UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2012

OR

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

FOR THE TRANSITION PERIOD FROM TO .

Commission File Number 000-1383183

COMBIMATRIX CORPORATION

(Exact name of registrant as specified in its charter)

DELAWARE	**47-0899439**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
310 GODDARD, SUITE 150, IRVINE, CA	**92618**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(949) 753-0624**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.001 par value	**The NASDAQ Stock Market LLC**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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 filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T 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 that disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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

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

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

As of June 30, 2012, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates was $7,420,000, based upon the last reported sale price of the registrant's common stock on that date as reported by Nasdaq. For the purposes of the foregoing calculation only, all of the registrant's directors, executive officers and persons known to the registrant to hold ten percent or greater of the registrant's outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not a determination for other purposes. The number of shares of the registrant's Common Stock, $0.001 par value, outstanding on March 20, 2013, was 2,783,030.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its Annual Meeting of Shareholders to be filed with the Commission within 120 days after the close of its fiscal year are incorporated by reference into Part III. Except with respect to the information specifically incorporated by reference into this Form 10-K, the registrant's definitive proxy statement is not deemed to be filed as part of this Form 10-K.

FORM 10-K ANNUAL REPORT
FISCAL YEAR ENDED DECEMBER 31, 2012
COMBIMATRIX CORPORATION

PART I

CAUTIONARY STATEMENT

This report contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact included in this report, are forward-looking statements. Reference is made in particular to the description of our plans and objectives for future operations, assumptions underlying such plans and objectives, and other forward-looking statements included in this report. Such statements may be identified by the use of forward-looking terminology such as "may," "will," "expect," "believe," "estimate," "anticipate," "intend," "continue," "plan," "predict," "seek," "should," "would," "could," "potential," "ongoing," or similar terms, variations of such terms, or the negative of such terms, and include, but are not limited to, statements regarding projected results of operations, capital expenditures, earnings, management's future strategic plans, product development, litigation, regulatory matters, market acceptance and performance of our products and services, the success and effectiveness of our technologies, our ability to retain and hire key personnel, the competitive nature of and anticipated growth in our markets, market position of our products and services, marketing efforts and partnerships, liquidity and capital resources, our accounting estimates, and our assumptions and judgments. Such statements are based on management's current expectations, estimates and projections about our industry, management's beliefs, and certain assumptions made by us, all of which are subject to change. These forward looking statements are not guarantees of future results and are subject to a number of risks, uncertainties and assumptions that are difficult to predict and that could cause actual results to differ materially and adversely from those described in the forward-looking statements. The risks and uncertainties referred to above include, but are not limited to, our ability to obtain additional financing for working capital on acceptable terms in a timely manner; our ability to regain and maintain compliance with the requirements for continued listing on The Nasdaq Stock Market; our ability to successfully increase the utilization of our existing tests, expand our diagnostic test menu, increase and diversify our client base, increase the number of strategic partners and improve reimbursement for our testing services; our ability to continue as a going concern; changes in consumer demand; our ability to attract and retain a qualified sales force and key technical personnel; our ability to successfully introduce new technologies and services; rapid technological change in our markets; the outcome of existing litigation; our ability to bill and obtain reimbursement for highly specialized tests; our ability to comply with regulations to which our business is subject; legislative, regulatory and competitive developments in markets in which we and our subsidiaries operate, including changes in coding and reimbursement methods; our limited market capitalization; future economic conditions; other circumstances affecting anticipated revenues and costs; and other factors as more fully disclosed in our discussion of risk factors in Item 1A of Part I of this report. These forward-looking statements speak only as of the date of this report and we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions, or circumstances on which any such statement is based, except as otherwise required by law. Additional factors that could cause such results to differ materially from those described in the forward-looking statements are set forth in connection with the forward-looking statements.

As used in this report, "the Company," "we," "us" and "our" refer to CombiMatrix Corporation and its majority-owned subsidiary companies.

Item 1. BUSINESS

Overview

CombiMatrix Corporation (the "Company," "we," "us" and "our") was originally incorporated in October 1995 as a California corporation and later reincorporated as a Delaware corporation in September 2000. In December 2002, we merged with and became a wholly owned subsidiary of Acacia

Research Corporation ("Acacia"). In December 2006, we filed a registration statement with the U.S. Securities and Exchange Commission ("SEC") in order to register our common stock as part of a plan to split-off from Acacia (the "Split-Off"). On August 15, 2007 (the "Split-Off Date"), the Split-Off was effected and our common stock became publicly traded on The Nasdaq Stock Market (symbol: "CBMX"). As of the Split-Off Date, we ceased to be a subsidiary of, or affiliated with, Acacia.

We are a molecular diagnostics company that operates primarily in the field of genetic analysis and molecular diagnostics through our wholly owned subsidiary, CombiMatrix Molecular Diagnostics, Inc. ("CMDX"), located in Irvine, California. CMDX operates as a diagnostics reference laboratory providing DNA-based clinical diagnostic testing services to physicians, hospitals, clinics and other laboratories in two primary areas: (i) prenatal and postnatal developmental disorders; and (ii) hematology/oncology genomics. CMDX provides its services primarily through the use of DNA microarrays, which enable the analysis of genetic anomalies, as well as through other test offerings including fluorescent in-situ hybridization ("FISH") and G-Band Chromosome analysis. Our mission is to empower physicians to positively impact patient care through the delivery of innovative molecular diagnostics services.

On April 19, 2010, we announced a strategic and operational restructuring plan (the "Restructuring Plan") intended to significantly reduce operating costs, increase the focus on the Company's diagnostic services business and transition senior management. As part of the Restructuring Plan, we closed our Mukilteo, Washington facility, which had been focused primarily on research, development and commercialization of the Company's oligonucleotide microarray technologies, also known as our "CustomArray" business.

We also own a one-third minority interest in Leuchemix, Inc. ("Leuchemix"), a private drug development company focused on developing a series of compounds to address a number of oncology-related diseases.

On December 4, 2012, we filed a Certificate of Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware to effect a reverse split of our common stock at a ratio of one-for-ten (the "Reverse Stock Split"), which became effective at the close of business on that day. As a result, each share of CombiMatrix common stock outstanding as of December 4, 2012 was automatically changed into one-tenth of a share of common stock. No fractional shares were issued in connection with the Reverse Stock Split, and cash paid to stockholders for potential fractional shares was insignificant. The number of shares of common stock subject to outstanding options, warrants and convertible securities were also reduced by a factor of ten as of December 4, 2012. All historical share and per share amounts reflected throughout this document have been adjusted to reflect the Reverse Stock Split. The authorized number of shares and the par value per share of our common stock were not affected by the Reverse Stock Split.

On March 19, 2013, we entered into a definitive securities purchase agreement with an existing institutional investor to purchase 130,000 shares of common stock at a price of $3.05 per share and approximately 1,610 units consisting of Series B 6% convertible preferred stock (the "Series B Preferred Stock") and warrants to purchase up to 275,000 shares of common stock at an exercise price of $3.49 per share (the "Warrants") in a registered direct offering (the "Offering") of securities off of our existing shelf registration statement on Form S-3 (File No. 333-176372). The Offering closed on March 20, 2013 ("Closing"). The Series B Preferred Stock and Warrants were sold in multiples of fixed combinations, with each fixed combination consisting of one share of Series B Preferred Stock and a Warrant to purchase approximately 171 shares of common stock. Each fixed combination of Series B Preferred Stock and Warrants were sold at a price of $1,000. The Series B Preferred Stock is convertible into an aggregate of 528,000 shares of Common Stock at an initial conversion price of $3.05 per share. The Series B Preferred Stock is not convertible into greater than 19.99% (when aggregated with the common shares purchased in the Offering) of the Company's outstanding common stock unless and until stockholder approval is obtained. The Warrants are not exercisable for six months from Closing, and the Series B Preferred Stock

will accrue dividends at an annual rate of 6% beginning six months after Closing, assuming the Series B Preferred Stock has not been converted. Upon closing of the Offering, we received proceeds of $1.76 million, net of placement agent fees and other related costs.

Market Overview

We develop and market our molecular testing services in two distinct markets: prenatal/postnatal developmental disorders and hematology/oncology genomics. In our view, the molecular diagnostics market is one of the fastest-growing segments within the overall diagnostics market. Molecular diagnostics, within the context of this discussion, refers to the use of an individual's genetic analysis to guide medical decision-making in the area of disease diagnosis and post-diagnostic management. Innovative approaches to re-sequencing of the human genome and a growing clinical appreciation and acceptance of the utility of genomic information in guiding clinical care are enabling rapid growth of this market. Most experts believe that the use of molecular diagnostics will continue to grow in the coming years and will have a significant impact on the way in which medicine is practiced.

Genes and Proteins

The human body is composed of billions of cells, each containing DNA that encodes the basic instructions for cellular function. The complete set of an individual's DNA is called the genome, and is organized into 23 pairs of chromosomes, which are further divided into smaller regions called genes. Each gene is comprised of a specific sequence involving four nucleotides (also called "bases"): A, T, G and C. These bases are complementary to one another in that A binds only with T and G binds only with C. This interaction forms "base pairs", and is responsible for the double helix structure of DNA.

The human genome has approximately three billion nucleotides. The order of these nucleotides is known as the DNA sequence. When a gene is turned on, or expressed, the genetic information encoded in the DNA is transcribed (copied) to an intermediate format, called messenger RNA ("mRNA"). The mRNA code is then read and translated into a specific protein product. Proteins direct numerous cellular functions; some of which lead to the expression of individual traits, such as eye color or height. Some level of normal variability is seen throughout the genome, however, abnormal variations in the sequence of a gene, such as deletions, duplications, or point mutations, can interfere with the normal physiology of the cells in which that gene is expressed. These abnormal variations may lead to disease, predisposition to a disease, or an atypical response to certain types of drugs.

Genes and Molecular Diagnostics

There are a number of methods of genetic analysis that are used in diagnostic genetic testing. They include: (i) sequencing individual bases for analysis; (ii) assessing DNA copy number variation; and (iii) analyzing gene expression. In many diagnostic situations, it is only necessary to analyze either a single gene or a small number of genes. This diagnostic testing can be accomplished by a number of different techniques, depending on the situation. However, when a larger number of genetic factors need to be analyzed, one of the most efficient methods of analysis is using microarrays to measure millions of variations in a single experiment (also referred to as "microarray" testing).

Microarray Testing for DNA Copy Number Variation

Microarray testing to assess DNA copy number variation is achieved by comparing a patient's genomic DNA to a reference genome to evaluate for relative gains and losses of genomic information. Some gains and losses of genomic information are known to cause genetic disorders, or predispose a person to a genetic disorder. Other gains and losses are considered benign because they occur in regions of the genome that are known to show variability and have not been associated with any disease or disease process. The reason we believe that microarray testing is such a powerful tool is that it enables

simultaneous analysis across the entire genome in a single reaction, providing a comprehensive analysis of all 46 chromosomes. Unlike gene expression arrays, which evaluate mRNA to monitor the activity of specific genes, DNA-based microarray analysis identifies quantitative defects in the number of copies of genomic DNA to test for conditions known to be associated with gains and losses of chromosomal information.

The manufacturing of microarrays involves affixing 'probes' (specific sequences of genomic DNA) to a solid surface, and then letting the labeled patient and reference DNA to hybridize with the probes. We use two different types of microarray testing platforms. The first type of platform is called a Bacterial Artificial Chromosome or "BAC." The target sequence (consisting of tens to hundreds of thousands of nucleotides) is replicated within a bacterial cell and used as a probe to identify the complimentary sequence within the patient and reference DNA. The second type of platform is called an oligonucleotide or "oligo" platform. Oligonucleotide probes usually contain between 25 - 75 base pairs of DNA, which is orders of magnitude fewer nucleotides than BAC probes. BAC probes and oligo probes map to specific regions of the genome, which allows us to custom-design our microarrays in a manner that optimizes both the sensitivity and specificity of the test. Our BAC arrays contain over 3,000 probes, and our oligo arrays range in density from 180,000 probes up to 1,000,000 probes per array.

Diagnostics Market Segmentation

Clinical Market

In general, our diagnostics services and test menus are focused around our highly specialized genomic microarray, which is described below. While there are risks associated with billing and reimbursement of these highly specialized tests, we believe that our market position and test portfolio provide significant leverage in the rapidly growing personalized genomics/diagnostics space. Our test menu is further supplemented by what may be considered routine tests, which allow us access to a broader, yet synergistic market. Our overall clinical market can be divided into two primary markets: (i) prenatal and postnatal developmental disorders; and (ii) oncogenomic testing for hematologic malignancies and solid tumors. Our market analysis indicates that our potential client base for both of these markets can be divided into three general customer segments, as detailed below. Our services are therefore tailored to meet the specific needs of each of these customer segments.

Postnatal Diagnostic Testing

- *Pediatric neurologist clinics and children's hospitals:* This market segment typically has relatively comprehensive laboratory capabilities and performs most basic genetic and chromosomal testing, such as: chromosome analysis; fluorescent *in situ* hybridization ("FISH") and polymerase chain reaction ("PCR")-based tests in-house. These facilities typically provide comprehensive genetic counseling to their patients, which is a key component in the clinical work-up and utilization of complex genomic assays in the prenatal and postnatal diagnostic arena. Due to economic conditions, some institutions find themselves in the untenable situation of having limited access to third-party manufactured kit components and being unable to internalize such highly specialized genomic testing platforms due to lack of expertise in this area. This segment of the market typically either outsources the testing completely or identifies a laboratory to perform the technical component of the testing while maintaining the professional component (test interpretation) in-house. From a billing perspective, many of the customers in this segment prefer the direct billing model, individual test pricing is negotiated with each institution.

Prenatal Diagnostic Testing

- *Community-based hospital pathology laboratories and regional reference laboratories:* This segment of the market is characterized by hospitals that provide basic laboratory services, but do not offer

complex genetic testing such as DNA microarrays. Generally speaking, most community hospitals have employed more traditional methods of genetic testing known as "karyotyping" for miscarriage testing (also referred to as "Products of Conception" or "POC") in the past decade and have referred this testing out to specialty labs. With the compelling recent data comparing microarray testing favorably to karyotyping, we believe significant growth opportunities exist in this segment. Another distinguishing factor of this segment is the large national and regional labs. These laboratories have sufficient professional competence and sophistication to partner with other service organizations offering DNA microarray technology as part of their service offerings to their patients and physicians. This segment of the market is characterized by a preponderance of clients requiring us to bill their patients' insurers directly as opposed to an institutional, direct-bill relationship.

- *Physician groups:* In the developmental genetics market, physician groups collectively constitute a significant market opportunity. This segment of the market typically outsources all of their genetic testing services, thus requiring Global service that would necessitate us to process all aspects of patient billing. The physicians that make up this market include geneticists, pediatric neurologists, OB-GYNs and maternal fetal medicine specialists.

Oncogenomic Diagnostic Testing

- *National and regional reference laboratories and other large hospitals/multi-hospital systems:* This segment typically has comprehensive capabilities and performs most of the basic cancer genetic testing including, but not limited to: flow cytometry, chromosome analysis, FISH and PCR-based testing, as well as routine pathology testing, in-house. However, many of these institutes face budgetary restraints and subsequently have difficulty trying to bring up new, specialized diagnostic tests, such as DNA microarray analysis. Perhaps even more so than with developmental disorders, this segment of the market will frequently outsource the technical component (i.e., the laboratory processing, or "TC") of their high-complexity genomic test menu, while maintaining the professional component (i.e., the interpretation of the test results, or "PC") in-house. In keeping with this strategy, we therefore focus on marketing our TC services to this segment of the market as well as providing direct billing options.
- *Regional reference laboratories, large pathology groups and small community hospitals:* This segment of the market does not typically have the core competency to perform complex testing such as DNA microarray and therefore, most of this type of cancer testing is sent out to other laboratories, which have entered into reference laboratory agreements with the regional laboratories. Again, unlike the larger national laboratories, this segment of the market typically requires us to bill patients' insurers directly, rather than arranging an institutional direct-bill relationship.

Technologies

In order to achieve the promise of personalized medicine, our objective is to provide a suite of molecular diagnostic tests based on the following array-based technologies.

BAC Arrays

Our BAC arrays enable us to perform microarray tests to evaluate genomic alterations from tissue samples that have been fixed in formalin and imbedded in paraffin wax, or "FFPE." BACs are made up of specific sequences of tens to hundreds of thousands of nucleotides and cover a large portion of the genome. These DNA sequences can be placed on a substrate, which, in our case, is a chemically modified glass slide. The BACs used on our arrays are developed by our laboratory or obtained through outside sources. While BAC microarrays can be used in both fresh tissue and FFPE tissue, BAC microarrays are superior to most commercially available oligonucleotide microarrays for the analysis of FFPE tissue.

Through BAC microarray analysis of a patient's sample, we compare the genomic DNA of the individual who has a potential genetic disorder with that of a reference set of normal individuals to evaluate for gains or losses of specific segments of genomic information that are known to be associated with well-described genetic disorders. Typically, these gains and losses of information are so small that they go undetected by standard cytogenetic analysis, and can only be detected by microarrays. BAC arrays are particularly useful in analyzing DNA samples that are of poorer quality, such as older samples or tissue that has been preserved in formalin and placed in a paraffin block, because the large sequences increase the assay's robustness and reduce "noise" in the data.

Oligo Arrays

Our oligo arrays allow us to analyze DNA on a much more refined scale than is possible with BAC technology. BAC probes are orders of magnitude larger than the 25 - 75 nucleotide-long oligo probes used in our arrays. By having shorter probes that are spaced more closely together, we are able to provide denser, more high-resolution analysis of the genome, focusing both on regions of known clinical significance (i.e. regions known to cause well-described genetic syndromes when lost or gained) as well as regions that make up the rest of the genome, called "backbone" regions. Since the introduction of high-density oligonucleotide arrays into clinical medicine, many new genetic syndromes caused by genomic gains and losses have been, and continue to be, identified. Meta-analyses and large prospective studies have demonstrated that microarray analysis provides greater than double the detection rate of standard cytogenetic testing (i.e., karyotyping and evaluation of the tips of chromosomes, called subtelomeres, by FISH) in constitutional cytogenetics, which is the analysis of POCs, prenatal, and postnatal samples. The ability to identify a specific cause for an individual's disorder assists not only with diagnostic management, but also with anticipatory care. In addition, microarrays have been shown to assist in the assessment of genetic instability in many types of cancer, such as breast, hematologic, brain, and the GI tract.

Technologies and Compound Libraries for Oncological Drug Development

Leuchemix has access to proprietary compounds that have been shown in pre-clinical studies to be cytotoxic toward certain cancers both *in vitro* and *in vivo*. Many of these compounds were discovered through combinatorial chemistry, natural product chemistry and cellular screening assays. Leuchemix has access to state-of-the-art laboratories and equipment, which includes flow cytometry, molecular biology and cell culture facilities. In addition, Leuchemix has access to a bank of over 150 primary leukemia specimens and a panel of 15 leukemia and lymphoma cell lines, as well as several xenogenic animal model systems. Leuchemix has also licensed proprietary compounds and compound libraries, which are being developed as drugs against a number of oncologic indications, including hematologic disorders and solid tumors. Leuchemix's lead compound, LC-1, is a modified natural compound known as parthenolide. The base compound of LC-1 was modified to improve solubility and favorably alter its natural pharmacokinetic properties to optimize it for anti-cancer therapy. Pre-clinical screening of LC-1 demonstrated activity against a variety of leukemic cells as well as activity against leukemic stem cells. LC-1 was also demonstrated to have activity against certain solid tumors. Leuchemix initiated human clinical safety trials of LC-1 in England during 2009, but had to halt these trials due to capital constraints. If additional funding can be obtained, Leuchemix hopes to continue Phase I clinical trials and proceed to Phase II.

Our Services

Overview

We utilize BAC and oligo microarray technologies to develop molecular diagnostic services for the diagnosis of diseases and the management of patients in two primary areas: (i) developmental disorders associated with congenital anomalies, dysmorphic features and/or intellectual disabilities, and (ii) hematology/oncology.

Developmental Disorders

The focus of our developmental disorder suite of array tests is on the prenatal and postnatal application of microarrays in diagnosing genomic syndromes associated with developmental delays, autism spectrum disorders, dysmorphic features and/or birth defects. Although traditional karyotyping has been regarded as the "gold standard" for this type of diagnosis for the past two decades, recent studies have demonstrated a clear improvement in the detection rate of chromosomal abnormalities by microarrays, not only in the pediatric realm but also in prenatal care. An accurate diagnosis is essential to providing appropriate anticipatory care, starting with decisions about pregnancy management and moving towards decisions about whether delivery at a tertiary care center is advised and how the genomic disorder will potentially impact neonatal and pediatric care. As a result of the advances in array-based diagnostic testing for developmental disorders, numerous professional organizations have recently revised their standard of care recommendations to include the use of microarrays as a first-tier test in lieu of standard karyotyping. As an example, in 2010, the American College of Medical Genetics recommended microarray testing as the preferred postnatal standard of care test for the detection of genomic abnormalities associated with congenital abnormalities, developmental disorders, intellectual disability, and autism/autism spectrum disorders.

In 2006, we introduced our first developmental disorders array test, which detected over 50 different genetic disorders in one multiplexed analysis. In October 2006, the U.S. Food and Drug Administration ("FDA") indicated that this test did not require approval under its guidance as it fell into the category of an *In Vitro* Diagnostics Multivariate Index Analysis ("IVDMIA"). Following this determination, we launched our microarray test under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) guidelines for use in the clinical care of patients. Since then, we have launched several upgrades of this test. Our current microarray offering is capable of identifying more than 500 different chromosomal and genetic disorders, ranging from common conditions, such as Down syndrome (trisomy 21) and DiGeorge syndrome (deletion 22q11.2) to much more rare conditions. Microarray testing can be used for postnatal analysis, prenatal diagnosis, and the analysis of POC tissue from a miscarriage to determine if there is an underlying chromosomal or genomic cause for the fetus, infant or child's condition.

