II

The purpose of this Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware (the "**DGCL**").

ARTICLE III

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE IV

4.1 Authorized Capital Stock. The total number of shares of all classes of capital stock that the Corporation is authorized to issue is 110,000,000 shares, consisting of 100,000,000 shares of Common Stock, having a par value of $0.001 (the "**Common Stock**"), and 10,000,000 shares of Preferred Stock, having a par value of $0.001 (the "**Preferred Stock**").

4.2 Increase or Decrease in Authorized Capital Stock. The number of authorized shares of Preferred Stock or Common 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 generally in the election of directors, irrespective of the provisions of Section 242(b)(2) of the DGCL (or any successor provision thereto), voting together as a single class, without a separate vote of the holders of the class or classes the number of authorized shares of which are being increased or decreased.

4.3 Common Stock.

(a) The holders of shares of Common Stock shall be entitled to one vote for each such share on each matter on which the holders of shares of Common Stock are entitled to vote. Except as otherwise required by law or this certificate of incorporation (this "**Certificate of Incorporation**" which term, as used herein, shall mean the certificate of incorporation of the Corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock), and subject to the rights of the holders of Preferred Stock, at any annual or special meeting of the stockholders the holders of shares of Common Stock shall have the right to vote for the election of directors and on all other matters submitted to a vote of the stockholders; provided, however, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Certificate of Incorporation that relates solely to the terms, number of shares, powers, designations, preferences, or relative participating, optional or other special rights (including, without limitation, voting rights), or to qualifications, limitations or restrictions thereon, 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 more other such series, to vote thereon pursuant to this Certificate of Incorporation (including, without limitation, by any certificate of designations relating to any series of Preferred Stock) or pursuant to the DGCL.

(b) Subject to the rights of the holders of Preferred Stock, the holders of shares of Common Stock shall be entitled to receive such dividends and other distributions (payable in cash, property or capital stock of the Corporation) when, as and if declared thereon by the Board of Directors from time to time out of any assets or funds of the Corporation legally available therefor and shall share equally on a per share basis in such dividends and distributions.

(c) In the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Corporation, after payment or provision for payment of the debts and other liabilities of the Corporation, and subject to the rights of the holders of Preferred Stock in respect thereof, the holders of shares of Common Stock shall be entitled to receive all the remaining assets of the Corporation available for distribution to its stockholders, ratably in proportion to the number of shares of Common Stock held by them.

4.4 Preferred Stock.

(a) The Preferred Stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board of Directors). The Board of Directors is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions and to set forth in a certification of designations filed pursuant to the DGCL the powers, designations, preferences and relative, participation, optional or other rights, if any, and the qualifications, limitations or restrictions thereof, if any, of any wholly unissued series of Preferred Stock, including without limitation authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing.

(b) The Board of Directors is further authorized to increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any series, the number of which was fixed by it, subsequent to the issuance of shares of such series then outstanding, subject to the powers, preferences and rights, and the qualifications, limitations and restrictions thereof stated in the Certificate of Incorporation or the resolution of the Board of Directors originally fixing the number of shares of such series. If the number of shares of any series is so decreased, then the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

ARTICLE V

5.1 General Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

5.2 Number of Directors; Election; Term.

(a) Subject to the rights of holders of any series of Preferred Stock with respect to the election of directors, the number of directors that constitutes the entire Board of Directors of the Corporation shall be fixed solely by resolution of the majority of the Whole Board. For purposes of this Certificate of Incorporation, the term "**Whole Board**" will mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships.

(b) Subject to the rights of holders of any series of Preferred Stock with respect to the election of directors, effective upon the closing date (the "**Effective Date**") of the initial sale of shares of common stock in the Corporation's initial public offering pursuant to an effective registration statement filed under the Securities Act of 1933, as amended, the directors of the Corporation shall be divided into three classes as nearly equal in size as is practicable, hereby designated Class I, Class II and Class III. The initial assignment of members of the Board of Directors to each such class shall be made by the Board of Directors. The term of office of the initial Class I directors shall expire at the first regularly-scheduled annual meeting of the stockholders following the Effective Date, the term of office of the initial Class II directors shall expire at the second annual meeting of the stockholders following the Effective Date and the term of office of the initial Class III directors shall expire at the third annual meeting of the stockholders following the Effective Date. At each annual meeting of stockholders, commencing with the first regularly-scheduled annual meeting of stockholders following the Effective Date, each of the successors elected to replace the directors of a Class whose term shall have expired at such annual meeting shall be elected to hold office until the third annual meeting next succeeding his or her election and until his or her respective successor shall have been duly elected and qualified. Subject to the rights of holders of any series of Preferred Stock with respect to the election of directors, if the number of directors that constitutes the Board of Directors is changed, any newly created directorships or decrease in directorships shall be so apportioned by the Board of Directors among the classes as to make all classes as nearly equal in number as is practicable, provided that no decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

(c) Notwithstanding the foregoing provisions of this Section 5.2, and subject to the rights of holders of any series of Preferred Stock with respect to the election of directors, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation, or removal.

(d) Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

5.3 Removal. Subject to the rights of holders of any series of Preferred Stock with respect to the election of directors, a director may be removed from office by the stockholders of the Corporation only for cause and only by the affirmative vote of the holders of at least 66 ⅔% in voting power of the stock of the Corporation entitled to vote thereon.

5.4 Vacancies and Newly Created Directorships. Subject to the rights of holders of any series of Preferred Stock with respect to the election of directors, and except as otherwise provided in the DGCL, vacancies occurring on the Board of Directors for any reason and newly created directorships resulting from an increase in the authorized number of directors may be filled only by vote of a majority of the remaining members of the Board of Directors, although less than a quorum, or by a sole remaining director, at any meeting of the Board of Directors. A person so elected by the Board of Directors to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been assigned by the Board of Directors and until his or her successor shall be duly elected and qualified.

