ASPIRA WOMEN'S HEALTH INC.

FORM 10-K
(Annual Report)

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

FORM 10-K

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Fiscal Year Ended December 31, 2011.

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to

Commission File Number: 001-34810

Vermillion, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**33-0595156**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
12117 Bee Caves Road, Building Three, Suite 100, Austin, Texas	**78738**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (512) 519-0400

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

Title of each class to be so registered	**Name of each exchange on which registered**
Common Stock, par value $0.001 per share	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 x

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 x

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Date 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 x No ¨

Indicate by check mark if 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 x .

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. (Check one):

Large accelerated filer ¨	Accelerated filer ¨
Non-Accelerated filer ¨	Smaller reporting company x

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes x No ¨

The aggregate market value of voting common stock held by non-affiliates of the Registrant is $45,564,126 and is based upon the last sales price as quoted on The NASDAQ Global Market as of June 30, 2011.

As of February 29, 2012, the Registrant had 14,900,831 shares of common stock, par value $0.001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement relating to the registrant's 2012 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year covered by this Form 10-K, are incorporated by reference into Part III of this Form 10-K where indicated.

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VERMILLION, INC.

FORM 10-K

For the Fiscal Year Ended December 31, 2011

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PART I

FORWARD-LOOKING STATEMENTS

Vermillion, Inc. ("Vermillion") and its wholly owned subsidiaries (collectively, the "Company") has made statements in Part I Item 1, "Business"; Part II Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations"; and other sections of this Annual Report on Form 10-K that are deemed forward-looking statements for purposes of the safe harbor provisions under the Private Securities Litigation Reform Act of 1995. We claim the protection of such safe harbor, and disclaim any intent or obligation to update any forward-looking statement. You can identify these statements by forward-looking words such as "may," "will," "expect," "intend," "anticipate," "believe," "estimate," "plan," "could," "should" and "continue" or similar words. These forward-looking statements may also use different phrases. We have based these forward-looking statements on management's ("we," "us" or "our") current expectations and projections about future events. Examples of language found in forward-looking statements include the following:

- projections of our future revenue, results of operations and financial condition;
- anticipated efficacy of our products, product development activities and product innovations;
- competition and consolidation in the markets in which we compete;
- existing and future collaborations and partnerships;
- the utility of biomarker discoveries;
- our belief that biomarker discoveries may have diagnostic and/or therapeutic utility;
- achieving milestones in product development, future regulatory or scientific submissions and presentations;
- our plans to develop and commercialize diagnostic tests through our strategic alliance with Quest Diagnostics, Incorporated ("Quest Diagnostics");
- our ability to comply with applicable government regulations;
- our ability to expand and protect our intellectual property portfolio;
- anticipated future losses;
- expected levels of expenditures;
- expected market adoption of our diagnostic tests, including the OVA1 ® ovarian tumor triage test ("OVA1");
- results of clinical trials, post-market studies required by FDA, and publications on OVA1;
- our ability to obtain reimbursement from third-party payers for our diagnostic tests, including OVA1;
- forgiveness of the outstanding principal amounts of the secured line of credit by Quest Diagnostics;
- recognition of revenue under our agreement with Quest Diagnostics;
- the period of time for which our financial resources will be sufficient to enable us to maintain current and planned operations; and
- market risk of our investments.

Such statements are subject to significant risks and uncertainties, including those identified in Part I Item 1A, "Risk Factors", that could cause actual results to differ materially from those projected in such forward-looking statements due to various factors, including our ability to generate sales after completing development of diagnostic products; our ability to manage our operating expenses and cash resources consistently with our plans;

our ability to secure adequate funds on acceptable terms to execute our business plan; our ability to develop and commercialize diagnostic products using both our internal and external research and development resources; our ability to obtain market acceptance of OVA1 or future diagnostic products, including the risk that our products will not be competitive with products offered by other companies, or that users will not be entitled to receive adequate reimbursement for our products from third party payers such as private insurance companies and government insurance plans; our ability to successfully license or otherwise successfully partner with third parties to commercialize our products; our ability to obtain any regulatory approval for our future diagnostic products; our success in achieving development milestones, achieving desired results in clinical trials or FDA-mandated studies; and our ability to protect and promote our proprietary technologies. We believe it is important to communicate our expectations to our investors. However, there may be events in the future that we are not able to accurately predict or that we do not fully control that could cause actual results to differ materially from those expressed or implied in our forward-looking statements.

ITEM 1. BUSINESS

Company Overview

We are dedicated to the discovery, development and commercialization of novel high-value diagnostic tests that help physicians diagnose, treat and improve outcomes for patients. Our tests are intended to help guide decisions regarding patient treatment, which may include decisions to refer patients to specialists, to perform additional testing, or to assist in the selection of therapy. A distinctive feature of our approach is to combine multiple biomarkers into a single, reportable index score that has higher diagnostic accuracy than its constituents. We concentrate our development of novel diagnostic tests in the fields of oncology, cardiology and women's health, with the initial focus on ovarian cancer. We also intend to address clinical questions related to early disease detection, treatment response, monitoring of disease progression, prognosis and others through collaborations with leading academic and research institutions.

Our lead product, OVA1, was cleared by the United States Food and Drug Administration ("FDA") on September 11, 2009. OVA1 addresses a clear unmet clinical need, namely the pre-surgical identification of women who are at high risk of having a malignant ovarian tumor. Numerous studies have documented the benefit of referral of these women to gynecologic oncologists for their initial surgery. Prior to the clearance of OVA1, no blood test had been cleared by the FDA for physicians to use in the pre-surgical management of ovarian adnexal masses. OVA1 is a qualitative serum test that utilizes five well-established biomarkers and proprietary FDA-cleared software to determine the likelihood of malignancy in women over age 18, with a pelvic mass for whom surgery is planned. OVA1 was developed through large clinical studies in collaboration with numerous academic medical centers encompassing over 2,500 clinical samples. OVA1 was fully validated in a prospective multi-center clinical trial encompassing 27 sites reflective of the diverse nature of the clinical centers at which ovarian adnexal masses are evaluated. The results of the clinical trial demonstrated that in a clinical cohort of 516 patients, OVA1, in conjunction with clinical evaluation, was able to identify 95.6% (154/161) of the malignant ovarian tumors overall, and to rule out malignancy with a negative predictive value ("NPV") of 94.6% (123/130). At the 2010 International Gynecologic Cancer Society Meeting, data were presented demonstrating the high sensitivity of OVA1 for epithelial ovarian cancers; OVA1 detected 95/96 epithelial ovarian cancer cases for a sensitivity of 99.0%, including 40/41 stage I and stage II epithelial ovarian cancers, for an overall sensitivity of 97.6% for early stage epithelial ovarian cancers, as compared to 65.9% for CA125 using the American Congress of Obstetricians and Gynecologists ("ACOG") cutoffs. The improvement in sensitivity was even greater among premenopausal women; for OVA1, sensitivity for early stage epithelial ovarian cancer was 92.9% and for CA125, sensitivity was 35.7%. Overall, OVA1 detected 76% of malignancies missed by CA125, including all advanced stage malignancies. OVA1 is not indicated for use as a screening or stand-alone diagnostic assay.

In addition to OVA1, we have development programs in other clinical aspects of ovarian cancer as well as in peripheral arterial disease. In the field of peripheral arterial disease, we have identified candidate biomarkers that may help to identify individuals at high risk for a decreased ankle-brachial index score, which is indicative of the likely presence of peripheral arterial disease. We have recently completed an intended-use study to develop and validate a multi-marker algorithm for the assessment of individuals at risk for peripheral arterial disease. This algorithm will be specifically directed at a primary care population in which the peripheral arterial disease blood test ("VASCLIR™") is expected to be used. Once this study has been published in the peer-reviewed literature, we intend to discuss with the FDA the appropriate submission pathway, which may be Premarket Approval ("PMA"), 510(k) clearance, or 510(k) de novo clearance. In another program, we have also initiated pilot experiments intended to identify markers with high clinical specificity that may complement OVA1. These experiments are early stage and may take different directions depending on the results. We have yet to establish a regulatory pathway for this potential product ("OVA2™").

Current and former academic and research institutions that we have or have had collaborations with include the Johns Hopkins University School of Medicine ("JHU"); the University of Texas M.D. Anderson Cancer Center ("M.D. Anderson"); University College London ("UCL"); the University of Texas Medical Branch

("UTMB"); the Katholieke Universiteit Leuven; Clinic of Gynecology and Clinic of Oncology, Rigshospitalet, Copenhagen University Hospital ("Rigshospitalet"); the Ohio State University Research Foundation ("OSU"); Stanford University ("Stanford"); and the University of Kentucky ("UK").

We have a strategic alliance agreement (the "Strategic Alliance Agreement") with Quest Diagnostics to develop and commercialize up to three diagnostic tests from our product pipeline (the "Strategic Alliance"). Quest Diagnostics has the exclusive right to commercialize OVA1 until September 2014, with an option to extend such exclusive period in its sole discretion for one additional year. To date, Quest Diagnostics has selected two diagnostic tests to commercialize, VASCLIR and OVA1. On April 2, 2011, we further amended the Strategic Alliance Agreement with Quest Diagnostics and Quest Diagnostics India. Pursuant to Amendment No. 5, Quest Diagnostics India will have the exclusive right to commercialize OVA1 in India for a certain period of time, as specified in the Strategic Alliance Agreement, as amended. The Amendment also establishes amounts due to Vermillion related to the performance of OVA1 in India.

We were originally incorporated in California on December 9, 1993, under the name Abiotic Systems. In March 1995, we changed our corporate name to Ciphergen Biosystems, Inc. and in May 2000, we reincorporated in Delaware. We had our initial public offering in September 2000. On November 13, 2006, we sold assets and liabilities of our protein research tools and collaborative services business (the "Instrument Business Sale"), to Bio-Rad Laboratories, Inc. ("Bio-Rad"), in order to concentrate our resources on developing clinical protein biomarker diagnostic products and services. On August 21, 2007, we changed our corporate name to Vermillion, Inc. On March 30, 2009, we filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") in the United States Bankruptcy Court for the District of Delaware (the "Bankruptcy Court"). Subsequently, on January 22, 2010, the confirmation order issued by the Bankruptcy Court approving our Second Amended Plan of Reorganization under Chapter 11 dated January 5, 2010 became final and all conditions precedent to January 22, 2010 were satisfied or waived. Accordingly, we emerged from bankruptcy protection under Chapter 11 on January 22, 2010. Our Bankruptcy case was formally closed on January 19, 2012.

OVA1 was launched on March 9, 2010 by Quest Diagnostics under the terms of the Strategic Alliance Agreement. On March 11, 2010, the Medicare contractor Highmark Medicare Services announced that it would cover OVA1 in its reimbursement program. On September 20, 2010, we announced that OVA1 was CE marked, a requirement for marketing the test in the European Union. OVA1 has satisfied all certification requirements to complete its declaration of conformity.

On August 1, 2011, we entered into an Exclusive Distribution Agreement (the "Pronto Agreement" with Pronto Diagnostics Ltd. ("Pronto Diagnostics"). Pursuant to the Pronto Agreement, Pronto Diagnostics will have the exclusive right to distribute OVA1 in Israel and areas under Palestinian control for a certain period of time as specified in the Pronto Agreement, provided that Pronto Diagnostics will sell certain minimum quantities of OVA1 to maintain the exclusive distribution rights. The Pronto Agreement also establishes the amounts that Pronto Diagnostics will pay to us with respect of OVA1. This supports our goal of expanding OVA1 into international markets.

On November 8, 2011, we entered into an asset purchase agreement with Correlogic Systems, Inc. ("Correlogic"), pursuant to which and subject to the satisfaction of certain conditions, we agreed to pay to Correlogic $435,000 and purchase from Correlogic substantially all of its assets, including certain documents, diagnostic samples and intellectual property owned by Correlogic in connection with Correlogic's ovarian cancer diagnostics business, including a diagnostic test under the name "OvaCheck2™" for the detection of ovarian cancer (the "Acquisition"). Correlogic was in Chapter 11 proceedings in the United States Bankruptcy Court for the District of Maryland (the "Court") at the time the asset purchase agreement was entered into and the Acquisition was subject to Court approval. On December 2, 2011, the Court entered an order approving the Acquisition and on December 19, 2011, we completed the Acquisition. We plan to use the Correlogic assets purchased from the Acquisition to advance the goals of our ovarian cancer franchise, including the development of OVA2.

The Diagnostic Market

The economics of healthcare demand improved allocation of resources which can be derived through disease prevention, early detection of disease leading to early intervention, and diagnostic tools that can triage patients to more appropriate therapy and intervention. According to the May 2009 In Vitro Diagnostics Market Analysis 2009-2024 report, the worldwide market for in vitro diagnostics ("IVDs") in 2008 was approximately $40.0 billion. Visiongain, an independent business information provider, predicts that the market will generate nearly $60.0 billion in 2014.

We have chosen to concentrate primarily in the areas of oncology, cardiology and women's health. Demographic trends suggest that, as the population ages, the burden from these diseases will increase and the demand for quality diagnostic, prognostic and predictive tests will increase. In addition, these areas generally lack quality diagnostic tests and, therefore, we believe patient outcomes can be significantly improved by the development of novel diagnostic tests.

Our focus on translational proteomics enables us to address the market for novel diagnostic tests that simultaneously measure multiple protein biomarkers. A protein biomarker is a protein or protein variant that is present at greater or lesser concentrations in a disease state versus a normal condition. Conventional protein tests measure a single protein biomarker whereas most diseases are complex. We believe that efforts to diagnose cancer and other complex diseases have failed in large part because the disease is heterogeneous at the causative level (i.e., most diseases can be traced to multiple potential etiologies) and at the human response level (i.e., each individual afflicted with a given disease can respond to that ailment in a specific manner).

Consequently, measuring a single protein biomarker when multiple protein biomarkers may be altered in a complex disease is unlikely to provide meaningful information about the disease state. We believe that our approach of monitoring and combining multiple protein biomarkers using a variety of analytical techniques will allow us to create diagnostic tests with sufficient sensitivity and specificity about the disease state to aid the physician considering treatment options for patients with complex diseases.

Ovarian Cancer

Background. Commonly known as the "silent killer", ovarian cancer leads to approximately 15,000 deaths each year in the United States. Approximately 20,000 new ovarian cancer cases are diagnosed each year, with the majority of the patients in the late stages of the disease in which the cancer has spread beyond the ovary. Unfortunately, ovarian cancer patients in the late stages of the disease have a poor prognosis, which leads to the high mortality rates. According to the American Cancer Society, when ovarian cancer is diagnosed at its earliest stage, the patient has a 5-year survival rate of 93%. Ovarian cancer patients have up to a 90% cure rate following surgery and/or chemotherapy if detected in stage 1. However, only 19% of ovarian cancer patients are diagnosed before the tumor has spread outside the ovary. For ovarian cancer patients diagnosed in the late-stages of the disease, the 5-year survival rate falls to as low as 18%.

While the diagnosis of ovarian cancer in its earliest stages greatly increases the likelihood of survival from the disease, another factor that predicts survival from ovarian cancer is the specialized training of the surgeon who operates on the ovarian cancer patient. Numerous studies have demonstrated that treatment of malignant ovarian tumors by specialists such as gynecologic oncologists or at specialist medical centers improves outcomes for women with these tumors. Published guidelines from the Society of Gynecologic Oncologists (the "SGO") and the ACOG recommend referral of women with malignant ovarian tumors to specialists. Unfortunately, today, only about one third of women with these types of tumors are operated on by specialists, in part because of inadequate tests and procedures that can identify such malignancies with high sensitivity. Accordingly, an unmet clinical need is a diagnostic test that can provide adequate predictive value to stratify patients with a pelvic mass into those with a high risk of invasive ovarian cancer versus those with a low risk of ovarian cancer, which is essential for improving overall survival in patients with ovarian cancer.