We continue to monitor primary, peer-reviewed journals for information that would allow us to make either incremental improvements to the current array design, or much larger changes for a new version of our array. As an example of our publication-driven approach, as early as 2009, we began to include specific coverage of regions shown to be strongly associated with autism spectrum disorders ("ASDs") or predisposition to ASDs, long before the guidelines to testing children with autism/ASDs included microarray analysis. It is now recognized that approximately 7% of all children with an ASD have a genomic abnormality that is identifiable by microarray. This resulted in the adoption of the recommendation that all children with an ASD undergo microarray analysis as part of a first-tier diagnostic evaluation. The ability to identify a genomic abnormality in a child with an ASD allows the physician to provide enhanced care based on the genomic diagnosis, rather than a broad behavioral label, such as "autism." In addition, based upon review of the medical literature, we have adopted a microarray platform to analyze single nucleotide polymorphisms ("SNPs") in the assessment of DNA copy number changes. The analysis of SNPs enables detection of loss of heterozygosity ("LOH"), which is essential for diagnosing some disorders such as Prader-Willi/Angleman Syndrome in the postnatal population. In the POC space, SNPs allow the easy detection of triploidy states and maternal cell contamination, thereby decreasing the amount of ancillary testing needed on POC samples. In oncology, LOH is becoming a standard assessment for deciphering the genes necessary for promoting tumor growth.

Oncology

The second area of focus for our diagnostic services is cancer. At any given time in the United States, there are several million individuals who either have cancer or are cancer survivors, and are at risk for recurrence. Patients who are newly diagnosed with cancer require significant medical care, which often

includes physical examinations, biopsies, diagnostic testing, chemotherapy, surgery, extended hospital stays, and radiotherapy. We have developed, and continue to develop a series of diagnostic microarray tests that, through the genetic analysis of blood, tissue or biopsy samples, will provide additional genomic information to physicians for use in providing more personalized management of their patients.

We offer microarray testing to address several of the common hematological malignancies, with a particular emphasis on Chronic Lymphocytic Leukemia ("CLL"). Our array-based test is designed to evaluate the underlying genetic aberrations in the cancer cells to assist in providing additional information regarding the likely clinical course of the disease. Such information can be then utilized by physicians, in combination with other tests, to make better-informed patient management and treatment decisions and recommendations.

In breast cancer, HER2 status has been traditionally determined by immunohystochemistry ("IHC") to assess the amount of HER2 protein present or FISH analysis to evaluate for the presence of HER2 gene amplification at the DNA level in cancer cells. However, both of these tests are relatively subjective, and studies have shown significant variability in interpretation not only between different pathologists, but also within a single pathologist's own interpretations on similar cases. To complicate matters further, some cases show equivocal results (i.e. not clearly positive or negative), and as many as 1 in 3 cases have discordant IHC and FISH results, in which one is positive, and the other is negative. Due to the incomplete assessment of chromosome 17 and the complex structural alterations associated with breast cancer, we believe FISH and IHC remain imperfect diagnostic tests for HER2 status determination. In contrast, microarray analysis of chromosome 17 is able to provide an objective measure of HER2 status and resolve both equivocal and discordant HER2 results obtained by FISH and IHC.

In January 2010, we became the first clinical laboratory in the United States to offer a comprehensive DNA-based genomic analysis of solid tumors, including breast, colon, lung, prostate and brain tumors. Our tumor profile microarray test has been utilized by oncologists to help direct patients to appropriate clinical trials and can be used to gain a picture of a patient's underlying overall genomic instability at the molecular level.

Our Strategy

Our strategic focus is on commercializing our diagnostics services business by increasing the volume of our existing tests, expanding the number of tests offered by our laboratory, increasing the number of clients and strategic partners, and improving reimbursement for our testing. We intend to accomplish this by implementing strategies in the following areas:

Prenatal Testing

We have begun to aggressively pursue what we believe to be the underserved Products of Conception and Invasive Prenatal testing markets with our DNA microarray offering to maternal fetal medicine ("MFM") specialists, OB-GYNs, and pathologists. Recent studies by the National Institute of Health, which were published in the *New England Journal of Medicine* in December of 2012 indicate that the clinical benefit of DNA microarray testing is greater than that of traditional karyotyping.

Partnering to Expand Marketing and Sales Efforts

We have established and will continue to pursue multiple relationships to facilitate the expansion of our array services. We plan to pursue relationships and collaborations to gain access to sales, marketing and distribution channels. These relationships could include alliances with other complementary laboratory service providers.

Expanding Our Test Offerings

We intend to expand the test menu of services we offer to clients in order to improve their ability to effectively treat their patients. In addition to providing new sources of revenue, we believe these additional tests will further our goal of establishing our company as a leader in the molecular diagnostics market.

Billing and Reimbursement

Payor Categories

Revenues from our clinical laboratory tests are generated primarily from providing test results to our physician customers, but can be reimbursed from several different sources. Depending on the billing arrangement and applicable law, parties that reimburse us for our services include direct-bill customers, third-party payors and individual patients. Where there is a coverage policy, contract or agreement in place, we bill the third-party payor, the hospital or referring laboratory as well as the patient (for deductibles and coinsurance or copayments, where applicable) in accordance with the policy or contractual terms. Where there is no coverage policy, contract or agreement in place, we pursue reimbursement on behalf of each patient on a case-by-case basis and rely on applicable billing standards to guide our claims process.

Direct-bill payors include healthcare institutions such as hospitals and clinics. In some circumstances, we bill patients directly. For the direct-bill and individual patient categories, our diagnostic services are billed and revenues are recognized at established contractual rates, once the test results have been delivered to the ordering physician.

Third-party payors include organizations such as commercial insurance companies as well as government payors including Medicare and Medicaid. We bill our tests to these payors using individual billing codes known as Common Procedural Terminology (or "CPT") codes established for array-based laboratory diagnostic tests. For the non-governmental third-party payor category, our diagnostic services are billed at our list prices for the tests performed, but are recognized for accounting and financial reporting purposes as diagnostic service revenues based upon the amounts expected to be collected. The difference between the amount billed to each payor and the amount expected to be collected is recorded as a contractual allowance. For governmental payors, we recognize revenues based upon published fee schedules established by the Centers for Medicare and Medicaid Services ("CMS").

CPT Coding

CPT codes are the main data code set used by physicians, hospitals, laboratories and other health care professionals to report separately-payable clinical laboratory tests for reimbursement purposes. The CPT coding system is maintained and updated on an annual basis by the American Medical Association ("AMA"). Recently, the AMA added over one hundred new CPT codes for specific molecular tests such as ours. These new codes replace the more general "stacking" codes that were previously used to bill for these services and became effective January 2013. In the Final Physician Fee Schedule Rule, which was issued in November 2012, CMS stated that it had determined it would pay for the new codes as clinical laboratory tests, which are payable on the Clinical Laboratory Fee Schedule. The various Medicare Administrative Contractors ("MAC") throughout the United States are "gap-filling" the new codes, meaning that each MAC will determine a price for the new codes and CMS will use this information to determine a national price. No date has been established as to when CMS will publish their pricing determinations.

These changes in coding and reimbursement methods could have an adverse impact on our revenues going forward. However, we are currently working with billing consultants and industry advisory groups to determine what changes will be required by the new molecular codes. The elimination of the "stacking" codes which currently describe our array-based testing services requires us to either use the new specific

code where applicable effective January 1, 2013, or to use other "Not Otherwise Classified" (NOC) codes when billing for some of our tests. The implementation of these new codes will vary from payer to payer and it is too early to assess the impact, if any, that the migration to the new codes may have on our results of operations. The introduction of the new codes, in combination with the other action being considered by CMS with regard to pricing, could result in a reduction in payment we receive for our tests. There is a possibility that Medicare and other payers will not establish positive or adequate coverage policies or reimbursement rates.

Reimbursement

For the years ending December 31, 2012 and 2011, approximately 38% and 43% of our diagnostic services revenues were derived from direct bill customers, 55% and 48% from third-party commercial insurance carriers and 7% and 9% from government payors including Medicare and several state Medicaids, respectively.

With respect to the third-party payors that we bill, we are considered an "out-of-network" provider with the majority of the carriers, resulting in varying expected reimbursement amounts, which is not unusual for a company such as ours that offers highly specialized and/or unique testing. An "in-network" provider has a contracted arrangement with the insurance company or benefits provider. This contract governs, among other things, service-level agreements and reimbursement rates. In certain instances, an insurance company may negotiate an "in-network" rate for our testing rather than pay the typical "out-of-network" rate. During our operating history we have been able to receive reimbursement for our tests from major commercial third-party payors based on their established policies. Our efforts in obtaining reimbursement based on individual claims, including pursuing appeals or reconsiderations of claims denials, require a substantial amount of time and effort, and bills may not be paid for many months, if at all. Furthermore, if a third-party payor denies coverage after final appeal, payment may not be received. During 2012, we implemented a revenue cycle management system and have expanded our Billing and Collections department to address these issues. However, we cannot predict whether, or under what circumstances, payors will reimburse our microarray tests. Payment amounts can also vary across individual policies. Denial of coverage by payors, or reimbursement at inadequate levels, will have a material adverse impact on market acceptance of our tests.

Governmental Regulation

Our business is subject to extensive laws and regulations as described below.

Clinical Laboratory Improvement Amendments of 1988 ("CLIA")

As a clinical reference laboratory, we are required to hold certain federal, state and local licenses as well as certain certifications and permits to conduct our business. Under CLIA, we are required to hold a certificate applicable to the type of work we perform and to comply with standards covering personnel, facilities administration, quality systems and proficiency testing. We have a certificate of accreditation under CLIA to perform testing and are accredited by the College of American Pathologists ("CAP"). To renew our CLIA certificate, we are subject to periodic inspection standards applicable to the testing we perform. Should regulatory compliance requirements become substantially more complex, operational costs at our lab might increase in the future. If our laboratory is out of compliance with CLIA requirements, we may be subject to certain sanctions. We must maintain CLIA compliance and certification to be eligible to bill for services provided to Medicare beneficiaries. If we were to be found out of compliance with CLIA program requirements and subjected to sanction, our business could be harmed.

U.S. Food and Drug Administration ("FDA")

Regulations by the U.S. FDA regarding genetic testing are in a state of flux and changes to these regulations could dramatically affect the molecular diagnostics industry in the near future. While the FDA has the authority to regulate laboratory developed tests ("LDTs"), it has generally exercised enforcement discretion in the area of LDTs performed by CLIA-certified laboratories. However, with the advent of Direct-to-Consumer DNA testing (i.e., testing that is marketed directly to the public, does not require a physician's order, and provides risk factor information rather than diagnostic or prognostic information), genomic testing using microarray technology (particularly single nucleotide polymorphism arrays) has come under scrutiny. In July 2010, the FDA held a two-day public meeting to obtain input from key stakeholders, including physicians, laboratory directors, regulatory and accrediting body members and the general public, regarding the structuring of a regulatory framework for LDTs. During this meeting, we believe that it became clear that the FDA's primary concern had less to do with CLIA-certified laboratories (such as CMDX) performing *clinical* microarray testing (i.e., testing ordered by a physician for medically necessary reasons, including disease diagnosis, monitoring, and treatment decisions) and more to do with Direct-to-Consumer laboratories performing *non-clinical* testing that relies on what the FDA has referred to a "black box" proprietary algorithms to interpret their microarray data. This meeting came on the heels of a U.S. Government Accountability Office report entitled "Direct-to-Consumer Genetic Tests: Misleading Test Results are Further Complicated By Deceptive Marketing and Other Questionable Practices." While no specific guidelines or timelines were stated, it is believed that changes to how the FDA regulates LDTs will be forthcoming. There can be no assurance, however, that such changes will not negatively impact our business.

Health Insurance Portability and Accountability Act ("HIPPA")

Under the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), the U.S. Department of Health and Human Services issued regulations to protect the privacy of individuals' personal medical and health information through the implementation of security measures that govern how such data is stored and maintained, and to limit the disclosure of this "protected health information" to only those who receive specific authorization from the individual. Violations of HIPAA regulations include civil and criminal penalties. Consequently, our policies and procedures are designed to comply with such regulations. The requirements under these regulations may change periodically and we will continue to monitor such changes. There are also a number of state laws governing confidentiality of health information that are applicable to our operations, and new laws governing privacy may be adopted in the future. While we believe that we comply with regulations currently, we can provide no assurance that we are or will remain in compliance with diverse privacy requirements as they develop.

Federal and State Insurance Regulations, Self-referral Prohibitions and Anti-kickback Laws

Existing federal and state laws governing Medicare and Medicaid impose a variety of restrictions on financial relationships among healthcare providers, including clinical laboratories. These laws include the federal anti-kickback law. Numerous civil and criminal penalties exist for many of the federal and state anti-fraud statutes and regulations, including their application to joint ventures and collaborative agreements. These statutes and regulations are vague and have not yet been interpreted by the courts. There are also federal and state self-referral prohibitions, which prohibit us from accepting referrals from physicians with whom we have a compensation relationship. Violations of these prohibitions could result in civil and criminal penalties. Finally, there are other rules addressing certain aspects of our business including billing and relationships with customers to which we are subject. These rules may evolve and change in the future and could negatively impact our business.

State Laboratory Licensing

In addition to federal certification requirements of laboratories under CLIA, licensure is required and maintained for our clinical reference laboratory under California law. We currently maintain a license in good standing with the California DHS, but if our clinical reference laboratory is found to be out of compliance with California standards, our license may be suspended or revoked by the California Department of Health Services ("DHS") and we may subject to fines and penalties.

We must also satisfy various application and provisional requirements for other states in which we desire to conduct business, and have obtained licenses for Florida, Maryland, Pennsylvania and Rhode Island. We are also licensed by the New York State Department of Health specifically for cytogenetics and genomic microarrays relating to pediatric specimens. We may become aware from time to time of additional states that require out-of-state laboratories to obtain licensure in order to accept patient specimens from those states, and it is possible that other states do have such requirements or will have such requirements in the future. If we identify any other state with such requirements or if we are contacted by any other states advising us of such requirements, we intend to strictly adhere to the instructions and guidelines from the state regulators as to how we should comply with such requirements. There can be no assurance, however, that our efforts to comply will be successful.

Subsidiaries

During the second quarter of 2005, we formed a wholly owned subsidiary, CMDX, in order to exploit our array technologies in the field of molecular diagnostics. As of December 31, 2012, CMDX had 39 full-time equivalent employees located primarily in Irvine, California.

Commercial Operations

All products and services offered by CMDX are performed in our CLIA-certified, CAP-accredited clinical laboratory in Irvine, California. Our commercial operations infrastructure includes sales, marketing, clinical support services and billing/ reimbursement. We continue to build a nationally focused commercialization strategy by interacting directly with oncologists, pathologists, medical geneticists, maternal-fetal medicine specialists, obstetrician/gynecologists, pediatric neurologists and genetic counselors. The market-specific experience of our direct sales force, coupled with regional and local territory experience, is expected to increase physician awareness and demand for our services. Our marketing and clinical support services teams work in tandem to increase awareness and appropriate utilization of our products and services by both physicians and patients. Our marketing initiatives include traditional marketing tactics such as physician education, professional medical society and advocacy tradeshows and web-based initiatives. Our billing/reimbursement team works to facilitate access to our products and services by assisting ordering physicians and their patients with healthcare insurance billing, appeal processes, and patient payment options. In addition to our direct sales approach, CMDX markets its services to other laboratories through partnerships and seeks to support the growth of our commercial operations initiatives through pursuing new partnerships.

Manufacturing

We have developed automated, computer-directed production processes for the spotting of BAC probes onto chemically modified glass slides to create our BAC microarrays. We conduct quality control reviews of all biological materials used in the manufacturing process.

Nearly all of the components and raw materials used in the production of our BAC microarrays are currently provided from a limited number of sources or, in some cases, from a single source. Although we believe that alternative sources for those components and raw materials are available, any supply interruption in a sole-sourced component or raw material might result in up to a several-month production delay and materially harm our ability to produce BAC microarrays until a new source of supply, if any, can

be located and qualified. In addition, an uncorrected impurity or supplier's variation in a raw material, either unknown to us or incompatible with our production process, could have a materially adverse effect on our ability to produce BAC microarrays. We may be unable to find a sufficient alternative supply channel in a reasonable time period, or on commercially reasonable terms, if at all.

Seasonality

Our business is subject to the impact of seasonality, particularly during the holiday season in the fourth quarter when patients tend to be less likely to visit their healthcare providers and pursue diagnostic testing. In addition, during the winter months, disruptions in transportation due to inclement weather may affect not only patients' ability to visit their healthcare providers, but also prompt provider concerns about potential disruption or delay in sample processing, both of which negatively impact our business. Consequently, the demand for our services, in general, could be subject to declines in the fourth quarter and during periods of severe weather.

Patents, Trademarks and Licenses

In the United States, we have been issued ten United States patents related to our former CustomArray tool business. Three of these patents (U.S. Patent Nos. 6,093,302 and 6,280,595, which expire on January 5, 2018 and 6,444,111, which expires October 13, 2019) are first generation technology relating to methods for electrochemical synthesis of arrays of DNA and other biological materials as well as non-biological materials. The fourth United States Patent (U.S. Patent No. 6,456,942 which expires January 25, 2020) describes and claims a network infrastructure for array synthesis and analysis. The fifth United States Patent (U.S. Patent No. 7,075,187 which expires November 9, 2021) describes and claims a porous coating material that covers electrodes and is used as a three-dimensional support material for electrochemical synthesis on the individual electrodes of an array of electrodes. The sixth (U.S. Patent No. 7,323,320 which expires September 12, 2022) and seventh (U.S. Patent No. 7,563,600 which expires September 12, 2022) United States Patents have been assigned to another company. The eighth United States Patent (U.S. Patent No. 7,507,837 which expires December 22, 2025) describes and claims a process for performing an isolated palladium (II)-mediated oxidation reaction on our electrode for building libraries of organic compounds electrochemically and in parallel. The ninth United States Patent (U.S. Patent No. 7,541,314 which expires February 24, 2026) describes and claims a microarray with a linker that is cleaved by a base for use in selective removal of oligonucleotides from the microarray. A tenth United States Patent (U.S. Patent No. 7,718,579 which expires September 13, 2024) describes and claims method for electrochemical removal of acid-labile protecting groups on an electrode microarray using an organic solution. Corresponding patents describing and claiming methods for electrochemical synthesis of arrays have been issued to us in the European Union, Australia, and Taiwan and are pending in the remaining major industrialized markets. We have filed patent applications relating to new methods of, and materials for, electrochemical synthesis and for electrochemical detection, which eliminates the need for optical readers. As a part of our Restructuring Plan, many of these patents were licensed to a private company, CustomArray, Inc.

We seek to protect our corporate identity, products, and services with trademarks and service marks. In addition, our trademark strategy includes protecting the identity and goodwill associated with our products and services. Currently, our registered trademarks include CMDX®, DNAARRAY®, HEMESCAN®, and HERSCAN® in the United States.

We try to obtain licenses to the patent rights of others when required to meet our business objectives. For example, we purchase chemical reagents from suppliers who are licensed under appropriate patent rights. Further, our policy is to obtain licenses from patent holders for our products and services whenever such licenses are required. We evaluate if and when a license is needed depending on the circumstances.

Competition

We believe that competition within our market is increasing. Our business competitors in the United States include regional DNA microarray clinical laboratories, both commercial and academic, as well as large national companies such as LabCorp (through its recent acquisition of Genzyme), Perkin-Elmer (through its recent acquisition of Signature Genomics), and approximately ten others. Some of these competitors may possess greater financial, technical, human and other resources than we do. Increased competition may be faced as new companies enter the market, market consolidation occurs and more advanced technologies become available. Technological advances or entirely different approaches developed by one or more of our competitors could render our products and services obsolete or uneconomical. The existing approaches of competitors or new approaches or technology developed by competitors may be more effective than those developed by us.

Our market is rapidly changing, and we expect to face additional competition from new market entrants, new product developments and consolidation of our existing competitors. As new competitors emerge, the intensity of competition may increase in the future. An example of this is the emergence of Non-Invasive Prenatal Testing ("NIPT") companies in the past several years. While these companies do not offer a competitive test to the DNA microarray, we compete with these companies for physician access in the O-BGYN and MFM office.

Research and Development

Our research and development expenses were $1.40 million and $1.37 million for the years ended December 31, 2012 and 2011, respectively. Of these amounts, research and development related non-cash stock compensation charges were $7,000 and $48,000 for the years ended December 31, 2012 and 2011, respectively. Our research and development activities primarily relate to the development and validation of diagnostic tests in connection with our specialized developmental disorder and oncology array-based diagnostic services.

Employees

As of December 31, 2012, we had 41 full-time-equivalent employees. We believe that we maintain good relationships with our employees and are not subject to collective bargaining arrangements.

Environmental Matters

Our operations involve the use, transportation, storage and disposal of hazardous substances. As a result, we are subject to environmental and health and safety laws and regulations. The cost of complying with these and any future environmental regulations could be substantial, though historically such costs have not been significant. In addition, if we fail to comply with environmental laws and regulations, or release any hazardous substances into the environment, we could be exposed to substantial liability in the form of fines, penalties, remediation costs and other damages and could even suffer a curtailment or shut down of our operations.

Available Information

We are subject to the informational requirements of the Securities Exchange Act of 1934. Therefore, we file periodic reports, proxy statements and other information with the SEC. Such reports, proxy statements and other information may be obtained by visiting the Public Reference Room of the SEC at 100 F Street N.E., Washington, D.C. 20549 or by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file electronically.

Additional financial and company-related information can be found in the Investor Relations section of our homepage, at : www.combimatrix.com. Our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are made available free of charge on our website as soon as reasonably practicable after we electronically file them with or furnish them to the SEC. Information contained on our web site is not part of this Annual Report on Form 10-K or our other filings with the SEC.

The charters of our Audit Committee, our Compensation Committee and our Nominating and Governance Committee are available on the Investor Relations section of our website under "Corporate Governance." Also available on that section of our website is our Code of Business Conduct and Ethics, which we expect every employee, officer and director to read, understand and abide by. This information is also available by writing to us at the address on the cover of this report.

Item 1A. RISK FACTORS

An investment in our securities involves a high degree of risk. Before making a decision to purchase our securities, you should carefully consider all of the risks described in this annual report. The risks and uncertainties described below are not the only ones that we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business and results of operations. If any of these risks actually occur, our business, financial condition or results of operations could be seriously harmed. In that event, the market price for our common stock could decline and you may lose all or part of your investment.

Risks Related To Our Business

We may not be able to meet our cash requirements beyond 2013 without obtaining additional capital from external sources and, if we are unable to do so, we may not be able to continue as a going concern.