ARTICLE VI

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the Corporation is expressly authorized to adopt, amend or repeal the Bylaws of the Corporation by the affirmative vote of a majority of the Whole Board. Notwithstanding any other provision of this Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any series of Preferred Stock required by law, by this Certificate of Incorporation or by any Preferred Stock Designation, the affirmative vote of the holders of at least 66 2/3% of the voting power of the stock of the Corporation entitled to vote thereon shall be required for the stockholders of the Corporation to amend, alter or repeal the Bylaws or adopt new Bylaws.

ARTICLE VII

7.1 No Action by Written Consent of Stockholders. Except as otherwise expressly provided by the terms of any series of Preferred Stock permitting the holders of such series of Preferred Stock to act by written consent, any action required or permitted to be taken by stockholders of the Corporation must be effected at a duly called annual or special meeting of the stockholders and may not be effected by written consent in lieu of a meeting.

7.2 Special Meetings. Except as otherwise expressly provided by the terms of any series of Preferred Stock permitting the holders of such series of Preferred Stock to call a special meeting of the holders of such series, special meetings of stockholders of the Corporation may be called only by the affirmative vote of a majority of the Whole Board, the chairperson of the Board of Directors, the chief executive officer or the president (in the absence of a chief executive officer), and the ability of the stockholders to call a special meeting is hereby specifically denied. The Board of Directors, by the affirmative vote of a majority of the Whole Board, may cancel, postpone or reschedule any previously scheduled special meeting at any time, before or after the notice for such meeting has been sent to the stockholders.

7.3 Advance Notice. 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.

ARTICLE VIII

8.1 Limitation of Personal Liability. To the fullest extent permitted by the DGCL, as it presently exists or may hereafter be amended from time to time, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

8.2 Indemnification.

The Corporation shall indemnify, to the fullest extent permitted by applicable law, any director or officer of the Corporation who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**") by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of

another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding. The Corporation shall be required to indemnify a person in connection with a Proceeding initiated by such person only if the Proceeding was authorized by the Board.

The Corporation shall have the power to indemnify, to the extent permitted by the DGCL, as it presently exists or may hereafter be amended from time to time, any employee or agent of the Corporation who was or is a party or is threatened to be made a party to any Proceeding by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding.

Any repeal or amendment of this Article VIII by the stockholders of the Corporation or by changes in law, or the adoption of any other provision of this Certificate of Incorporation inconsistent with this Article VIII will, unless otherwise required by law, be prospective only (except to the extent such amendment or change in law permits the Corporation to further limit or eliminate the liability of directors) and shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or amendment or adoption of such inconsistent provision with respect to acts or omissions occurring prior to such repeal or amendment or adoption of such inconsistent provision.

ARTICLE IX

If any provision or provisions of this Certificate of Incorporation shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever: (i) the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Certificate of Incorporation (including, without limitation, each portion of any paragraph of this Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (ii) to the fullest extent possible, the provisions of this Certificate of Incorporation (including, without limitation, each such portion of any paragraph of this Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to permit the Corporation to protect its directors, officers, employees and agents from personal liability in respect of their good faith service or for the benefit of the Corporation to the fullest extent permitted by law.

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation (including any rights, preferences or other designations of Preferred Stock), in the manner now or hereafter prescribed by this Certificate of Incorporation and the DGCL; and all rights, preferences and privileges herein conferred upon stockholders by and pursuant to this Certificate of Incorporation in its present form or as hereafter amended are granted subject to the right reserved in this Article IX. Notwithstanding any other provision of this Certificate of Incorporation, and in addition to any other vote that may be required by law or the terms of any series of Preferred Stock, the affirmative vote of the holders of at least 66 ⅔% of the voting power of all then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to amend, alter or repeal, or adopt any provision as part of this Certificate of Incorporation inconsistent with the purpose and intent of, Article V, Article VI, Article VII, Article VIII or this Article IX (including, without limitation, any such Article as renumbered as a result of any amendment, alteration, change, repeal or adoption of any other Article).

Exhibit 3.4

AMENDED AND RESTATED BYLAWS OF

CAREDX, INC.

Adopted March 20, 2014

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BYLAWS

ARTICLE I — CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of CareDx, Inc. shall be fixed in the corporation's certificate of incorporation. References in these bylaws to the certificate of incorporation shall mean the certificate of incorporation of the corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock.

1.2 OTHER OFFICES

The corporation's board of directors may at any time establish other offices at any place or places where the corporation is qualified to do business.

ARTICLE II — MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the board of directors. The board of directors may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the General Corporation Law of the State of Delaware (the "**DGCL**"). In the absence of any such designation or determination, stockholders' meetings shall be held at the corporation's then-principal executive office.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held on such date, at such time, and at such place (if any) within or without the State of Delaware, as the board of directors shall designate from time to time and stated in the corporation's notice of the meeting. At the annual meeting, directors shall be elected and any other proper business, brought in accordance with Section 2.4 of these bylaws, may be transacted.

2.3 SPECIAL MEETING

(i) A special meeting of the stockholders, other than those required by statute, may be called at any time only by (A) the affirmative vote of a majority of the Whole Board, (B) the chairperson of the board of directors, (C) the chief executive officer, or (D) the president (in the absence of a chief executive officer). A special meeting of the stockholders may not be called by any other person or persons. The board of directors, by the affirmative vote of a majority of the Whole Board, may cancel, postpone or reschedule any previously scheduled special meeting at any time, before or after the notice for such meeting has been sent to the stockholders. For purposes of these Bylaws, the term "**Whole Board**" will mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships.

(ii) The notice of a special meeting shall include the purpose for which the meeting is called. Only such business shall be conducted at a special meeting of stockholders as shall have been brought

before the meeting by or at the direction of the board of directors acting by the affirmative vote of a majority of the Whole Board, the chairperson of the board of directors, the chief executive officer or the president (in the absence of a chief executive officer).