Although adnexal masses are relatively common, malignant tumors are less so. Screening studies have indicated that the prevalence of adnexal masses in postmenopausal women can be as high as 5 percent. Adnexal

masses are thought to be even more common in premenopausal women, but there are more non-persistent, physiologic ovarian masses in this demographic. In the Prostate, Lung, Colorectal and Ovarian Cancer study (American Journal of Obstetrics and Gynecology (2005) 193, 1630-9), 28,519 post-menopausal women were screened for ovarian malignancy and 4.7% received an abnormal ultrasound. Using the US census of 53 million women over the age of 50, this suggests there are >2.4 million adnexal masses in this segment alone. Although many of these do not present to the physician or are not concerning enough to warrant surgery, those that do require evaluation for the likelihood of malignancy could potentially benefit from the use of OVA1.

The ACOG and the SGO have issued guidelines to help physicians evaluate adnexal masses for malignancy. These guidelines take into account menopausal status, CA125 levels, and physical and imaging findings. However, these guidelines have notable shortcomings because of their reliance on tools with certain weaknesses. Most notably, the CA125 blood test, which is cleared by the FDA only for monitoring for recurrence of ovarian cancer, is negative in up to 50% of early stage ovarian cancer cases. Moreover, CA125 can be elevated in numerous conditions and diseases other than ovarian cancer, including benign ovarian masses and endometriosis. These shortcomings limit the CA125 blood test's utility in distinguishing benign from malignant ovarian tumors or for use in detection of early stage ovarian cancer. Transvaginal ultrasound is another diagnostic modality used with patients with ovarian masses. Attempts at defining specific morphological criteria that can aid in a benign versus malignant diagnosis have led to the morphology index and the risk of malignancy index, with reports of 40-70% predictive value. However, ultrasound interpretation can be variable and dependent on the experience of the operator. Accordingly, the ACOG and SGO guidelines perform only modestly in identifying early stage ovarian cancer and malignancy in pre-menopausal women. Efforts to improve detection of cancer by lowering the cutoff for CA125 (the "Modified ACOG/SGO Guidelines") provide only a modest benefit, since CA125 is absent in about 20% of epithelial ovarian cancer cases and is poorly detected in early stage ovarian cancer.

Clinical Development . To address this documented unmet clinical need, we initiated an ovarian cancer biomarker discovery program. In August 2004, we, along with collaborators at JHU, UCL and M.D. Anderson, reported in a *Cancer Research* paper the discovery of three biomarkers that, when combined with CA125, provided higher diagnostic accuracy for early stage ovarian cancer than other biomarkers, including CA125 alone. The three biomarkers that we reported in the August 2004 *Cancer Research* paper formed the basis of an expanded panel of biomarkers that together have demonstrated risk stratification value in a series of studies involving over 2,500 clinical samples from more than five clinical sites. Data presented at the June 2006 Annual Meeting of the American Society of Clinical Oncology demonstrated the portability of this biomarker panel among different clinical groups, indicating its potential validity across various testing populations. Data presented at the March 2007 Annual Meeting of the SGO described results from a cohort study. We were able to demonstrate in 525 consecutively sampled women, a significant increase in the positive predictive value using its biomarker panel over the baseline level. This translates into the potential to enrich the concentration of ovarian cancer cases referred to the gynecologic oncologist by more than twofold.

OVA1™ Ovarian Tumor Triage Test . In January, 2007, we commenced our multi-center prospective clinical trial to demonstrate the clinical performance and utility of OVA1, which was developed based on the studies described above. The clinical study population came from institutions with primary care physicians, gynecologists ("non-GO"), and/or gynecologic oncologists ("GO"). The clinical study subject enrollment centers were representative of institutions where ovarian tumor subjects potentially undergo a gynecologic examination. The specimens were collected at 27 demographically mixed sites that included large and small medical centers (universities/community hospitals), clinics that specialize in women's health, small gynecology/obstetrics groups, gynecology/oncology practices, and HMO groups. The performance of OVA1 was determined based on 516 evaluable subjects who underwent surgery to remove a documented ovarian tumor and for whom a pathology result was available. Physicians were asked, based on the information they had, which included physical, radiologic, and laboratory results, whether they believed the patient had cancer ("Clinical Assessment"). Physicians were not provided with OVA1 score in making this determination. After surgery, the specimen was examined by a surgical pathologist per routine clinical practice. The ability of physicians to predict malignancy without OVA1 was compared to the ability of physicians or OVA1 ("Dual Assessment") to predict

malignancy. With Dual Assessment, which included OVA1, 80.0% of cancers missed by clinician impression alone were detected. Dual Assessment, which included OVA1, had greater sensitivity and negative predictive value than Clinical Assessment alone and the metrics of clinical performance were 91.7% and 93.2%, respectively. We obtained FDA clearance of OVA1 on September 11, 2009. OVA1 is the first FDA-cleared test to be used in the pre-surgical evaluation of ovarian adnexal masses.

Results from the clinical trial were presented at the 2010 Annual Meeting of the SGO. A presentation by Rachel Ware Miller, M.D., Associate Professor of Gynecologic Oncology at the University of Kentucky's Markey Cancer Center, demonstrated that the ACOG/SGO guidelines detected only 77% of ovarian malignancies and that the Modified ACOG/SGO Guidelines improved detection to only 80%. Moreover, detection of early stage ovarian cancer was only 47%. A second presentation by Fred Ueland, M.D., Associate Professor of Gynecologic Oncology, demonstrated that among non-gynecologic oncologists, OVA1, in conjunction with clinical impression, improved detection of malignancy to 92% from 72% using clinical impression alone among patients evaluated by non-gynecologic oncologists. Among these patients, detection of stage I ovarian cancer was 79%.

Additional results from the clinical trial were presented at the 2010 International Gynecologic Cancer Society (IGCS) meeting. This presentation reported that OVA1 had overall sensitivity for ovarian cancer of 92.5%, as compared to 68.9% for CA125 using cutoffs established in the ACOG criteria for adnexal mass evaluation and 77.0% for CA125 using cutoffs in the modified ACOG criteria. Additionally, data were presented demonstrating the high sensitivity of OVA1 for epithelial ovarian cancers; OVA1 detected 95/96 epithelial ovarian cancer cases for a sensitivity of 99.0%, including 40/41 stage I and stage II epithelial ovarian cancers, for an overall sensitivity of 97.6% for early stage epithelial ovarian cancers, as compared to 65.9% for CA125 using the ACOG cutoffs. The improvement in sensitivity was even greater among premenopausal women; for OVA1, sensitivity for early stage epithelial ovarian cancer was 92.9% and for CA125, sensitivity was 35.7%. Overall, OVA1 detected 76% of malignancies missed by CA125, including all advanced stage malignancies. OVA1 is not indicated for use as a screening or stand-alone diagnostic assay.

Health economic analysis indicates that anticipated benefits of OVA1 include i) more appropriate referrals of women with high risk of malignancy to a gynecologic oncologist and fewer referrals of women at low risk of malignancy; ii) fewer second surgeries as a result of an initial surgery by a generalist on a woman with a malignant tumor; iii) reduced need for a backup surgeon (i.e. specialist) during a surgery by a generalist; iv) more appropriate and efficient administration of intraperitoneal chemotherapy; v) longer survival, associated with better quality of life.

Peripheral Arterial Disease

Peripheral arterial disease ("PAD") represents atherosclerosis of the lower extremities and is generally reflective of systemic atherosclerotic disease and is therefore a risk factor for adverse cardiac events such as myocardial infarction and stroke. This disease affects between 8-12 million Americans, and the number of people diagnosed with PAD is expected to increase concurrently with the rising number of people diagnosed with diabetes. The American Heart Association and the American College of Cardiology have identified three demographics at risk for PAD: smokers 50 years of age or older; diabetics 50 years of age or older; and the elderly 65 years of age or older. Collectively, this represents tens of millions of Americans.

PAD is most commonly diagnosed using the ankle-brachial index ("ABI"), which is performed using a handheld Doppler. Blood pressures are measured in the arm and at the ankles and the ratio (ankle/arm) is calculated. Non-affected individuals should have a ratio of 0.9 or greater, while individuals with a ratio of less than 0.9 are defined as having PAD. Although the ABI has good sensitivity and specificity for PAD, its implementation into routine clinical practice has been hampered by poor physician adoption, generally because of the need to utilize special equipment by a specially trained technician and the need to have the patient lie supine in an examination room for 10 to 30 minutes prior to the administration of this test. Additionally, studies

have shown that the ABI is often performed incorrectly. Therefore, a blood test that can be more routinely implemented would be beneficial in identifying people at increased risk for PAD.

In collaboration with John P. Cooke, M.D., Ph.D., a Professor and Associate Director of the Stanford Cardiovascular Institute at Stanford University School of Medicine, we have performed both an initial discovery study and a first validation study that has resulted in the identification of blood markers that could assist in the diagnosis of PAD. These findings form the basis of a novel blood diagnostic test for PAD.

The results of these studies, including the publication of two blood markers for PAD, were published in the August 2007 on-line issue of the peer-reviewed journal Circulation, which is published by the American Heart Association (the "AHA"). Independent validation of these initial findings was subsequently published in the peer-reviewed journal Vascular Medicine in 2008. This study, which encompassed 540 individuals, confirmed the elevation of the two biomarkers in subjects with PAD. Moreover, the study showed that a panel of markers improved the identification of subjects with PAD and was complementary to available data, including the AHA risk score. In this study, subjects with a moderate AHA risk score but elevated PAD biomarker score had almost a 7 times increased likelihood of having PAD than if they had a normal PAD biomarker score.

Commercialization

We expect to commercialize and sell diagnostic tests (which may consist of reagents and/or proprietary software) in one or both of two phases. One phase, referred to as the laboratory developed test ("LDT") phase, will involve the sale of certain reagents (which may be in the form of proprietary software) to certain customers coupled with the grant to such customer of a sublicense to utilize the reagent in a laboratory-developed test using the methodology covered by the relevant license(s) obtained from our collaborators. An LDT would comprise multiple reagents (such as assay test kits, software, or other reagents), some of which would be supplied by us, and would be utilized by clinical laboratories to develop and perform "home brew" laboratory tests in laboratories federally regulated under the Clinical Laboratory Improvement Amendments of 1988 ("CLIA"). In the other phase, referred to as the IVD phase, we plan to sell FDA-cleared devices (which may comprise multiple reagents such as assay test kits, software, or other reagents).

Under the terms of the Amended Strategic Alliance Agreement, Quest Diagnostics has the right to commercialize up to three diagnostic tests from our product pipeline. To date, Quest Diagnostics has selected two tests, VASCLIR and OVA1. Pursuant to the Amended Strategic Alliance Agreement, Quest Diagnostics will have the non-exclusive right to commercialize each of the tests other than OVA1 on a worldwide basis, with exclusive commercialization rights in each exclusive territory, as this term is defined in the Amended Strategic Alliance Agreement, beginning on the date each test is first commercialized and ending on the third anniversary of the date that such test is cleared or approved by the FDA. Quest has exclusive commercialization rights to commercialize OVA1 in each exclusive territory through September 2014 and the right to extend the exclusivity period for one additional year. These exclusive territories consist of the United States, India, Mexico, and the United Kingdom. Quest Diagnostics has the non-exclusive right to commercialize OVA1 on a worldwide basis outside of these exclusive territories.

Customers

In the United States, the IVD market can be segmented into three major groups: clinical reference laboratories, the largest of which are Quest Diagnostics and Laboratory Corporation of America; hospital laboratories; and physician offices. Initially, substantially all of our revenue in the United States will be generated through clinical reference laboratories, and Quest Diagnostics will be the major customer. We will attempt to penetrate hospital laboratories and physician offices, when appropriate. Outside the United States, laboratories may become customers, either directly with us or via distribution relationships established between us and authorized distributors.

Research and Development

Our research and development efforts center on the discovery and validation of biomarkers and combinations of biomarkers that can be developed into diagnostic assays. We do this predominantly through collaborations we have established with academic institutions such as JHU, Rigshospitalet, and Stanford as well as through contract research organizations ("CRO's") such as PrecisionMed and the Colorado Prevention Center.

Scientific Background

Genes are the hereditary coding system of living organisms. Genes encode proteins that are responsible for cellular functions. The study of genes and their functions has led to the discovery of new targets for drug development. Industry sources estimate that, within the human genome, there are approximately 30,000 genes. Although the primary structure of a protein is determined by a gene, the active structure of a protein is frequently altered by interactions with additional genes or proteins. These subsequent modifications result in hundreds of thousands of different proteins. In addition, proteins may interact with one another to form complex structures that are ultimately responsible for cellular functions.

Genomics allows researchers to establish the relationship between gene activity and disease. However, many diseases are manifested not at the genetic level, but at the protein level. The complete structure of modified proteins cannot be determined by reference to the encoding gene alone. Thus, while genomics provides some information about diseases, it does not provide a full understanding of disease processes. We are focused on converting recent advances in proteomics into clinically useful diagnostic tests.

Relationship Between Proteins and Diseases

The entire genetic content of any organism, known as its genome, is encoded in strands of deoxyribonucleic acid ("DNA"). Cells perform their normal biological functions through the genetic instructions encoded in their DNA, which results in the production of proteins. The process of producing proteins from DNA is known as gene expression or protein expression. Differences in living organisms result from variability in their genomes, which can affect the types of genes expressed and the levels of gene expression. Each cell of an organism expresses only approximately 10% to 20% of the genome. The type of cell determines which genes are expressed and the amount of a particular protein produced. For example, liver cells produce different proteins from those produced by cells found in the heart, lungs, skin, etc. Proteins play a crucial role in virtually all biological processes, including transportation and storage of energy, immune protection, generation and transmission of nerve impulses and control of growth. Diseases may be caused by a mutation of a gene that alters a protein directly or indirectly, or alters the level of protein expression. These alterations interrupt the normal balance of proteins and create disease symptoms. A protein biomarker is a protein or protein variant that is present in a greater or lesser amount in a disease state versus a normal condition. By studying changes in protein biomarkers, researchers may identify diseases prior to the appearance of physical symptoms. Historically, researchers discovered protein biomarkers as a byproduct of basic biological disease research, which resulted in the validation by researchers of approximately 200 protein biomarkers that are being used in commercially available clinical diagnostic products.

Limitations of Existing Diagnostic Approaches

The IVD industry manufactures and distributes products that are used to detect thousands of individual components present in human derived specimens. However, the vast majority of these assays are used specifically to identify single protein biomarkers. The development of new diagnostic products has been limited by the complexity of disease states, which may be caused or characterized by several or many proteins or post-translationally modified protein variants. Diagnostic assays that are limited to the detection of a single protein often have limitations in clinical specificity (true negatives) and sensitivity (true positives) due to the complex nature of many diseases and the inherent biological diversity among populations of people. Diagnostic products that are limited to the detection of a single protein may lack the ability to detect more complex diseases, and thus produce results that are unacceptable for practical use. The heterogeneity of disease and of the human response to disease often underlies the shortcoming of single biomarkers to diagnose and predict many diseases accurately.

Our Solution

Our studies, particularly in ovarian cancer, have given us a better understanding of both the disease pathophysiology and the host response. By using multiple biomarkers, we are able to better characterize the disease and host response heterogeneity. In addition, by examining specific biomarkers with greater resolution, for example, post-translational modifications, we believe we can improve the specificity of our diagnostic biomarkers because these modifications reflect both the pathophysiology and host response. This is accomplished using novel protein analysis tools coupled with multivariate statistical analysis software to identify combinations of specific biomarkers leading to commercialization of disease-specific assays.

We are applying translational proteomics research, development tools, and methods to analyze biological information in an attempt to discover associations between proteins, protein variants, protein-protein interaction and diseases. We intend to develop new diagnostic tests based on known and newly identified protein markers to help physicians predict an individual's predisposition for a disease in order to better characterize, monitor progression of and select appropriate therapies for such disease. Our goal is to develop novel diagnostic tests that address unmet medical needs, particularly in stratifying patients according to the risk of developing a disease, having a disease or failing a specific therapy for a disease.

Addressing the Heterogeneity of Disease

Our strategy is to create a diagnostics paradigm that is based on risk stratification, multiple-biomarker testing and information integration. This strategy is based on the belief that any specific disease is heterogeneous and, therefore, relying on a single disease biomarker to provide a simple "yes-no" answer is likely to fail. We believe that efforts to diagnose cancer and other complex diseases have failed in large part because the disease is heterogeneous at the causative level, meaning that most diseases can be traced to multiple potential etiologies, and at the human response level, meaning that each individual afflicted with a given disease can respond to that ailment in a specific manner. Consequently, diagnosis, disease monitoring and treatment decisions can be challenging. This heterogeneity of disease and difference in human response to disease and/or treatment underlies the shortcomings of single biomarkers to predict and identify many diseases. A better understanding of heterogeneity of disease and human response is necessary for improved diagnosis and treatment of many diseases.