We anticipate that our cash and cash equivalents of $2.4 million as of December 31, 2012, combined with proceeds received from the exercise of certain common stock warrants in February and March of 2013 and proceeds received from the Offering, will meet our cash requirements into the fourth quarter of 2013. However, in order for us to continue as a going concern beyond the fourth quarter of 2013, we will be required to obtain capital from external sources. Unless our market capitalization does not increase or the amount of our public float does not increase, the Offering will exhaust the limits of our existing S-3 shelf registration statement for the next 12 months, and we will need to file and obtain effectiveness of additional registration statements in order to raise capital in the form of a registered offering within that time period. In addition, holders of Series B Preferred Stock and Warrants issued in the Offering will, under certain circumstances, have the ability to prevent us from raising additional capital from third parties. If external financing sources are not available in a timely manner or at all, or are inadequate to fund our operations, it could result in reduced revenues and cash flows from the sales of our diagnostic services and/or could jeopardize our ability to launch, market and sell additional products and services necessary to grow and sustain our operations, and we will be required to reduce operating costs, including but not limited to reducing personnel across all operational functions, which could jeopardize our future strategic initiatives and business plans.

We have a history of losses and expect to incur additional losses in the future.

We have sustained substantial losses since our inception. We may never become profitable, or if we do, we may never be able to sustain profitability. We expect to incur significant research and development, marketing, general and administrative expenses. As a result, we expect to incur losses for the foreseeable future.

To date, we have relied primarily upon selling equity and convertible debt and equity securities, as well as payments from strategic partners, to generate the funds needed to finance the implementation of our business strategies. We cannot assure you that we will not encounter unforeseen difficulties, including the outside influences identified below that may deplete our capital resources more rapidly than anticipated. Our subsidiary companies also may be required to obtain additional financing through bank borrowings, debt or equity financings or otherwise, which would require us to make additional investments or face a dilution of our equity interests. We cannot be sure that additional funding will be available on favorable terms, if at all. If we fail to obtain additional funding when needed for our subsidiary companies and ourselves, we may not be able to execute our business plans or continue operations, and our business may be materially adversely affected.

We began commercialization of our molecular diagnostics services in 2006. Accordingly, we have a limited operating history of generating revenues from products and services. In addition, we are still developing our product and service offerings and are subject to the risks, expenses and difficulties frequently encountered by companies with such limited operating histories. Since we have a limited operating history, we cannot assure you that our operations will become profitable or that we will generate sufficient revenues to meet our expenditures and support our activities.

Because our business operations are subject to many uncontrollable outside influences, we may not succeed.

Our business operations are subject to numerous risks from outside influences, including the following:

- *Technological advances may make our array-based technology obsolete or less competitive, and as a result, our revenue and the value of our assets could materially decrease.*

  Our services are dependent upon oligo and BAC array-based technologies. These technologies compete with conventional diagnostic technologies such as FISH and PCR. Our products and services are substantially dependent upon our ability to offer the latest in array technology in the SNP genotyping, gene expression profiling, chromosomal microarray analysis and proteomic markets. We believe technological advances of conventional arrays are currently being developed by our existing competition, including companies such as LabCorp and Perkin-Elmer, and potential new competitors in the market. We also expect to face additional competition from new market entrants and consolidation of our existing competitors. Many of our competitors have existing strategic relationships with major pharmaceutical and biotechnology companies, greater commercial experience and substantially greater financial and personnel resources than we do. We expect new competitors to emerge and the intensity of competition to increase in the future. If these companies are able to offer technological advances, our products may become less valuable or even obsolete. We cannot provide any assurance that existing or new competitors will not enter the market with the same or similar technological advances before we are able to do so.

- *New environmental regulation may materially increase the net losses of our business.*

  Our operations involve the use, transportation, storage and disposal of hazardous substances, and as a result, we are subject to environmental and health and safety laws and regulations. If we were to be found in violation of these laws and regulations, we may face fines or other penalties. Also, any changes in these laws and regulations could increase our compliance costs, and as a result, could materially increase our net losses.

- *Our technologies face uncertain market value.*

  Our business includes many products, some of which were recently introduced into the market. These technologies and products have not gained widespread market acceptance, and we cannot provide any assurance that the increase, if any, in market acceptance of these technologies and products will meet or exceed our expectations.

Further, we are developing products and services, some of which have not yet been introduced into the market. A lack of or limited market acceptance of these technologies, products and services will have a material adverse effect upon our results of operations.

- *We obtain components and raw materials from a limited number of sources, and, in some cases, a single source, and the loss or interruption of our supply sources may materially adversely impact our ability to manufacture our products to meet our existing or future sales targets.*

  Substantially all of the components and raw materials used in the manufacture of our products are currently provided from a limited number of sources or, in some cases, from a single source. Any supply interruption in a sole-sourced component or raw material might result in significant production delays and materially harm our ability to manufacture products until a new or alternative source of supply, if any, could be located and qualified. In addition, an uncorrected impurity or supplier's variation in a raw material, either unknown to us or incompatible with our manufacturing process, could have a material adverse effect on our ability to manufacture products. We may be unable to find a sufficient alternative supply channel in a reasonable time period, or on commercially reasonable terms, if at all.

Any one of the foregoing outside influences may require us to seek additional financing to meet the challenges presented or to mitigate a loss in revenue, and we may not be able to obtain the needed financing in a timely manner on commercially reasonable terms or at all. Further, any one of the foregoing outside influences affecting our business could make it less likely that we will be able to gain acceptance of our array technology by researchers in the pharmaceutical, biotechnology and academic communities.

Our revenues will be unpredictable, and this may materially adversely affect our financial condition.

The amount and timing of revenues that we may realize from our business will be unpredictable because whether our products and services are commercialized and generate revenues depends, in part, on the efforts and timing of our potential customers. Also, our sales cycles may be lengthy. As a result, our revenues may vary significantly from quarter to quarter, which could make our business difficult to manage and cause our quarterly results to be below market expectations. If this happens, the price of our common stock may decline significantly.

The genetic diagnostic laboratory market is characterized by rapid technological change, frequent new product introductions, and evolving industry standards, and we may encounter difficulties keeping pace with changes in this market.

The introduction of diagnostic tests embodying new technologies and the emergence of new industry standards can render existing tests obsolete and unmarketable in short periods of time. We expect our competitors to introduce new products and services and enhancements to their existing products and services. We may not be able to enhance our current tests, or to develop new tests, in a manner that keeps pace with emerging industry standards and achieves market acceptance. Our inability to accomplish any of these endeavors will likely have a material adverse effect on our business, operating results, cash flows, and financial condition.

If we do not enter into successful partnerships and collaborations with other companies, we may not be able to fully develop our technologies or products, and our business would be materially adversely affected.

Since we do not possess all of the resources necessary to develop and commercialize products that may result from our technologies on a mass scale, we will need either to grow our sales, marketing and support group or make appropriate arrangements with strategic partners to market, sell and support our products. We believe that we will have to enter into additional strategic partnerships to develop and commercialize future products. If we cannot identify adequate partners, if we do not enter into adequate agreements, or if our existing arrangements or future agreements are not successful, our ability to develop

and commercialize products will be impacted negatively, and our revenues will be materially adversely affected.

We have limited commercial experience in marketing or selling any of our potential products and services, and unless we develop these capabilities, we may not be successful.

Even if we are able to develop our products and services for commercial release on a large scale, we have limited experience in performing our tests in the volumes that will be necessary for us to achieve commercial sales and in marketing or selling our products to potential customers. We cannot assure you that we will be able to commercially perform our tests on a timely basis, in sufficient quantities, or on commercially reasonable terms.

We face intense competition, and we cannot assure you that we will be successful competing in the market.

The diagnostics market is characterized by rapidly changing technology, evolving industry standards, changes in customer needs, emerging competition and new product introductions. One or more of our competitors may offer technology superior to ours and render our technology obsolete or uneconomical. Many of our competitors have greater financial and personnel resources and more experience in marketing, sales and research and development than we have. If we were not able to compete successfully, our business and financial condition would be materially harmed.

If our technology is not widely adopted by physicians and laboratories in the diagnostics market, our business will be materially adversely affected.

In order to be successful, our test offerings must meet the commercial requirements of hospitals and physicians and be considered the standard of care in order to be widely adopted. Market acceptance will depend on many factors, including:

- the benefits and cost-effectiveness of our products relative to others available in the market;
- our ability to provide testing services in sufficient quantities with acceptable quality and reliability and at an acceptable cost;
- our ability to develop and market additional tests and enhance existing tests that are responsive to the changing needs of our customers; and
- the willingness and ability of customers to adopt new technologies or the reluctance of customers to change technologies upon which they have previously relied.

The FDA may decide to regulate Laboratory Developed Tests ("LDTs"), which could prevent us from offering existing tests and/or delay the introduction of new testing services.

During 2010, the FDA publicly announced that it has decided to exercise regulatory authority over LDTs and that it plans to issue guidance to the industry regarding its regulatory approach. The FDA has indicated that it will use a risk-based approach to regulation and will direct more resources to tests with wider distribution and with the highest risk of injury, but that it will be sensitive to the need to not adversely impact patient care or innovation. The FDA has not announced a framework or timetable for implementing its new regulatory approach. The regulatory approach adopted by the FDA may lead to an increased regulatory burden, including additional costs and delays in introducing new tests. While the ultimate impact of the FDA's approach is unknown, it may be extensive and may result in significant change. Our failure to adapt to these changes could have a material adverse effect on our business.

U.S. healthcare reform legislation may result in significant changes and our business could be adversely impacted if we fail to adapt.

Government oversight of and attention to the healthcare industry in the United States is significant and increasing. In March 2010, U.S. federal legislation was enacted to reform healthcare. The legislation provides for reductions in the Medicare clinical laboratory fee schedule beginning in 2011 and also includes a productivity adjustment that reduces the CPI market basket update beginning in 2011. The legislation imposes an excise tax on the seller for the sale of certain medical devices in the United States, including those purchased and used by laboratories, beginning in 2013. The legislation establishes the Independent Payment Advisory Board, which will be responsible, beginning in 2014, annually to submit proposals aimed at reducing Medicare cost growth while preserving quality. These proposals automatically will be implemented unless Congress enacts alternative proposals that achieve the same savings targets. Further, the legislation calls for a Center for Medicare and Medicaid Innovation that will examine alternative payment methodologies and conduct demonstration programs. The legislation provides for extensive health insurance reforms, including the elimination of pre-existing condition exclusions and other limitations on coverage, fixed percentages on medical loss ratios, expansion in Medicaid and other programs, employer mandates, individual mandates, creation of state and regional health insurance exchanges, and tax subsidies for individuals to help cover the cost of individual insurance coverage. The legislation also permits the establishment of accountable care organizations, a new healthcare delivery model. While the ultimate impact of the legislation on the healthcare industry is unknown, it is likely to be extensive and may result in significant change. Our failure to adapt to these changes could have a material adverse effect on our business.

A significant component of our revenue is dependent on successful insurance claims. Our revenue will be diminished if payors do not adequately cover or reimburse us for our services.

Physicians and patients may decide not to order our high-complexity genomic microarray tests unless third-party payors, such as managed care organizations as well as government payors such as Medicare and Medicaid, pay a substantial portion of the test price. Reimbursement by a third-party payor may depend on a number of factors, including a payors' determination that tests using our technologies are:

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

A substantial portion of the testing for which we bill our hospital and laboratory clients is ultimately paid by third-party payors. However, there is uncertainty concerning third-party payor reimbursement of any test, including our high-complexity genomic microarray tests. Several entities conduct technology assessments of medical tests and devices and provide the results of their assessments for informational purposes to other parties. These assessments may be used by third-party payors and health care providers as grounds to deny coverage for a test or procedure. It is possible that federal, state and third-party insurers may limit their coverage of our tests in the future.

Increasing emphasis on managed care in the United States is likely to put pressure on the pricing of healthcare services. Uncertainty exists as to the coverage and reimbursement status of new applications or services. Governmental payors and private payors are scrutinizing new medical products and services. Such third-parties may not cover, or may limit coverage and resulting reimbursement for our services. Additionally, third-party insurance coverage may not be available to patients for any of our existing tests or

tests we may add in the future. Any pricing pressure exerted by these third-party payors on our customers may, in turn, be exerted by our customers on us. If governmental payors, including their contracted administrators, and other third-party payors do not provide adequate coverage and/or timely reimbursement for our services, our operating results, cash flows, or financial condition may materially decline.

Our business could be adversely impacted by the adoption of new coding for molecular genetic tests.

Certain of the CPT procedure codes that we use to bill our tests were recently revised by the AMA, effective January 1, 2013. In the Final Rule, CMS announced that it has decided to keep the new molecular codes on the Clinical Laboratory Fee Schedule, rather than move them to the Physician Fee Schedule as some stakeholders had urged. CMS has also announced that for 2013 it will price the new codes using a "gap-filling" process by which it will refer the codes to the Medicare contractors to allow them to determine an appropriate price. There can be no guarantees that Medicare and other payers will establish positive or adequate coverage policies or reimbursement rates. If pricing and subsequent reimbursement levels for the new codes do not recognize the value of the molecular genetic tests, our revenues, earnings and cash flows could be adversely impacted.

Our cash flows and financial condition may materially decline if payors do not reimburse us for our services in a timely manner.

We depend on our payors to reimburse us for our services in timely manner. If our payors do not reimburse us in a timely manner, our cash flows and financial condition may materially decline.

Third-party billing is extremely complicated and could result in us incurring significant additional costs.

Billing for molecular laboratory services is extremely complicated. The customer is the party that refers the tests and the payor is the party that pays for the tests, and the two are not always the same. Depending on the billing arrangement and/or applicable law, we need to bill various payors, such as patients, health insurance companies, Medicare, Medicaid, doctors and employer groups, all of which have different billing requirements. Health insurance companies and governmental payors also generally require complete and correct billing information within certain filing deadlines. Additionally, our billing relationships require us to undertake internal audits to evaluate compliance with applicable laws and regulations as well as internal compliance policies and procedures. Health insurance companies also impose routine external audits to evaluate payments made. Additional factors complicating billing are:

- pricing differences between our fee schedules and the reimbursement rates of the payors;
- disputes with payors as to which party is responsible for payment; and
- disparity in coverage and information requirements among various carriers.

We incur significant additional costs as a result of our participation in the Medicare and Medicaid programs, as billing and reimbursement for laboratory testing are subject to considerable and complex federal and state regulations. The additional costs we expect to incur as a result of our participation in the Medicare and Medicaid programs include costs related to, among other factors: (1) complexity added to our billing processes; (2) training and education of our employees and customers; (3) implementing compliance procedures and oversight; (4) collections and legal costs; (5) challenging coverage and payment denials; and (6) providing patients with information regarding claims processing and services, such as advanced beneficiary notices. If these costs increase, our results of operations will be materially adversely affected.

Loss of or adverse changes to our accreditations or licenses could materially and adversely affect our business, prospects and results of operations.

The clinical laboratory testing industry is highly regulated. We are subject to CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA is intended to ensure the quality and reliability of clinical laboratories in the United States by mandating specific standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. We have a current certificate of accreditation under CLIA to perform testing. To renew this certificate, we are subject to survey and inspection every two years. Moreover, CLIA inspectors may make random inspections of our clinical reference laboratory. A failure to pass such inspections would result in suspension of our certificate of accreditation, which would have a material adverse effect on our business and results of operations.

We are also required to maintain a laboratory license to conduct testing in California. California laws establish standards for day-to-day operation of our clinical reference laboratory, including the training and skills required of personnel and quality control. Moreover, several states require that we hold licenses to test specimens from patients in those states. Other states may have similar requirements or may adopt similar requirements in the future. A failure to obtain and maintain these licenses would have a material adverse effect on our business and results of operations.

Complying with numerous regulations pertaining to our business is an expensive and time-consuming process, failure of which could result in significant penalties and suspension of one or more of our licenses.

Areas of the regulatory environment that may affect our ability to conduct business include, without limitation:

- Federal and state laws applicable to billing and claims payment and/or regulatory agencies enforcing those laws and regulations;
- Federal and state laboratory anti-mark-up laws;
- Federal and state anti-kickback laws;
- Federal and state false claims laws;
- Federal and state self-referral and financial inducement laws, including the federal physician anti-self-referral law, or the Stark Law;
- Coverage and reimbursement levels by Medicare, Medicaid, other governmental payors and private insurers;
- Restrictions on reimbursements for our services;
- Federal and state laws governing laboratory testing, including CLIA;
- Federal and state laws governing the development, use and distribution of diagnostic medical tests known as "home brews";
- Health Insurance Portability and Accountability Act of 1996 ("HIPAA");
- Federal and state regulation of privacy, security and electronic transactions;
- State laws regarding prohibitions on the corporate practice of medicine;
- State laws regarding prohibitions on fee-splitting;
- Federal, state and local laws governing the handling and disposal of medical and hazardous waste; and

• Occupational Safety and Health Administration ("OSHA") rules and regulations.

The above noted laws and regulations are extremely complex and in many instances, there are no significant regulatory or judicial interpretations of such laws and regulations. We also may be subject to regulation in foreign jurisdictions as we seek to expand international distribution of our tests. Any determination that we have violated these laws, or the public announcement that we are being investigated for possible violations of these laws, would materially adversely affect our business, prospects, results of operations and financial condition. In addition, a significant change in any of these laws may require us to change our business model in order to maintain compliance with these laws, which could reduce our revenue or increase our costs and materially adversely affect our business, prospects, results of operations, and financial condition.

We are subject to significant environmental, health and safety regulation.

We are subject to licensing and regulation under federal, state and local laws and regulations relating to the protection of the environment and human health and safety, including laws and regulations relating to the handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials, as well as to the safety and health of laboratory employees. In addition, OSHA has established extensive requirements relating to workplace safety for health care employers, including clinical laboratories, whose workers may be exposed to blood-borne pathogens such as HIV and the hepatitis B virus. These regulations, among other things, require work practice controls, protective clothing and equipment, training, medical follow-up, vaccinations, and other measures designed to minimize exposure to, and transmission of, blood-borne pathogens. In addition, the federally enacted Needlestick Safety and Prevention Act requires, among other things, that we include in our safety programs the evaluation and use of engineering controls such as safety needles if found to be effective at reducing the risk of needlestick injuries in the workplace. If we are found in violation of any of these regulations, we could be subject to substantial penalties or discipline and our business, prospects and results of operations could be materially and adversely affected.

We are subject to federal and state laws governing the financial relationship among healthcare providers, including Medicare and Medicaid laws, and our failure to comply with these laws could result in significant penalties and other material adverse consequences.

We anticipate that a component of our future revenue will be dependent on reimbursement from Medicare and state Medicaid programs. The Medicare program is administered by CMS which, like the states that administer their respective state Medicaid programs, imposes extensive and detailed requirements on diagnostic services providers, including, but not limited to, rules that govern how we structure our relationships with physicians, how and when we submit reimbursement claims and how we provide our specialized diagnostic services. Our failure to comply with applicable Medicare, Medicaid and other governmental payor rules could result in our inability to participate in a governmental payor program, our returning of funds already paid to us, civil monetary penalties, criminal penalties and/or limitations on the operational function of our laboratory. Any of these outcomes would have a material adverse effect on our business and results of operations.

Our business is subject to stringent laws and regulations governing the privacy, security and transmission of medical information, and our failure to comply could subject us to criminal penalties and civil sanctions.

Governmental laws and regulations protect the privacy, security and transmission of medical information. Such laws and regulations restrict our ability to use or disclose patient identifiable laboratory data, without patient authorization, for purposes other than payment, treatment or healthcare operations (as defined by HIPAA), except for disclosures for various public policy purposes and other permitted purposes outlined in the privacy regulations. The privacy and security regulations provide for significant fines and other penalties for wrongful use or disclosure of PHI, including potential civil and criminal fines and penalties. We also could incur damages under state laws to private parties for the wrongful use or disclosure of confidential health information or other private personal information.

Our product development efforts may be hindered if we are unable to gain access to patients' tissue and blood samples.

The development of our diagnostic products requires access to tissue and blood samples from patients who have the diseases we are addressing. Our clinical development relies on our ability to secure access to these samples, as well as information pertaining to their associated clinical outcomes. Access to samples can be difficult since it may involve multiple levels of approval, complex usage rights and privacy rights, among other issues. Lack of or limited access to samples would harm our future product development efforts, which would have a material adverse effect on our business and results of operations.

If our current laboratory facility becomes inoperable or loses certification, we will be unable to perform our tests and our business will be materially adversely affected.

Our diagnostic tests are operated out of our CLIA-certified laboratory in Irvine, California. Currently, we do not have a second certified laboratory. Should our only CLIA-certified laboratory be unable to perform tests, for any reason, we may be unable to perform needed diagnostic tests in connection with our product development and our business will be materially adversely affected.

Our future success depends on the continued service from our scientific, technical and key management personnel and our ability to identify, hire and retain additional scientific, technical and key management personnel in the future.

There is intense competition for qualified personnel in our industry, particularly for laboratory technicians, scientific and medical experts, and senior level management. Loss of the services of, or failure to recruit, these key personnel functions could be significantly detrimental to us and could materially adversely affect our business and operating results. We may not be able to continue to attract and retain scientific and medical experts or other qualified personnel necessary for the development of our business or to replace key personnel who may leave us in the future. If our business grows, it will place increased demands on our resources and likely will require the addition of new management personnel. An inability to recruit and retain qualified management and employees on commercially reasonable terms would adversely and materially affect our business.

As our operations expand, our costs to comply with environmental laws and regulations will increase, and failure to comply with these laws and regulations could materially harm our financial results.

Our operations involve the use, transportation, storage and disposal of hazardous substances and as a result we are subject to environmental and health and safety laws and regulations. As we expand our operations, our use of hazardous substances will increase and lead to additional and more stringent requirements. The cost to comply with these and any future environmental and health and safety regulations could be substantial. In addition, our failure to comply with laws and regulations, and any releases of hazardous substances into the environment or at our disposal sites, could expose us to substantial liability in the form of fines, penalties, remediation costs and other damages, or could lead to a curtailment or shut down of our operations. These types of events, if they occur, would materially adversely affect our financial results.

Any litigation to protect our intellectual property, or any third-party claims of infringement, could divert substantial time and money from our business and could shut down some of our operations.