2.4 ADVANCE NOTICE PROCEDURES

(i) *Advance Notice of Stockholder Business at Annual Meeting.* At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be brought: (A) pursuant to the corporation's proxy materials with respect to such meeting, (B) by or at the direction of the board of directors, or (C) by a stockholder who (1) is a stockholder of record at the time of the giving of the notice required by this Section 2.4(i) and on the record date for the determination of stockholders entitled to vote at the annual meeting and (2) has timely complied in proper written form with the notice procedures set forth in this Section 2.4(i). In addition, for business to be properly brought by a stockholder before an annual meeting, such business must be a proper matter for stockholder action pursuant to these bylaws and applicable law. Except for proposals properly made in accordance with Rule 14a-8 under the Securities and Exchange Act of 1934, and the rules and regulations thereunder (as so amended and inclusive of such rules and regulations), clause (C) above shall be the exclusive means for a stockholder to bring business before an annual meeting of stockholders.

(a) To comply with clause (C) of Section 2.4(i), above, a stockholder's notice must set forth all information required under this Section 2.4(i) and must be timely received by the secretary of the corporation. To be timely, a stockholder's notice must be received by the secretary at the principal executive offices of the corporation not later than the 45th day nor earlier than the 75th day before the one-year anniversary of the date on which the corporation first mailed its proxy materials or a notice of availability of proxy materials (whichever is earlier) for the preceding year's annual meeting; *provided*, *however*, that in the event that no annual meeting was held in the previous year or if the date of the annual meeting is advanced by more than 30 days prior to or delayed by more than 30 days after the one-year anniversary of the date of the previous year's annual meeting, then, for notice by the stockholder to be timely, it must be so received by the secretary not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of (i) the 90th day prior to such annual meeting, or (ii) the tenth day following the day on which Public Announcement (as defined below) of the date of such annual meeting is first made. In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described in this Section 2.4(i)(a). "**Public Announcement**" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or any successor thereto (the "**1934 Act**").

(b) To be in proper written form, a stockholder's notice to the secretary must set forth as to each matter of business the stockholder intends to bring before the annual meeting: (1) a brief description of the business intended to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (2) the name and address, as they appear on the corporation's books, of the stockholder proposing such business and any Stockholder Associated Person (as defined below), (3) the class and number of shares of the corporation that are held of record or are beneficially owned by the stockholder or any Stockholder Associated Person and any derivative positions held or beneficially held by the stockholder or any Stockholder Associated Person as of the date of delivery of such notice, (4) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of such stockholder or any Stockholder Associated Person with respect to any securities of the

corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit from share price changes for, or to increase or decrease the voting power of, such stockholder or any Stockholder Associated Person with respect to any securities of the corporation, (5) any material interest of the stockholder or a Stockholder Associated Person in such business, and (6) a statement whether either such stockholder or any Stockholder Associated Person will deliver a proxy statement and form of proxy to holders of at least the percentage of the voting power of the corporation's voting shares required under applicable law to carry the proposal (such information provided and statements made as required by clauses (1) through (6), a "**Business Solicitation Statement**"). In addition, to be in proper written form, a stockholder's notice to the secretary must be supplemented not later than ten days following the record date for notice of the meeting to disclose the information contained in clauses (3) and (4) above as of the record date for notice of the meeting. For purposes of this Section 2.4, a "**Stockholder Associated Person**" of any stockholder shall mean (i) any person controlling, directly or indirectly, or acting in concert with, such stockholder, (ii) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such stockholder and on whose behalf the proposal or nomination, as the case may be, is being made, or (iii) any person controlling, controlled by or under common control with such person referred to in the preceding clauses (i) and (ii).

(c) Without exception, no business shall be conducted at any annual meeting except in accordance with the provisions set forth in this Section 2.4(i) and, if applicable, Section 2.4(ii). In addition, business proposed to be brought by a stockholder may not be brought before the annual meeting if such stockholder or a Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Business Solicitation Statement applicable to such business or if the Business Solicitation Statement applicable to such business contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading. The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the annual meeting that business was not properly brought before the annual meeting and in accordance with the provisions of this Section 2.4(i), and, if the chairperson should so determine, he or she shall so declare at the annual meeting that any such business not properly brought before the annual meeting shall not be conducted.

(ii) *Advance Notice of Director Nominations at Annual Meetings.* Notwithstanding anything in these bylaws to the contrary, only persons who are nominated in accordance with the procedures set forth in this Section 2.4(ii) shall be eligible for election or re-election as directors at an annual meeting of stockholders. Nominations of persons for election or re-election to the board of directors of the corporation shall be made at an annual meeting of stockholders only (A) by or at the direction of the board of directors or (B) by a stockholder who (1) was a stockholder of record at the time of the giving of the notice required by this Section 2.4(ii) and on the record date for the determination of stockholders entitled to vote at the annual meeting and (2) has complied with the notice procedures set forth in this Section 2.4(ii). In addition to any other applicable requirements, for a nomination to be made by a stockholder, the stockholder must have given timely notice thereof in proper written form to the secretary of the corporation.

(a) To comply with clause (B) of Section 2.4(ii) above, a nomination to be made by a stockholder must set forth all information required under this Section 2.4(ii) and must be received by the secretary at the then-principal executive offices of the corporation at the time set forth in, and in accordance with, the final three sentences of Section 2.4(i)(a), above; provided additionally, however, that in the event that the number of directors to be elected to the board of directors is increased and there is no Public Announcement naming all of the nominees for director or specifying the size of the increased board made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination pursuant to the foregoing provisions, a stockholder's notice required by this Section 2.4(ii) shall also be

considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be received by the secretary at the principal executive offices of the corporation not later than the close of business on the tenth day following the day on which such Public Announcement is first made by the corporation.