Validation of Biomarkers Through Proper Study Design

Analysis of peer-reviewed publications reveals almost daily reports of novel biomarkers or biomarker combinations associated with specific diseases. Few of these are used clinically. As with drug discovery, preliminary research results fail to canvass sufficient variation in study populations or laboratory practices and, therefore, the vast majority of candidate biomarkers fail to be substantiated in subsequent studies. Recognizing that validation is the point at which most biomarkers fail, our strategy is to reduce the attrition rate between discovery and clinical implementation by building validation into the discovery process. Biomarkers fail to validate for a number of reasons, which can be broadly classified into pre-analytical and analytical factors. Pre-analytical factors include study design that does not mimic actual clinical practice, inclusion of the wrong types of control individuals and demographic bias (usually seen in studies in which samples are collected from a single institution). Analytical factors include poor control over laboratory protocols, inadequate randomization of study samples and instrumentation biases (for example, higher signal early in the experimental run compared to later in the experimental run). Finally, the manner in which the data are analyzed can have a profound impact on the reliability of the statistical conclusions.

When designing clinical studies, we begin with the clinical question, since this drives the downstream clinical utility of the biomarkers. With the starting point of building validation into the discovery process, we design our studies to include the appropriate cases and control groups. We further incorporate an initial validation component even within the discovery component. We place an emphasis on multi-institutional studies,

inclusion of clinically relevant controls, using qualified and trained operators to run assays and collect data. For example, in an August 2004 cancer research paper, which describes the first three biomarkers in the ovarian cancer panel, there were more than 600 specimen samples taken from five hospitals that were analyzed. In the development of OVA1, we analyzed more than 2,500 samples from five additional medical centers prior to initiating the prospective ovarian clinical study for submission to the FDA. Additionally to date, we have examined over 600 samples in our PAD program. In analyzing the complex proteomics data, we take a skeptical view of statistical methodologies, choosing to use a variety of approaches and looking for concordance between approaches, taking the view that biomarkers deemed significant by multiple statistical algorithms are more likely to reflect biological conditions than mathematical artifacts.

Through biomarker discovery efforts conducted predominantly from 2000 through 2007, we have amassed a portfolio of candidate biomarkers identified in retrospective sample sets. Our research and development efforts are now mostly focused on validating these biomarkers in prospective studies. During the period from 2007 through 2008, we conducted a multi-center prospective clinical trial to determine the clinical performance of OVA1, which was submitted to the FDA on June 19, 2008, and cleared by the FDA on September 11, 2009. We have additional markers for ovarian cancer that we plan to evaluate and validate. Additionally, we recently completed a prospective intended use study for PAD. These activities are outlined below.

R&D-sponsored initiatives to support market development to support OVA1

We have two ongoing R&D-sponsored initiatives to support OVA1 market development and adoption as an improved standard of care in the pre-surgical triage and evaluation of adnexal masses. The first is a major new clinical study of OVA1, focused on its performance in the predominantly pre-menopausal non-Gynecologic Oncologist patient population. This will follow up on and extend the landmark studies of Ueland and Miller with a completely new patient cohort, in an independent, multi-center patient population. We expect this study to be submitted later in 2012 for publication.

The second is a series of Vermillion-assisted, independent clinical research studies of OVA1. Through this new program, Vermillion offers limited support for well-qualified Principal Investigators in the form of materials, testing services, and scientific consulting. As a result, we are currently in discussion with a number of potential investigators, to support new research publications on OVA1's clinical utility, cost-effectiveness, and potential line extensions.

New ovarian cancer indications . While our focus on supporting the commercialization of OVA1 is our primary priority, we also may extend our ovarian cancer franchise beyond OVA1, enabled by three key initiatives. First, we have a research and license agreement with JHU to evaluate markers that provide improved specificity in the detection of ovarian cancer. Candidate markers are currently being assessed in small, pilot sample sets. Markers demonstrating high specificity may then be assessed in larger, clinical samples sets. Pilot results of these studies were reported in early 2011 at the Society of Gynecologic Oncologists. Second, our research and license agreement with Rigshospitalet (Copenhagen) generated data showing that a certain combination of markers can separate ovarian cancer patients into those with good prognosis from those with poor prognosis. These results were published in 2010 and we filed a patent application. Third, the acquisition of Correlogic assets in 2011 brings with it highly curated clinical samples, intellectual property and promising biomarker leads. These have the potential to further amplify our OVA2 efforts in the future.

Prospective intended-use clinical study for Peripheral Arterial Disease (PAD) . In 2011, we completed an intended-use study to validate a multi-marker algorithm for the assessment of individuals at risk for PAD. This algorithm will be specifically directed at a primary care population in which VASCLIR is expected to be used.

The intended use study was a prospective, double-blinded multi-center study of approximately 1,000 subjects who met specific inclusion criteria for being at increased risk of having PAD, including smokers and diabetics age 50 or above and elderly age 70 or above. On October 3, 2011, we announced positive top-line

results from the intended use study of VASCLIR. The goals of the study were to validate the markers described in earlier publications (*Circulation* , 2007 and *Vascular Medicine* , 2008) and to develop and validate a biomarker panel applicable to the intended use population.

Key results of the study include the following:

- The individual biomarkers beta-2 microglobulin (B2M), cystatin C, and hsCRP (high sensitivity c-reactive protein), each had statistically significant different levels between PAD subjects and non-PAD subjects ($p<.001$).
- As in the previous study described in the earlier publications, these biomarkers showed statistically significant correlation to the ankle-brachial index or ABI, ($p<.001$).
- A logistic regression model was able to identify more than 80% of PAD patients among those deemed low-risk by the conventional Framingham Risk Score for estimating cardiovascular disease probability.

The work has been submitted for presentation at a recognized national vascular medicine conference, and is awaiting a decision. A manuscript will also be submitted to a leading vascular medicine journal in the first half of 2012. This presentation and manuscript will support our future discussions with the FDA regarding the appropriate submission pathway, which may be PMA, 510(k) clearance, or 510(k) de novo clearance. Quest Diagnostics has accepted the PAD test as a development program under the terms of the Amended Strategic Alliance Agreement.

Our research and development expenses were $5,387,000 and $3,848,000 for the years ended December 31, 2011 and 2010, respectively.

Commercial Operations

We have a commercial infrastructure, including sales and marketing and reimbursement expertise. Our sales representatives work with colleagues at Quest Diagnostics to identify opportunities for communicating the benefits of OVA1 to general gynecologists and gynecologic oncologists alike. Our success will also depend on our ability to penetrate markets outside of the United States. OVA1 is CE marked, a requirement for marketing the test in the European Union. OVA1 has satisfied all certification requirements to complete its declaration of conformity.

At the end of 2011, approximately 15,225 OVA1 tests had been performed in the calendar year, an increase of 147% over 2010. Additionally, over 275 gynecologic oncologists are supportive or advocating the use of OVA1 for the triage of women with adnexal masses. This broad number of specialists supporting the test indicates an understanding of the unmet clinical need and the ability of OVA1 to serve a significant market to assist physicians to triage women who need a specialist for surgery from those who can be treated by the primary physician. As of December 2011, 3,700 doctors had ordered OVA1, an increase of 153% over December 2010. This indicates a market penetration of 11% of the available gynecologists in the US.

We continue to develop the market through experienced Territory Development Managers and have expanded their scope of responsibility. As market awareness continues to build, these managers are focused on efforts that will have a positive impact on regional payers and create positive coverage decisions. They are working with local key opinion leaders and meeting with medical directors to discuss the unmet clinical need, our technology assessment package and increasing experience and cases studies showing the positive outcomes utilizing OVA1.

There are still obstacles to overcome and significant milestones to attain to ensure ongoing success. First, although the test volume and the number of doctors continue to increase, the average gynecologist will only see about 2 to 4 appropriate patients per month and additional effort will be required to establish a consistent

ordering pattern. Second, insurance coverage and patient bills are a concern to the physician and can disrupt the ordering pattern of a generalist who is supportive of OVA1. These obstacles are being addressed in a cross functional approach to include publishing additional clinical studies, working towards OVA1 inclusion in professional guidelines in a reasonable time frame, adding positive coverage decisions on a regional and national basis, and improving coding and claims through obtaining a Category I CPT code.

In January 2012, we announced a restructuring plan to streamline our organization and reduce our cash expenditures compared to 2011. This plan included eliminating the positions of Chief Financial Officer and Vice President of Corporate Strategy as well as a reduction in our Territory Development and sales management personnel. We intend to reduce cash-based operating expenses in 2012; extending our cash runway while focusing our efforts on the continued commercialization of OVA1 and advancing our product pipeline.

Reimbursement

In the United States, revenue for diagnostic tests comes from several sources, including third-party payers such as insurance companies and government healthcare programs, such as Medicare and Medicaid. On March 12, 2010, we announced that Highmark Medicare Services, the Medicare contractor that has jurisdiction over claims submitted by Quest Diagnostics for OVA1, will cover OVA1. This local coverage determination from Highmark Medicare Services essentially provides national coverage for patients enrolled in Medicare as well as Medicare Advantage health plans. We have worked together with Quest Diagnostics to obtain coverage and reimbursement from private payers across the country. As of January 1, 2012, twenty-five independent BlueCross BlueShield plans, representing more than 41 million lives, provide coverage for OVA1. In total, including Medicare and other private payers, approximately 88 million patients have access and coverage for OVA1. The Company and Quest Diagnostics are pursuing coverage from additional payers.

On March 6, 2012, the American Medical Association (AMA) Current Procedural Terminology (CPT ®) Panel voted to approve an application for a Category I CPT code for OVA1. The AMA recently disclosed the new code on its website, which will become effective January 1, 2013. The new CPT code is a positive step forward in advancing the commercialization of OVA1, as we believe it will help streamline claims processing and accelerate further coverage and adoption by private payers.

New and innovative diagnostic tests often face reimbursement challenges that can affect adoption; the three key focus areas are coding, claims, and coverage or payor adoption. In conjunction with Quest Diagnostics, we are consistently addressing these three areas.

Coding-

- OVA1 is a new class of diagnostics and therefore no specific code existed upon our launch. This is often the case with new diagnostic tests and companies will bill using a miscellaneous code, which is the path we and Quest Diagnostics have implemented. Now, after establishing OVA1 in the market, creating demand, demonstrating the utility of the test, obtaining coverage and reimbursement, we took the additional step of filing for a CPT code specific for OVA1 in 2011.
- Achieving a unique Category I Code is a critical step in a company’s commercialization process.
- Now that our CPT code has been approved, the process will continue forward to establish the appropriate reimbursement rate for the unique code.

Claims Process

- In the early launch of a product that does not have its own CPT code, claims can be rejected due to lack of medical necessity, lack of payer understanding, or even billing process errors. To address these items, our Territory Development Managers are engaging with physicians’ offices to assist in the appeals process and are using these claims to educate payers and create awareness about the medical necessity of our test.

Payer Coverage

- We continue to focus on–going efforts toward obtaining national coverage decisions. However, these typically have a much longer lead time due to industry established processes and time frames. In most cases, these entail clinical and technical reviews that are performed on an annual basis.
- We have assembled a Technology Assessment Package that will provide a nucleus of materials tailored to each National Plan.
- We have launched a program to aid local key opinion leaders to work with health plans to support coverage for OVA1. These strategic actions are necessary steps to convert those plans representing numerous regional payers and late adopters.

Competition

The diagnostics industry in which we operate is competitive and evolving. There is intense competition among healthcare, biotechnology and diagnostics companies attempting to discover candidates for potential new diagnostic products. These companies may:

- develop new diagnostic products in advance of us or our collaborators;
- develop diagnostic products that are more effective or cost-effective than those developed by us or our collaborators;
- obtain regulatory clearance or approval of their diagnostic products more rapidly than us or our collaborators; or
- obtain patent protection or other intellectual property rights that would limit the ability to develop and commercialize, or a customers' ability to use our or our collaborators' diagnostic products.

We compete with companies in the United States and abroad that are engaged in the development and commercialization of novel biomarkers that may form the basis of novel diagnostic tests. These companies may develop products that are competitive with and/or perform the same or similar to the products offered by us or our collaborators, such as biomarker specific reagents or diagnostic test kits. Also, clinical laboratories may offer testing services that are competitive with the products sold by us or our collaborators. For example, a clinical laboratory can either use reagents purchased from manufacturers other than us or use its own internally developed reagents to make diagnostic tests. If clinical laboratories make tests in this manner for a particular disease, they could offer testing services for that disease as an alternative to products sold by us used to test for the same disease. The testing services offered by clinical laboratories may be easier to develop and market than test kits developed by us or our collaborators because the testing services are not subject to the same clinical validation requirements that are applicable to FDA-cleared or approved diagnostic test kits.

In September 2011, Fujirebio Diagnostics received FDA clearance for Risk of Ovarian Malignancy Algorithm. This test is made up of two tumor markers (HE4 and CA125II) and includes a publicly available algorithm which takes into consideration menopausal status. The intended use is the same as OVA1. In January 2012, the test was made available by Laboratory Corporation of America.

The two tests have not been compared in a side by side cohort evaluation to date, so no direct performance comparisons can be made. However, studies have shown OVA1 offers significant performance in the following key areas:

- 96% sensitivity across a broad range of Ovarian Cancer subtypes;
- 98% sensitivity for early stage epithelial ovarian cancer;
- 95% NPV adds reassurance that an ovarian mass with a negative OVA1 score is benign; and a

- comprehensive 5 biomarker panel that detects tumor secreted proteins while also measuring the host response to ovarian cancer

The market has indicated that these factors are critical to the proper triage of women with ovarian masses.

Intellectual Property Protection

Our intellectual property includes a portfolio of owned, co-owned or licensed patents and patent applications. As of December 31, 2011, our patent portfolio included 52 issued United States patents, 93 pending United States patent applications, and numerous pending patent applications and issued patents outside the United States. These patents and patent applications are directed to several areas of technology important to our business, including our Surfaced Enhanced Laser Desorption/Ionization ("SELDI") technology, diagnostic applications, protein biochips, instrumentation, software and biomarkers. The issued patents covering the SELDI and mass spectrometry technologies expire at various times from 2012 to 2025. As part of the Instrument Business Sale, we entered into a cross license agreement with Bio-Rad pursuant to which we retained the right to commercially exploit those proprietary rights, including SELDI technology, in the clinical diagnostics market. The clinical diagnostics market includes laboratories engaged in the research and development and/or manufacture of diagnostic tests using biomarkers, commercial clinical laboratories, hospitals and medical clinics that perform diagnostic tests. We have been granted exclusive rights to commercialize the proprietary rights in the clinical diagnostics market during a five-year exclusivity period that ended on November 13, 2011. After the end of the five-year period, we now share exclusive rights with Bio-Rad. The Company and Bio-Rad each have the right to engage in negotiations with the other party for a license to any improvements in the proprietary rights created by the other party.