Our commercial success depends, in part, on our non-infringement of the patents or proprietary rights of third-parties. Many companies developing technology for the biotechnology and pharmaceutical industries use litigation aggressively as a strategy to protect and expand the scope of their intellectual property rights. Accordingly, third-parties may assert that we are employing their proprietary technology without authorization. In addition, third-parties may claim that use of our technologies infringes their

current or future patents. We could incur substantial costs defending against such allegations regardless of their merit, and the attention of our management and technical personnel could be diverted while defending ourselves against any of these claims. We may incur the same liabilities in enforcing our patents against others. We have not made any provision in our financial plans for potential intellectual property related litigation, and we may not be able to pursue litigation as aggressively as competitors with substantially greater financial resources.

If parties making infringement claims against us are successful, they may be able to obtain injunctive or other relief, which effectively could block our ability to further develop, commercialize, and sell products and/or services, and could result in the award of substantial damages against us. If we are unsuccessful in protecting and expanding the scope of our intellectual property rights, our competitors may be able to develop, commercialize, and sell products and/or services that compete against us using similar technologies or obtain patents that could effectively block our ability to further develop, commercialize, and sell our products and/or services. In the event of a successful claim of infringement against us, we may be required to pay substantial damages and either discontinue those aspects of our business involving the technology upon which we infringed or obtain one or more licenses from third-parties, which may not be available on commercially reasonable terms or at all. While we may license additional technology in the future, we may not be able to obtain these licenses at a reasonable cost, or at all. In that event, we could encounter delays in product introductions while we attempt to develop alternative methods or products, and such attempts may not be successful. Defense of any lawsuit or failure to obtain any of these licenses could prevent us from commercializing available products and/or services, which would have a material adverse effect on our business and results of operations.

We could face substantial liabilities if we are sued for product liability.

Product liability claims could be filed by someone alleging that our product failed to perform as claimed. We may also be subject to liability for errors in the performance of our tests. Such product liability and related claims could be substantial. Defense of such claims could be time consuming and expensive and could result in damages that are not covered by our insurance.

Exposure to possible litigation and legal liability may adversely affect our business, financial condition and results of operations.

In the past, we have been exposed to a variety of litigation claims and there can be no assurance that we will not be subject to other litigation in the future that may adversely affect our business, financial condition or results of operations. On February 14, 2011, Relator Michael Strathmann served us with a Complaint filed in the Superior Court of the State of California for the County of Orange. The Complaint alleged that we submitted false and fraudulent insurance claims to National Union Fire Insurance Company of Pittsburgh, PA in connection with a prior lawsuit that was settled with Nanogen, Inc., thereby allegedly violating the California Insurance Fraud Prevention Act, and sought penalties and unspecified treble damages. On May 4, 2011, the Superior Court dismissed the Complaint by ordering that it be stricken for violation of the California Anti-SLAPP statute, which prevents plaintiffs from filing abusive lawsuits against public policy. On June 15, 2011, Mr. Strathmann filed a Notice of Appeal with the California Court of Appeals, appealing the granting of the Motion to Strike. Subsequently, Mr. Strathmann filed a Notice of Appeal of the award of attorneys' fees against him. On October 24, 2012, the California Court of Appeals reversed the Superior Court's dismissal, finding that the anti-SLAPP statute was not applicable, permitting Mr. Strathmann to file an Amended Complaint and remanding the matter back to the Superior Court. We have now filed a Demurrer to that Amended Complaint, seeking to have the matter dismissed. Defense of this lawsuit could be time-consuming and expensive, and there can be no assurance that we will be successful in our defense.

Failure to effectively manage our growth could place strains on our managerial, operational and financial resources and could materially adversely affect our business and operating results.

Our growth has placed, and is expected to continue to place, a strain on our managerial, operational and financial resources. Any further growth by us or an increase in the number of our strategic relationships will increase this strain on our managerial, operational and financial resources. This strain may inhibit our ability to achieve the rapid execution necessary to successfully implement our business plan.

As a public company, we are subject to complex legal and accounting requirements that will require us to incur substantial expense and will expose us to risk of non-compliance.

As a public company, we are subject to numerous legal and accounting requirements that do not apply to private companies. The cost of compliance with many of these requirements is substantial, not only in absolute terms but, more importantly, in relation to the overall scope of the operations of a small company. Failure to comply with these requirements can have numerous material adverse consequences including, but not limited to, our inability to file required periodic reports on a timely basis, which would result in the loss of our eligibility to use Form S-3 for raising capital, loss of market confidence, delisting of our securities, and/or governmental or private actions against us. We cannot assure you that we will be able to comply with all of these requirements or that the cost of such compliance will not prove to be a substantial competitive disadvantage vis-à-vis our privately held and larger public competitors.

Ethical, legal and social concerns surrounding the use of genetic information could reduce demand for our test offerings.

Genetic testing has raised ethical issues regarding privacy and the appropriate uses of the resulting information. For these reasons, governmental authorities may call for limits on or regulation of the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, such concerns may lead individuals to refuse to use genetics tests even if permissible. Any of these scenarios could reduce the potential markets for our molecular diagnostic products, which reduction could have a material adverse effect on our business.

Risks Related To Investment In Our Securities

Small company stock prices are especially volatile, and this volatility may depress the price of our stock.

The stock market has experienced significant price and volume fluctuations, and the market prices of small companies have been highly volatile. We believe that various factors may cause the market price of our stock to fluctuate, perhaps substantially, including, among others, announcements of:

- our or our competitors' technological innovations;
- supply, manufacturing, or distribution disruptions or other similar problems;
- proposed laws regulating participants in the laboratory services industry;
- developments in relationships with collaborative partners or customers;
- our failure to meet or exceed securities analysts' expectations of our financial results; or
- a change in financial estimates or securities analysts' recommendations.

In the past, companies that have experienced volatility in the market price of their stock have been the objects of securities class action litigation. If we become the object of securities class action litigation, it could result in substantial costs and a diversion of management's attention and resources, all of which could materially adversely affect the business and financial results of our business.

Future sales or the potential for future sales of our securities in the public markets may cause the trading price of our common stock to decline and could impair our ability to raise capital through subsequent equity offerings.

Sales of a substantial number of shares of our common stock or other securities in the public markets, or the perception that these sales may occur, could cause the market price of our common stock or other securities to decline and could materially impair our ability to raise capital through the sale of additional securities. The shares of common stock issued in the Offering, and issuable upon conversion or exercise of the Series B Preferred Stock and Warrants issued in the Offering, are freely tradable. We have obligations to the investors in our 2012 private placement offering of Series A convertible preferred stock (Series A Stock) and warrants to purchase common stock to maintain the public registration of common stock underlying their issued and outstanding warrants. We also have obligations to the investors in our April 2011 private placement that could require us to register shares of common stock held by them and shares issuable upon exercise of their warrants for resale on a registration statement. If we raise additional capital in the future through the use of our existing shelf registration statement or if we register existing, or agree to register future, privately placed shares for resale on a registration statement, such additional shares would be freely tradable, and, if significant in amount, such sales could further adversely affect the market price of our common stock. The sale of a large number of shares of our common stock also might make it more difficult for us to sell equity or equity-related securities in the future at a time and at the prices that we deem appropriate.

Our stock price could decline because of the potentially dilutive effect of future financings, preferred stock or warrant anti-dilution provisions or exercises of warrants and common stock options.

As of December 31, 2012, we had approximately 1.5 million shares of common stock issued and outstanding. Assuming conversion of all of our existing convertible securities and exercise in full of all options and warrants outstanding as of December 31, 2012 (not taking into account any price-based or anti-dilution adjustments related to the warrants), plus conversions of the Series B Preferred Stock and exercise of the Warrants issued in the Offering (not taking into account any price-based or anti-dilution adjustments or redemption payments related to the Series B Preferred Stock), approximately 4.7 million shares of our common stock would be outstanding. Any additional equity or convertible debt financings in the future could result in further dilution to our stockholders. Existing stockholders also will suffer significant dilution in ownership interests and voting rights and our stock price could decline as a result of potential future application of anti-dilution features of our Series B Preferred Stock and certain warrants or redemption features of our Series B Preferred Stock. The Offering triggered the anti-dilution provisions of the warrants issued in the 2012 Series A Stock financing such that the number of shares of common stock issuable upon their exercise was increased by approximately 452,420 shares.

We may fail to meet market expectations because of fluctuations in our quarterly operating results, all of which could cause our stock price to decline.

Our revenues and operating results have fluctuated in the past and may continue to fluctuate significantly from quarter to quarter in the future. It is possible that, in future periods, our revenues could fall below the expectations of securities analysts or investors, all of which could cause the market price of our stock to decline. The following are among the factors that could cause our operating results to fluctuate significantly from period to period:

- our unpredictable revenue sources;
- the nature, pricing and timing of our and our competitors' products;
- changes in our and our competitors' research and development budgets;

- expenses related to, and our ability to comply with, governmental regulations of our products and processes; and
- expenses related to, and the results of, patent filings and other proceedings relating to intellectual property rights.

We anticipate significant fixed expenses due in part to our need to continue to invest in product development. We may be unable to adjust our expenditures if revenues in a particular period fail to meet our expectations, all of which would materially adversely affect our operating results for that period. As a result of these fluctuations, we believe that period-to-period comparisons of our financial results will not necessarily be meaningful, and you should not rely on these comparisons as an indication of our future performance.

If we fail to meet Nasdaq's stockholders' equity requirement or the requirement to have a majority of independent directors, our shares may be delisted from The Nasdaq Capital Market.

As conditions for continued listing on The Nasdaq Capital Market, Nasdaq requires us to maintain at least $2.5 million in stockholders' equity and to have a majority of independent directors. We have recently failed to comply with these requirements. Due to the stockholders' equity deficiency, the Nasdaq staff notified us that it was reviewing our eligibility for continued listing on The Nasdaq Capital Market. Within 45 days after March 11, 2013, we must submit a plan to regain compliance which, if accepted by Nasdaq, will need to be successfully implemented within 180 days. The Nasdaq staff also notified us that we must achieve a majority of independent directors on our Board by September 11, 2013 (assuming our next annual stockholders' meeting is held before that time). There are no assurances that our stockholders' equity will remain above Nasdaq's $2.5 million minimum or that we will be able to add another independent director to our Board. If we fail to comply with these requirements in the required time frames, our stock will be delisted. In addition, even if we regain technical compliance with the stockholders' equity and board composition requirements, we will have to continue to meet other objective and subjective listing requirements to continue to be listed on The Nasdaq Capital Market. There can be no assurance that we will meet these requirements. Delisting from Nasdaq Capital Market would make trading our common stock more difficult for investors, potentially leading to declines in our share price. Without a Nasdaq Capital Market listing, stockholders may have a difficult time getting a quote for the sale or purchase of our stock, the sale or purchase of our stock would likely be made more difficult and the trading volume and liquidity of our stock would likely decline. Delisting from Nasdaq Capital Market would also result in negative publicity and would also make it more difficult for us to raise additional capital. The absence of such a listing may adversely affect the acceptance of our common stock as currency or the value accorded by other parties. Further, if we are delisted, we would also incur additional costs under state blue sky laws in connection with any sales of our securities. These requirements could severely limit the market liquidity of our common stock and the ability of our stockholders to sell our common stock in the secondary market. If our common stock is delisted by Nasdaq, our common stock may be eligible to trade on the OTC Bulletin Board, an over-the-counter quotation system, or on the pink sheets where an investor may find it more difficult to dispose of or obtain accurate quotations as to the market value of our common stock. We cannot assure you that our common stock, if delisted from The Nasdaq Capital Market, will be listed on a national securities exchange, a national quotation service, the OTC Bulletin Board or the pink sheets.

If we are delisted from The Nasdaq Capital Market, your ability to sell your shares of our common stock would also be limited by the penny stock restrictions, which could further limit the marketability of your shares.

If our common stock is delisted, it would come within the definition of "penny stock" as defined in the Securities Exchange Act of 1934 (the Exchange Act) and would be covered by Rule 15g-9 of the Exchange Act. That Rule imposes additional sales practice requirements on broker-dealers who sell securities to

persons other than established customers and accredited investors. For transactions covered by Rule 15g-9, the broker-dealer must make a special suitability determination for the purchaser and receive the purchaser's written agreement to the transaction prior to the sale. Consequently, Rule 15g-9, if it were to become applicable, would affect the ability or willingness of broker-dealers to sell our securities, and accordingly would affect the ability of stockholders to sell their securities in the public market. These additional procedures could also limit our ability to raise additional capital in the future.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We currently lease office and laboratory space of approximately 12,200 square feet in Irvine, California under a lease agreement that expires in January 2014.

Item 3. LEGAL PROCEEDINGS

On February 14, 2011, Relator Michael Strathmann ("Strathmann") served us with a complaint ("the Complaint") filed in the Superior Court of the State of California for the County of Orange. The Complaint alleged that we submitted false and fraudulent insurance claims to National Union Fire Insurance Company of Pittsburgh, PA in connection with a prior lawsuit that was settled with Nanogen, Inc., thereby allegedly violating the California Insurance Fraud Prevention Act, and sought penalties and unspecified treble damages. On May 4, 2011, the Superior Court dismissed the Complaint by ordering that it be stricken for violation of the California Anti-SLAPP statute, which prevents plaintiffs from filing abusive lawsuits against public policy. On June 15, 2011, Strathmann filed a Notice of Appeal with the California Court of Appeals, appealing the granting of the Motion to Strike. Subsequently, Strathmann filed a Notice of Appeal of the award of attorneys' fees against him. On October 24, 2012, the California Court of Appeals reversed the Superior Court's dismissal, finding that the anti-SLAPP statute was not applicable, permitting Strathmann to file an Amended Complaint and remanding the matter back to the Superior Court. We have now filed a Demurrer to that Amended Complaint, seeking to have the matter dismissed. We believe that this litigation is frivolous and intend to vigorously defend against it, but there can be no assurance that we will ultimately be successful.

From time to time, we are involved in other litigation arising in the normal course of business. Management believes that resolution of these other matters will not result in any payment that, in the aggregate, would be material to our financial position or results of operations.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Recent Market Prices

The following table sets forth, for the periods indicated, the high and low quarterly sales prices of our common stock as reported by The Nasdaq Capital Market under the symbol of "CBMX". These prices represent prices among dealers, do not include retail markups, markdowns or commissions, and may not represent actual transactions. For comparability purposes, per-share amounts prior to the reverse stock split which occurred on December 4, 2012, have been adjusted for the split ratio of 1:10.

	2012				2011			
	Fourth Quarter	Third Quarter	Second Quarter	First Quarter	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
High	$14.14	$10.50	$15.90	$20.00	$26.50	$38.00	$40.00	$30.00
Low	$ 1.40	$ 5.60	$ 7.40	$14.50	$13.30	$22.60	$21.10	$20.60

As of March 20, 2013, there were approximately 22 holders of record of our common stock.

No dividends have been paid on our common stock. We currently intend to retain all future earnings, if any, for use in our business and do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Equity Compensation Plan Information

The following table provides information with respect to our common shares issuable under our equity compensation plans as of December 31, 2012:

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options	(b) Weighted average exercise price of outstanding options	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders: 2006 CombiMatrix Stock Incentive Plan(1)	161,933	$35.36	434,332
Equity compensation plans not approved by security holders: None	—	—	—
TOTAL	161,933	$35.36	434,332

(1) Our 2006 CombiMatrix Stock Incentive Plan as amended, or the CombiMatrix Plan, allows for the granting of stock options and other awards to eligible individuals, which generally includes directors, officers, employees and consultants. The share reserve under the CombiMatrix Plan automatically increases on the first trading day in January each calendar year by an amount equal to three percent (3%) of the total number of shares of our common stock outstanding on the last trading day of December in the prior calendar year; in no event will the total number of shares of common stock in the share reserve (as adjusted for all such annual increases) exceed thirty million shares. Please refer to Note 11 to our consolidated financial statements for additional information.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer or Affiliated Purchasers

None.

Item 6. SELECTED FINANCIAL DATA

Not required for smaller reporting companies.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with our consolidated financial statements included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors including those set forth under the heading "Risk Factors" elsewhere in this report.

General

We are a molecular diagnostics company that operates primarily in the field of genetic analysis and molecular diagnostics through our wholly owned subsidiary, CombiMatrix Molecular Diagnostics, Inc. ("CMDX"), located in Irvine, California. CMDX operates as a diagnostics reference laboratory providing DNA-based clinical diagnostic testing services to physicians, hospitals, clinics and other laboratories in two primary areas: (i) prenatal and postnatal developmental disorders; and (ii) hematology/oncology genomics. CMDX provides its services primarily through the use of array-comparative genomic hybridization ("aCGH"), which enables the analysis of genetic anomalies, as well as through other test offerings including fluorescent in-situ hybridization ("FISH") and G-Band Chromosome analysis. Our mission is to empower physicians to positively impact patient care through the delivery of innovative molecular diagnostics services.

Prior to 2010, we were primarily focused on developing proprietary DNA array-based tools and instruments for the genetic research community, under the brand formerly known as "CustomArray," as well as providing molecular diagnostics services through CMDX. On April 19, 2010, we announced a strategic and operational restructuring plan (the "Restructuring Plan") intended to significantly reduce operating costs, increase the focus on our diagnostic services business and transition senior management. As part of the Restructuring Plan, we closed our CustomArray business and facilities located in Mukilteo, Washington and relocated our corporate headquarters to Irvine, California. Since the restructuring, our primary focus has been on our diagnostics services business. Our goals include increasing utilization of our existing tests, expanding our diagnostic test menu, increasing and diversifying our client base, and improving reimbursement for our testing services.

As a result of executing the Restructuring Plan, the financial results of our CustomArray business have been classified as discontinued operations in the consolidated statements of operations for all periods presented. Unless otherwise noted, amounts and disclosures throughout this report relate to our continuing operations.

We also own a one-third minority interest in Leuchemix, Inc. ("Leuchemix"), a private drug development company focused on developing a series of compounds to address a number of oncology-related diseases.

Liquidity

At December 31, 2012, we had cash and cash equivalents of $2.4 million. From January 1, 2013 through March 15, 2013, we have received net proceeds of $2.7 million from financing activities discussed further below. As a result, we anticipate that our cash and cash equivalent balances, inclusive of recent financing activities and coupled with anticipated cash flows from operations will be sufficient to meet our cash requirements into the fourth quarter of 2013. In order for us to continue as a going concern beyond this point and ultimately to achieve profitability, we will be required to obtain capital from external sources, increase revenues and reduce operating costs. However, there can be no assurances that our operations will become profitable or that external sources of financing, including the issuance of debt and/or equity securities, will be available at times and at terms acceptable to us, or at all. The issuance of additional equity or convertible debt securities will also cause dilution to our shareholders. If external financing sources are not available or are inadequate to fund our operations, we will be required to reduce operating costs, including research projects and personnel, which could jeopardize our future strategic initiatives and business plans. See the Liquidity and Capital Resources section below as well as Note 1 to our consolidated financial statements included elsewhere in this report for additional discussion of these matters.

Overview of Recent Business Activities

During 2012, our business activities were driven primarily by commercialization efforts for our suite of molecular diagnostic tests, expansion of our test menu and of our leadership team. For the year ended December 31, 2012, our operating activities included the recognition of $5.4 million of total revenues, which increased by $692,000 from 2011 due primarily to increased volumes of molecular diagnostic tests performed, increases in royalty revenues and from recognition of one-time revenues from providing clinical trials support services to one customer during the third quarter of 2012. In the area of molecular testing, our volumes from our prenatal testing services increased by 172% from 2011, and total molecular testing from all of our test offerings increased by 25%. Our net loss from operations decreased over the comparable period due to increased revenues and also from reduced operating expenses as a result of cost reduction efforts executed during the second quarter of 2012, which included the elimination of certain staff positions across all functional areas of the Company. Our net loss increased due primarily from charges recognized in 2012 relating to mark-to-market adjustments of our warrant derivative liabilities, which were issued as part of an equity financing discussed.

Also during 2012, we made significant changes to our executive management and leadership teams by hiring Richard Hockett, MD, as our Chief Medical Officer, who joined us on May 1, 2012, and by hiring Mark McDonough as Chief Commercial Officer, who joined us on August 23, 2012. During the first quarter of 2012, we named Richard Ding and Joseph Limber to our Board of Directors and, during the second quarter, appointed Dr. Ronald J. Wapner to our Scientific Advisory Board. On October 9, 2012, Mr. Limber resigned from our Board for personal reasons. During the fourth quarter of 2012, we named Jeremy Jones to our Board of Directors.

On October 1, 2012, we announced the execution of an agreement to issue securities in a private placement transaction to certain accredited investors (“Investors”) that resulted in gross proceeds paid to us of $2.5 million, which was received in two tranches, with the first tranche having closed on October 1, 2012 and the second tranche having closed on December 6, 2012, following the approval by our stockholders at a special meeting held on November 29, 2012. The financing was through the sale of Series A convertible preferred stock and warrants to purchase common stock (the “Series A Financing”) at 100% warrant coverage, meaning that the number of shares of common stock underlying the warrants was equal to the number of shares of common stock initially issuable from conversions of the Series A preferred stock. For the first tranche, the conversion price of the Series A preferred stock and the exercise price of the common stock warrants were $4.9112 and $9.50 per share of common stock, respectively, subject to future adjustments. For the second tranche, the conversion price of the Series A preferred stock

and the exercise price of the common stock warrants were $1.9995 and $2.364 per share of common stock, respectively, also subject to future adjustments. As a result of closing the second tranche at a conversion price lower than the first tranche, the conversion price of the first tranche Series A preferred stock was reduced to $1.9995 and the number of shares of common stock issuable from conversion of the Series A Preferred stock was increased. In total, the $2.5 million of Series A preferred stock issued during the fourth quarter of 2012 was convertible into 1.25 million shares of common stock, along with warrants ("Series A Warrants") to purchase 938,770 shares of common stock. The preferred stock also accrued dividends at an annual rate of 6%. On February 26, 2013, we entered into an agreement with the Investors to modify the Series A Warrants such that they would become immediately exercisable as of February 22, 2013 (the "Modification Date"). Since the Modification Date through March 15, 2013, 329,820 shares of common stock have been issued from exercise of the Warrants, resulting in gross proceeds to the Company of $934,000.

On February 18, 2013, R. Judd Jessup informed our Board of Directors that he would retire as Chief Executive Officer effective March 15, 2013. Martin Felsenthal also resigned from our Board on the same date. Mark McDonough, our Chief Commercial Officer, became a director on February 28, 2013 and Chief Executive Officer on March 15, 2013. Richard Hockett, Jr., MD, our Chief Medical Officer, was also named to our Board of Directors on February 28, 2013. On March 12, 2013, Mark McGowan announced his resignation from our Board, and R. Judd Jessup was appointed Chairman of the Board on that date.