(b) To be in proper written form, such stockholder's notice to the secretary must set forth:

(1) as to each person whom the stockholder proposes to nominate for election or re-election as a director (a "**nominee**"): (A) the name, age, business address and residence address of the nominee, (B) the principal occupation or employment of the nominee, (C) the class and number of shares of the corporation that are held of record or are beneficially owned by the nominee and any derivative positions held or beneficially held by the nominee, (D) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of the nominee with respect to any securities of the corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit of share price changes for, or to increase or decrease the voting power of the nominee, (E) a description of all arrangements or understandings between or among the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder or concerning the nominee's potential service on the board of directors, (F) a written statement executed by the nominee acknowledging that as a director of the corporation, the nominee will owe fiduciary duties under Delaware law with respect to the corporation and its stockholders, and (G) any other information relating to the nominee that would be required to be disclosed about such nominee if proxies were being solicited for the election or re-election of the nominee as a director, or that is otherwise required, in each case pursuant to Regulation 14A under the 1934 Act (including without limitation the nominee's written consent to being named in the proxy statement, if any, as a nominee and to serving as a director if elected or re-elected, as the case may be); and

(2) as to such stockholder giving notice, (A) the information required to be provided pursuant to clauses (2) through (5) of Section 2.4(i)(b), above, and the supplement referenced in the second sentence of Section 2.4(i)(b) above (except that the references to "business" in such clauses shall instead refer to nominations of directors for purposes of this paragraph), and (B) a statement whether either such stockholder or Stockholder Associated Person will deliver a proxy statement and form of proxy to holders of at least the percentage of the voting power of the corporation's voting shares reasonably believed by such stockholder or Stockholder Associated Person to be necessary to elect or re-elect such nominee(s) (such information provided and statements made as required by clauses (A) and (B) above, a "**Nominee Solicitation Statement**").

(c) At the request of the board of directors, any person nominated by a stockholder for election or re-election as a director must furnish to the secretary (1) that information required to be set forth in the stockholder's notice of nomination of such person as a director as of a date subsequent to the date on which the notice of such person's nomination was given and (2) such other information as may reasonably be required by the corporation to determine the eligibility of such proposed nominee to serve as an independent director or audit committee financial expert of the corporation under applicable law, securities exchange rule or regulation, or any publicly disclosed corporate governance guideline or committee charter of the corporation and (3) such other information that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such nominee; in the absence of the furnishing of any such information of the kind specified in this Section 2.4(ii)(c) if requested, such stockholder's nomination shall not be considered in proper form pursuant to this Section 2.4(ii).

(d) Without exception, no person shall be eligible for election or re-election as a director of the corporation at an annual meeting of stockholders unless nominated in accordance with the provisions set forth in this Section 2.4(ii). In addition, a nominee shall not be eligible for election or re-election if a stockholder or Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Nominee Solicitation Statement applicable to such nominee or if the Nominee Solicitation Statement applicable to such nominee contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading. The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the annual meeting that a nomination was not made in accordance with the provisions prescribed by these bylaws, and if the chairperson should so determine, he or she shall so declare at the annual meeting, and the defective nomination shall be disregarded.

(iii) Advance Notice of Director Nominations for Special Meetings.

(a) For a special meeting of stockholders at which directors are to be elected or re-elected, nominations of persons for election or re-election to the board of directors shall be made only (1) by or at the direction of the board of directors or (2) by any stockholder who (A) is a stockholder of record at the time of the giving of the notice required by this Section 2.4(iii) and on the record date for the determination of stockholders entitled to vote at the special meeting and (B) delivers a timely written notice of the nomination to the secretary that includes the information set forth in Sections 2.4(ii)(b) and (ii)(c) above. To be timely, such notice must be received by the secretary at the then-principal executive offices of the corporation not later than the close of business on the later of the 90th day prior to such special meeting or the tenth day following the day on which Public Announcement is first made of the date of the special meeting and of the nominees proposed by the board of directors to be elected or re-elected at such meeting. A person shall not be eligible for election or re-election as a director at a special meeting unless the person is nominated (i) by or at the direction of the board of directors or (ii) by a stockholder in accordance with the notice procedures set forth in this Section 2.4(iii). In addition, a nominee shall not be eligible for election or re-election if a stockholder or Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Nominee Solicitation Statement applicable to such nominee or if the Nominee Solicitation Statement applicable to such nominee contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading. Any person nominated in accordance with this Section 2.4(iii) is subject to, and must comply with, the provisions of Section 2.4(ii)(c).

(b) The chairperson of the special meeting shall, if the facts warrant, determine and declare at the meeting that a nomination or business was not made in accordance with the procedures prescribed by these bylaws, and if the chairperson should so determine, he or she shall so declare at the meeting, and the defective nomination or business shall be disregarded.

(iv) Other Requirements and Rights. In addition to the foregoing provisions of this Section 2.4, a stockholder must also comply with all applicable requirements of state law and of the 1934 Act and the rules and regulations thereunder with respect to the matters set forth in this Section 2.4. Nothing in this Section 2.4 shall be deemed to affect any rights of:

(a) a stockholder to request inclusion of proposals in the corporation’s proxy statement pursuant to Rule 14a-8 (or any successor provision) under the 1934 Act; or

(b) the corporation to omit a proposal from the corporation’s proxy statement pursuant to Rule 14a-8 (or any successor provision) under the 1934 Act.

2.5 NOTICE OF STOCKHOLDERS' MEETINGS

Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Except as otherwise provided in the DGCL, the certificate of incorporation or these bylaws, the written notice of any meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

2.6 QUORUM

The holders of a majority of the voting power of the stock issued, outstanding and entitled to vote, and present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders, unless otherwise required by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange. Where a separate vote by a class or series or classes or series is required, a majority of the voting power of the then-issued and outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise required by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange.