We own, license or hold options to license the patents related to biomarkers developed using SELDI technology. As of December 31, 2011, we were maintaining and/or had license to 26 diagnostic patent application families. These include applications in the areas of cancer, cardiovascular disease, infectious disease, neurodegenerative disease and women's health. On March 31, 2009, we were issued patent number 7,510,842, "Biomarker for ovarian and endometrial cancer: hepcidin". On October 20, 2009, we were issued patent number 7,605,003, "Use of biomarkers for detecting ovarian cancer". On June 29, 2010, we announced that the United States Patent and Trademark Office ("USPTO") has issued a notice of allowance to us of a patent entitled "Biomarkers for Alzheimer's disease". On January 11, 2011, we were issued patent number 7,867,719 entitled "Beta-2 microglobulin as a biomarker for peripheral artery disease". The patent claims are directed to beta-2 microglobulin and biomarker combinations that include Beta-2 microglobulin for the diagnosis and management of peripheral artery disease and to the measurement of the biomarkers by a variety of methods, including mass spectrometry and immunoassay. On February 2, 2011, we announced that the USPTO had issued a notice of allowance to us of a patent entitled "Biomarkers for breast cancer." On May 17, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Panel of Biomarkers for Peripheral Artery Disease". The patent covers biomarker panels for the diagnosis of Peripheral Artery Disease. The data supporting the patent were published in an article titled, "A biomarker panel for peripheral arterial disease," in Vasc Med. 2008 Aug; 13(3):217 24. This work was done in coordination with Dr. John Cooke at Stanford University. Dr. Cooke is Professor and Associate Director of the Stanford Cardiovascular Institute at Stanford University School of Medicine. On May 25, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Saposin D and Fam3C are Biomarkers for Alzheimer's Disease." The patent claims cover the biomarkers saposin D and Fam3c as well as combinations that include these biomarkers. On August 1, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Biomarkers for Peripheral Artery Disease." The patent claims cover the biomarker alpha1beta glycoprotein and biomarker combinations that include alpha1beta glycoprotein for the diagnosis of PAD. On August 2, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Beta-2 microglobulin as a Biomarker for Peripheral Artery Disease." The patent covers various potential permutations of candidate biomarkers and will therefore cover a broad range of possibilities in our intended use study. On September 6, 2011, we announced that theUSPTO has issued patent number 8,014,952 entitled "Serum Biomarkers in Lung Cancer" to the Company. On November 3, 2011, we announced the receipt of a notice of allowance from the USPTO for our

fifth patent covering a combination of biomarkers that could be used in the diagnosis of PAD, a condition that raises the risk of heart attack and stroke. The patent, entitled “Beta-2 Microglobulin (B2M) and C Reactive Protein (CRP) as Biomarkers for Peripheral Artery Disease,” involves a unique combination of B2M and CRP, two proteins that have been demonstrated in numerous studies to be associated with PAD.

On December 19, 2011, we completed the purchase of substantially all of the assets associated with the ovarian cancer diagnostics business of Correlogic for $435,000 in cash. The assets include more than 1,800 prospectively collected diagnostic samples from ovarian tumor studies, three biomarker-related pending U.S. patents, proprietary software and other intellectual property.

On March 5, 2012 we announced the receipt of a notice of allowance from the USPTO for “Platelet biomarkers for cancer.” The patent resulted from a collaboration with the late Dr. Judah Folkman, a renowned cancer expert, and identifies three biomarkers that can be used to assess changes in endogenous angiogenesis in a subject. Angiogenesis is commonly associated with cancer, and novel therapeutics such as bevacizumab (Avastin ®) target angiogenesis to limit tumor recruitment of blood vessels. The patented biomarkers, which are associated with platelets, can be used to measure ongoing angiogenic activity. The patent covers the measurement of these biomarkers over time and correlating changes in expression with the changing level of endogenous angiogenic activity. Consequently, this patent also enables the use of these biomarkers to monitor efficacy of therapy directed at angiogenic pathways.

Under the terms of an amended research collaboration agreement with the Johns Hopkins University School of Medicine, we are required to pay JHU $400,000 for 2012 and $100,000 for 2013. Collaboration costs under the JHU collaboration were $235,000 and $400,000 for the years ended December 31, 2011 and 2010, respectively. In addition, under the terms of the amended research collaboration agreement, we are required to pay the greater of 4% royalties on net sales of diagnostic tests using the assigned patents or annual minimum royalties of $52,500. Other institutions and companies from which we hold options to license intellectual property related to biomarkers or are a co-inventor on applications include UCL, M.D. Anderson, UK, OSU, McGill University (Canada), Eastern Virginia Medical School, Aaron Diamond AIDS Research Center, UTMB, Goteborg University (Sweden), University of Kuopio (Finland), The Katholieke Universiteit Leuven (Belgium) and Rigshospitalet.

In connection with the Instrument Business Sale, we sublicensed to Bio-Rad certain rights to the core SELDI technology for use outside of the clinical diagnostics field. We retained exclusive rights to the license rights for use in the field of clinical diagnostics for a five-year period, after which the license became co-exclusive in this field. The rights to the SELDI technology are derived through royalty-bearing sublicenses from Molecular Analytical Systems, Inc. (“MAS”). MAS holds an exclusive license to patents directed to the SELDI technology from the owner, Baylor College of Medicine. MAS granted certain rights under these patents to its wholly owned subsidiaries, IllumeSys Pacific, Inc. and Ciphergen Technologies, Inc. in 1997. We obtained further rights under the patents in 2003 through sublicenses and assignments executed as part of the settlement of a lawsuit between us, MAS, LumiCyte and T. William Hutchens. Together, the sublicenses and assignments provide all rights to develop, make and have made, use, sell, import, market and otherwise exploit products and services covered by the patents throughout the world in all fields and applications, both commercial and non-commercial. The sublicenses carry the obligation to pay MAS a royalty equal to 2% of revenues recognized between February 21, 2003, and the earlier of (i) February 21, 2013, or (ii) the date on which the cumulative payments to MAS have reached $10,000,000 (collectively, the “Sublicenses”).Under our sublicense with Bio-Rad, Bio-Rad agreed to pay the royalties directly to MAS under the license rights.

Manufacturing

We are the manufacturer of OVA1. Components of OVA1 include reagents for each of the component assays as well as the OvaCalc ® software. Because we do not directly manufacture the component assays, we are

required to maintain supply agreements with manufacturers of each of the assays. As part of our Quality Systems, reagent lots for these assays are tested to ensure they meet specifications required for inclusion in OVA1. Only reagent lots determined by us as having met these specifications are permitted for use in OVA1.

Environmental Matters

Medical Waste

We have been subject to licensing and regulation under federal, state and local laws relating to the handling and disposal of medical specimens and hazardous waste as well as to the safety and health of laboratory employees. We formerly operated laboratories located in each of our former facilities in Fremont, California, the last lease for which expired on August 31, 2010. Our laboratories were operated in material compliance with applicable federal and state laws and regulations relating to disposal of all laboratory specimens. We utilized outside vendors for disposal of specimens. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from these materials. Federal, state and local laws and regulations govern the use, manufacture, storage, handling and disposal of these materials. We could be subject to damages in the event of an improper or unauthorized release of, or exposure of individuals to, hazardous materials. In addition, claimants may sue us for injury or contamination that results from our use, or the use by third parties, of these materials, and our liability may exceed our total assets. Compliance with environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development or production efforts.

Occupational Safety

In addition to its comprehensive regulation of safety in the workplace, the Federal Occupational Safety and Health Administration has established extensive requirements relating to workplace safety for healthcare employers whose workers may be exposed to blood-borne pathogens such as HIV and the hepatitis 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 chemicals and transmission of the blood-borne and airborne pathogens. Although we believe that we are currently in compliance in all material respects with such federal, state and local laws, failure to comply could subject us to denial of the right to conduct business, fines, criminal penalties and other enforcement actions.

Specimen Transportation

Regulations of the Department of Transportation, the International Air Transportation Agency, the Public Health Service and the Postal Service apply to the surface and air transportation of clinical laboratory specimens.

Government Regulation

General. Our activities related to diagnostic products are, or have the potential to be, subject to regulatory oversight by the FDA under provisions of the Federal Food, Drug and Cosmetic Act and regulations thereunder, including regulations governing the development, marketing, labeling, promotion, manufacturing and export of our products. The Food, Drug and Cosmetic Act requires that medical devices introduced to the United States market, unless exempted by regulation, be the subject of either a pre-market notification clearance, known as a 510(k) clearance or 510(k) de novo clearance, or a PMA. OVA1 was cleared by the FDA on September 11, 2009 under the 510(k) de novo guidelines. OVA1 was the first FDA-cleared blood test for the pre-operative assessment of ovarian masses. We have not yet established a regulatory pathway for our future potential products such as VASCLIR and OVA2. Clinical studies to support either a 510(k) submission or a PMA application would need to be conducted in accordance with FDA requirements. If the FDA indicates that a PMA is required for any of our potential future clinical products, the application will require extensive clinical studies, manufacturing information and likely review by a panel of experts outside the FDA. Additionally, the FDA will generally conduct a pre-approval inspection for PMA devices.

Even in the case of devices like analyte specific reagents ("ASRs"), which may be exempt from 510(k) clearance or PMA approval requirements, the FDA may impose restrictions on marketing. Our potential future ASR products may be sold only to clinical laboratories certified under the CLIA to perform high complexity testing. In addition to requiring approval or clearance for new products, the FDA may require approval or clearance prior to marketing products that are modifications of existing products or the intended uses of these products. Additionally, the FDA will generally conduct a pre-approval inspection for PMA devices. Our suppliers' manufacturing facilities are, and, if and when we begin commercializing and manufacturing our products ourselves, our manufacturing facilities will be, subject to periodic and unannounced inspections by the FDA and state agencies for compliance with Quality System Regulations ("QSRs"). Additionally, the FDA will generally conduct a pre-approval inspection for PMA devices. Although we believe that we and our suppliers will be able to operate in compliance with the FDA's QSRs for ASRs, we cannot assure that we or our suppliers will be in or be able to maintain compliance in the future. We have never been subject to an FDA inspection and cannot assure that we will pass an inspection, if and when it occurs. If the FDA believes that we or our suppliers are not in compliance with applicable laws or regulations, the FDA can issue a Form 483 List of Observations, warning letter, detain or seize our products, issue a recall notice, enjoin future violations and assess civil and criminal penalties against us. In addition, approvals or clearances could be withdrawn under certain circumstances.

Any customers using our products for clinical use in the United States may be regulated under CLIA, which 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, participation in proficiency testing, patient test management, quality control, quality assurance and inspections. The regulations promulgated under CLIA establish three levels of diagnostic tests—namely, waived, moderately complex and highly complex—and the standards applicable to a clinical laboratory depend on the level of the tests it performs. Medical device laws and regulations are also in effect in many of the countries in which we may do business outside the United States. These range from comprehensive device approval requirements for some or all of our potential future medical device products, to requests for product data or certifications. The number and scope of these requirements are increasing. In addition, products which have not yet been cleared or approved for domestic commercial distribution may be subject to the FDA Export Reform and Enhancement Act of 1996 ("FDERA").

FDA Regulation of Cleared Tests . Once granted, a 510(k) clearance or PMA approval may place substantial restrictions on how our device is marketed or to whom it may be sold. All devices cleared by the FDA are subject to continuing regulation by the FDA and certain state agencies. As a medical device manufacturer, we are also required to register and list our products with the FDA. We are required to set forth and adhere to a Quality Policy and other regulations. In addition, we are required to comply with the FDA's QSRs, which require that our devices be manufactured and records be maintained in a prescribed manner with respect to manufacturing, testing and control activities. Additionally, we may be subject to inspection by federal and state regulatory agencies. Non-compliance with these standards can result in, among other things, fines, injunctions, civil penalties, recalls, total or partial suspension of production. Further, we are required to comply with FDA requirements for labeling and promotion. For example, the FDA prohibits cleared or approved devices from being promoted for uncleared or unapproved uses. Labeling and promotional activities are subject to scrutiny by the FDA, which prohibits the marketing of medical devices for unapproved uses. Additionally, the FDA is requiring us to perform a post-marketing study ("Post-market Surveillance") to verify the performance characteristics of OVA1 in routine clinical use.

In addition, the medical device reporting regulation requires that we provide information to the FDA whenever evidence reasonably suggests that one of our devices may have caused or contributed to a death or serious injury, or where a malfunction has occurred that would be likely to cause or contribute to a death or serious injury if the malfunction were to recur.

Foreign Government Regulation of Our Products . We intend to obtain regulatory approval in other countries to market our tests. Each country maintains its own regulatory review process, tariff regulations, duties

and tax requirements, product standards, and labeling requirements. In 2010, we retained the services of the Emergo Group and TUV SUD America Inc. to assist in our efforts to satisfy the regulatory requirements necessary for commercialization in Europe. In September 2010, OVA1 was CE marked, a requirement for marketing the test in the European Union.

Employees

As of December 31, 2011, we had 27 full-time employees. We also engage independent contractors from time to time.

Code of Ethics for Executive Officers

We have adopted a Code of Ethics for Executive Officers. We publicize the Code of Ethics for Executive Officers by posting the policy on our website, www.vermillion.com. We will disclose on our website any waivers of, or amendments to, our Code of Ethics.

Information About Us

We file annual reports, quarterly reports, special reports, proxy and information statements, and other information with the Securities and Exchange Commission (the "SEC"). You may read and copy any material we file with the SEC at the SEC's Public Reference Room located at the following address:

100 F Street, NE
Washington, DC 20549

You may obtain information on the operation of the SEC's Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website, www.sec.gov, that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

In addition, we make available free of charge under the Investors Relation section of our website, www.vermillion.com, the Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, 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 ("Exchange Act") as soon as reasonably practicable after we have electronically filed such material with or furnished it to the SEC. The information contained on our website is not incorporated by reference in this Annual Report on Form 10-K and should not be considered a part of this Annual Report on Form 10-K. You may also obtain these documents free of charge by submitting a written request for a paper copy to the following address:

Investor Relations
Vermillion, Inc.
12117 Bee Caves Road, Building Three, Suite 100
Austin, TX 78738

ITEM 1A. RISK FACTORS

You should carefully consider the following risk factors and uncertainties together with all of the other information contained in this Annual Report on Form 10-K, including our audited consolidated financial statements and the accompanying notes in Part II Item 8, "Financial Statements and Supplementary Data." The risks and uncertainties management describes below are the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also adversely affect our business.

Risks Related to Our Business

If we are unable to increase the volume of OVA1 sales, our revenues, results of operations and financial condition would be adversely affected.

We have experienced significant operating losses each year since our inception and we expect to incur a net loss for fiscal year 2012. Our losses have resulted principally from costs incurred in research and development, sales and marketing, litigation, and general and administrative costs associated with our operations, bankruptcy under Chapter 11 and test development.

All of our revenues are currently generated from the number of OVA1 tests sold. If we are unable to increase the volume of OVA1 sales in the near future, our consolidated results of operations and financial condition would be adversely affected.

Our ability to commercialize OVA1 and other potential diagnostic tests is heavily dependent on our strategic alliance with Quest Diagnostics.

Quest Diagnostics has an exclusive license to offer OVA1 as a clinical laboratory test in the US, Mexico, Britain and India through September 11, 2014, which may be extended for an additional year beyond September 11, 2014. In addition, Quest Diagnostics is expected to have a similar exclusive license with respect to our VASCLIR test for a three year period following clearance by the FDA, as well as with respect to one additional test developed by us, if and to the extent, Quest Diagnostics exercises its development option with respect to any such test on or before October 7, 2012. Consequently, our ability to generate revenue from these tests in these regions is heavily dependent on Quest Diagnostics and its ability to market and offer these tests in its clinical laboratories.

We expect that for the foreseeable future nearly all of our revenue will be derived from Quest Diagnostics and will depend on the number of OVA1 tests performed by Quest Diagnostics and the reimbursement rate for performing those tests, which are outside of our control.

We expect that nearly all of our revenues for the foreseeable future will be derived through our strategic partnership with Quest Diagnostics and will be based on the number of OVA1 tests performed by Quest Diagnostics and the reimbursement rate received by Quest Diagnostics for those tests. On November 10, 2010, we entered into an Amendment No. 4 to our Strategic Alliance Agreement with Quest Diagnostics (the “Amendment No. 4”). Under the terms of the Amendment, we are to be paid $50 for each domestic OVA1 performed by Quest Diagnostics, as well as a 33% royalty of Quest Diagnostics’ gross margin from performing OVA1. Amendment No. 4 provides for a monthly payment by Quest Diagnostics to us based on Quest Diagnostics’ average reimbursement per OVA1 in the previous month. Under the terms of Amendment No. 4, royalty portion of our revenue is subject to adjustment, either up or down, on an annual basis within 60 days of end of each calendar year based on Quest Diagnostics’ actual reimbursement history for that calendar year. To the extent Quest Diagnostics is not reimbursed, is reimbursed at a lower than expected rate, or has reimbursement claims rejected, the royalty amounts owed to us would be reduced. Any amounts owed by us to Quest Diagnostics will be deducted against payments owed to us in future periods. The number of tests performed by Quest Diagnostics and the amount of reimbursements received by Quest Diagnostics in any given period will be largely outside of our control. If Quest Diagnostics were to perform fewer tests or receive less reimbursement per test than expected, it could have a material adverse effect on our revenue and results of operations.