On March 19, 2013, we entered into a definitive securities purchase agreement with an existing institutional investor to purchase 130,000 shares of common stock at a price of $3.05 per share and approximately 1,610 units consisting of Series B 6% convertible preferred stock (the "Series B Preferred Stock") and warrants to purchase up to 275,000 shares of common stock at an exercise price of $3.49 per share (the "Series B Warrants") in a registered direct offering (the "Series B Offering") of securities off of our existing shelf registration statement on Form S-3 (File No. 333-176372). The Series B Offering closed on March 20, 2013 ("Closing"). The Series B Preferred Stock and Series B Warrants were sold in multiples of fixed combinations, with each fixed combination consisting of one share of Series B Preferred Stock and a Series B Warrant to purchase approximately 171 shares of common stock. Each fixed combination of Series B Preferred Stock and Series B Warrants were sold at a price of $1,000. The Series B Preferred Stock is convertible into an aggregate of 528,000 shares of common stock at an initial conversion price of $3.05 per share. The Series B Preferred Stock is not convertible into greater than 19.99% (when aggregated with the common shares purchased in the Offering) of our outstanding common stock unless and until stockholder approval is obtained. The Series B Warrants are not exercisable for six months from Closing, and the Series B Preferred Stock will accrue dividends at an annual rate of 6% beginning six months after Closing, assuming the Series B Preferred Stock has not been converted by that time. Upon closing of the Offering, we received proceeds of $1.76 million, net of placement agent fees and other related costs. Also as a result of the Offering, the exercise price of certain Series A Warrants automatically ratcheted down by their terms from their original exercise price of $9.50 per share to an adjusted exercise price of $3.05 per share, and the underlying shares exercisable was automatically increased from 213,945 shares to 666,365 shares.

Critical Accounting Policies

Our consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. In preparing these financial statements, we make assumptions, judgments and estimates that can have a significant impact on amounts reported in our financial statements. We base our assumptions, judgments and estimates on historical experience and various other factors that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates under different assumptions or conditions. On a regular basis we evaluate our assumptions, judgments and estimates and make changes accordingly.

We believe that, of the significant accounting policies discussed in Note 2 to our consolidated financial statements, the following accounting policies require our most difficult, subjective or complex judgments:

- revenue recognition and estimates for contractual allowances;
- accounting for stock-based compensation;
- accounting for derivative financial instruments;
- fair value measurements; and
- accounting for income taxes.

We discuss below the critical accounting assumptions, judgments and estimates associated with these policies. Historically, our assumptions, judgments and estimates relative to our critical accounting policies have not differed materially from actual results. For further information on our critical accounting policies, refer to Note 2 to our consolidated financial statements included elsewhere in this report.

Revenue Recognition

As described below, significant management judgments must be made and used in connection with the revenue recognized in any accounting period. Material differences may result in the amount and timing of revenue recognized or deferred for any period if management made different judgments.

In general, we recognize revenue when (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been performed, (iii) amounts are fixed or determinable and (iv) collectability of amounts is reasonably assured.

Service revenues from providing diagnostic tests are recognized when the testing process is complete and test results are reported to the ordering physician or clinic. These diagnostic services are billed to various payors, including commercial insurance companies, healthcare institutions, individuals and government payors including Medicare and Medicaid. We report revenues from contracted payors based on a contractual rate, or in the case of Medicare and Medicaid, published fee schedules for our tests. We report revenues from non-contracted payors based on the amount expected to be collected. The difference between the amount billed and the amount expected to be collected from non-contracted payors is recorded as a contractual allowance to arrive at net recognized revenues. The expected revenues from non-contracted payors are based on the historical collection experience of each payor or payor group, as appropriate. In each reporting period, we review our historical collection experience for non-contracted payors and adjust our expected revenues for current and subsequent periods accordingly. We also recognize additional revenue from actual cash payments that exceed amounts initially recognized, in the period the payments are received. Because a substantial portion of our revenues is from non-contracted third-party payors, it is likely that we will be required to make positive or negative adjustments to accounting estimates with respect to contractual allowances in the future, which may positively or adversely affect our results of operations. In all cases described above, we report revenues net of any applicable statutory taxes collected from customers, as applicable.

Accounting for Stock-Based Compensation

The compensation cost for all employee stock-based awards is measured at the grant date, based on the fair value of the award, and is recognized as an expense, on a straight-line basis, over the employee's requisite service period (generally the vesting period of the equity award) which is generally three to four years. The fair value of each option award is estimated on the date of grant using a Black-Scholes option valuation model. Stock-based compensation expense is recognized only for those awards that are expected to vest using an estimated forfeiture rate. We estimate pre-vesting option forfeitures at the time of grant and reflect the impact of estimated pre-vesting option forfeitures in compensation expense recognized.

Accounting for Derivative Financial Instruments

We evaluate financial instruments for freestanding or embedded derivatives. Derivative instruments that do not qualify for permanent equity classification are recorded as liabilities at fair value, with changes in value recognized as other income (expense) in the consolidated statements of operations in the period of change. Derivative warrant liabilities are categorized as either short-term or long-term based upon management's estimates as to when the derivative instrument may be realized. Management judgment is required in identifying derivative instruments and whether or not such instruments should be classified as liabilities or as a component of permanent equity based upon interpretations of existing accounting literature. Also, management judgment is required in determining the assumptions and valuation methods to be used for valuing the derivatives. If actual results differ from these estimates, the future impact on our consolidated financial position and results of operations could be significant.

Fair Value Measurements

We measure fair value as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that is determined based on assumptions that market participants would use in pricing an asset or liability. We utilize a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

- Level 1: Observable market inputs such as quoted prices in active markets;
- Level 2: Observable market inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3: Unobservable inputs where there is little or no market data, which require the reporting entity to develop its own assumptions

Accounting for Income Taxes

We recognize income taxes on an accrual basis based on tax positions taken or expected to be taken in our tax returns. A tax position is defined as a position in a previously filed tax return or a position expected to be taken in a future tax filing that is reflected in measuring current or deferred income tax assets and liabilities. Tax positions are recognized only when it is more likely than not (i.e., likelihood of greater than 50%), based on technical merits, that the position would be sustained upon examination by taxing authorities. Tax positions that meet the more likely than not threshold are measured using a probability-weighted approach as the largest amount of tax benefit that has a greater than 50% likelihood of being realized upon settlement. Income taxes are accounted for using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our financial statements or tax returns. A valuation allowance is established to reduce deferred tax assets if all, or some portion, of such assets will more than likely not be realized. Should they occur, our policy is to classify interest and penalties related to tax positions as income tax expense. Since our inception, no such interest or penalties have been incurred, however.

Comparison of the Results of Operations

Revenues and Cost of Revenues (dollars in thousands):

	For the Years Ended December 31,		Change	
	2012	2011	$	%
Diagnostic services	$ 4,975	$ 4,558	$417	9%
Clinical trial support services	195	—	195	—
Royalties	180	100	80	80%
Cost of services	(2,702)	(2,642)	(60)	(2%)

Diagnostic Services. Diagnostic services revenues are generated from providing DNA-based genomic testing services primarily in the areas of prenatal and postnatal development disorders in children and, to a lesser extent, in oncology. Total billable testing volumes were 5,782 for the year ended December 31, 2012, compared to 4,634 for 2011, representing an increase of 25%. The reason that diagnostic services revenues have not increased by the same percentage as diagnostic testing volumes is due to a change in mix during 2012 of the types of diagnostic services performed. Cytogenetic tests in the prenatal market, including FISH and chromosome analysis, are priced and reimbursed at lower rates than our array-based tests, which made up the majority of our testing volumes in 2011. As a result, our average revenue per test decreased from $984 in 2011 to $860 in 2012. In addition, decreases in oncology and pediatric testing volumes were offset by increases in prenatal testing, resulting in an overall increase in diagnostic services revenues year-over-year. Diagnostic services revenues also includes adjustments relating to our revenue recognition policy of periodically adjusting our estimate for contractual allowances for revenues from non-contracted payors as well as from receiving cash payments in excess of amounts previously recognized for services revenues. For the years ended December 31, 2012 and 2011, net positive revenue adjustments were $570,000 and $448,000, respectively.

Clinical Trial Support Services. In June of 2012, we entered into a materials transfer agreement with Affymetrix, Inc. in support of their clinical trial program. Under the terms of the agreement, we delivered over 300 anonymous patient samples during the third quarter. As a result, we fully satisfied our obligations to Affymetrix, which resulted in recognition of $195,000 of clinical trial support services revenues in 2012. There are no future performance obligations by either party and we do not expect to recognize additional revenues from this agreement in the future.

Royalties. In 2010, we entered into an exclusive licensing agreement with CustomArray, Inc. ("CA"), a private company located in Washington State, for certain of our patents and intellectual property developed as part of our prior microarray manufacturing business. This agreement requires CA to pay us royalties as a percentage of their gross revenues, not less than $25,000 per quarter. Beginning in the second quarter of 2012, CA's gross revenues exceeded the minimum thresholds stipulated in the licensing agreement, resulting in total royalties of $180,000 for 2012, compared to $100,000 in 2011. It is uncertain whether in future periods, CA's revenues will increase, continue at current levels or return to the minimum contractual amounts.

Cost of Services. Cost of services relating to our diagnostic tests performed include direct materials such as array and laboratory costs, direct laboratory labor (wages and benefits), allocation of administrative overhead and stock-compensation expenses. Due primarily to favorable pricing obtained on certain of our direct materials used in providing our services, the percentage changes from 2011 to 2012 are not proportional to the change in revenues during the same periods. For the years ended December 31, 2012 and 2011, non-cash stock compensation expenses were not significant. See Note 2 to our consolidated financial statements included elsewhere in this report for a detailed description of the amounts of non-cash stock compensation expense recognized for the periods presented.

Operating Expenses (dollars in thousands):

	For the Years Ended December 31,		Change	
	2012	2011	$	%
Research and development	$1,400	$1,366	$ 34	2%
Sales and marketing	2,596	2,715	(119)	(4%)
General and administrative	5,378	5,567	(189)	(3%)

Research and Development. These expenses include labor and laboratory supply costs associated with investigating new tests, but primarily consist of development costs to maintain and improve our existing suite of diagnostic tests offered. Prior to launching a new test or modifying an existing test, appropriate clinical trials and extensive laboratory validations, consistent with the various regulations that govern our industry, must be performed. These costs are classified as research and development for all periods presented. The increase in research and development expenses was due primarily to higher laboratory supply costs from test validations of new cytogenetics and related tests launched in early 2012, as well as from higher headcount during the first half of 2012 compared to 2011, partially offset by lower headcount during the second half of 2012 as a result of cost reductions executed in May and June of 2012. In addition, research and development expenses include non-cash stock compensation charges, which were $7,000 and $48,000 for the years ended December 31, 2012 and 2011, respectively. The decrease in stock compensation charges was due primarily to prior stock option awards to our employees which became fully vested late in 2011. See Note 2 to our consolidated financial statements included elsewhere in this report for a detailed description of the amounts of non-cash stock compensation expense recognized for the periods presented.

Sales and Marketing. These expenses include salaries and wages associated with our sales force and marketing resources, sales commissions and other expenses associated with promotional and advertising efforts. The decrease in sales and marketing expenses was due primarily to fewer sales personnel in 2012 compared to 2011 as a result of the cost reductions executed in May and June of 2012. In addition, sales and marketing expenses include non-cash stock compensation charges, which were $4,000 and $43,000 for the years ended December 31, 2012 and 2011, respectively. The decrease in stock compensation charges was due primarily to prior stock option awards to our employees which became fully vested in 2011 and from fewer sales personnel with stock option awards continuing to vest. See Note 2 to our consolidated financial statements included elsewhere in this report for a detailed description of the amounts of non-cash stock compensation expense recognized for the periods presented.

General and Administrative. These expenses include compensation and benefit costs of our administrative staff, client billing and collections, information technology, executive management, human resources and accounting personnel, as well as facilities-related costs, insurance, legal, audit and other professional services. Excluding non-cash stock compensation expenses discussed below, general and administrative expenses were $5.0 million and $4.6 million for the years ended December 31, 2012 and 2011, respectively. General and administrative expenses increased due primarily to higher salaries and benefits costs associated with our Chief Medical Officer and from increased staff in our Billing department, increased recruitment expenses associated with new board members and executive management and from increased litigation defense costs as compared to 2011. Included in general and administrative expenses were non-cash stock compensation charges of $386,000 and $943,000 for the years ending December 31, 2012 and 2011, respectively. The decrease in stock compensation charges was due primarily to prior stock option awards to our employees which became fully vested in 2011. See Note 2 to our consolidated interim financial statements included elsewhere in this report for a detailed description of the amounts of non-cash stock compensation expense recognized for the periods presented.

Other Non-Operating Items (dollars in thousands):

	For the Years Ended December 31,		Change	
	2012	2011	$	%
Interest expense	$ (179)	$(20)	$ (159)	(795%)
Warrant derivatives charges	(2,357)	—	(2,357)	—

Interest Expense. Prior to the fourth quarter of 2012, interest expense was entirely comprised of interest charges associated with from certain capital leases for laboratory equipment, which were $29,000 and $20,000 for the years ended December 31, 2012 and 2011, respectively. In addition, $147,000 of interest expense in 2012 is related to the amortization of $427,000 of offering-related costs incurred during the fourth quarter of 2012. These costs are being amortized over the Warrant exercise restriction period of six months from issuance, which will result in the remaining $280,000 of unamortized charges being expensed during the first quarter of 2013.

Warrant Derivative Charges. These charges represent the net expense recognized from mark-to-market adjustments of the Warrants to their estimated fair values as of December 31, 2012. There were no such activities in 2011. We valued the Warrants using the Monte-Carlo simulation method using the following assumptions at each valuation date: (i) closing stock price and Warrant contractual exercise price; (ii) term to expiration commensurate with the individual Warrant terms ranging from 5.3 years to 5.5 years; (iii) historical volatilities commensurate with the term of the Warrants ranging from 65.6% to 103.9%; (iv) risk-free interest rates commensurate with the term of the Warrants ranging from 0.7% to 0.8%; and (v) simulated anti-dilution impact assuming various probabilities that Company will raise additional capital by issuing equity securities at prices above or below the current contractual Warrant exercise prices during the Warrant terms. The result of these valuation simulations was to initially value the Warrants issued at a combined $2.1 million derivative liability, with the residual value allocated to the Series A preferred stock. Subsequently, the fair value of the warrants increased to $4.5 million at December 31, 2012, resulting in $2.4 million of warrant derivative charges recognized during the fourth quarter of 2012. The Warrants were valued as Level 3 liabilities under our policies for assessing fair value measurements. If the inputs such as volatility and probability of subsequent financings were to change, the concluded values could change significantly.

Discontinued Operations (dollars in thousands):

	For the Years Ended		Change	
	2012	2011	$	%
Income from discontinued operations	$—	$316	$(316)	(100%)

On April 19, 2010, we announced a Restructuring Plan intended to focus our Company on our diagnostic services business while shutting down our CustomArray business. The operations of our former CustomArray business are classified as discontinued operations for all periods presented. Income from final billings on former Department of Defense contracts occurred and was recognized during the first and second quarters of 2011. There were no activities relating to discontinued operations since the second quarter of 2011.

Inflation

Inflation has not had a significant impact in the current or prior periods.

Liquidity and Capital Resources

At December 31, 2012, cash and cash equivalents totaled $2.4 million, compared to $6.4 million at December 31, 2011. Cash is held primarily in general checking accounts as well as in money market mutual funds backed by U.S. government securities. Working capital was $(1.4 million) and $7.5 million at December 31, 2012 and 2011, respectively. The primary reason for the decline in working capital was due to lower cash balances at December 31, 2012 compared to 2011 and from classifying the Warrants, valued at $4.2 million net of issuance costs, as current liabilities as of December 31, 2012.

The net change in cash and cash equivalents for the periods presented was comprised of the following (in thousands):

	For the Years Ended December 31,		
	2012	2011	Change
Net cash (used in) provided by:			
Operating activities	$(5,940)	$(6,542)	$ 602
Investing activities	(31)	(192)	161
Financing activities	1,958	6,563	(4,605)
(Decrease) increase in cash and cash equivalents	$(4,013)	$ (171)	$(3,842)

Operating Activities. The decrease in net cash flows used in operating activities was primarily the result of higher cash reimbursement from increased sales, billing and collection efforts experienced during 2012 compared to 2011.

Investing Activities. The decrease in net cash flows used in investing activities was due to decreased capital expenditures for laboratory and IT-related equipment to support our diagnostics business.

Financing Activities. The decrease in net cash flows from financing activities was due primarily to the $2.1 million of net proceeds received from the Series A Financing during the fourth quarter of 2012 compared to the $6.6 million of net proceeds received from a private placement of common stock and warrants to certain investors during the second quarter of 2011.

Future Liquidity. We have a history of incurring net losses and net operating cash flow deficits. We are also deploying new technologies and continue to develop commercial products and services. We believe that our cash and cash equivalent balances as of December 31, 2012, combined with the $2.7 million of combined proceeds from certain Series A Warrant exercises and proceeds from the Offering described above, will be sufficient to meet our cash requirements into the fourth quarter of 2013. In order for us to continue as a going concern beyond this point and ultimately to achieve profitability, we may be required to obtain capital from external sources, increase revenues and reduce operating costs. However, there can be no assurance that our operations will become profitable or that external sources of financing, including the issuance of debt and/or equity securities, will be available at times and at terms acceptable to us, or at all. The issuance of additional equity or convertible debt securities will also cause dilution to our shareholders. If external financing sources are not available or are inadequate to fund our operations, we will be required to reduce operating costs, including research projects and personnel, which could jeopardize our future strategic initiatives and business plans. See Note 1 to the consolidated financial statements included elsewhere in this report for additional discussion of these matters.

Capital Requirements. We may also encounter unforeseen difficulties that may deplete our capital resources more rapidly than anticipated. Any efforts to seek additional funding could be made through equity, debt or other external financing, and there can be no assurance that additional funding will be

available on favorable terms, in a timely manner or at all. Our long-term capital requirements will be substantial and the adequacy of available funds will depend upon many factors, including:

- the costs of commercialization activities, including sales and marketing, manufacturing and capital equipment;
- competing technological developments;
- the creation and formation of strategic partnerships;
- the costs associated with leasing and improving our Irvine, California facility; and
- other factors that may not be within our control.

We have no significant commitments for capital expenditures in 2012 or beyond. We have executed twelve capital leases totaling $699,000 for certain laboratory equipment.

Off-Balance Sheet Arrangements

As of December 31, 2012, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K promulgated by the SEC. However, we have entered into an operating lease for our laboratory space and corporate offices, totaling approximately 12,200 square feet.

Recent Accounting Pronouncements

Refer to Note 2 to our consolidated financial statements included elsewhere in this report.

Quantitative and Qualitative Disclosures About Market Risk

Not required for smaller reporting companies.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required for smaller reporting companies.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements and related financial information required to be filed hereunder are indexed under Item 15 of this report and are incorporated herein by reference.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended. Based on this evaluation, our principal executive officer and our principal financial officer concluded that, as of the end of the period covered by this annual report, our disclosure controls and procedures were effective to ensure that the information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is accumulated and communicated to management, including our chief executive officer and chief financial officer, to allow

timely decisions regarding required disclosure, and that such information is recorded, processed, summarized and reported within the time periods prescribed by the SEC.

Management's Report on Internal Controls Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal controls over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal controls over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in Internal Control—Integrated Framework, our management concluded that our internal controls over financial reporting were effective as of December 31, 2012.

There has been no change in our internal controls over financial reporting that occurred during the fiscal quarter ended December 31, 2012 that has materially affected, or is reasonably expected to materially affect, our internal controls over financial reporting.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Except as provided below, the information required by this Item is incorporated by reference from the information under the captions entitled "Board of Directors," "Executive Officers and Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance" in our definitive proxy statement to be filed with the SEC no later than 120 days after our most recent fiscal year end, which is December 31, 2012.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics for directors, officers (including our Chief Executive Officer and Chief Financial Officer) and employees, known as the CombiMatrix Corporation Code of Business Conduct and Ethics (the "Code of Ethics"). The Code of Ethics is available on our website at *http://www.combimatrix.com* in the corporate governance section under the "Investors" link. Shareholders may request a free copy of the Code of Ethics by sending an email request to investors@combimatrix.com. We intend to disclose future amendments to certain provisions of our Code of Ethics, or waivers of such provisions, applicable to our directors and officers (including our Chief Executive Officer and Chief Financial Officer), at the same location on our website identified above. The inclusion of our website address in this report does not include or incorporate by reference the information on, or accessible through, our web site into this report.

Item 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference from the information under the caption entitled "Executive Compensation and Other Information" in our definitive proxy statement to be filed with the SEC no later than 120 days after our most recent fiscal year end, which is December 31, 2012.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item is incorporated by reference from the information under the caption entitled "Security Ownership of Certain Beneficial Owners and Management" in our definitive proxy statement to be filed with the SEC no later than 120 days after our most recent fiscal year end, which is December 31, 2012.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated by reference from the information under the caption entitled "Certain Transactions" and "Board of Directors" in our definitive proxy statement to be filed with the SEC no later than 120 days after our most recent fiscal year end, which is December 31, 2012.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is incorporated by reference from the information under the caption entitled "Principal Accountants" in our definitive proxy statement to be filed with the SEC no later than 120 days after our most recent fiscal year end, which is December 31, 2012.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) (1) Financial Statements—See "Index to Consolidated Financial Statements" appearing on page F-1.

(2) Financial Statement Schedules

Schedules have been omitted, as they are not required for smaller reporting companies, not applicable or the information is otherwise included.

(3) Exhibits—Refer to Item 15(b) below.