If a quorum is not present or represented at any meeting of the stockholders, then either (i) the chairperson of the meeting, or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. The chairperson of the meeting shall have the authority to adjourn a meeting of the stockholders in all other events. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the original meeting.

2.7 ADJOURNED MEETING; NOTICE

When a meeting is adjourned to another time or place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting, are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If, after the adjournment, a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the board of directors shall fix a new record date for notice of such adjourned meeting in accordance with Section 213(a) of the DGCL and Section 2.11 of these bylaws, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

2.8 CONDUCT OF BUSINESS

The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of business. The chairperson of any meeting of stockholders shall be designated by the board of directors; in the absence of such designation, the chairperson of the board, if any, the chief executive officer (in the absence of the chairperson) or the president (in the absence of the chairperson of the board and the chief executive officer), or in their absence any other executive officer of the corporation, shall serve as chairperson of the stockholder meeting.

2.9 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Except as otherwise required by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Where a separate vote by a class or series or classes or series is required, in all matters other than the election of directors, the affirmative vote of the majority of the voting power of shares of such class or series or classes or series present in person or represented by proxy at the meeting shall be the act of such class or series or classes or series, except as otherwise provided by law, the certificate of incorporation, these bylaws or the rules of any applicable stock exchange.

2.10 STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Subject to the rights of the holders of the shares of any series of Preferred Stock or any other class of stock or series thereof that have been expressly granted the right to take action by written consent, any action required or permitted to be taken by the stockholders of the corporation must be effected at a duly called annual or special meeting of stockholders of the corporation and may not be effected by any consent in writing by such stockholders.

2.11 RECORD DATES

In order that the corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If the board of directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the board of directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination.

If no record date is fixed by the board of directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however,* that the board of directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the provisions of Section 213 of the DGCL and this Section 2.11 at the adjourned meeting.

In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

2.12 PROXIES

Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL. A written proxy may be in the form of a telegram, cablegram, or other means of electronic transmission which sets forth or is submitted with information from which it can be determined that the telegram, cablegram, or other means of electronic transmission was authorized by the stockholder.

2.13 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting; *provided, however,* if the record date for determining the stockholders entitled to vote is less than ten (10) days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date. The stockholder list shall be arranged in alphabetical order and show the address of each stockholder and the number of shares registered in the name of each stockholder. The corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting for a period of at least ten (10) days prior to the meeting (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the corporation's then-principal place of business. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. If the meeting is to be held at a place (as opposed to solely by means of remote communication), then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be examined by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also

be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Such list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

2.14 INSPECTORS OF ELECTION

Before any meeting of stockholders, the board of directors shall appoint an inspector or inspectors of election to act at the meeting or its adjournment. The number of inspectors shall be either one (1) or three (3). If any person appointed as inspector fails to appear or fails or refuses to act, then the chairperson of the meeting shall appoint a person to fill that vacancy.

Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath to execute faithfully the duties of inspector with strict impartiality and according to the best of his or her ability. The inspector or inspectors so appointed and designated shall (i) ascertain the number of shares of capital stock of the corporation outstanding and the voting power of each share, (ii) determine the shares of capital stock of the corporation represented at the meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, (v) certify their determination of the number of shares of capital stock of the corporation represented at the meeting and such inspector or inspectors' count of all votes and ballots, (vi) determine the result; and (vii) do any other acts that may be proper to conduct the election or vote with fairness to all stockholders.

In determining the validity and counting of proxies and ballots cast at any meeting of stockholders of the corporation, the inspector or inspectors may consider such information as is permitted by applicable law. If there are three (3) inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein.

ARTICLE III — DIRECTORS

3.1 POWERS

The business and affairs of the corporation shall be managed by or under the direction of the board of directors, except as may be otherwise provided in the DGCL or the certificate of incorporation.

3.2 NUMBER OF DIRECTORS

The board of directors shall consist of one or more members, each of whom shall be a natural person. Unless the certificate of incorporation fixes the number of directors, the number of directors shall be determined from time to time solely by resolution of the board of directors. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation or removal. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors. If so provided in the certificate of incorporation, the directors of the corporation shall be divided into classes.

3.4 RESIGNATION AND VACANCIES

Any director may resign at any time upon notice given in writing or by electronic transmission to the corporation; *provided*, *however*, that if such notice is given by electronic transmission, such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the director. A resignation is effective when the resignation is delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events. Acceptance of such resignation shall not be necessary to make it effective. A resignation which is conditioned upon the director failing to receive a specified vote for reelection as a director may provide that it is irrevocable. Unless otherwise provided in the certificate of incorporation or these bylaws, when one or more directors resign from the board of directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.

Unless otherwise provided in the certificate of incorporation or these bylaws, vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class shall be filled only by a majority of the directors then-in office, although less than a quorum, or by a sole remaining director. If the directors are divided into classes, a person so elected by the directors then in office to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been chosen and until his or her successor shall have been duly elected and qualified.

If, at the time of filling any vacancy or any newly created directorship, the directors then-in office constitute less than a majority of the whole board of directors (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the voting stock at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

The board of directors may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board of directors.

3.7 SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairperson of the board of directors, the chief executive officer, the president, the secretary or a majority of the authorized number of directors, at such times and places as he or she or they shall designate.

Notice of the time and place of special meetings shall be:

(i) delivered personally by hand, by courier or by telephone;

(ii) sent by United States first-class mail, postage prepaid;

(iii) sent by facsimile; or

(iv) sent by electronic mail,

directed to each director at that director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the corporation's records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the corporation's principal executive office) nor the purpose of the meeting.

3.8 QUORUM; VOTING

At all meetings of the board of directors, a majority of the total authorized number of directors shall constitute a quorum for the transaction of business. If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the board of directors, except as may be otherwise specifically provided by the DGCL, the certificate of incorporation or these bylaws.