How we will recognize future revenue under the Quest Diagnostics Strategic Alliance Agreement remains uncertain and is likely to change, which could affect our revenue in future periods.

As described in detail above, Amendment No. 4 changed the structure and calculation of the payment to be received by us from Quest Diagnostics relating to OVA1. Given our limited commercialization history with

OVA1, our lack of experience with the new payment terms contained in Amendment No. 4 and our inability to know or control Quest Diagnostics' reimbursement rates for OVA1, it may be difficult for us to estimate the amount of the future royalties and the size of any year-end adjustment. It is likely that we will be unable to recognize some or all of the revenue from the royalty payments to be received from Quest Diagnostics until we are better able to estimate the final royalty payment amounts and the magnitude and effect of the annual recalculation and adjustment mechanism. Accordingly, the amount of revenue we will be able to recognize in any quarter could vary significantly, and the method used to calculate that revenue could be subject to change.

Failures to reimburse OVA1 or changes in reimbursement rates by third party payers and variances in reimbursement rates could materially and adversely affect our revenues and could result in significant fluctuations in our revenues.

A significant portion of our revenues are dependent on the amount Quest Diagnostics receives from third party payers for performing OVA1. Insurance coverage and reimbursement rates for diagnostic tests are uncertain, subject to change and particularly volatile during the early stages of a newly commercialized diagnostic test. OVA1 was commercially launched in March of 2010. There remain questions as to what extent third party payers, like Medicare, Medicaid and private insurance companies will provide coverage for OVA1 and for which indications. Reimbursement rates, payment denials, appeals, and final payer determinations for OVA1 are largely out of our control, as Quest Diagnostics handles billing and reimbursement activities for all OVA1 tests performed. We are not able to predict any specific payer-level reimbursement data for OVA1 as such data is provided to us by Quest once a year as part of the annual revenue true-up process. We endeavor to maintain a dialogue with Quest Diagnostics regarding reimbursement issues as they arise. Quest Diagnostics has advised us that it has experienced volatility in the coverage and reimbursement of OVA1 due to contract negotiation with third party payers and implementation requirements and that the reimbursement amounts it has received from third party payers varies from payer to payer, and, in some cases, the variation is material. Third party payers, including private insurance companies, as well as government payers such as Medicare and Medicaid, have increased their efforts to control the cost, utilization and delivery of healthcare services. These measures have resulted in reduced payment rates and decreased utilization for the diagnostic test industry. From time to time, Congress has considered and implemented changes to the Medicare fee schedules in conjunction with budgetary legislation, and pricing for tests covered by Medicare is subject to change at any time. Reductions in the reimbursement rate of payers may occur in the future. Reductions in the price at which OVA1 is reimbursed could have a material adverse effect on our revenues. If we and Quest Diagnostics working collaboratively are unable to establish and maintain broad coverage and reimbursement for OVA1 or if third party payers change their coverage or reimbursement policies with respect to OVA1, our revenues could be materially and adversely affected.

We will need to raise additional capital in the future beyond what we have raised in a follow-on public offering on February 18, 2011, and if we are unable to secure adequate funds on terms acceptable to us, we may be unable to execute our business plan.

On February 18, 2011, we completed a follow-on public offering of our common stock in which we issued an additional 4 million shares and raised $20.2 million in net proceeds. However, in order to continue our operations as currently planned through 2013 and beyond, we will need to raise additional capital and thus there is substantial doubt regarding our ability to continue as a going concern. Our independent registered public accounting firm's report on our financial statements for the year ended December 31, 2011 includes an explanatory paragraph expressing substantial doubt about our ability to continue as a going concern, given our recurring net losses, negative cash flows from operations and debt outstanding due and payable in October 2012. We will seek to raise additional capital beyond what we have raised in the follow-on offering through the issuance of equity or debt securities, or a combination thereof, in the public or private markets, or through a collaborative arrangement or sale of assets. Additional financing opportunities may not be available to us, or if available, may not be on favorable terms. The availability of financing opportunities will depend, in part, on market conditions, and the outlook for our business. Any future issuance of equity securities or securities

convertible into equity could result in substantial dilution to our stockholders, and the securities issued in such a financing may have rights, preferences or privileges senior to those of our common stock. If we raise additional funds by issuing debt, we may be subject to limitations on our operations, through debt covenants or other restrictions. If we obtain additional funds through arrangements with collaborators or strategic partners, we may be required to relinquish rights to certain technologies or products that we might otherwise seek to retain. If adequate and acceptable financing is not available to us at the time that we seek to raise additional capital, our ability to execute our business plan successfully may be negatively impacted.

Leverage and debt service obligations may adversely affect our consolidated cash flows.

As of December 31, 2011, we had $7,000,000 outstanding under our secured line of credit with Quest Diagnostics.

Quest Diagnostics provided us with a $10,000,000 secured line of credit, which was forgivable based upon the achievement of certain milestones related to the development, regulatory approval and commercialization of certain diagnostic tests. As of our emergence from bankruptcy under the Bankruptcy Code, certain milestones had been met and the principal balance of the secured line of credit was reduced to $7,000,000. We are in discussions with Quest Diagnostics regarding the achievement of an additional $1,000,000 forgiveness milestone that we believe is owed to us relating to OVA1 under the terms of the Amended Strategic Alliance Agreement. The $7,000,000 secured line of credit, which is due on October 7, 2012, is secured by certain of our assets, including our patents and other intellectual property. As a result of this indebtedness, we have principal and interest payment obligations to Quest Diagnostics. The degree to which we are leveraged could, among other things:

- make it difficult for us to obtain financing for working capital, acquisitions or other purposes on favorable terms, if at all;
- make us more vulnerable to industry downturns and competitive pressures; and
- limit our flexibility in planning for or reacting to changes in our business.

Our ability to meet our debt service obligations will depend upon our future performance, which will be subject to financial, business and other factors affecting our operations, many of which are beyond our control. If we cannot meet our debt service obligation, it would have a material adverse effect on our consolidated financial position.

We may not succeed in developing additional diagnostic products, and, even if we do succeed in developing additional diagnostic products, the diagnostic products may never achieve significant commercial market acceptance.

Our success depends on our ability to continue to develop and commercialize diagnostic products. There is considerable risk in developing diagnostic products based on our biomarker discovery efforts, as candidate biomarkers may fail to validate results in larger clinical studies or may not achieve acceptable levels of clinical accuracy. For example, markers being evaluated for OVA2 may not be validated in downstream pre-clinical or clinical studies, once we undertake and perform such studies. Although our PAD blood test in development, VASCLIR, achieved positive top-line results from an intended use clinical study, it is possible that these biomarkers, upon further analysis and clinical study, may not meet acceptance criteria for validation or regulatory clearance.

Clinical testing is expensive, takes many years to complete and can have an uncertain outcome. Clinical failure can occur at any stage of the testing. Clinical trials for our PAD, OVA2, and other future diagnostic tests may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical and/or non-clinical testing on these tests. In addition, the results of our clinical trials may identify unexpected risks relative to safety or efficacy, which could complicate, delay or halt clinical trials, or result in the denial of regulatory approval by the FDA and other regulatory authorities.

If we do succeed in developing additional diagnostic tests with acceptable performance characteristics, we may not succeed in achieving significant commercial market acceptance for those tests. Our ability to successfully commercialize diagnostic products, including OVA1, will depend on several factors, including:

- our ability to convince the medical community of the safety and clinical efficacy of our products and their advantages over existing diagnostic products;
- our success in establishing new clinical practices or changing previous ones, such that utilization of the tests fail to meet established standards of care, medical guidelines and the like;
- our ability to further establish business relationships with other diagnostic or laboratory companies that can assist in the commercialization of these products in the US and globally; and
- the scope and extent of the agreement by Medicare and third-party payers to provide full or partial reimbursement coverage for our products, which will affect patients' willingness to pay for our products and will likely heavily influence physicians' decisions to recommend or use our products.

These factors present obstacles to significant commercial acceptance of our existing and potential diagnostic products, for which we will have to spend substantial time and financial resources to overcome, and there is no guarantee that we will be successful in doing so. Our inability to do so successfully would prevent us from generating revenue from future diagnostic products.

The diagnostics market is competitive and we may not be able to compete successfully, which would adversely impact our ability to generate revenue.

Our principal competition currently comes from the many clinical options available to medical personnel involved in clinical decision making. For example, rather than ordering an OVA1 for a woman with an adnexal mass, obstetricians, gynecologists, and gynecologic oncologists may choose a different clinical option or none at all. If we are not able to convince clinicians that OVA1 provides significant improvement over current clinical practices, our ability to commercialize OVA1 would be adversely affected. Additionally, Fujirebio Diagnostics, Inc. announced in September 2011 that they have received clearance from the FDA to commercialize its Risk of Malignancy Algorithm ("ROMA") test, a diagnostic test that uses the biomarkers CA125 and HE4 to identify masses with a high likelihood of malignancy. The ROMA test may be in direct competition with OVA1 and our revenues could be materially and adversely affected if and when the ROMA test is successfully commercialized. In addition, competitors, such as Becton Dickinson, ArrayIt Corporation, and Abbott Labs have publicly disclosed that they have been or are currently working on ovarian cancer diagnostic assays. Academic institutions periodically report new findings in ovarian cancer diagnostics that may have commercial value. Our failure to compete with any competitive diagnostic assay if and when commercialized could adversely affect our business.

We have priced OVA1 at a point that recognizes the value-added by its increased sensitivity for ovarian malignancy. If others develop a test that is viewed to be similar to OVA1 in efficacy but is priced at a lower point, we and/or our strategic partners may have to lower the price of OVA1 in order to effectively compete, which would impact our margins and potential for profitability.

The commercialization of our diagnostic tests may be affected adversely by changing FDA regulations, and any delay by or failure of the FDA to approve our diagnostic tests submitted to the FDA may adversely affect our consolidated revenues, results of operations and financial condition.

The FDA cleared OVA1 on September 11, 2009. Our activities related to diagnostic products are, or have the potential to be, subject to regulatory oversight by the FDA under provisions of the Federal Food, Drug and Cosmetic Act and regulations thereunder, including regulations governing the development, marketing, labeling, promotion, manufacturing and export of our products. Failure to comply with applicable requirements can lead to sanctions, including withdrawal of products from the market, recalls, refusal to authorize government contracts, product seizures, civil money penalties, injunctions and criminal prosecution.

The Food, Drug and Cosmetic Act requires that medical devices introduced to the United States market, unless exempted by regulation, be the subject of either a pre-market notification clearance, known as a 510(k) clearance or 510(k) de novo clearance, or a PMA. Some of our potential future clinical products may require a 510(k) or 510(k) de novo clearance, while others may require a PMA. With respect to devices reviewed through the 510(k) process, we may not market a device until an order is issued by the FDA finding our product to be substantially equivalent to a legally marketed device known as a predicate device. A 510(k) submission may involve the presentation of a substantial volume of data, including clinical data. The FDA may agree that the product is substantially equivalent to a predicate device and allow the product to be marketed in the United States. On the other hand, the FDA may determine that the device is not substantially equivalent and require a PMA, or require further information, such as additional test data, including data from clinical studies, before it is able to make a determination regarding substantial equivalence. By requesting additional information, the FDA can delay market introduction of our products. Delays in receipt of or failure to receive any necessary 510(k) clearance or PMA approval, or the imposition of stringent restrictions on the labeling and sales of our products, could have a material adverse effect on us. If the FDA indicates that a PMA is required for any of our potential future clinical products, the application will require extensive clinical studies, manufacturing information and likely review by a panel of experts outside the FDA. Clinical studies to support either a 510(k) submission or a PMA application would need to be conducted in accordance with FDA requirements. Failure to comply with FDA requirements could result in the FDA's refusal to accept the data or the imposition of regulatory sanctions. We cannot assure that any necessary 510(k) clearance or PMA approval will be granted on a timely basis, or at all. To the extent we seek FDA 510 (k) clearance or FDA pre-market approval for other diagnostic tests, any delay by or failure of the FDA to clear or approve those diagnostic tests may adversely affect our consolidated revenues, results of operations and financial condition.

If we or our suppliers fail to comply with FDA requirements for production, marketing and postmarket monitoring of our products, we may not be able to market our products and services and may be subject to stringent penalties, product restrictions or recall; further improvements to our manufacturing operations may be required that could entail additional costs.

The commercialization of our products could be delayed, halted or prevented by applicable FDA regulations. If the FDA were to view any of our actions as non-compliant, it could initiate enforcement actions, such as a warning letter and possible imposition of penalties. In addition, analyte specific reagents ("ASRs") that we may provide would be subject to a number of FDA requirements, including compliance with the FDA's Quality System Regulations ("QSR"), which establish extensive requirements for quality assurance and control as well as manufacturing procedures. Failure to comply with these regulations could result in enforcement actions for us or our potential suppliers. Adverse FDA actions in any of these areas could significantly increase our expenses and limit our revenue and profitability. We will need to undertake steps to maintain our operations in line with the FDA's QSR requirements. Some components of OVA1 are manufactured by other companies and we are required to maintain supply agreements with these companies. If these agreements are not satisfactory to the FDA, we will have to renegotiate these agreements. Any failure to do so would have an adverse effect on our ability to commercialize OVA1. Our suppliers' manufacturing facilities will be subject to periodic regulatory inspections by the FDA and other federal and state regulatory agencies. If and when we begin commercializing and assembling our products by ourselves, our facilities will be subject to the same inspections. We or our suppliers may not satisfy such regulatory requirements, and any such failure to do so would have an adverse effect on our commercialization efforts.

If we fail to continue to develop our technologies, we may not be able to successfully foster adoption of our products and services or develop new product offerings.

Our technologies are new and complex, and are subject to change as new discoveries are made. New discoveries and advancements in the diagnostic field are essential if we are to foster the adoption of our product offerings. Development of these technologies remains a substantial risk to us due to various factors, including the scientific challenges involved, our ability to find and collaborate successfully with others working in the diagnostic field, and competing technologies, which may prove more successful than our technologies.

If we fail to maintain our rights to utilize intellectual property directed to diagnostic biomarkers, we may not be able to offer diagnostic tests using those biomarkers.

One aspect of our business plan is to develop diagnostic tests based on certain biomarkers, which we have the right to utilize through licenses with our academic collaborators, such as the Johns Hopkins University School of Medicine, Stanford University, and the University of Texas M.D. Anderson Cancer Center. In some cases, our collaborators own the entire right to the biomarkers. In other cases, we co-own the biomarkers with our collaborators. If, for some reason, we lose our license to biomarkers owned entirely by our collaborators, we may not be able to use those biomarkers in diagnostic tests. If we lose our exclusive license to biomarkers co-owned by us and our collaborators, our collaborators may license their share of the intellectual property to a third party that may compete with us in offering diagnostic tests, which would materially adversely affect our consolidated revenues, results of operations and financial condition.

We have $7,000,000 outstanding from the secured line of credit provided by Quest Diagnostics. We will likely be responsible for full repayment of the secured line of credit on October 7, 2012.

As of December 31, 2011, we have $7,000,000 outstanding from the secured lined of credit in connection with the Strategic Alliance. Over a two-year period, we borrowed monthly increments of $417,000, totaling $10,000,000, and have paid all interest that was due. Funds from this secured line of credit were used for certain costs and expenses directly related to the Strategic Alliance, with forgiveness of the repayment obligations based upon our achievement of milestones related to the development, regulatory approval and commercialization of certain diagnostic tests. On October 7, 2009, the Strategic Alliance Agreement was amended to extend the term of the agreement to end on the earlier of (i) October 7, 2012 and (ii) the date on which Quest Diagnostics has commercially launched three licensed laboratory tests under the Strategic Alliance. On September 11, 2009, we announced our milestone achievement of clearing OVA1 with the FDA and, effective after the emergence from bankruptcy, reduced our principal obligations under the Amended Strategic Alliance Agreement to $7,000,000. We are in discussions with Quest Diagnostics regarding the achievement of an additional $1,000,000 forgiveness milestone related to OVA1 under the terms of the Amended Strategic Alliance Agreement. However, Quest Diagnostics has not yet acknowledged that such milestone has been achieved. We will likely be responsible for the repayment of the outstanding principal amount and any unpaid interest on the secured line of credit on October 7, 2012, which could materially adversely affect our consolidated results of operations and financial condition.