(b) Exhibits. The following exhibits are either filed herewith or incorporated herein by reference:

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation(1)
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation(2)
3.3	Certificate of Amendment of Certificate of Incorporation(3)
3.4	Second Amended and Restated Bylaws(4)
3.5	Certificate of Designation of Preferences, Rights and Limitations of Series A 6% Convertible Preferred Stock(5)
3.6	Certificate of Designation of Preferences, Rights and Limitations of Series B 6% Convertible Preferred Stock(32)
10.1†	Separation Agreement and General Release of Claims with Amit Kumar, Ph.D., dated as of August 8, 2010(6)
10.2†	Restated Executive Change in Control Severance Plan(7)
10.3†	Offer and Employment Agreement with R. Judd Jessup, dated as of August 11, 2010(8)
10.4	Amendment No. 3 to Lease dated as of January 11, 2010(9)
10.5	Amendment No. 4 to the Lease effective as of October 21, 2012(10)
10.6†	2006 Stock Incentive Plan, as amended(11)
10.7†	Form of Stock Incentive Plan Agreement(12)
10.8	Employment Agreement for Mark McDonough(13)
10.9	Form of Amended and Restated Indemnification Agreement(14)
10.10	Warrant (exercise price of $11.87 per share)(15)
10.11	Warrant (exercise price of $13.65 per share)(16)
10.12	Registration Rights Agreement(17)
10.13	Form of Securities Purchase Agreement dated as of April 1, 2011(18)
10.14	Form of Investors Rights Agreement dated as of April 1, 2011(19)
10.15	HLM Rights Agreement dated as of April 1, 2011(20)
10.16	Form of Warrant to Purchase Common Stock issued on April 7, 2011(21)
10.17	Form of Indemnity Agreement(22)

Exhibit Number	Description
10.18	Form of Securities Purchase Agreement dated as of September 28, 2012(23)
10.19	Form of Warrant to Purchase Common Stock(24)
10.20	Form of Registration Rights Agreement dated as of September 28, 2012(25)
10.21	Form of Lock-Up Agreement dated as of September 28, 2012(26)
10.22	Form of Voting Agreement dated as of September 28, 2012(27)
10.23	Consent and Waiver executed on December 4, 2012(28)
10.24	Employment Agreement for Richard Hockett, M.D.(29)
10.25	Amendment to CombiMatrix 2006 Stock Incentive Plan(30)
10.26	Form of Amendment No. 1 to Common Stock Purchase Warrant dated February 26, 2013(31)
10.27	Form of Warrant to Purchase Common Stock(33)
10.28	Form of Securities Purchase Agreement dated as of March 19, 2013(34)
10.29	Placement Agent Agreement, dated July 13, 2012, between the Company and C. K. Cooper & Company(35)
10.30	Addendum to Placement Agent Agreement, dated September 10, 2012, between the Company and C. K. Cooper & Company(36)
10.31	Addendum to Placement Agent Agreement, dated March 14, 2013, between the Company and C. K. Cooper & Company(37)
21.1	Subsidiaries of the Registrant(*)
23.1	Consent of Haskell & White LLP(*)
31.1	Certification of Chief Executive Officer pursuant to section 302 of the Sarbanes-Oxley Act of 2002(*)
31.2	Certification of Chief Financial Officer pursuant to section 302 of the Sarbanes-Oxley Act of 2002(*)
32.1	Certification of Chief Executive Officer pursuant to section 906 of the Sarbanes-Oxley Act of 2002(*)
32.2	Certification of Chief Financial Officer pursuant to section 906 of the Sarbanes-Oxley Act of 2002(*)
101.0	The following materials from CombiMatrix Corporation's Annual Report on Form 10-K for the year ended December 31, 2012, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2012 and December 31, 2011; (ii) Consolidated Statements of Operations for the years ended December 31, 2012 and 2011; (iii) Consolidated Statements of Stockholders' (Deficit) Equity for the years ended December 31, 2012 and 2011; (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2012 and 2011; and (v) Notes to Consolidated Financial Statements(**)

(*) Included herewith.

(**) Pursuant to Rule 406T of Regulation S-T, the Interactive Data Files on Exhibit 101.0 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended, and otherwise are not subject to liability under those sections, included herewith.

† Denotes management contract or compensatory plan or arrangement.

(1) Incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-1 (SEC File No. 333-139679), filed with the SEC on December 26, 2006.

(2) Incorporated by reference to Exhibit 3.1A to the Company's Quarterly Report on Form 10-Q filed August 14, 2008.

(3) Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on December 4, 2012.

(4) Incorporated by reference to Exhibit 3.2 to the Company's Annual Report on Form 10-K (File No. 001-33523) filed with the SEC on March 18, 2010.

(5) Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 1, 2012.

(6) Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on August 16, 2010.

(7) Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on August 16, 2010.

(8) Incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on August 16, 2010.

(9) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on January 15, 2010.

(10) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 25, 2012.

(11) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 1, 2012.

(12) Incorporated by reference to the Company's Registration Statement on Form S-1 (SEC File No. 333-139679), which became effective June 8, 2007.

(13) Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on November 13, 2012.

(14) Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on August 12, 2011.

(15) Incorporated by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on July 11, 2008.

(16) Incorporated by reference to Exhibit 99.4 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on July 11, 2008.

(17) Incorporated by reference to Exhibit 99.5 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on July 11, 2008.

(18) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on April 7, 2011.

(19) Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on April 7, 2011.

(20) Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on April 7, 2011.

(21) Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on April 7, 2011.

(22) Incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on April 7, 2011.

(23) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 1, 2012.

(24) Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 1, 2012.

(25) Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 1, 2012.

(26) Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 1, 2012.

(27) Incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on October 1, 2012.

(28) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on December 7, 2012.

(29) Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on May 11, 2012.

(30) Incorporated by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q (File No. 001-33523) filed with the SEC on November 13, 2012.

(31) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on February 26, 2013.

(32) Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 20, 2013.

(33) Incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 20, 2013.

(34) Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 20, 2013.

(35) Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 20, 2013.

(36) Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 20, 2013.

(37) Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K (File No. 001-33523) filed with the SEC on March 20, 2013.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

Dated: March 25, 2013

COMBIMATRIX CORPORATION

/s/ MARK MCDONOUGH

Mark McDonough
President and
Chief Executive Officer
(Authorized Signatory)

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and the capacities and on the dates indicated.

Signature	Title	Date
/s/ MARK MCDONOUGH Mark McDonough	President and Chief Executive Officer, Director (Principal Executive Officer)	March 25, 2013
/s/ SCOTT R. BURELL Scott R. Burell	Chief Financial Officer, Treasurer and Secretary (Principal Financial and Accounting Officer)	March 25, 2013
/s/ RICHARD HOCKETT, JR., MD Richard Hockett, Jr., MD	Chief Medical Officer, Director	March 25, 2013
/s/ R. JUDD JESSUP R. Judd Jessup	Chairman of the Board	March 25, 2013
/s/ SCOTT GOTTLIEB, M.D. Scott Gottlieb, M.D.	Director	March 25, 2013
/s/ WEI RICHARD DING Wei Richard Ding	Director	March 25, 2013
/s/ JEREMY M. JONES Jeremy M. Jones	Director	March 25, 2013

COMBIMATRIX CORPORATION
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders
CombiMatrix Corporation
Irvine, California

We have audited the accompanying consolidated balance sheets of CombiMatrix Corporation (the "Company") as of December 31, 2012 and December 31, 2011, and the related consolidated statements of operations, stockholders' (deficit) equity, and cash flows for each of the years then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of CombiMatrix Corporation as of December 31, 2012 and December 31, 2011, and the results of its operations and its cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States.

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. As described in Note 1 to the consolidated financial statements, the Company has a history of incurring net losses and net operating cash flow deficits. Further, as of December 31, 2012, the Company has a stockholders' deficit, working capital deficit and insufficient liquidity to operate its business for a period of at least twelve months. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ HASKELL & WHITE LLP

Irvine, California
March 25, 2013

COMBIMATRIX CORPORATION
CONSOLIDATED BALANCE SHEETS
As of December 31, 2012 and 2011
(In thousands, except share and per share information)

	December 31, 2012	December 31, 2011
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,372	$ 6,385
Accounts receivable, net of allowance for doubtful accounts of $245 and $333	1,262	1,462
Supplies	465	476
Prepaid expenses and other assets	138	259
Total current assets	4,237	8,582
Property and equipment, net	666	607
Investments in unconsolidated subsidiaries and other	211	127
Patents and licenses, net	66	132
Total assets	$ 5,180	$ 9,448
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities:		
Accounts payable, accrued expenses and other	$ 1,222	$ 1,004
Current portion, capital lease obligations	253	115
Warrants, net of $280 in issuance costs	4,204	—
Total current liabilities	5,679	1,119
Capital lease obligations, net of current portion	226	179
Total liabilities	5,905	1,298
Series A convertible preferred stock; $0.001 par value; 5,000,000 shares authorized; 1,644.45186 and none issued and outstanding, net of issuance costs	394	—
Stockholders' (deficit) equity:		
Common stock; $0.001 par value; 25,000,000 shares authorized; 1,511,133 and 1,070,412 shares issued and outstanding	11	11
Additional paid-in capital	67,097	66,099
Accumulated net losses	(68,227)	(57,960)
Total stockholders' (deficit) equity	(1,119)	8,150
Total liabilities and stockholders' (deficit) equity	$ 5,180	$ 9,448

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

See Report of Independent Registered Public Accounting Firm.

COMBIMATRIX CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
For the Years Ended December 31, 2012 and 2011
(In thousands, except share and per share information)

	For the Years Ended December 31,	
	2012	**2011**
Revenues:		
Diagnostic services	$ 4,975	$ 4,558
Clinical trial support services	195	—
Royalties	180	100
Total revenues	5,350	4,658
Operating expenses:		
Cost of services	2,702	2,642
Research and development	1,400	1,366
Sales and marketing	2,596	2,715
General and administrative	5,378	5,567
Patent amortization and royalties	266	266
Total operating expenses	12,342	12,556
Operating loss	(6,992)	(7,898)
Other income (expenses):		
Interest income	1	3
Interest expense	(179)	(20)
Warrant derivative charges	(2,357)	—
Total other (expense) income	(2,535)	(17)
Net loss from continuing operations	(9,527)	(7,915)
(Loss) income from discontinued operations	—	316
Net loss	$ (9,527)	$ (7,599)
Deemed dividends from issuing Series A convertible preferred stock	(617)	—
Series A convertible preferred stock dividends	(123)	—
Net loss attributable to common stockholders	$(10,267)	$ (7,599)
Basic and diluted net loss per share from continuing operations	$ (8.75)	$ (8.01)
Basic and diluted net loss per share from discontinued operations	—	0.32
Basic and diluted net loss per share	(8.75)	(7.69)
Deemed dividends from issuing Series A convertible preferred stock	(0.57)	—
Series A convertible preferred stock dividends	(0.11)	—
Basic and diluted net loss per share attributable to common stockholders	$ (9.43)	$ (7.69)

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

See Report of Independent Registered Public Accounting Firm.

COMBIMATRIX CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' (DEFICIT) EQUITY
For the Years Ended December 31, 2012 and 2011
(In thousands, except share information)

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Net Losses	Total Stockholders' (Deficit) Equity
	Shares	Amount	Shares	Amount			
Balances, December 31, 2010 . .	—	$ —	762,040	$ 8	$58,569	$(50,361)	$ 8,216
Issuance of common stock, net of issuance costs	—	—	308,372	3	6,597	—	6,600
Non-cash stock compensation	—	—	—	—	933	—	933
Net loss	—	—	—	—	—	(7,599)	(7,599)
Balances, December 31, 2011 . .	—	—	1,070,412	11	66,099	(57,960)	8,150
Reverse stock split adjustment	—	—	(28)	—	—	—	—
Issuance of Series A convertible preferred stock, net of issuance costs	2,500.00000	394	—	—	—	—	—
Beneficial conversion feature on Series A convertible preferred stock	—	(495)	—	—	495	—	495
Conversion of Series A convertible preferred stock to common stock	(855.54814)	—	427,878	—	—	—	—
Make-whole dividends paid in common stock	—	—	12,871	—	101	(101)	—
Accrued dividends on Series A convertible preferred stock	—	—	—	—	—	(22)	(22)
Deemed dividends from issuing Series A convertible preferred stock	—	495	—	—	—	(617)	(617)
Non-cash stock compensation	—	—	—	—	402	—	402
Net loss	—	—	—	—	—	(9,527)	(9,527)
Balances, December 31, 2012 . .	1,644.45186	$ 394	1,511,133	$11	$67,097	$(68,227)	$(1,119)

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

See Report of Independent Registered Public Accounting Firm.

COMBIMATRIX CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 2012 and 2011
(In thousands)

	For the Years Ended December 31,	
	2012	**2011**
Operating activities:		
Net loss	$(9,527)	$(7,599)
Adjustments to reconcile net loss to net cash flows from operating activities:		
Depreciation and amortization	490	316
Stock compensation	402	933
Warrant derivative charges	2,357	—
Provision for bad debts	276	479
Changes in assets and liabilities:		
Accounts receivable	(76)	(494)
Supplies, prepaid expenses and other assets	48	(14)
Accounts payable, accrued expenses and other	90	(163)
Net cash flows from operating activities	(5,940)	(6,542)
Investing activities:		
Purchase of property and equipment	(31)	(192)
Net cash flows from investing activities	(31)	(192)
Financing activities:		
Net proceeds from issuance of Series A convertible preferred stock	2,079	—
Net proceeds from issuance of common stock	—	6,600
Net proceeds from capital lease financing	—	46
Repayment of capital lease obligations	(121)	(83)
Net cash flows from financing activities	1,958	6,563
Decrease in cash and cash equivalents	(4,013)	(171)
Cash and cash equivalents, beginning	6,385	6,556
Cash and cash equivalents, ending	$ 2,372	$ 6,385
Cash paid in interest expense	$ 25	$ 19
Non-cash investing and financing activities:		
Property and equipment purchased on capital leases	$ 306	$ 127
Make-whole Series A convertible preferred stock paid in common stock	$ 101	$ —
Deemed dividends from issuing Series A convertible preferred stock	$ 617	$ —
Fair value of warrants issued with Series A convertible preferred stock offering	$ 2,127	$ —

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

See Report of Independent Registered Public Accounting Firm.

1. DESCRIPTION OF BUSINESS

CombiMatrix Corporation (the "Company," "we," "us" and "our") was originally incorporated in October 1995 as a California corporation and later reincorporated as a Delaware corporation in September 2000. In December 2002, we merged with and became a wholly owned subsidiary of Acacia Research Corporation ("Acacia"). In December 2006, we filed a registration statement with the U.S. Securities and Exchange Commission ("SEC") in order to register our common stock as part of a plan to split-off from Acacia (the "Split-Off"). On August 15, 2007 (the "Split-Off Date"), the Split-Off was effected and our common stock became publicly traded on The Nasdaq Stock Market (symbol: "CBMX"). As of the Split-Off Date, we ceased to be a subsidiary of, or affiliated with, Acacia.

Description of the Company

We are a molecular diagnostics company that operates primarily in the field of genetic analysis and molecular diagnostics through our wholly owned subsidiary, CombiMatrix Molecular Diagnostics, Inc. ("CMDX"), located in Irvine, California. CMDX operates as a diagnostics reference laboratory providing DNA-based clinical diagnostic testing services to physicians, hospitals, clinics and other laboratories in two primary areas: (i) prenatal and postnatal developmental disorders; and (ii) hematology/oncology genomics. CMDX provides its services primarily through the use of array-comparative genomic hybridization ("aCGH"), which enables the analysis of genetic anomalies, as well as through other test offerings including fluorescent in-situ hybridization ("FISH") and G-Band Chromosome analysis. Our mission is to empower physicians to positively impact patient care through the delivery of innovative molecular diagnostics services.

On April 19, 2010, we announced a strategic and operational restructuring plan (the "Restructuring Plan") intended to significantly reduce operating costs, increase the focus on the Company's diagnostic services business and transition senior management. As part of the Restructuring Plan, we closed our Mukilteo, Washington facility, which had been focused primarily on research, development and commercialization of the Company's oligonucleotide microarray technologies, also known as our "CustomArray" business.

Reverse Stock Split

On December 4, 2012, we filed a Certificate of Amendment to our Certificate of Incorporation with the Secretary of State of the State of Delaware to effect a reverse split of our common stock at a ratio of one-for-ten (the "Reverse Stock Split"), which became effective at the close of business on that day. As a result, each share of CombiMatrix common stock outstanding as of December 4, 2012 was automatically changed into one-tenth of a share of common stock. No fractional shares were issued in connection with the Reverse Stock Split, and cash paid to stockholders for potential fractional shares was insignificant. The number of shares of common stock subject to outstanding options, warrants and convertible securities were also reduced by a factor of ten as of December 4, 2012. All historical share and per share amounts reflected throughout this document have been adjusted to reflect the Reverse Stock Split. The authorized number of shares and the par value per share of our common stock were not affected by the Reverse Stock Split.

Liquidity and Risks

We have a history of incurring net losses and net operating cash flow deficits. We are also deploying new technologies and continue to develop new and improve existing commercial diagnostic testing services and related products. At December 31, 2012, we had cash and cash equivalents of $2.4 million and

anticipate that our cash and cash equivalent balances, combined with $2.7 million of proceeds from the exercise of certain common stock warrants and sales of equity securities subsequent to year-end (see Notes 10 and 12) will be sufficient to meet our cash requirements into the fourth quarter of 2013. As a result, the uncertainty regarding our ability to execute our business plan beyond this point raises substantial doubt about our ability to continue as a going concern.

Our financial statements for the year ended December 31, 2011 were also prepared assuming we would continue as a going concern. Our history of incurring net losses and net operating cash flow deficits led to the uncertainty regarding our ability to execute our business plans as of December 31, 2011, which also raised substantial doubt about our ability to continue as a going concern at December 31, 2011.

In order for us to continue as a going concern beyond the fourth quarter of 2013 and ultimately to achieve profitability, we may be required to obtain capital from external sources, increase revenues and reduce operating costs. However, there can be no assurance that our operations will become profitable or that external sources of financing, including the issuance of debt and/or equity securities, will be available at times and at terms acceptable to us, or at all. The issuance of additional equity or convertible debt securities will also cause dilution to our shareholders. If external financing sources are not available or are inadequate to fund our operations, we will be required to reduce operating costs, including research projects and personnel, which could jeopardize our future strategic initiatives and business plans.

Our business operations are also subject to certain risks and uncertainties, including:

- market acceptance of products and services;
- technological advances that may make our products and services obsolete or less competitive;
- increases in operating costs, including costs for supplies, personnel and equipment;
- the availability and cost of capital;
- governmental regulation that may restrict our business.

Our services are concentrated in a highly competitive market that is characterized by rapid technological advances, frequent changes in customer requirements and evolving regulatory requirements and industry standards. Failure to anticipate or respond adequately to technological advances, changes in customer requirements, changes in regulatory requirements or industry standards, or any significant delays in the development or introduction of planned products or services, could have a material adverse effect on our business and operating results. The accompanying consolidated financial statements have been prepared assuming that we will continue as a going concern. The financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the matters discussed herein.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Accounting Principles and Fiscal Year End. The consolidated financial statements and accompanying notes are prepared on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles (“GAAP”). We have a December 31 year-end.

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 amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Basis of Presentation and Principles of Consolidation. The accompanying consolidated financial statements include the accounts of the Company and our wholly owned subsidiaries. Investments for which we possess the power to direct or cause the direction of the management and policies, either through majority ownership or other means, are accounted for under the consolidation method. Material intercompany transactions and balances have been eliminated in consolidation. Investments in companies in which we maintain an ownership interest of 20% to 50% or exercise significant influence over operating and financial policies are accounted for under the equity method. The cost method is used where we maintain ownership interests of less than 20% and do not exercise significant influence over the investee.

Discontinued Operations. We reclassify, from continuing operations to discontinued operations, for all periods presented, the results of operations for any component either held for sale or disposed of. We define a component as being distinguishable from the rest of our Company because it has its own operations and cash flows. A component may be a reportable segment, an operating segment, a reporting unit, a subsidiary, or an asset group. Such reclassifications had no effect on our net loss or shareholders' equity.

Revenue Recognition. We recognize revenue when (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been performed, (iii) amounts are fixed or determinable and (iv) collectability of amounts is reasonably assured.

Service revenues from providing diagnostic tests are recognized when the testing process is complete and test results are reported to the ordering physician or clinic. These diagnostic services are billed to various payors, including commercial insurance companies, healthcare institutions, government payors including Medicare and Medicaid, and individuals. We report revenues from contracted payors based on a contractual rate, or in the case of Medicare and Medicaid, published fee schedules for our tests. We report revenues from non-contracted payors based on the amount expected to be collected. The difference between the amount billed and the amount expected to be collected from non-contracted payors is recorded as a contractual allowance to arrive at net recognized revenues. The expected revenues from non-contracted payors are based on the historical collection experience of each payor or payor group, as appropriate. In each reporting period, we review our historical collection experience for non-contracted payors and adjust our expected revenues for current and subsequent periods accordingly. We also recognize additional revenue from actual cash payments that exceed amounts initially recognized, in the period the payments are received. For the years ended December 31, 2012 and 2011, net positive revenue adjustments were $570,000 and $448,000, respectively. Because a substantial portion of our revenues is from non-contracted third-party payors, it is likely that we will be required to make adjustments to accounting estimates with respect to contractual allowances in the future, which may positively or adversely affect our results of operations. In all cases described above, we report revenues net of any applicable statutory taxes collected from customers, as applicable.

Clinical trials support services revenue is recognized when the related support services have been delivered to and accepted by the customer. Royalty revenue is recognized in the period when earned.

Cash and Cash Equivalents. We consider all highly liquid, short-term investments with original maturities of three months or less when purchased to be cash equivalents.

Fair Value Measurements. We measure fair value as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that is determined based on assumptions

that market participants would use in pricing an asset or liability. We utilize a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

- Level 1: Observable market inputs such as quoted prices in active markets;
- Level 2: Observable market inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3: Unobservable inputs where there is little or no market data, which require the reporting entity to develop its own assumptions.

Concentration of Credit Risks. Cash equivalents are invested in deposits with certain financial institutions and may, at times, exceed federally insured limits. We have not experienced any significant losses on our deposits of cash and cash equivalents.

Substantially all of the components and raw materials used in providing our testing services, including array slides and reagents, are currently provided to us from a limited number of sources or in some cases from a single source. Although we believe that alternative sources for those components and raw materials are available, any supply interruption in a sole-sourced component or raw material might result in up to a several-month production delay and materially harm our ability to manufacture products until a new source of supply, if any, could be located and qualified.