If the certificate of incorporation provides that one or more directors shall have more or less than one vote per director on any matter, every reference in these bylaws to a majority or other proportion of the directors shall refer to a majority or other proportion of the votes of such directors.

3.9 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise restricted by the certificate of incorporation, these bylaws or DGCL, any action required or permitted to be taken at any meeting of the board of directors, or of any committee thereof, may be taken without a meeting if all members of the board of directors or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board of directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

3.10 FEES AND COMPENSATION OF DIRECTORS

Unless otherwise restricted by the certificate of incorporation, these bylaws or [DCGL/applicable law], the board of directors shall have the authority to fix the compensation of directors.

3.11 REMOVAL OF DIRECTORS

A director may be removed from office by the stockholders of the corporation only for cause.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

ARTICLE IV — COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The board of directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board of directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors or in these bylaws, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the corporation.

4.2 COMMITTEE MINUTES

Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

4.3 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(i) Section 3.5 (place of meetings and meetings by telephone);

(ii) Section 3.6 (regular meetings);

(iii) Section 3.7 (special meetings; notice);

(iv) Section 3.8 (quorum; voting);

(v) Section 3.9 (action without a meeting); and

(vi) Section 7.5 (waiver of notice)

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members. *However*:

(i) the time of regular meetings of committees may be determined by resolution of the committee;

(ii) special meetings of committees may also be called by resolution of the committee; and

(iii) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors or a committee may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

Any provision in the certificate of incorporation providing that one or more directors shall have more or less than one vote per director on any matter shall apply to voting in any committee or subcommittee, unless otherwise provided in the certificate of incorporation or these bylaws.

4.4 SUBCOMMITTEES

Unless otherwise provided in the certificate of incorporation, these bylaws or the resolutions of the board of directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

ARTICLE V — OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a president and a secretary. The corporation may also have, at the discretion of the board of directors, a chairperson of the board of directors, a vice chairperson of the board of directors, a chief executive officer, a chief financial officer or treasurer, one or more vice presidents, one or more assistant vice presidents, one or more assistant treasurers, one or more assistant secretaries, and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS

The board of directors shall appoint the officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws, subject to the rights, if any, of an officer under any contract of employment. A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in this Section 5 for the regular election to such office.

5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or empower the chief executive officer or, in the absence of a chief executive officer, the president, to appoint, such other officers and agents as the business of the

corporation may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the board of directors at any regular or special meeting of the board of directors. Any such officer, except in the case of an officer chosen by the board of directors, may also be removed by an officer upon whom such power of removal may be conferred by the board of directors.

Any officer may resign at any time by giving written or electronic notice to the corporation; *provided, however*, that if such notice is given by electronic transmission, such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the officer. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

Any vacancy occurring in any office of the corporation shall be filled by the board of directors or as provided in Section 5.3.

5.6 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The chairperson of the board of directors, the president, any vice president, the treasurer, the secretary or assistant secretary of this corporation, or any other person authorized by the board of directors or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

5.7 AUTHORITY AND DUTIES OF OFFICERS

All officers of the corporation shall respectively have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the board of directors.

5.8 THE CHAIRPERSON OF THE BOARD

The chairperson of the board shall have the powers and duties customarily and usually associated with the office of the chairperson of the board. The chairperson of the board shall preside at meetings of the board of directors.

5.9 THE VICE CHAIRPERSON OF THE BOARD

The vice chairperson of the board shall have the powers and duties customarily and usually associated with the office of the vice chairperson of the board. In the case of absence or disability of the chairperson of the board, the vice chairperson of the board shall perform the duties and exercise the powers of the chairperson of the board.

5.10 THE CHIEF EXECUTIVE OFFICER

The chief executive officer shall have, subject to the supervision, direction and control of the board of directors, ultimate authority for decisions relating to the supervision, direction and management of the affairs and the business of the corporation customarily and usually associated with the position of chief executive officer, including, without limitation, all powers necessary to direct and control the organizational and reporting relationships within the corporation. If at any time the office of the chairperson and vice chairperson of the board shall not be filled, or in the event of the temporary absence or disability of the chairperson of the board and the vice chairperson of the board, the chief executive officer shall perform the duties and exercise the powers of the chairperson of the board unless otherwise determined by the board of directors.

5.11 THE PRESIDENT

The president shall have, subject to the supervision, direction and control of the board of directors, the general powers and duties of supervision, direction and management of the affairs and business of the corporation customarily and usually associated with the position of president. The president shall have such powers and perform such duties as may from time to time be assigned to him or her by the board of directors, the chairperson of the board or the chief executive officer. In the event of the absence or disability of the chief executive officer, the president shall perform the duties and exercise the powers of the chief executive officer unless otherwise determined by the board of directors.

5.12 THE VICE PRESIDENTS AND ASSISTANT VICE PRESIDENTS

Each vice president and assistant vice president shall have such powers and perform such duties as may from time to time be assigned to him or her by the board of directors, the chairperson of the board, the chief executive officer or the president.

5.13 THE SECRETARY AND ASSISTANT SECRETARIES

(i) The secretary shall attend meetings of the board of directors and meetings of the stockholders and record all votes and minutes of all such proceedings in a book or books kept for such purpose. The secretary shall have all such further powers and duties as are customarily and usually associated with the position of secretary or as may from time to time be assigned to him or her by the board of directors, the chairperson of the board, the chief executive officer or the president.

(ii) Each assistant secretary shall have such powers and perform such duties as may from time to time be assigned to him or her by the board of directors, the chairperson of the board, the chief executive officer, the president or the secretary. In the event of the absence, inability or refusal to act of the secretary, the assistant secretary (or if there shall be more than one, the assistant secretaries in the order determined by the board of directors) shall perform the duties and exercise the powers of the secretary.