If a competitor infringes on our proprietary rights, we may lose any competitive advantage we may have as a result of diversion of our time, enforcement costs and the loss of the exclusivity of our proprietary rights.

Our success depends in part on our ability to maintain and enforce our proprietary rights. We rely on a combination of patents, trademarks, copyrights and trade secrets to protect our technology and brand. We have submitted a number of patent applications covering biomarkers that may have diagnostic or therapeutic utility. Our patent applications may or may not result in additional patents being issued.

If competitors engage in activities that infringe on our proprietary rights, our focus will be diverted and we may incur significant costs in asserting our rights. We may not be successful in asserting our proprietary rights, which could result in our patents being held invalid or a court holding that the competitor is not infringing, either of which would harm our competitive position. We cannot be sure that competitors will not design around our patented technology.

We also rely upon the skills, knowledge and experience of our technical personnel. To help protect our rights, we require all employees and consultants to enter into confidentiality agreements that prohibit the disclosure of confidential information. These agreements may not provide adequate protection for our trade secrets, knowledge or other proprietary information in the event of any unauthorized use or disclosure. If any trade secret, knowledge or other technology not protected by a patent were to be disclosed to or independently developed by a competitor, it could have a material adverse effect on our business, consolidated results of operations and financial condition.

If others successfully assert their proprietary rights against us, we may be precluded from making and selling our products or we may be required to obtain licenses to use their technology.

Our success depends on avoiding infringing on the proprietary technologies of others. If a third party were to assert claims that we are violating their patents, we might incur substantial costs defending ourselves in lawsuits against charges of patent infringement or other unlawful use of another's proprietary technology. Any such lawsuit may not be decided in our favor, and if we are found liable, it may be subject to monetary damages or injunction against using the technology. We may also be required to obtain licenses under patents owned by third parties and such licenses may not be available to us on commercially reasonable terms, if at all.

Current and future litigation against us could be costly and time consuming to defend.

We are from time to time subject to legal proceedings and claims that arise in the ordinary course of business, such as claims brought by our clients in connection with commercial disputes, employment claims made by current or former employees, and claims brought by third parties alleging infringement on their intellectual property rights. In addition, we may bring claims against third parties for infringement on our intellectual property rights. Litigation may result in substantial costs and may divert our attention and resources, which may seriously harm our business, consolidated results of operations and financial condition.

An unfavorable judgment against us in any legal proceeding or claim could require us to pay monetary damages. In addition, an unfavorable judgment in which the counterparty is awarded equitable relief, such as an injunction, could have an adverse impact on our licensing and sublicensing activities, which could harm our business, consolidated results of operations and consolidated financial condition.

On July 9, 2007, Molecular Analytical Systems filed a lawsuit in the Superior Court of California for the County of Santa Clara naming Vermillion and Bio-Rad as defendants (the "State Court lawsuit"). In connection with the State Court lawsuit, MAS sought an unspecified amount of damages and alleged, among other things, that we breached our license agreement with MAS relating to SELDI technology by entering into a sublicense agreement with Bio-Rad. We filed our general denial and affirmative defenses on April 1, 2008. The State Court lawsuit was automatically stayed when we filed a Voluntary Petition for Relief under Chapter 11 in the Bankruptcy Court on March 30, 2009. MAS filed a proof of claim in the Bankruptcy Court on July 15, 2009. The proof of claim mirrored the State Court lawsuit, alleging that we breached our license agreement with MAS by transferring certain technologies to Bio-Rad without obtaining MAS's consent. MAS listed the value of its claim as in excess of $5,000,000. On December 28, 2009, we objected to MAS's Proof of Claim in the Bankruptcy Court. On January 7, 2010, the Bankruptcy Court confirmed our Plan of Reorganization. After the Plan of Reorganization was confirmed, MAS filed a motion with the Bankruptcy Court requesting that it abstain from hearing its proof of claim and that it grant MAS relief from the automatic stay so that MAS could proceed with the State Court lawsuit in California. Over our objection, the Bankruptcy Court granted that motion on March 16, 2010. Thereafter, the Superior Court ordered that the dispute be arbitrated before the Judicial Arbitration and Mediation Service. MAS filed its demand for arbitration on September 15, 2010. The demand did not include any additional detail regarding MAS's claims and attached the same complaint for unspecified damages that MAS filed in the Superior Court in 2007. The parties thereafter conducted discovery, and the arbitration hearing commenced on September 21, 2011. Both sides presented evidence over five hearing days ending on October 4, 2011. The parties completed post-hearing briefing on November 9, 2011 and presented closing arguments on November 11, 2011. On February 23, 2012, an interim arbitration award was issued by the Arbitrator. In the interim arbitration award, the Arbitrator denied MAS's claim for breach of the license agreement as well as several other of MAS's claims. The Arbitrator found that MAS was entitled to an accounting concerning our 2% royalty obligation either for 10 years (from February 21, 2003 through February 21, 2013) or until cumulative royalty payments reached $10 million, whichever comes first, and ordered that such royalties should be based on our total GAAP revenues, less revenues attributable to certain excluded entities, not just SELDI-related revenues. The Arbitrator also ordered that the parties meet and confer regarding further proceedings relating to the accounting. We have accrued for the amount deemed estimable and probable of loss, and not previously paid

to MAS, pursuant to the interim arbitration award within general and administrative expense at December 31, 2011. The amount was not material to the financial statements for the year ended December 31, 2011. We anticipate receiving a final arbitration award consistent with the interim arbitration award by June 2012 and believe the possibility of any material loss in excess of the amount accrued is remote; however, management cannot predict the content nor control the timing of the final arbitration award at this time.

On February 28, 2012, Robert Goggin III, a purported shareholder of Vermillion, filed for and obtained a writ of summons in Pennsylvania state court as a precursor to filing a lawsuit against Vermillion. Goggin discontinued his case on February 29, 2012. Thereafter, on March 12, 2012, Patrick Gillespie, a purported shareholder of Vermillion, represented by the same counsel as Goggin, filed for and obtained a writ of summons in Pennsylvania state court as a precursor to filing a lawsuit against Vermillion. On March 22, 2012, Gillespie asked the court to issue letters rogatory to permit pre-suit discovery. We dispute any claims that Gillespie may make and intend to defend this matter vigorously. Due to the fact that complaints have not yet been filed in the proceedings, we cannot estimate its likely impact on us.

Our failure to meet our purchase commitments pursuant to a manufacture and supply agreement with Bio-Rad could adversely affect our consolidated results of operations and financial condition.

We are a party to a manufacture and supply agreement with Bio-Rad, dated November 13, 2006, whereby we agreed to purchase from Bio-Rad the ProteinChip Systems and ProteinChip Arrays necessary to support our diagnostics efforts. Under the terms of the agreement, we were required to purchase a specified number of ProteinChip Systems and ProteinChip Arrays in each of the three years following the date of the agreement. Pursuant to a letter from us to Bio-Rad dated May 2, 2008, we exercised our right to terminate the agreement for convenience upon 180 days' written notice. Consequently, termination of the agreement became effective on October 29, 2008. In our bankruptcy proceeding, Bio-Rad filed a claim for approximately $1,000,000. If we are unable to resolve this claim, it would have an adverse effect on our consolidated cash flows.

Because our business is highly dependent on key executives and employees, our inability to recruit and retain these people could hinder our business plans.

We are highly dependent on our executive officers and certain key employees. Our executive officers and key employees are employed at will by us. Any inability to engage new executive officers or key employees could impact operations or delay or curtail our research, development and commercialization objectives. To continue our research and product development efforts, we need people skilled in areas such as clinical operations, regulatory affairs and clinical diagnostics. Competition for qualified employees is intense.

If we lose the services of any senior executive officers or key employees, our ability to achieve our business objectives could be harmed, which in turn could adversely affect our business and operating results.

Our diagnostic efforts may cause us to have significant product liability exposure.

The testing, manufacturing and marketing of medical diagnostic tests entail an inherent risk of product liability claims. Potential product liability claims may exceed the amount of our insurance coverage or may be excluded from coverage under the terms of the policy. Our existing insurance will have to be increased in the future if we are successful at introducing new diagnostic products and this will increase our costs. In the event that we are held liable for a claim or for damages exceeding the limits of our insurance coverage, we may be required to make substantial payments. This may have an adverse effect on our consolidated results of operations, financial condition and cash flows, and may increase the volatility of our common stock price.

Business interruptions could limit our ability to operate our business.

Our operations, as well as those of the collaborators on which we depend, are vulnerable to damage or interruption from fire; natural disasters, including earthquakes; computer viruses; human error; power shortages;

telecommunication failures; international acts of terror; and similar events. Although we have certain business continuity plans in place, we have not established a formal comprehensive disaster recovery plan, and our back-up operations and business interruption insurance may not be adequate to compensate it for losses we may suffer. A significant business interruption could result in losses or damages incurred by us and require us to cease or curtail our operations.

If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could adversely affect our business, operating results, and financial condition.

We are required to comply with the management certification requirements of Section 404 of the Sarbanes-Oxley Act of 2002. We are required to report, among other things, control deficiencies that constitute a "material weakness" or changes in internal controls that, or that are reasonably likely to, materially affect internal controls over financial reporting. A "material weakness" is a deficiency or combination of deficiencies that results in a reasonable possibility that a material misstatement of the annual or interim consolidated financial statements will not be prevented or detected. If we fail to continue to comply with the requirements of Section 404, we might be subject to sanctions or investigation by regulatory authorities such as the SEC. If we fail to remedy any material weakness, our consolidated financial statements may be inaccurate, which could adversely affect our business, operating results, and financial condition.

Legislative actions resulting in higher compliance costs are likely to adversely affect our future consolidated results of operations, financial position and cash flows.

Compliance with laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, and new regulations adopted by the SEC, are resulting in increased compliance costs. We, like all other public companies, are incurring expenses and diverting employees' time in an effort to comply with Section 404 of the Sarbanes-Oxley Act of 2002. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to existing regulations that require our compliance. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations. Compliance with these evolving standards will result in increased general and administrative expenses and may cause a diversion of our time and attention from revenue-generating activities to compliance activities.

Changes in healthcare policy could increase our costs and impact sales of and reimbursement for our tests.

In March 2010, President Barack Obama signed the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (collectively, the "PPACA"), which makes changes that are expected to significantly impact the pharmaceutical and medical device industries. Beginning in 2013, each medical device manufacturer will have to pay a sales tax in an amount equal to 2.3 percent of the price for which such manufacturer sells its medical devices. The PPACA also mandates a reduction in payments for clinical laboratory services paid under the Medicare Clinical Laboratory Fee Schedule of 1.75% for the years 2011 through 2015. This adjustment is in addition to a productivity adjustment to the Clinical Laboratory Fee Schedule. In addition to the PPACA, the impact of which cannot be predicted given its recent enactment and current lack of implementing regulations or interpretive guidance, a number of states are also contemplating significant reform of their healthcare policies. We cannot predict whether future healthcare initiatives will be implemented at the federal or state level, or the effect any future legislation or regulation will have on us. The taxes imposed by the new federal legislation may result in decreased profits to us, and lower reimbursements by payers for our tests, all of which may adversely affect our business.

We are subject to environmental laws and potential exposure to environmental liabilities.

We are subject to various international, federal, state and local environmental laws and regulations that govern our operations, including the handling and disposal of non-hazardous and hazardous wastes, the recycling and treatment of electrical and electronic equipment, and emissions and discharges into the environment. Failure to comply with such laws and regulations could result in costs for corrective action, penalties or the imposition of other liabilities. We are also subject to laws and regulations that impose liability and clean-up responsibility for releases of hazardous substances into the environment. Under certain of these laws and regulations, a current or previous owner or operator of property may be liable for the costs to remediate hazardous substances or petroleum products on or from its property, without regard to whether the owner or operator knew of, or caused, the contamination, as well as incur liability to third parties affected by such contamination. The presence of, or failure to remediate properly, such substances could adversely affect the value and the ability to transfer or encumber such property. Based on currently available information, although there can be no assurance, we believe that such costs and liabilities have not had and will not have a material adverse impact on our consolidated results of operations.

Risks Related to Owning our Stock

The liquidity and trading volume of our common stock may be low.

The liquidity and trading volume of our common stock has at times been low in the past and may again be low in the future. If the liquidity and trading volume were to fall, this could impact the trading price of our shares and adversely affect our ability to issue stock and for holders to obtain liquidity in their shares should they desire to sell.

Our stock price has been, and may continue to be, highly volatile, and an investment in our stock could suffer a decline in value.

The trading price of our common stock has been highly volatile and could continue to be subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including:

- failure to significantly increase revenue and volumes of OVA1;
- actual or anticipated period-to-period fluctuations in financial results;
- failure to achieve, or changes in, financial estimates by securities analysts;
- announcements or introductions of new products or services or technological innovations by us or our competitors;
- publicity regarding actual or potential discoveries of biomarkers by others;
- comments or opinions by securities analysts or stockholders;
- conditions or trends in the pharmaceutical, biotechnology and life science industries;
- announcements by us of significant acquisitions and divestitures, strategic partnerships, joint ventures or capital commitments;
- developments regarding our patents or other intellectual property or that of our competitors;
- litigation or threat of litigation;
- additions or departures of key personnel;
- limited daily trading volume;
- economic and other external factors, disasters or crises; and
- our announcement of additional fund raisings.

In addition, the stock market in general and the market for diagnostic technology companies, in particular, have experienced significant price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted. A securities class action suit against us could result in substantial costs, potential liabilities and the diversion of our attention and our resources.

If we fail to meet all applicable Nasdaq Capital Market requirements and Nasdaq determines to delist our common stock, the market liquidity and market price of our common stock could decline, and our ability to access the capital markets could be negatively affected.

Trading of our common stock was transferred from the Nasdaq Global Market to the Nasdaq Capital Market on February 15, 2012. We made the request to transfer our listing to facilitate our continued compliance with the applicable requirements for continued listing on NASDAQ. In order to maintain the listing on the Nasdaq Capital Market, we must satisfy minimum financial and other requirements, including requirements that we maintain a minimum stockholder's equity of $2.5 million and a minimum bid price of $1 per share. If we fail to meet all applicable Nasdaq Capital Market requirements and Nasdaq determines to delist our common stock, the delisting could adversely affect the market liquidity of our common stock and adversely affect our ability to obtain financing for the continuation of our operations. This delisting could also impair the value of our investors' investment.

Anti-takeover provisions in our charter, bylaws and stockholder rights plan and under Delaware law could make a third party acquisition of the Company difficult.

Our certificate of incorporation, bylaws and stockholder rights plan contain provisions that could make it more difficult for a third party to acquire us, even if doing so might be deemed beneficial by our stockholders. These provisions could limit the price that investors might be willing to pay in the future for shares of our common stock. We are also subject to certain provisions of Delaware law that could delay, deter or prevent a change in control of the Company. The rights issued pursuant to our stockholder rights plan will become exercisable the tenth day after a person or group announces acquisition of 15% or more of our common stock or announces commencement of a tender or exchange offer the consummation of which would result in ownership by the person or group of 15% or more of our common stock. If the rights become exercisable, the holders of the rights (other than the person acquiring 15% or more of our common stock) will be entitled to acquire, in exchange for the rights' exercise price, shares of our common stock or shares of any company in which we are merged, with a value equal to twice the rights' exercise price.

We could face adverse consequences as a result of the actions of activist stockholders.