Accounts Receivable and Allowance for Doubtful Accounts. Accounts receivable are stated at principal amounts and are primarily comprised of amounts contractually due from third-party payors and individuals for services performed. Our policy for assessing the collectability of receivables is dependent upon the major payor source of the underlying revenue. For direct bill clients, an assessment of credit worthiness is performed prior to initial engagement and is reassessed periodically. If deemed necessary, an allowance is established on receivables from direct bill clients. For receivables where insurance carriers have made payments to patients instead of directing payments to us, an allowance is established for a portion of such receivables. The process for estimating the allowance for doubtful accounts involves significant assumptions and judgments. Specifically, the allowance for doubtful accounts is adjusted periodically and is principally based upon specific identification of past due or disputed accounts. We also review the age of receivables by payor class to assess our allowance at each period end, though we typically do not carry an account receivable for longer than twelve months from the initial recognition date. The payment realization cycle for certain governmental and commercial insurance payors can be lengthy, involving denial, appeal and adjudication processes, and is subject to periodic adjustments that may be significant. Accounts receivable are periodically written off when identified as uncollectible and deducted from the allowance for doubtful accounts after appropriate collection efforts have been exhausted. Additions to the allowance for doubtful accounts are charged to bad debt expense as a component of marketing, general and administrative expenses in the consolidated statements of operations. Collection of governmental, private health insurer, and client receivables are generally a function of providing complete and correct billing information to the insurers and clients within the filing deadlines required by each payor. Collection of receivables due from patients and clients is generally subject to increased credit risk due to credit worthiness or inability to pay.

Supplies. Supplies inventory, which consists primarily of raw materials to be used in the production of our array products, is stated at the lower of cost or market using the first-in, first-out method.

Property and Equipment. Property and equipment is recorded at cost. Additions and improvements that increase the value or extend the life of an asset are capitalized. Maintenance and repairs are expensed as incurred. Disposals are removed at cost less accumulated depreciation or amortization and any gain or

loss from disposition is reflected in the consolidated statement of operations in the period of disposition. Depreciation is computed on a straight-line basis over the following estimated useful lives of the assets:

Laboratory equipment	3 to 5 years
Furniture and fixtures	5 to 7 years
Computer hardware and software	3 years
Leasehold improvements	Lesser of lease term or useful life of improvement

Certain leasehold improvements, furniture and equipment held under capital leases are classified as property and equipment and are amortized over their useful lives using the straight-line method. Lease amortization is included in depreciation expense.

Derivative Financial Instruments. We evaluate financial instruments for freestanding or embedded derivatives. Derivative instruments that do not qualify for permanent equity classification are recorded as liabilities at fair value, with changes in value recognized as other income (expense) in the consolidated statements of operations in the period of change. Derivative liabilities are categorized as either short-term or long-term based upon management's estimates as to when the derivative instrument may be realized or based upon the holder's ability to realize the instrument.

Stock-Based Compensation. The compensation cost for stock-based awards to employees is measured at the grant date, based on the fair value of the award, and is recognized as an expense, on a straight-line basis, over the employee's requisite service period (generally the vesting period of the equity award) which is generally three years. The fair value of each option award is estimated on the date of grant using a Black-Scholes option valuation model. Stock-based compensation expense is recognized only for those awards that are expected to vest using an estimated forfeiture rate. We estimate pre-vesting option forfeitures at the time of grant and reflect the impact of estimated pre-vesting option forfeitures in compensation expense recognized.

The weighted average assumptions used to estimate the fair value of awards granted for the periods presented are noted in the table below. Expected volatility is based on the separate historical volatility of the market prices of our common stock. The risk-free rate for the expected term, using the simplified method, of the option is based on the U.S. Treasury yield curve in effect at the time of grant.

	For the Years Ended December 31,	
	2012	**2011**
Risk free interest rate	1.3%	2.7%
Volatility	78.5%	63.0%
Expected term	6.3 years	5.8 years
Expected dividends	0%	0%

Stock-based compensation expense for 2012 and 2011 attributable to our functional expense categories were as follows (in thousands):

	For the Years Ended December 31,	
	2012	2011
Cost of products and services	$ 5	$ 44
Research and development	7	48
Sales and marketing	4	43
General and administrative	386	943
Discontinued operations	—	(145)
Total non-cash stock compensation	$402	$ 933

Research and Development Expenses. Prior to launching a new test or modifying an existing test, extensive laboratory validations consistent with the various regulations that govern our industry must be performed. As a result, research and development expenses include labor, laboratory supplies, and other development costs required to maintain and improve our existing suite of diagnostic test offerings as well as to investigate and develop new tests. Costs to acquire technologies which are utilized in research and development and which have no alternative future use are expensed when incurred. Software developed for use in our products is expensed as incurred until both (i) technological feasibility for the software has been established and (ii) all research and development activities for the other components of the system have been completed. We believe these criteria are met after we have received evaluations from third-party test sites and completed any resulting modifications to the products. Expenditures to date have been classified as research and development expense.

Advertising. Costs associated with marketing and advertising of our products and services are expensed as incurred. For the years ended December 31, 2012 and 2011, we incurred marketing and advertising expenses of $312,000 and $327,000, respectively.

Income Taxes. We recognize income taxes on an accrual basis based on tax positions taken or expected to be taken in our tax returns. A tax position is defined as a position in a previously filed tax return or a position expected to be taken in a future tax filing that is reflected in measuring current or deferred income tax assets and liabilities. Tax positions are recognized only when it is more likely than not (i.e., likelihood of greater than 50%), based on technical merits, that the position would be sustained upon examination by taxing authorities. Tax positions that meet the more likely than not threshold are measured using a probability-weighted approach as the largest amount of tax benefit that is greater than 50% likely of being realized upon settlement. Income taxes are accounted for using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our financial statements or tax returns. A valuation allowance is established to reduce deferred tax assets if all, or some portion, of such assets will more than likely not be realized. Should they occur, our policy is to classify interest and penalties related to tax positions as income tax expense. Since our inception, no such interest or penalties have been incurred, however.

Segments. We have determined that we operate in one segment for financial reporting purposes.

Net Loss Per Share. Basic and diluted net loss per share has been computed by dividing the net loss by the weighted average number of common shares issued and outstanding during the periods presented. Options and warrants to purchase CombiMatrix stock as well as preferred stock convertible into shares of

common stock are anti-dilutive and therefore are not included in the determination of the diluted net loss per share. The following table reflects the excluded dilutive securities:

	For the Years Ended December 31,	
	2012	2011
Common stock options	161,933	221,243
Common stock warrants	1,219,479	376,648
Series A preferred stock convertible into common stock	822,431	—
Excluded dilutive securities	2,203,843	597,891

Recent and Adopted Accounting Pronouncements. In July 2011, the Financial Accounting Standards Board (“FASB”) issued an amendment to the accounting standards related to the revenue recognition practices of health care entities that recognize significant amounts of patient service revenues at the time services are rendered even though the entity does not assess the patient’s ability to pay for those services. The amendment requires such entities to classify its provision for bad debts related to such revenues as a reduction from patient service revenues rather than as an operating expense as well as enhanced disclosures about an entity’s policy for recognizing revenue and bad debt expense for patient service transactions along with quantitative information about the effects of changes in the assessment of collectability of patient service revenue. This amendment was effective for us beginning January 1, 2012. Given that we do not recognize significant amounts of patient service revenues from individual payments but primarily from contracted and non-contracted third-party payors, this standard did not result in a material impact on our consolidated financial position, results of operations or cash flows.

In June 2011, the FASB issued an amendment to the accounting standards related to the presentation of comprehensive income. This standard revises the manner in which entities present comprehensive income in their financial statements and removes the option to present items of other comprehensive income in the statement of changes in shareholders’ equity. This standard requires an entity to report components of comprehensive income in either (1) a continuous statement of comprehensive income or (2) two separate but consecutive statements of net income and other comprehensive income. This standard did not result in a material impact on our consolidated financial position, results of operations or cash flows.

3. RESTRUCTURING

On April 19, 2010, we announced a Restructuring Plan intended to focus our Company on our diagnostic services business while shutting down our CustomArray business. Certain activities relating to completion of our former Department of Defense contracts continued into the first few months of 2011. There have been no activities from discontinued operations subsequent to June 30, 2011.

4. FAIR VALUE MEASUREMENTS

The following table summarizes, for each major category of financial assets or liabilities measured on a recurring basis, the respective fair value at December 31, 2012 and 2011, and the classification by level of input within the fair value hierarchy defined above (in thousands):

		Fair Value Measurements		
December 31, 2012	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash equivalents	$ 14	$14	$—	$ —
Liabilities:				
Derivative warrant liability	$4,484	$—	$—	$4,484

		Fair Value Measurements		
December 31, 2011	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash equivalents	$5,771	$5,771	$—	$—
Liabilities:				
Derivative warrant liability	$ —	$ —	$—	$—

The following table is a reconciliation of financial liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the year ended December 31, 2012 (in thousands):

	Derivative Warrant Liability
Balance, December 31, 2011	$ —
Issuances at fair value	2,127
Changes in fair value	2,357
Balance, December 31, 2012	$4,484

The fair value of the derivative warrant liability is based on Level 3 inputs. For this liability, we developed our own assumptions that do not have observable inputs or available market data to support the fair value recorded. See Note 11 for further discussion of the derivative warrant liability.

5. PROPERTY AND EQUIPMENT

Property and equipment consists of the following (in thousands):

	December 31,	
	2012	2011
Laboratory equipment	$ 1,745	$ 1,431
Furniture and fixtures	103	197
Computer hardware and software	214	100
Leasehold improvements	289	288
	2,351	2,016
Less—accumulated depreciation and amortization	(1,685)	(1,409)
	$ 666	$ 607

Depreciation and amortization expense was $276,000 and $250,000 for the years ended December 31, 2012 and 2011, respectfully. The net book value of assets under capital lease obligations was $523,000 and $314,000 as of December 31, 2012 and 2011, respectively.

6. BALANCE SHEET COMPONENTS

Accounts payable, accrued expenses and other accrued expenses consist of the following (in thousands):

	December 31,	
	2012	2011
Accounts payable	$ 610	$ 411
Payroll and other employee benefits	324	300
Accrued vacation	143	168
Deferred rent	4	56
Other accrued expenses	141	69
	$1,222	$1,004

7. INCOME TAXES

The tax effects of temporary differences and carryforwards that give rise to significant portions of deferred assets and liabilities consist of the following (in thousands):

	December 31,	
	2012	2011
Deferred tax assets:		
Deferred settlement costs	$ 1,574	$ 1,781
Stock-based compensation	428	1,171
Accrued liabilities and other	485	483
Net operating loss carryforwards and credits	59,173	56,271
Total deferred tax assets	61,660	59,706
Less: valuation allowance	(61,620)	(59,700)
Deferred tax assets, net of valuation allowance	40	6
Deferred tax liabilities:		
Depreciation and amortization	(40)	(6)
Net deferred tax liability	$ —	$ —

A reconciliation of the federal statutory income tax rate and the effective income tax rate is as follows:

	December 31,	
	2012	2011
Statutory federal tax rate	(34%)	(34%)
Impact on state tax rates	(5%)	(5%)
Warrant valuation	9%	0%
Research and development tax credits	0%	(1%)
Cancellation of vested non-qualified stock options	9%	9%
Valuation allowance	20%	29%
Other non deductible permanent items	1%	2%
	0%	0%

At December 31, 2012 and 2011, we had net deferred tax assets totaling approximately $61.7 million and $59.7 million, respectively. These assets are offset by valuation allowances due to our determination that the criteria for asset recognition have not been met, as well as by deferred tax liabilities. At December 31, 2012, we had federal net operating loss carryforwards of approximately $153.3 million, which begin to expire in 2017 through 2031. In addition, we have tax credit carryforwards of approximately $5.2 million. Utilization of net operating loss carryforwards and tax credit carryforwards are subject to the "change of ownership" provisions under Section 382 of the Internal Revenue Code. The amount of such limitations has not been determined. Based on a tax allocation agreement executed between us and Acacia, it is expected that all tax benefits, carryforwards and balances attributable to CombiMatrix Corporation prior to the Split-Off Date will remain with us subsequent to the Split-Off Date.

Prior to the Split-Off Date, our annual income tax returns were included with Acacia's consolidated tax return filings. Had we filed separate tax returns, the benefit for income taxes recognized by us would not have differed significantly from the amounts reported in our consolidated statements of operations for

all years presented. Also, given that our net operating losses have yet to be utilized, all previous tax years remain open to examination by Federal authorities and other jurisdictions in which we operate. We have no unrecognized tax benefits as of December 31, 2012 and 2011.

8. COMMITMENTS AND CONTINGENCIES

Leases

We have entered into a non-cancelable operating lease for approximately 12,200 square feet of office and laboratory facilities in Irvine, California, with a lease term through January 2014.

At December 31, 2012, we had twelve capital leases for laboratory equipment with original purchase amounts totaling $699,000 and with useful lives of five years. As of December 31, 2012, the remaining lease obligations (including interest charges) were $567,000 with minimum future lease payments shown below. The weighted average interest rate on the capital lease obligations was 14.2%, based on remaining lease obligations as of December 31, 2012. The fair value of the capital lease obligations was not significantly different from their carrying amounts for all periods presented.

Future minimum lease payments for all of our facilities and leased equipment are as follows (in thousands):

Years ending December 31:

	Operating Leases	Capital Leases	Total
2013	$170	$ 313	$483
2014	14	181	195
2015	—	47	47
2016	—	23	23
2017	—	3	3
Total minimum lease payments	$184	567	$751
Less—imputed interest		(88)	
Present value of capital lease obligations		479	
Less—current portion		(253)	
Capital lease obligations, net of current portion		$ 226	

Rent expense for the years ended December 31, 2012 and 2011 was $288,000 and $302,000, respectively.

Executive Severance

We provide certain severance benefits such that if an executive officer of CombiMatrix Corporation is terminated for other than cause, death or disability, the executive will receive payments equal to three months' base salary plus medical and dental benefits. In addition, we have implemented a Restated Executive Change of Control Severance Plan (the "Severance Plan") that affects certain of our senior management-level employees who are classified as "Section 16 Officers" of the Company. Pursuant to the Severance Plan, if a participating employee is involuntarily terminated (other than for death, disability or for cause) or resigns for "good reason" (as defined in the Severance Plan) during the two-year period following a "change of control" (as defined in the Severance Plan) of the Company, then, subject to execution of a release of claims against the Company, the employee will be entitled to receive: (i) one-half times annual base salary; (ii) immediate vesting of outstanding compensatory equity awards; and

(iii) payment of COBRA premiums for the participating employee and eligible dependants for a pre-determined period of time. Payment of benefits under the Severance Plan will be limited by provisions contained in Section 409A of the U.S. Internal Revenue Code. The Severance Plan is administered by a plan administrator, which initially is the Compensation Committee of the Board of Directors. In order to participate in the Severance Plan, an eligible employee must waive any prior retention or severance agreements.

Litigation

On September 30, 2002, we entered into a settlement agreement with Nanogen, Inc. (“Nanogen”) to settle all pending litigation between the parties. Pursuant to the terms of the settlement agreement, we agreed to make quarterly payments to Nanogen equal to 12.5% of total sales of products developed by us and our affiliates based on the patents that had been in dispute in the litigation, up to an annual maximum amount of $1.5 million. The minimum quarterly payments under the settlement agreement are $25,000 per quarter until the patents expire in 2018. Royalty expenses recognized under the agreement were $100,000 in each of the years ended December 31, 2012 and 2011, and are included in patent amortization and royalties in the accompanying consolidated statements of operations.

On February 14, 2011, Relator Michael Strathmann (“Strathmann”) served us with a complaint (“the Complaint”) filed in the Superior Court of the State of California for the County of Orange. The Complaint alleged that we submitted false and fraudulent insurance claims to National Union Fire Insurance Company of Pittsburgh, PA in connection with a prior lawsuit that was settled with Nanogen, Inc., thereby allegedly violating the California Insurance Fraud Prevention Act, and sought penalties and unspecified treble damages. On May 4, 2011, the Superior Court dismissed the Complaint by ordering that it be stricken for violation of the California Anti-SLAPP statute, which prevents plaintiffs from filing abusive lawsuits against public policy. On June 15, 2011, Strathmann filed a Notice of Appeal with the California Court of Appeals, appealing the granting of the Motion to Strike. Subsequently, Strathmann filed a Notice of Appeal of the award of attorneys’ fees against him. On October 24, 2012, the California Court of Appeals reversed the Superior Court’s dismissal, finding that the anti-SLAPP statute was not applicable, permitting Strathmann to file an Amended Complaint and remanding the matter back to the Superior Court. We have now filed a Demurrer to that Amended Complaint, seeking to have the matter dismissed. We believe that this litigation is frivolous and intend to vigorously defend against it, but there can be no assurance that we will ultimately be successful. No contingent liability has been recognized due to the lack of specificity relating to the damages being sought by Strathmann and management’s assessment that the likelihood of materially unfavorable outcome to be remote in nature.

From time to time, we are subject to other claims and legal actions that arise in the ordinary course of business. We believe that the ultimate liability with respect to these claims and legal actions, if any, will not have a material effect on our financial position, results of operations or cash flows. Any legal costs resulting from claims or legal actions are expensed as incurred. Based on a distribution agreement executed between us and Acacia, it is expected that such claims and legal actions attributable to CombiMatrix Corporation prior to the Split-Off Date will remain with us subsequent to the Split-Off Date. As of the date of this report and prior to such date, we are not aware of the existence of any such claims or legal actions.

9. RETIREMENT SAVINGS PLAN

We have an employee savings and retirement plan under section 401(k) of the Internal Revenue Code (the “Retirement Plan”). The Retirement Plan is a defined contribution plan in which eligible employees may elect to have a percentage of their compensation contributed to the Retirement Plan, subject to

certain guidelines issued by the Internal Revenue Service. We may contribute to the Retirement Plan at the discretion of our board of directors. There were no contributions made by us during any of the years presented.

10. SHAREHOLDERS' EQUITY

Common and Preferred Stock

The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the shareholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose. The board of directors has the authority, without further action by the shareholders, to issue from time to time preferred stock in one or more series and to fix the number of shares, designations, preferences, powers, and relative, participating, optional or other special rights and the qualifications or restrictions of our preferred stock. The preferences, powers, rights and restrictions of different series of preferred stock may differ with respect to dividend rates, amounts payable on liquidation, voting rights, conversion rights, redemption provisions, sinking fund provisions, and purchase funds and other matters.

Preferred Stock Financing—Description

On September 28, 2012 (the "Commitment Date"), we entered into a securities purchase agreement (the "Purchase Agreement") with certain accredited investors (the "Investors"), pursuant to which we would sell and issue 1,050.70039 shares of newly created Series A 6% Convertible Preferred Stock (the "Series A Stock") to the Investors at a purchase price of $1,000 per share in an initial closing that occurred on October 1, 2012 (the "First Closing") and, subject to stockholder approval, would sell and issue 1,449.29961 additional shares of Series A Stock to the Investors at a purchase price of $1,000 per share within five business days after such stockholder approval was obtained (the "Second Closing") (combined, the "Series A Financing"). A special stockholders' meeting was held on November 29, 2012 in which stockholder approval for the Second Closing was obtained. On December 6, 2012, the Second Closing occurred and the remaining $1.45 million of aggregate proceeds was paid to us. After certain offering-related costs were incurred, the net proceeds received by us from the Series A Financing were $2.1 million.

The Series A Stock is non-voting (except to the extent required by law and except for certain consent rights relating to amending the certificate of incorporation or bylaws, and the like) but ranks senior to our common stock with respect to dividends and to distributions upon a deemed dissolution, liquidation or winding-up of the Company. Holders of the Series A Stock are entitled to receive accruing dividends at the annual rate of 6%, payable semi-annually. If the Series A Stock is converted into common stock prior to the third anniversary of its issuance date, we will pay to each holder of Series A Stock converting to common stock, as a "make-whole" payment in cash or, subject to certain conditions, in common stock, in an amount equal to $118 per $1,000 of stated value of Series A Stock so converted, less the aggregate amount of dividends previously paid on such converting Series A Stock. Dividends are payable in cash or in additional shares of common stock (subject to a 20% discount) if certain trading requirements prior to the dividend payment dates are achieved. Also, each share of Series A Stock is convertible at any time at the holder's option into shares of our common stock at an initial conversion price of $4.9112 per share of common stock, which was 77.5% of the three-day volume weighted average price ("VWAP") of one share of common stock immediately prior to the execution of the Purchase Agreement. The conversion price of the Series A Stock is subject to full-ratchet anti-dilution adjustments in the event we issue securities, other than for certain excepted issuances, at a price below the then-current conversion price of the Series A Stock. The conversion price of the Series A Stock will be reduced to the lesser of the then-applicable

conversion price or 77.5% of the three-day VWAP of one share of common stock immediately prior to each of the following dates: (i) each "Effective Date"; (ii) the Second Closing; and (iii) the 180th calendar day following each Effective Date, which is defined as each date that a registration statement filed by us pursuant to the Registration Rights Agreement (described below) is declared effective by the SEC. The conversion price of the Series A Stock also is subject to proportional adjustment for stock splits, stock dividends, recapitalizations and similar events. As a result of the Second Closing, the conversion price for the Series A Financing was reduced to $1.9995 per share, or the equivalent of 1.25 million shares of common stock issuable upon conversion of all Series A Stock. During December 2012, the Investors converted 855.54814 shares of Series A Stock into 427,878 shares of common stock. In addition, 12,871 shares of common stock were issued to the Investors in payment of the make-whole dividends related to the Series A Stock conversions. The combination of make-whole dividends paid plus accrual of the 6% contractual dividend rate was $123,000 for the period ended December 31, 2012.

In addition to the issuance of the Series A Stock, at the First Closing, we issued warrants to purchase 213,945 shares of common stock to the Investors. These warrants have a term of 5½ years and become exercisable six months from the First Closing, with an initial exercise price of $9.50 per share. At the Second Closing, we issued warrants to purchase 724,825 shares of common stock to the Investors. These warrants have a term of 5½ years and become exercisable six months from the Second Closing, with an initial exercise price of $2.36 per share (collectively, the "Series A Warrants"). The exercise price of the Series A Warrants and the number of shares of common stock underlying the Series A Warrants are subject to full-ratchet anti-dilution adjustments in the event we issue securities, other than certain excepted issuances, at a price below the then current exercise price of the Series A Warrants.