5.14 THE CHIEF FINANCIAL OFFICER AND ASSISTANT TREASURERS

(i) The chief financial officer shall be the treasurer of the corporation. The chief financial officer shall have custody of the corporation's funds and securities, shall be responsible for maintaining the corporation's accounting records and statements, shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation, and shall deposit or cause to be deposited moneys or other valuable effects in the name and to the credit of the corporation in such depositories as may be designated by the board of directors. The chief financial officer shall also maintain adequate records of all assets, liabilities and transactions of the corporation and shall assure that adequate audits thereof are currently and regularly made. The chief financial officer shall have all such further powers and duties as are customarily and usually associated with the position of chief financial officer, or as may from time to time be assigned to him or her by the board of directors, the chairperson, the chief executive officer or the president.

(ii) Each assistant treasurer shall have such powers and perform such duties as may from time to time be assigned to him or her by the board of directors, the chief executive officer, the president or the chief financial officer. In the event of the absence, inability or refusal to act of the chief financial officer, the assistant treasurer (or if there shall be more than one, the assistant treasurers in the order determined by the board of directors) shall perform the duties and exercise the powers of the chief financial officer.

ARTICLE VI — STOCK

6.1 STOCK CERTIFICATES; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of the corporation by the chairperson of the board of directors or vice-chairperson of the board of directors, or the president or a vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue. The corporation shall not have power to issue a certificate in bearer form.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly-paid shares, or upon the books and records of the corporation in the case of uncertificated partly-paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully-paid shares, the corporation shall declare a dividend upon partly-paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

6.2 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other

special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; *provided, however*, that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to this section 6.2 or Sections 151, 156, 202(a) or 218(a) of the DGCL or with respect to this section 6.2 a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated stock and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

6.3 LOST, STOLEN OR DESTROYED CERTIFICATES

Except as provided in this Section 6.3, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

6.4 DIVIDENDS

The board of directors, subject to any restrictions contained in the certificate of incorporation or applicable law, may declare and pay dividends upon the shares of the corporation's capital stock. Dividends may be paid in cash, in property, or in shares of the corporation's capital stock, subject to the provisions of the certificate of incorporation.

The board of directors may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the corporation, and meeting contingencies.

6.5 TRANSFER OF STOCK

Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by an attorney duly authorized, and, if such stock is certificated, upon the surrender of a certificate or certificates for a like number of shares, properly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer; *provided, however,* that such succession, assignment or authority to transfer is not prohibited by the certificate of incorporation, these bylaws, applicable law or contract.

6.6 STOCK TRANSFER AGREEMENTS

The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

6.7 REGISTERED STOCKHOLDERS

The corporation:

(i) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner;

(ii) shall be entitled (to the fullest extent permitted by applicable law) to hold liable for calls and assessments the person registered on its books as the owner of shares; and

(iii) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VII — MANNER OF GIVING NOTICE AND WAIVER

7.1 NOTICE OF STOCKHOLDERS' MEETINGS

Notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the corporation's records. An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that the notice has been given shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

7.2 NOTICE BY ELECTRONIC TRANSMISSION

Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the certificate of incorporation or these bylaws, any notice to stockholders given by the corporation under any provision of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any such consent shall be deemed revoked if:

(i) the corporation is unable to deliver by electronic transmission two consecutive notices given by the corporation in accordance with such consent; and

(ii) such inability becomes known to the secretary or an assistant secretary or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;

(iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(iv) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

An "**electronic transmission**" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

7.3 NOTICE TO STOCKHOLDERS SHARING AN ADDRESS

Except as otherwise prohibited under the DGCL, without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the corporation under the provisions of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any stockholder who fails to object in writing to the corporation, within 60 days of having been given written notice by the corporation of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice.

7.4 NOTICE TO PERSON WITH WHOM COMMUNICATION IS UNLAWFUL

Whenever notice is required to be given, under the DGCL, the certificate of incorporation or these bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

7.5 WAIVER OF NOTICE

Whenever notice is required to be given to stockholders, directors or other persons under any provision of the DGCL, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether

before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders or the board of directors, as the case may be, need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

ARTICLE VIII — INDEMNIFICATION

8.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS IN THIRD PARTY PROCEEDINGS

Subject to the other provisions of this Article VIII, the corporation shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**") (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director of the corporation or an officer of the corporation, or while a director of the corporation or officer of the corporation is or was serving at the request of the corporation as a director, officer, employee or agent of a subsidiary or another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such Proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

8.2 INDEMNIFICATION OF DIRECTORS AND OFFICERS IN ACTIONS BY OR IN THE RIGHT OF THE CORPORATION

Subject to the other provisions of this Article VIII, the corporation shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the corporation, or while a director or officer of the corporation is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

8.3 SUCCESSFUL DEFENSE

To the extent that a present or former director or officer of the corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described in Section 8.1 or Section 8.2, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

8.4 INDEMNIFICATION OF OTHERS; ADVANCE PAYMENT TO OTHERS

Subject to the other provisions of this Article VIII, the corporation shall have power to advance expenses to and indemnify its employees and its agents to the extent not prohibited by the DGCL or other applicable law. The board of directors shall have the power to delegate the determination of whether employees or agents shall be indemnified or receive an advancement of expenses to such person or persons as the board of determines.

8.5 ADVANCE PAYMENT OF EXPENSES

Expenses (including attorneys' fees) incurred by an officer or director of the corporation in defending any Proceeding shall be paid by the corporation in advance of the final disposition of such Proceeding upon receipt of a written request therefor (together with documentation reasonably evidencing such expenses) and an undertaking by or on behalf of the person to repay such amounts if it shall ultimately be determined that the person is not entitled to be indemnified under this Article VIII or the DGCL. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the corporation deems reasonably appropriate and shall be subject to the corporation's expense guidelines.