Certain of our stockholders or parties affiliated with our stockholders may, from time to time, attempt to aggressively involve themselves in the governance and strategic direction of our Company above and apart from normal interactions between stockholders and management. Such activism, and any related negative publicity, could result in substantial costs that negatively impact our stock price and increase its volatility. In addition, such involvement could cause a diversion of the attention of our management and Board of Directors and create perceived uncertainties with existing and potential strategic partners impacting our ability to consummate potential transactions, collaborations or opportunities in furtherance of our strategic plan. In addition, such activism could make it more difficult to attract and retain qualified personnel, customers and business partners, which could disrupt the growth of the market for OVA1, delay the development and commercialization of new tests and further adversely affect the trading price of our common stock and increase its volatility. In addition, the activists may have little or no experience in the diagnostics industry or may seek to elect members to our Board of Directors with little or no experience in the diagnostics industry who may have a specific agenda different and apart from the majority of our stockholders. To the extent any suc *h stockholders constitute a "group,"* as used

relating to Section 13 of the Securities Exchange Act of 1934, by having any relationship, agreement, arrangement, affiliation or understanding among themselves, whether direct or indirect, oral or written, specific or informal, it could result in a "trigger event" under our stockholder rights plan, causing disruption and additional costs to the Company and its stockholders and increasing volatility in our stock price.

Because we do not intend to pay dividends, our stockholders will benefit from an investment in our common stock only if it appreciates in value.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain our future earnings, if any, to finance the expansion of our business and do not expect to pay any cash dividends in the foreseeable future. As a result, the success of an investment in our common stock will depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value or even maintain the price at which our investors purchased their shares.

We may need to sell additional shares of our common stock or other securities in the future to meet our capital requirements which could cause significant dilution.

On February 18, 2011, we completed a follow-on public offering of our common stock in which we issued an additional 4 million shares and raised $20.2 million in net proceeds. As of December 31, 2011, we had 14,900,831 shares of our common stock outstanding and 628,675 shares of our common stock reserved for future issuance to employees, directors and consultants pursuant to our employee stock plans, which excludes 930,060 shares of our common stock that were subject to outstanding options. Also, as of December 31, 2011, there were 114,750 shares of restricted stock awarded to certain Executive Officers pursuant to the 2010 Plan that were not vested. These shares vest ratably through March 2014. In addition, as of December 31, 2011, warrants to purchase 195,012 shares of our common stock were outstanding at an exercise price of $9.25 per share.

The exercise or conversion of all or a portion of our senior notes, outstanding options and warrants, and the vesting of our restricted stock, would dilute the ownership interests of our stockholders. Furthermore, future sales of substantial amounts of our common stock in the public market, or the perception that such sales are likely to occur, could affect prevailing trading prices of our common stock and the value of the notes.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal facility is located in Austin, Texas. The following chart indicates the facilities that we lease, the location and size of each facility and its designated use.

Location	Approximate Square Feet	Primary Functions	Lease Expiration Date
Austin, Texas	4,218 sq. ft.	Marketing, sales and administrative offices	2013
Mountain View, California	2,442 sq. ft.	Research and development, clinical and regulatory offices	2012

ITEM 3. LEGAL PROCEEDINGS

Molecular Analytical Systems, Inc. Litigation

On July 9, 2007, Molecular Analytical Systems filed a lawsuit in the Superior Court of California for the County of Santa Clara naming Vermillion and Bio-Rad as defendants (the "State Court lawsuit"). In connection

with the State Court lawsuit, MAS sought an unspecified amount of damages and alleged, among other things, that we breached our license agreement with MAS relating to SELDI technology by entering into a sublicense agreement with Bio-Rad. We filed our general denial and affirmative defenses on April 1, 2008. The State Court lawsuit was automatically stayed when we filed a Voluntary Petition for Relief under Chapter 11 in the Bankruptcy Court on March 30, 2009. MAS filed a proof of claim in the Bankruptcy Court on July 15, 2009. The proof of claim mirrored the State Court lawsuit, alleging that we breached our license agreement with MAS by transferring certain technologies to Bio-Rad without obtaining MAS's consent. MAS listed the value of its claim as in excess of $5,000,000. On December 28, 2009, we objected to MAS's Proof of Claim in the Bankruptcy Court. On January 7, 2010, the Bankruptcy Court confirmed our Plan of Reorganization. After the Plan of Reorganization was confirmed, MAS filed a motion with the Bankruptcy Court requesting that it abstain from hearing its proof of claim and that it grant MAS relief from the automatic stay so that MAS could proceed with the State Court lawsuit in California. Over our objection, the Bankruptcy Court granted that motion on March 16, 2010. Thereafter, the Superior Court ordered that the dispute be arbitrated before the Judicial Arbitration and Mediation Service. MAS filed its demand for arbitration on September 15, 2010. The demand did not include any additional detail regarding MAS's claims and attached the same complaint for unspecified damages that MAS filed in the Superior Court in 2007. The parties thereafter conducted discovery, and the arbitration hearing commenced on September 21, 2011. Both sides presented evidence over five hearing days ending on October 4, 2011. The parties completed post-hearing briefing on November 9, 2011 and presented closing arguments on November 11, 2011. On February 23, 2012, an interim arbitration award was issued by the Arbitrator. In the interim arbitration award, the Arbitrator denied MAS's claim for breach of the license agreement as well as several other of MAS's claims. The Arbitrator found that MAS was entitled to an accounting concerning our 2% royalty obligation either for 10 years (from February 21, 2003 through February 21, 2013) or until cumulative royalty payments reached $10 million, whichever comes first, and ordered that such royalties should be based on our total GAAP revenues, less revenues attributable to certain excluded entities, not just SELDI-related revenues. The Arbitrator also ordered that the parties meet and confer regarding further proceedings relating to the accounting. We have accrued for the amount deemed estimable and probable of loss, and not previously paid to MAS, pursuant to the interim arbitration award within general and administrative expense at December 31, 2011. The amount was not material to the financial statements for the year ended December 31, 2011. We anticipate receiving a final arbitration award consistent with the interim arbitration award by June 2012 and believe the possibility of any material loss in excess of the amount accrued is remote; however, management cannot predict the content nor control the timing of the final arbitration award at this time.

Bio-Rad Laboratories, Inc. Matters

On November 13, 2006, we completed the Instrument Business Sale to Bio-Rad. The Instrument Business Sale included our SELDI technology, ProteinChip arrays and accompanying software. Pursuant to the terms of the sales agreement, the total sales price was $20,000,000, of which $16,000,000 was paid by Bio-Rad to us at the closing of the transaction on November 13, 2006. A total of $4,000,000 was held back from the sales proceeds contingent upon our meeting certain obligations, of which $2,000,000 was subsequently paid to us in fiscal 2007 upon the issuance by the United States Patent and Trademark Office of a reexamination certificate for United States Patent No. 6,734,022. From the amounts held back, the remaining $2,000,000, subject to certain adjustments, is being held in escrow to serve as security for us to fulfill certain obligations.

In connection with the Instrument Business Sale, we entered into a letter agreement with Bio-Rad pursuant to which we agreed to indemnify Bio-Rad and its subsidiaries with respect to certain payments made by Bio-Rad in connection with the termination of employees of its former subsidiary in the United Kingdom in the six-month period immediately following the Instrument Business Sale. On May 4, 2007, Bio-Rad delivered a claim for indemnification under the agreement for $307,000, which was paid out of $2,000,000 held in escrow. In August 2009, Bio-Rad also filed a proof of claim in the bankruptcy case for indemnification of the MAS lawsuit. Management is disputing the claim and cannot predict the ultimate outcome of this matter at this time.

In connection with the Instrument Business Sale, we also entered into a manufacture and supply agreement with Bio-Rad on November 13, 2006, whereby we agreed to purchase ProteinChip Systems and ProteinChip

Arrays (collectively, the "Research Tools Products") from Bio-Rad. Under the terms of the manufacture and supply agreement, we agreed to provide Bio-Rad quarterly, non-binding, twelve-month rolling forecasts setting forth our anticipated needs for Research Tools Products over the forecast period. We were permitted to provide revised forecasts as necessary to reflect changes in demand for the products, and Bio-Rad was required to use commercially reasonable efforts to supply amounts in excess of the applicable forecast. Either party was permitted to terminate the agreement for convenience upon 180 days' prior written notice, or upon default if the other party failed to cure such default within 30 days after notice thereof. In a letter from us to Bio-Rad dated May 2, 2008, we exercised our right to terminate the November 13, 2006 manufacture and supply agreement for convenience upon 180 days' written notice. Consequently, termination of the agreement became effective on October 29, 2008. In October 2009, Bio-Rad filed a proof of claim in our bankruptcy case based on certain contract claims for approximately $1,000,000. We are attempting to resolve the contract claims and have accrued for this contingency within general and administrative expense at December 31, 2011 and 2010. Management cannot predict the ultimate outcome of this matter at this time.

Patrick Gillespie Litigation

On February 28, 2012, Robert Goggin III, a purported shareholder of Vermillion, filed for and obtained a writ of summons in Pennsylvania state court as a precursor to filing a lawsuit against Vermillion. Goggin discontinued his case on February 29, 2012. Thereafter, on March 12, 2012, Patrick Gillespie, a purported shareholder of Vermillion, represented by the same counsel as Goggin, filed for and obtained a writ of summons in Pennsylvania state court as a precursor to filing a lawsuit against Vermillion. On March 22, 2012, Gillespie asked the court to issue letters rogatory to permit pre-suit discovery. We dispute any claims that Gillespie may make and intend to defend this matter vigorously. Due to the fact that complaints have not yet been filed in the proceedings, we cannot estimate its likely impact on us.

In addition, from time to time, we are involved in legal proceedings and regulatory proceedings arising out of our operations. We established reserves for specific liabilities in connection with legal actions that it deems to be probable and estimable. Other than as disclosed above, we are not currently a party to any proceeding, the adverse outcome of which would have a material adverse effect on 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

Our common stock was traded on the Nasdaq Global Market under the symbol "VRML." Effective February 15, 2012, we transferred our listing from the NASDAQ Global Market to the NASDAQ Capital Market.

On September 25, 2008, our common stock was delisted from and suspended from trading on The Nasdaq Capital Market as a result of our noncompliance with the listing criteria under Marketplace Rule 4310(c)(3). Upon delisting from The Nasdaq Capital Market, our common stock became immediately eligible for quotation and began trading over-the-counter ("OTC") on Pink Quote, formerly known as Pink Sheets, electronic quotation system ("Pink Quote") on September 25, 2008, under the ticker symbol "VRML.PK". After a market maker's application to trade our common stock on the OTC Bulletin Board was approved by the Financial Industry Regulatory Authority, our common stock began trading on the OTC Bulletin Board under the ticker symbol "VRML.OB" on October 10, 2008.

In connection to our March 30, 2009 filing for relief under the Bankruptcy Code in the Bankruptcy Court, our common stock began trading under the ticker symbol "VRMLQ.OB" on April 6, 2009. On April 20, 2009, our common stock began trading under the ticker symbol "VRMQE.OB" as a result of us becoming a delinquent filer of our required financial reports to the SEC under the National Association of Securities Dealers, Inc. ("NASD") Rule 6530. After a 30-day grace period on May 20, 2009, our common stock was delisted from the OTC Bulletin Board for noncompliance with NASD Rule 6530. Upon delisting from the OTC Bulletin Board, our common stock became immediately eligible for quotation and began trading on Pink Quote under the ticker symbol "VRMLQ.PK" on May 20, 2009. On January 27, 2010, our common stock began trading under the symbol "VRML.PK" in connection with our emergence from bankruptcy under the Bankruptcy Code on January 22, 2010.

On July 6, 2010, The Nasdaq Stock Market LLC relisted our common stock on The Nasdaq Global Market. On March 8, 2012, there were 72 registered holders of record of our common stock, including multiple beneficial holders and depositories, banks and brokers listed as a single holder in the street name of each respective depository, bank or broker. The closing price of our common stock on March 19, 2012 was $1.61.

The following sets forth the quarterly high and low trading prices as reported by The Nasdaq Global Market and Pink Quote for the periods indicated.

	2011		2010	
	High	Low	High	Low
First Quarter	$9.25	$3.75	$34.00	$20.90
Second Quarter	7.60	3.33	29.00	10.95
Third Quarter	4.36	2.14	13.50	4.95
Fourth Quarter	2.89	0.97	9.49	4.53

Dividends

We have never paid or declared any dividend on our common stock and we do not anticipate paying cash dividends on our common stock in the foreseeable future. If we pay a cash dividend on our common stock, we also may be required to pay the same dividend on an as-converted basis on any outstanding preferred stock, warrants, convertible notes or other securities. Moreover, any preferred stock or other senior debt or equity securities to be issued and any future credit facilities might contain restrictions on our ability to declare and pay dividends on our common stock. We intend to retain all available funds and any future earnings to fund the development and expansion of our business.

Unregistered Sales of Equity Securities

On January 7, 2010, we closed a private placement transaction with a group of investors. We received $43,050,000 in gross proceeds from the sale of 2,327,869 shares of our common stock at a price of $18.4932 per share. The shares of our common stock issued in connection with the private placement were exempted from the registration requirement pursuant to Regulation D of the Securities Act. Accordingly, these restricted shares were subject to the resale limitations of Rule 144 under the Securities Act, as a transaction not involving a public offering because, among other things, the investors were accredited investors at the time of the transaction and appropriate legends were affixed to the instruments representing such securities issued in such transaction.

From November 30, 2009, through January 22, 2010, we exchanged 428,906 shares of our common stock for $7,100,000 in principal and unpaid interest of $732,000 related to the convertible senior notes due September 1, 2011. From October 21, 2009 through November 19, 2009, $4,400,000 in principal related to the 7.00% Notes was converted into 220,000 shares of our common stock. The offer and issuance of the securities was exempt from registration under Section 3(a)(9) of the Securities Act.

From November 24, 2009 to January 22, 2010, we exchanged a total of 15,794 shares of our common stock for $305,000 in principal and $18,000 in unpaid interest related to the convertible senior notes due September 1, 2009 (the “4.50% Notes”). The offer and issuance of the securities was exempt from registration under Section 3(a)(9) of the Securities Act.

From October 5, 2009, through April 12, 2010, we issued 990 shares of our common stock for $12,000 from the cash exercise of warrants dated August 3, 2006, with an exercise price of $12.60 per share (the “August 3 Warrants”), and 3,496 shares of our common stock from the cashless exercise of 8,625 underlying common stock shares of the August 3 Warrants. From October 5, 2009, through April 12, 2010, we issued 990 shares of our common stock for $12,000 from the cash exercise of warrants dated November 15, 2006, with an exercise price of $12.60 per share (the “November 15 Warrants”), and 3,486 shares of our common stock from the cashless exercise of 8,625 underlying common stock shares of the November 15 Warrants. From September 29, 2009, through March 4, 2010, we issued 392,120 shares of our common stock for $3,627,000 from the cash exercise of warrants dated August 29, 2007, with an exercise price of $9.25 per share (the “2007 Warrants”), and 521,213 shares of our common stock from the cashless exercise of 1,435,678 underlying common stock shares of the 2007 Warrants. The offer and issuance of securities is subject to the resale limitations of Rule 144 under the Securities Act.

Equity Compensation Plan Information

We currently maintain three equity-based compensation plans that were approved by our stockholders. The plans are the Amended and Restated 2000 Stock Plan (the “2000 Plan”), the Amended and Restated 2000 Employee Stock Purchase Plan (the “2000 ESPP”), and the 2010 Stock Incentive Plan (the “2010 Plan”).

2000 Plan. The authority of our Board of Directors to grant new stock options and awards under the 2000 Plan terminated in 2010. The Board of Directors continues to administer the 2000 Plan with respect to the stock options that remain outstanding to our officers, employees, directors and a consultant. At December 31, 2011, options to purchase 596,047 shares of common stock remained outstanding under the 2000 Plan.

2010 Plan. The 2010 Plan is administered by the Compensation Committee of the Board. Our employees, directors, and consultants are eligible to receive awards under the 2010 Plan. The 2010 Plan permits the granting of a variety of awards, including stock options, share appreciation rights, restricted shares, restricted share units, and unrestricted shares, deferred share units, performance and cash-settled awards, and dividend equivalent rights. We are authorized to issue up to 1,322,983 shares of common stock, par value $0.001 per share under the 2010 Plan, subject to adjustment as provided in the 2010 Plan. At December 31, 2011, options to purchase 334,013 shares of common stock remained outstanding under the 2010 Plan.