On the Commitment Date, we entered into a Registration Rights Agreement with the Investors (the "Registration Rights Agreement"), which requires us to not later than 15 days after each closing, file a registration statement with the SEC registering for resale: (i) the shares of common stock issuable upon conversion of the Series A Stock; (ii) the shares of Common Stock issuable as dividends and "make-whole" payments on the Series A Stock; (iii) the shares of common stock issuable upon exercise of the Series A Warrants; and (iv) any additional shares of common stock issuable in connection with any anti-dilution provisions of the Series A Stock or the Series A Warrants. On October 10, 2012, we filed a resale registration statement on Form S-3 with the SEC pursuant to our obligations under the Registration Rights Agreement relating to the First Closing, which was declared effective on December 13, 2012. On December 20, 2012, we filed a resale registration statement on Form S-3 with the SEC pursuant to our obligations under the Registration Rights Agreement relating to the Second Closing, which was declared effective on January 7, 2013.

The holders of Series A Stock may require us to: (A) redeem the Series A Stock for a cash payment of at least 130% of the stated value of the Series A Stock; or (B) either redeem the Series A Stock in exchange for the issuance of common stock valued at a discount of 25% to the preceding 10-day VWAP or increase the dividend payable on the Series A Stock to 18% per year, in each case dependent upon the occurrence of certain triggering events based upon: (i) the failure of the initial registration statement to be declared effective as required by the Registration Rights Agreement; (ii) the lapse of effectiveness of one or more of the registration statements; (iii) the failure to timely deliver stock certificates; (iv) the breach of certain provisions of the Registration Rights Agreement; (v) the failure to pay certain liquidated damages or penalties required by the Certificate of Designation or Registration Rights Agreement; (vi) the failure to have available a sufficient number of authorized and unreserved shares of common stock to issue upon conversion of Series A Stock; (vii) the material, uncured failure by us to observe or perform any other covenant, agreement or warranty contained in, or otherwise commit any material breach of any of the transaction agreements; (viii) the redemption of any common stock, subject to certain exceptions; (ix) a

change in control as defined in the transaction documents; (x) bankruptcy, assignment for benefit of creditors, or similar insolvency event by us; (xi) the delisting of the common stock for more than five trading days; or (xii) any monetary judgment or similar order for more than $500,000 against us, our subsidiary, or any of our respective properties or other assets that is not covered by insurance and remains un-vacated, un-bonded or un-stayed for a period of 45 calendar days.

For a period of 12 months following the First Closing, we have granted the Investors a right of first offer on certain of our future issuances of securities. We have also agreed to certain standstill provisions, pursuant to which, if the Second Closing occurs, we may not issue any equity securities (or securities convertible into equity) until 180 days following the Second Closing (except for certain exempt issuances); provided, however, if the registration statements covering common stock issuable upon conversion of the Series A Stock and exercise of the Series A Warrants sold and issued at both the First Closing and Second Closing are declared effective prior to March 1, 2013, then the restriction on our issuance of equity securities (or securities convertible into equity) will expire on March 1, 2013. In addition, until all Investors no longer hold Series A Stock or Series A Warrants: (i) we may not sell any variable rate securities or dilutive securities except for certain exempt issuances; (ii) if we enter into a subsequent financing on more favorable terms than the Series A Stock financing, then the agreements between us and the Selling Stockholders will be amended to include such more favorable terms; and (iii) we may not sell securities at an effective price per share less than $4.9112 except for certain exempt issuances.

Preferred Stock Financing—Accounting and Recognition

As described above, there are certain circumstances that if they occur, would be considered triggering events requiring us to redeem the Series A Stock from the Investors for cash. Because certain of these events are considered to be outside of our control, we have classified the Series A Stock as mezzanine equity (i.e., outside of permanent equity) on our December 31, 2012 consolidated balance sheet, net of offering-related costs allocated to the Series A Stock. Also, given that the conversion price of the Series A Stock was below the closing market price of our common stock at Closing, we recognized a beneficial conversion feature in the amount of $495,000, which was limited to and reduced the net proceeds allocated to the Series A Stock with a corresponding increase to paid-in capital. Since the Series A Stock is immediately convertible into common stock, the beneficial conversion feature was treated as a deemed dividend charged to retained earnings with a corresponding increase to the Series A Stock.

We account for stock purchase warrants as either equity instruments or derivative liabilities depending on the specific terms of the warrant agreements. Under applicable accounting guidance, stock warrants must be accounted for as derivative financial instruments if the warrants contain full-ratchet anti-dilution provisions, which preclude the warrants from being considered indexed to the Company's own stock. The Series A Warrants issued to Investors contain such provisions, thus requiring us to treat them as derivative financial instruments, to be recorded at fair value at issuance and subsequently adjusted to fair value at each reporting date, with the corresponding adjustment reflected as a non-operating credit / charge in the consolidated statement of operations. We valued the Series A Warrants using the Monte-Carlo simulation method using the following assumptions at each valuation date: (i) closing stock price and Series A Warrant contractual exercise price; (ii) term to expiration commensurate with the individual Series A Warrant terms ranging from 5.3 years to 5.5 years; (iii) historical volatilities commensurate with the term of the Series A Warrants ranging from 65.6% to 103.9%; (iv) risk-free interest rates commensurate with the term of the Series A Warrants ranging from 0.7% to 0.8%; and (v) simulated anti-dilution impact assuming various probabilities that the Company will raise additional capital by issuing equity securities at prices above or below the current contractual Series A Warrant exercise prices during the Series A Warrant terms. The result of these valuation simulations was to initially value the Series A Warrants issued at a

combined $2.1 million derivative liability, with the residual value of $495,000 allocated to the Series A Stock. Because the value of the Series A Warrants issued at the First Closing exceeded the consideration paid by Investors by $122,000, this amount was recorded as a deemed dividend charged to retained earnings at the First Closing. Subsequently, the fair value of the warrants increased to $4.5 million, resulting in $2.4 million of non-operating, warrant derivative charges recognized for the period ending December 31, 2012.

Offering-related costs that were paid or accrued as of and for the period ending December 31, 2012 of $527,000 were allocated between the Series A Warrants and Series A Stock on a pro-rata basis, resulting in $427,000 allocated to the Series A Warrants and $101,000 allocated to the Series A Stock. Offering-related costs allocated to the Series A Warrants are being amortized over the Series A Warrant exercise restriction period of six months from issuance of the Series A Warrants, which resulted in $147,000 of additional interest expense charges in the period ending December 31, 2012.

Common Stock Financing

There were no common stock financings in 2012.

On April 7, 2011 (the "Closing Date"), we completed a private placement transaction (the "Private Placement") with accredited investors in which we sold $6.76 million of newly issued shares of our common stock and common stock purchase warrants. Under the terms of the Private Placement, we sold 3.08 million units for $2.193125 per unit. Each unit consisted of one share of CombiMatrix common stock and one warrant to purchase 0.425 shares of common stock at an exercise price of $2.14 per share. The unit price reflects the market value of our common stock as determined by Nasdaq rules plus $0.053125 for the warrant component. The warrants became exercisable six months after the Closing Date and have a term of five years. We paid no investment banking or advisory fees in order to execute the Private Placement. Attorney's fees and related costs were approximately $163,000, resulting in net proceeds from the Private Placement of $6.6 million.

Warrants

Outstanding warrants to purchase our common stock are as follows:

	Shares of Common Stock Issuable from Warrants Outstanding as of December 31,		Exercise Price	Expiration
	2012	2011		
Liability-classified warrants:				
October 2012	213,945	—	$9.50	March 2018
December 2012	724,825	—	$2.36	June 2018
	938,770	—		
Equity-classified warrants:				
April 2011	131,047	131,047	$21.40	April 2016
October 2009	3,000	3,000	$77.80	October 2014
May 2009	2,967	2,967	$75.00 - $90.00	May 2014 - June 2014
May 2009	109,997	109,997	$90.00	May 2014
July 2008	33,698	33,698	$118.70 - $136.50	July 2013
May 2007	—	95,939	$55.00	May 2012
Total	280,709	376,648		
Total—all warrants	1,219,479	376,648		

11. STOCK OPTIONS

Our employees participate in the CombiMatrix Corporation 2006 Stock Incentive Plan (the "CombiMatrix Plan"), which was approved by our board of directors in 2006. In addition, during 2005, the board of directors of our wholly owned subsidiary, CMDX, approved the CombiMatrix Molecular Diagnostics 2005 Stock Award Plan (the "CMDX Plan"). Our board of directors believes that granting employees stock-based awards is in the best interest of our company and our shareholders.

CombiMatrix Corporation 2006 Stock Incentive Plan

The CombiMatrix Plan is administered by the Compensation Committee (the "Committee") of our Board of Directors. The Committee determines which eligible individuals are to receive option grants or stock issuances under the CombiMatrix Plan, the time or times when the grants or issuances are to be made, the number of shares subject to each grant or issuance, the status of any granted option as either an incentive stock option or a non-statutory stock option under the federal tax laws, the vesting schedule to be in effect for the option grant or stock issuance and the maximum term for which any granted option is to remain outstanding.

The CombiMatrix Plan is divided into three separate equity incentive programs: a discretionary option grant / stock appreciation right program, a stock issuance program, and an automatic option grant program for outside directors. To date, the discretionary option grant program has been the primary program used in awarding stock-based compensation. Under the discretionary option grant program, the Committee may grant non-statutory options to purchase shares of CombiMatrix stock to eligible individuals in our employ

(including employees, non-employee board members and consultants) at an exercise price not less than 100% of the fair market value of those shares on the grant date, and incentive stock options to purchase shares of CombiMatrix stock to eligible employees at an exercise price not less than 100% of the fair market value of those shares on the grant date. Options are generally exercisable over a three- or four-year vesting term following the date of grant and expire ten years after the grant date. The authorized number of shares of common stock subject to the CombiMatrix Plan was originally 810,000 shares (adjusted for the Reverse Split), and increases by 3% of the total number of CombiMatrix stock outstanding at the end of each calendar year beginning in 2007. On September 10, 2012, our Board of Directors approved a resolution to reduce the authorized number of shares under the CombiMatrix Plan by 300,000 shares. At December 31, 2012, there were approximately 596,000 authorized shares available under the CombiMatrix Plan, with approximately 434,000 shares available for grant.

The following is a summary of the stock option activities under the CombiMatrix Plan for 2012 and 2011:

	Shares	Weighted Average Price	Weighted Contractual Term	Aggregate Intrinsic Value ('000s)
Balance at December 31, 2010	167,787	$59.05	8.2 years	$11
Granted	79,767	$23.36		
Exercised	—	$ —		
Forfeited	(20,266)	$27.22		
Cancelled	(6,045)	$65.65		
Balance at December 31, 2011	221,243	$48.92	7.8 years	$ 6
Granted	60,000	$10.00		
Exercised	—	$ —		
Forfeited	(52,933)	$22.47		
Cancelled	(66,377)	$67.91		
Balance at December 31, 2012	161,933	$35.36	7.7 years	$23
Exercisable at December 31, 2011	126,954	$65.22	6.9 years	$ 1
Exercisable at December 31, 2012	84,335	$54.16	6.6 years	$—

Information related to options granted under the CombiMatrix Plan for 2012 and 2011 is as follows:

	December 31,	
	2012	2011
Weighted average fair values of options granted	$ 6.23	$ 13.70
Options granted with exercise prices:		
Greater than market price on the grant date	—	—
Equal to market price on the grant date	60,000	79,767
Less than market price on the grant date	—	—

There were no option exercises during 2012 or 2011. The aggregate fair value of options vested during the years ended December 31, 2012 and 2011 was $600,000 and $1.4 million, respectively. As of December 31, 2012, the total unrecognized compensation expense related to non-vested stock option

awards was $581,000, which is expected to be recognized over a weighted average term of approximately 2.4 years.

CombiMatrix Molecular Diagnostics 2005 Stock Award Plan

Our wholly owned subsidiary, CMDX, executed the CMDX Plan, with plan provisions and terms similar to that of the CombiMatrix Plan as described above. At December 31, 2012, there were 4.0 million authorized shares available under the CMDX Plan, with approximately 3.7 million shares available for grant.

The following is a summary of stock option activities for the CMDX Plan for 2012 and 2011:

	Shares	Weighted Average Price	Weighted Contractual Term	Aggregate Intrinsic Value ('000s)
Balance at December 31, 2010	451,000	$0.38	4.9 years	$61
Granted	—	$ —		
Exercised	—	$ —		
Cancelled	(40,000)	$0.50		
Balance at December 31, 2011	411,000	$0.36	4.2 years	$60
Granted	—	$ —		
Exercised	—	$ —		
Cancelled	(120,000)	$0.43		
Balance at December 31, 2012	291,000	$0.34	3.1 years	$51
Exercisable at December 31, 2011	361,000	$0.34	4.2 years	$60
Exercisable at December 31, 2012	241,000	$0.30	3.0 years	$50

There were no option grants during 2012 or 2011 under the CMDX Plan. The fair value of options vested during the years ended December 31, 2012 and 2011 was not significant. As of December 31, 2012, the total unrecognized compensation expense related to non-vested stock option awards was not significant.

Stock Option Awards Granted to Non-Employees

Stock option expense reflected in the consolidated statements of operations related to stock options issued to our non-employee scientific advisory board members and consultants are recognized at fair value using the Black-Scholes option-pricing model with weighted average assumptions as disclosed in Note 2 under "Stock-Based Compensation." For the years ended December 31, 2012 and 2011, non-cash charges recognized from stock option awards granted to non-employees was not significant.

12. SUBSEQUENT EVENTS

On January 4, 2013, accrued Series A dividends of $22,000 were paid by issuing 4,164 shares of common stock to the Investors.

On February 26, 2013, we entered into an agreement with the Investors to modify the Warrants such that they would become immediately exercisable as of February 22, 2013 (the "Modification Date"). Since

the Modification Date through March 20, 2013, 329,820 shares of common stock have been issued from exercise of the Warrants, resulting in gross proceeds to the Company of $934,000.

On March 11, 2013, we received written notice (the "Notice") from The NASDAQ Stock Market indicating that we were no longer in compliance with the minimum stockholders' equity requirement for continued listing on The NASDAQ Capital Market. NASDAQ Capital Market Listing Rule 5550(b)(1) (the "Listing Rule") requires registrants to maintain a minimum of $2,5 million in stockholders equity unless the registrant has met one of the alternative standards of market value of listed securities or net income from continuing operations. In our Form 8-K filed on February 27, 2013, we reported stockholders' equity of negative $1.1 million for the period ended December 31, 2012. As such, we are currently not in compliance with the Listing Rule due to our $3.6 million shortfall in stockholders' equity noted. The Notice has no immediate effect on the listing of our common stock. In the Notice, NASDAQ requested that we provide our plan to regain compliance with the continued listing requirements before April 25, 2013. If NASDAQ accepts the plan, it can grant us an additional 180 days from the date of the Notice for us to evidence compliance with the Listing Rule. If NASDAQ does not accept the plan, we will have the opportunity to appeal any delisting decision to a NASDAQ Listings Qualifications Panel. We are currently evaluating various alternative courses of action to regain compliance, and we intend to submit a plan with NASDAQ before April 25, 2013 to maintain our NASDAQ listing. We are working diligently to regain compliance with the Listing Rule.

As a result of the resignation of Martin Felsenthal from our Board of Directors on March 15, 2013, we are no longer in compliance with NASDAQ Listing Rule 5605(b)(1), which requires that a majority of our Board be comprised of independent directors. On March 18, 2013, we received a notice from the Staff of The Nasdaq Stock Market in this regard. In accordance with NASDAQ Listing Rule 5605(b)(1)(A), the notice states that Nasdaq will provide us a cure period, in order to regain compliance, until the earlier of our next annual stockholders' meeting or March 15, 2014; or if the next annual stockholders' meeting is held before September 11, 2013, then we must evidence compliance no later than September 11, 2013.

Subsequent to December 31, 2012 and through the date of this report, the Investors have converted all of the remaining 1,644.45186 shares of Series A Stock into 822,421 shares of common stock. In addition, 50,307 shares of common stock were issued to the Investors in payment of the make-whole and 6% accrued dividends related to the Series A Stock conversions. The combination of make-whole dividends plus the 6% contractual dividends paid in shares of common stock was $180,000.

On March 19, 2013, we entered into a definitive securities purchase agreement (the "Purchase Agreement") with an existing institutional investor to purchase 130,000 shares of common stock at a price of $3.05 per share and approximately 1,610 units consisting of Series B 6% convertible preferred stock (the "Series B Preferred Stock") and warrants to purchase up to 275,000 shares of common stock at an exercise price of $3.49 per share (the "Series B Warrants") in a registered direct offering (the "Series B Offering") of securities off of our existing shelf registration statement on Form S-3 (File No. 333-176372). The Series B Offering closed on March 20, 2013 ("Closing"). The Series B Preferred Stock and Series B Warrants were sold in multiples of fixed combination, with each fixed combination consisting of one share of Series B Preferred Stock and a Series B Warrant to purchase approximately 171 shares of common stock. Each fixed combination of Series B Preferred Stock and Series B Warrants were sold at a price of $1,000. The Series B Preferred Stock is convertible into an aggregate of 528,000 shares of common stock at an initial conversion price of $3.05 per share. The Series B Preferred Stock is not convertible into greater than 19.99% (when aggregated with the common shares purchased in the Offering) of our outstanding common stock unless and until stockholder approval is obtained. The Series B Warrants are not exercisable for six months from Closing, and the Series B Preferred Stock will accrue dividends at an annual rate of 6% beginning six months after Closing, assuming the Series B Preferred Stock has not been converted by

that time. Upon closing of the Offering, we received proceeds of $1.76 million, net of placement agent fees and other related costs. Also as a result of the Offering, the exercise price of certain Series A Warrants automatically ratcheted down by their terms from their original exercise price of $9.50 per share to an adjusted exercise price of $3.05 per share, and the underlying shares exercisable was automatically increased from 213,945 shares to 666,365 shares.

Pursuant to the Certificate of Designation of Preferences, Rights and Limitations of Series B 6% Convertible Preferred Stock filed by the Company with the Delaware Secretary of State on March 19, 2013 (the "Certificate of Designation"), the Series B Preferred Stock is non-voting (except to the extent required by law and except for certain consent rights relating to amending the certificate of incorporation or bylaws, and the like), but ranks senior to the common stock with respect to dividends and with respect to distributions upon a deemed dissolution, liquidation or winding-up of the Company. Each share of Series B Preferred Stock carries a 6% per annum dividend that will begin accruing six months after Closing and will be payable only in cash. Subject to certain exceptions, the conversion price of the Series B Preferred Stock is subject to full ratchet anti-dilution adjustment in the event we issue any convertible debt or equity below the then-current conversion price (subject to the limits imposed by General Instruction I.B.6. of Form S-3). In the event the Company commits material and intentional fraud, we may be required to redeem the Series B Preferred Stock in exchange for the issuance of common stock valued at 130% of the stated value divided by 75% of the average of the preceding 10-day volume-weighted average price of the common stock, subject to the limits imposed by General Instruction I.B.6. of Form S-3.

The Series B Warrants have a 5½ year term as well as a cashless exercise provision in the event there is no effective registration statement covering the common stock issuable upon exercise of the Series B Warrants, and are not exercisable for the first six months following issuance. The Series B Warrants are not subject to price anti-dilution protection.

Pursuant to the terms of the Purchase Agreement, we have also agreed with the Investor that while such Investor holds Series B Preferred Stock or Series B Warrants, we will not effect or enter into an agreement to effect a "Variable Rate Transaction," which means a transaction in which the Company: (i) issues or sells any convertible securities either (A) at a conversion, exercise or exchange rate or other price that is based upon and/or varies with the trading prices of, or quotations for, the shares of the common stock at any time after the initial issuance of such convertible securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such convertible securities or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company; or (ii) enters into any agreement (including, without limitation, an equity line of credit) whereby the Company may sell securities at a future determined price.

We also agreed with the Investor pursuant to the Purchase Agreement that, except under certain permitted circumstances: (i) until the later of the date that is six months from the closing or 30 days following the date on which the Series B Preferred Stock is no longer outstanding it will not issue, or enter into any agreement to issue, any shares of common stock or equivalents thereof; (ii) until the time that less than 7.5% of the Series B Warrants remain outstanding, neither the Company nor its subsidiaries shall issue, or enter into any agreement to issue, common stock or equivalents thereof at a price below the exercise price of the Series B Warrants; (iii) so long as any shares of Series B Preferred Stock are outstanding, neither the Company nor its subsidiaries shall issue, or enter into any agreement to issue, common stock or equivalents at a price below the conversion price of the Series B Preferred Stock unless all shares of common stock underlying the Series B Preferred Stock (taking into consideration the effect of the full adjustment of the anti-dilution provisions from such dilutive issuance) are permitted by General Instruction I.B.6. of Form S-3 to be issued under the registration statement; (iv) if the Company issues

securities within the nine months following Closing under the Purchase Agreement, and subject to the preexisting rights of other security holders, the Investor shall have the right to purchase all of the securities on the same terms, conditions and price provided for in the proposed issuance of securities; and (v) the Company will indemnify the Investor against certain losses resulting from the Company's breach of any of its representations, warranties, or covenants under agreements with the Investor, as well as under certain other circumstances described in the Purchase Agreement.

The Investor has agreed to be subject to a blocker that (i) would prevent its common stock ownership at any given time from exceeding 4.99% (which may be increased, but not above 9.99%) of the Company's outstanding common stock; or (ii) would prevent us from issuing any shares of common stock to the Investor upon the conversion by such Investor of Series B Preferred Stock if the issuance of such shares to the Investor, when aggregated with all other shares of common stock sold to the Investor under the Purchase Agreement together with all shares of common stock issued upon the conversion of Series B Preferred Stock, would result in the total issuance of common stock to exceed 19.99% of our outstanding common stock, without first obtaining the approval of our stockholders. We have agreed to seek stockholder approval at our next annual stockholders' meeting for the terms of the Series B Preferred Stock and the issuance and delivery in the aggregate of that number of shares of common stock exceeding 19.99% of the outstanding shares of common stock upon conversion of the Series B Preferred Stock.

The net proceeds to us from the sale and issuance of the common stock, Series B Preferred Stock and Series B Warrants, after deducting placement agent fees and the estimated offering expenses borne by the Company, and excluding the proceeds, if any, from the exercise of the Series B Warrants, were approximately $1.76 million. After giving effect to the sale and issuance of the common stock, Series B Preferred Stock and Series B Warrants, but without giving effect to the exercise of the warrants and conversion of the Series B Preferred Stock being offered and sold, we had 2,913,030 shares of common stock outstanding.