8.6 LIMITATION ON INDEMNIFICATION

Subject to the requirements in Section 8.3 and the DGCL, the corporation shall not be obligated to indemnify any person pursuant to this Article VIII in connection with any Proceeding (or any part of any Proceeding):

(i) for which payment has actually been made to or on behalf of such person under any statute, insurance policy, indemnity provision, vote or otherwise, except with respect to any excess beyond the amount paid;

(ii) for an accounting or disgorgement of profits pursuant to Section 16(b) of the 1934 Act, or similar provisions of federal, state or local statutory law or common law, if such person is held liable therefor (including pursuant to any settlement arrangements);

(iii) for any reimbursement of the corporation by such person of any bonus or other incentive-based or equity-based compensation or of any profits realized by such person from the sale of securities of the corporation, as required in each case under the 1934 Act (including any such reimbursements that arise from an accounting restatement of the corporation pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "**Sarbanes-Oxley Act**"), or the payment to the corporation of profits arising from the purchase and sale by such person of securities in violation of Section 306 of the Sarbanes-Oxley Act), if such person is held liable therefor (including pursuant to any settlement arrangements);

(iv) initiated by such person against the corporation or its directors, officers, employees, agents or other indemnitees, unless (a) the board of directors authorized the Proceeding (or the relevant part of

the Proceeding) prior to its initiation, (b) the corporation provides the indemnification, in its sole discretion, pursuant to the powers vested in the corporation under applicable law, (c) otherwise required to be made under Section 8.7 or (d) otherwise required by applicable law; or

(v) if prohibited by applicable law; *provided*, *however*, that if any provision or provisions of this Article VIII shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (1) the validity, legality and enforceability of the remaining provisions of this Article VIII (including, without limitation, each portion of any paragraph or clause containing any such provision held to be invalid, illegal or unenforceable, that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (2) to the fullest extent possible, the provisions of this Article VIII (including, without limitation, each such portion of any paragraph or clause containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforcebable.

8.7 DETERMINATION; CLAIM

If a claim for indemnification or advancement of expenses under this Article VIII is not paid in full within 90 days after receipt by the corporation of the written request therefor, the claimant shall be entitled to an adjudication by a court of competent jurisdiction of his or her entitlement to such indemnification or advancement of expenses. The corporation shall indemnify such person against any and all expenses that are incurred by such person in connection with any action for indemnification or advancement of expenses from the corporation under this Article VIII, to the extent such person is successful in such action, and to the extent not prohibited by law. In any such suit, the corporation shall, to the fullest extent not prohibited by law, have the burden of proving that the claimant is not entitled to the requested indemnification or advancement of expenses.

8.8 NON-EXCLUSIVITY OF RIGHTS

The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the certificate of incorporation or any statute, bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person’s official capacity and as to action in another capacity while holding such office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advancement of expenses, to the fullest extent not prohibited by the DGCL or other applicable law.

8.9 INSURANCE

The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person’s status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of the DGCL.

8.10 SURVIVAL

The rights to indemnification and advancement of expenses conferred by this Article VIII shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

8.11 EFFECT OF REPEAL OR MODIFICATION

Any amendment, alteration or repeal of this Article VIII shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to such amendment, alteration or repeal.

8.12 CERTAIN DEFINITIONS

For purposes of this Article VIII, references to the "**corporation**" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. For purposes of this Article VIII, references to "**other enterprises**" shall include employee benefit plans; references to "**fines**" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "**serving at the request of the corporation**" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "**not opposed to the best interests of the corporation**" as referred to in this Article VIII.

ARTICLE IX — GENERAL MATTERS

9.1 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS

Except as otherwise provided by law, the certificate of incorporation or these bylaws, the board of directors may authorize any officer or officers, or agent or agents, to enter into any contract or execute any document or instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

9.2 FISCAL YEAR

The fiscal year of the corporation shall be fixed by resolution of the board of directors and may be changed by the board of directors.

9.3 SEAL

The corporation may adopt a corporate seal, which shall be adopted and which may be altered by the board of directors. The corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

9.4 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "**person**" includes both an entity and a natural person.

ARTICLE X — AMENDMENTS

These bylaws may be adopted, amended or repealed by the affirmative vote of the holders of at least 66 2/3% of the total voting power of outstanding voting securities, voting together as a single class. The board of directors, acting by the affirmative vote of a majority of the Whole Board, shall also have the power to adopt, amend or repeal bylaws; *provided, however*, that a bylaw amendment adopted by stockholders which specifies the votes that shall be necessary for the election of directors shall not be further amended or repealed by the board of directors.

Exhibit 31.1

CERTIFICATION

I, Peter Maag, certify that:

1. I have reviewed this quarterly report on Form 10-Q of CareDx, Inc.;

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(s) 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)) 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) 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

   c) 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(s) 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: August 28, 2014

By: /s/ Peter Maag
Peter Maag
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Kenneth E. Ludlum, certify that:

1. I have reviewed this quarterly report on Form 10-Q of CareDx, Inc.;

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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) 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) 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

   c) 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(s) 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: August 28, 2014

By: /s/ Kenneth E. Ludlum
Kenneth E. Ludlum
Chief Financial Officer
(Principal Accounting and Financial Officer)

Exhibit 32.1

CERTIFICATION

I, Peter Maag, Chief Executive Officer, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. the Quarterly Report on Form 10-Q for the quarter ended June 30, 2014, (the "Periodic Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of CareDx, Inc.

Date: August 28, 2014

By: /s/ Peter Maag

Peter Maag
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION

I, Kenneth E. Ludlum, Chief Financial Officer, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. the Quarterly Report on Form 10-Q for the quarter ended June 30, 2014, (the "Periodic Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of CareDx, Inc.

Date: August 28, 2014

By: /s/ Kenneth E. Ludlum
Kenneth E. Ludlum
Chief Financial Officer
(Principal Accounting and Financial Officer)