The number of shares of our common stock to be issued upon exercise of outstanding stock options, the weighted-average exercise price of outstanding stock options and the number of shares available for future stock option grants and stock awards under equity compensation plans as of December 31, 2011, were as follows:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Shares Reflected in First Column)
Equity compensation plans approved by security holders	930,060[1]	$ 12.97[2]	628,675[3]
Equity compensation plans not approved by security holders	—	—	—
Total	930,060		628,675

(1) Includes outstanding stock options for 596,047 shares of our common stock under the 2000 Plan and 334,013 shares of our common stock under the 2010 Plan.
(2) Includes the weighted average stock price for outstanding stock options of $14.01 under the 2000 Plan and $11.11 for the 2010 Plan.
(3) Includes 628,675 shares of our common stock for the 2010 Plan. No future awards shall occur under the 2000 Plan.

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Performance Graph

Pursuant to Instructions to Item 201(e)(6) of Regulation S-K, information is not required.

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ITEM 6. SELECTED FINANCIAL DATA

Per Item 301(c) of Regulation S-K, information is not required.

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

You should read the following discussion and analysis in conjunction with our Consolidated Financial Statements and related Notes thereto, included on pages F-1 through F-31 of this Annual Report on Form 10-K, and "Risk Factors", which are discussed in Item 1A. The statements below contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act. See "Forward-Looking Statements" on page i.

Overview

Vermillion was originally incorporated in California on December 9, 1993, under the name Abiotic Systems. In March 1995, Abiotic Systems changed its corporate name to Ciphergen Biosystems, Inc., and subsequently on June 21, 2000, it reincorporated in Delaware. Under the name Ciphergen Biosystems, Inc., we had our initial public offering on September 28, 2000. On November 13, 2006, we sold the assets and liabilities of our protein research products and collaborative services business to Bio-Rad, which allowed us to focus on the development of our diagnostics tests. On August 21, 2007, Ciphergen Biosystems, Inc. changed its corporate name to Vermillion, Inc.

We are dedicated to the discovery, development and commercialization of novel high-value diagnostic tests that help physicians diagnose, treat and improve outcomes for patients. Our tests are intended to help guide decisions regarding patient treatment, which may include decisions to refer patients to specialists, to perform additional testing, or to assist in the selection of therapy. A distinctive feature of our approach is to combine multiple markers into a single, reportable index score that has higher diagnostic accuracy than its constituents. Management ("we", "us" or "our") concentrate its development of novel diagnostic tests in the fields of oncology, cardiology and women's health, with our initial focus on ovarian cancer. We also intend to address clinical questions related to early disease detection, treatment response, monitoring of disease progression, prognosis and others through collaborations with leading academic and research institutions.

On March 30, 2009, we filed for relief under the Chapter 11 of the Bankruptcy Code. We emerged from bankruptcy protection on January 22, 2010, pursuant to the terms of a January 5, 2010 order entered by the Bankruptcy court approving our Second Amended Plan of Reorganization under Chapter 11. Our Bankruptcy case was formally closed on January 19, 2012.

Our lead product, OVA1, was cleared by the FDA on September 11, 2009. OVA1 addresses a clear unmet clinical need, namely the pre-surgical identification of women who are at high risk of having a malignant ovarian tumor. Numerous studies have documented the benefit of referral of these women to gynecologic oncologists for their initial surgery. Prior to the clearance of OVA1, no blood test had been cleared by the FDA for physicians to use in the pre-surgical management of ovarian adnexal masses. OVA1 is a qualitative serum test that utilizes five well-established biomarkers and proprietary FDA-cleared software to determine the likelihood of malignancy in women over age 18, with a pelvic mass for whom surgery is planned. OVA1 was developed through large pre-clinical studies in collaboration with numerous academic medical centers encompassing over 2,500 clinical samples. OVA1 was fully validated in a prospective multi-center clinical trial encompassing 27 sites reflective of the diverse nature of the clinical centers at which ovarian adnexal masses are evaluated. The results of the clinical trial demonstrated that in a clinical cohort of 516 patients, OVA1, in conjunction with clinical evaluation, was able to identify 95.6% (154/161) of the malignant ovarian tumors overall, and to rule out malignancy with a negative predictive value ("NPV") of 94.6% (123/130). Recently, data were presented at the 2010 International Gynecologic Cancer Society Meeting demonstrating the high sensitivity of OVA1 for epithelial ovarian cancers; overall OVA1 detected 95/96 epithelial ovarian cancer cases for a sensitivity of 99.0%, including 40/41 stage I and stage II epithelial ovarian cancers, for an overall sensitivity of 97.6% for early stage epithelial ovarian cancers, as compared to 65.9% for CA125 using the ACOG cutoffs. The improvement in sensitivity was even greater among premenopausal women; for OVA1, sensitivity for early stage epithelial ovarian cancer was 92.9% and for CA125, sensitivity was 35.7%. Overall, OVA1 detected 76% of malignancies missed by CA125, including all advanced stage malignancies. OVA1 is not indicated for use as a screening or stand-alone diagnostic assay.

OVA1 is currently being offered by Quest Diagnostics. Under the terms of our strategic alliance agreement with Quest Diagnostics, as amended, Quest Diagnostics is required to pay us a fixed payment of $50 per OVA1 performed, as well as 33% of its "gross margin" from revenue from performing OVA1, as that term is defined in the strategic alliance agreement as amended. Quest Diagnostics is the exclusive clinical laboratory provider of OVA1 in its exclusive territory, which consists of the US, Mexico, Britain and India, through September 11, 2014. Quest has the right to extend the exclusivity period for one additional year on the same terms and conditions. OVA1 was CE marked in September 2010, a requirement for marketing the test in the European Union. Quest Diagnostics has the right to extend the exclusivity period for an additional year beyond September 11, 2014 on the same terms and conditions. An estimated 21,380 OVA1s have been performed from the launch on March 9, 2010 through December 31, 2011.

In addition to OVA1, we have development programs in other clinical aspects of ovarian cancer as well as in peripheral arterial disease, or PAD. In the field of peripheral arterial disease, we have identified candidate biomarkers that may help to identify individuals at high risk for a decreased ankle-brachial index score, which is indicative of the likely presence of PAD. We have recently completed an intended-use study to develop and validate a multi-marker algorithm for the assessment of individuals at risk for peripheral arterial disease. This algorithm will be specifically directed at a primary care population in which the peripheral arterial disease blood test ("VASCLIR™") is expected to be used. Once this study has been published in the peer-reviewed literature, we intend to discuss with the FDA the appropriate submission pathway, which may be PMA, 510(k) clearance, or 510(k) de novo clearance. Vasclir is subject to the Quest Diagnostics Strategic Alliance.

Current and former academic and research institutions that we have or have had collaborations with include the Johns Hopkins University School of Medicine; the University of Texas M.D. Anderson Cancer Center; University College London; the University of Texas Medical Branch; the Katholieke Universiteit Leuven; Clinic of Gynecology and Clinic of Oncology, Rigshospitalet, Copenhagen University Hospital; the Ohio State University Research Foundation; Stanford University; and the University of Kentucky.

On January 11, 2011, we were issued patent number 7,867,719 entitled "Beta-2 microglobulin as a biomarker for peripheral artery disease" by the USPTO. The patent claims are directed to beta-2 microglobulin and biomarker combinations that include beta-2 microglobulin for the diagnosis and management of peripheral artery disease and to the measurement of the biomarkers by a variety of methods, including mass spectrometry and immunoassay.

On February 2, 2011, we announced that the USPTO has issued to us a notice of allowance for a patent entitled "Biomarkers for breast cancer". The patent claims are directed to biomarker combinations for the diagnosis and management of breast cancer and to the measurement of the biomarkers by mass spectrometry.

On February 3, 2011, we received payment for an award of two grants, approved in November 2010, for the aggregate sum of $489,000 under the Internal Revenue Service Qualifying Therapeutic Discovery Projects Grant Program for our OVA2 and PAD programs. The grant relates to 2010 expenditures and was awarded to therapeutic or diagnostic discovery projects that show a reasonable potential to result in new therapies or diagnostic tests that address areas of unmet medical need or that prevent, detect or treat chronic or acute diseases and conditions. These grants were included in other income for the year ended December 31, 2010 and were recorded as other current assets at December 31, 2010.

On February 18, 2011, we completed a sale of 4,000,000 shares of our common stock in an underwritten public offering at a price of $5.45 per share for $21,800,000 in gross proceeds. Net proceeds of the offering were approximately $20,200,000 after deducting underwriting discounts and expected offering expenses.

On March 8, 2011, positive preliminary data from our collaboration with Johns Hopkins University School of Medicine to identify biomarkers that improve on the specificity of CA125 for the identification of malignant ovarian tumors were presented at the 42nd Annual Meeting on Women's Cancer of the Society of Gynecologic Oncologists, March 6-9, 2011 in Orlando, Florida.

On March 14, 2011, we announced the inclusion of OVA1 as part of the recently published ACOG/SGO committee opinion. In the March edition of Obstetrics and Gynecology, the American College of Obstetricians and Gynecologists ("ACOG") and Society of Gynecologic Oncologists ("SGO") published an update committee opinion on the role of the obstetrician-gynecologist in the early detection of epithelial ovarian cancer. This updates the original opinion, which was published in 2002.

On April 4, 2011, we announced the signing of an agreement with Quest Diagnostics to make OVA1 available in India. Additionally, at the International Gynecologic Cancer Society ("IGCS") regional meeting held in New Delhi from April 2-3, 2011, Dr. Fred Ueland, M.D., Associate Professor of Gynecologic Oncology at the University of Kentucky's Markey Cancer Center presented data demonstrating the high sensitivity for ovarian malignancy of OVA1 combined with ultrasound.

On May 17, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Panel of Biomarkers for Peripheral Artery Disease". The patent covers biomarker panels for the diagnosis of Peripheral Artery Disease. The data supporting the patent were published in an article titled, "A biomarker panel for peripheral arterial disease," in Vasc Med. 2008 Aug; 13(3):217 24. This work was done in coordination with Dr. John Cooke at Stanford University. Dr. Cooke is Professor and Associate Director of the Stanford Cardiovascular Institute at Stanford University School of Medicine.

On May 19, 2011, we announced the appointment of Bruce Huebner to our Board of Directors. Mr. Huebner currently serves as Managing Director at LynxCom Partners, LLC – a Healthcare Consulting Firm. Mr. Huebner has over 35 years of experience in the diagnostic industry, and has been a key member of upper management in a number of clinical diagnostic companies including Hybritech, Inc., Gen-Probe, Inc., Nanogen, Inc. and Osmetech Molecular Diagnostics.

On May 25, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Saposin D and Fam3C are Biomarkers for Alzheimer's Disease." The patent claims cover the biomarkers saposin D and Fam3c as well as combinations that include these biomarkers.

In the June 2011 edition of Obstetrics & Gynecology, two landmark papers were published on the clinical validation of OVA1, supporting FDA clearance. The first, by Ueland et al., showed that OVA1correctly identified 70% and 95% of malignancies missed by non-gynecologic oncologists and gynecologic oncologists, respectively. Physician assessment plus the OVA1 also detected 86% of malignancies missed by CA125, a biomarker commonly used off label in the screening and diagnosis of ovarian cancer. The second, by Ware Miller et al., demonstrated that replacement of CA125 by OVA1 in the American College of Obstetricians and Gynecologists (ACOG) guidelines for referral of a pelvic mass improves the sensitivity and negative predictive value of the guidelines. The high sensitivity is maintained even in premenopausal women and early-stage disease, two particularly challenging diagnostic groups.

On June 24, 2011, we were added to the Russell Microcap Index. Membership in the Russell Microcap Index, which remains in place for one year, means automatic inclusion in the appropriate growth and value style indexes. Russell determines membership for its equity indexes primarily by objective, market-capitalization rankings and style attributes.

On August 1, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled "Biomarkers for Peripheral Artery Disease." The patent claims cover the biomarker alpha1beta glycoprotein and biomarker combinations that include alpha1beta glycoprotein for the diagnosis of PAD.

On August 1, 2011, we entered into the Pronto Agreement with Pronto Diagnostics. Pursuant to the Pronto Agreement, Pronto Diagnostics will have the exclusive right to distribute OVA1 in Israel and areas under Palestinian control for a certain period of time as specified in the Pronto Agreement, provided that Pronto Diagnostics will sell certain minimum quantities of OVA1 to maintain the exclusive distribution rights. The Pronto Agreement also establishes the amounts that Pronto Diagnostics will pay to us with respect of OVA1. This supports our goal of expanding OVA1 into international markets.

On August 2, 2011, we announced that the USPTO has issued a notice of allowance to us for a patent entitled “Beta-2 microglobulin as a Biomarker for Peripheral Artery Disease.” The patent covers various potential permutations of candidate biomarkers and will therefore cover a broad range of possibilities in our intended use study.

On September 6, 2011, we announced that the USPTO has issued patent number 8,014,952 entitled “Serum Biomarkers in Lung Cancer” to the Company.

On September 14, 2011, we announced the presentation of data by Fred Ueland, M.D., Associate Professor of Gynecologic Oncology at the University of Kentucky’s Markey Cancer Center, and principal investigator of the multi-center OVA1 clinical trial, demonstrating the improvement in sensitivity when using imaging in conjunction with OVA1. The key finding from Dr. Ueland’s presentation at the 17th Annual European Society of Gynecologic Oncology meeting held in Milan from September 11th to 14 th , 2011 is that OVA1, when combined with imaging, achieved 98.1% sensitivity for all types of ovarian cancers and obtained a negative predictive value of 96.3%. A higher OVA1 score also correlated with an increasing risk of ovarian malignancy.

On September 29, 2011, our Board of Directors determined that it was appropriate for the Company to separate the role of Chairman of the Board from the role of Chief Executive Officer. To this end, Gail S. Page resigned her role as Chairman of the Board and the Board elected James S. Burns as Chairman of the Board. Mr. Burns has been a director of the Board since 2005. Ms. Page will continue in her role as President and Chief Executive Officer of the Company and as a member of the Board.

On September 26, 2011, we announced the appointment of Donald Munroe, Ph.D. as Chief Scientific Officer and Vice President of Research and Development. In conjunction with Dr. Munroe’s hiring, Eric T. Fung, MD, Ph.D. became Chief Medical Officer. These changes were effective as of October 11, 2011.

On October 3, 2011, we announced positive top-line results from the intended use study of our PAD blood test, VASCLIR. The goals of the study were to validate the markers described in earlier publications (*Circulation* , 2007 and *Vascular Medicine* , 2008) and to develop and validate a biomarker panel applicable to the intended use population.

Key results of the study include the following:

- The individual biomarkers beta-2 microglobulin (B2M), cystatin C, and hsCRP (high sensitivity c-reactive protein), each has statistically significant different levels between PAD subjects and non-PAD subjects ($p<.001$).
- Each biomarkers showed statistically significant correlation to the ankle-brachial index or ABI ($p<.001$).
- A logistic regression model was able to identify more than 80% of PAD patients among those deemed low-risk by the conventional Framingham Risk Score for estimating cardiovascular disease probability.

The intended use study was a prospective, double-blinded multi-center study of approximately 1,000 subjects who met specific inclusion criteria for being at increased risk of having PAD, including smokers and diabetics age 50 or above and elderly age 70 or above. The study was conducted in conjunction with CPC Clinical Research, led by William R. Hiatt, MD, who is currently the Novartis Foundation endowed professor for cardiovascular research in the Department of Medicine, University of Colorado School of Medicine appointed in cardiology and a clinical focus in vascular medicine.

On October 5, 2011, Sandra A. Gardiner announced her resignation as our Vice President and Chief Financial Officer, effective October 21, 2011. Ms. Gardiner accepted an employment opportunity in the San Francisco Bay Area and her resignation was not the result of any disagreement with the Company on any matter relating to the Company’s operations, policies or practices. In conjunction with Ms. Gardiner’s resignation, Eric Schoen was appointed as our Chief Accounting Officer effective October 6, 2011.

On November 2, 2011, the Company entered into a consulting agreement with Eric T. Fung, MD, Ph.D., effective on November 4, 2011. Pursuant to the terms of the consulting agreement, Dr. Fung will continue to serve as the Company’s Chief Medical Officer and a member of the Company’s Scientific Advisory Board.

On November 3, 2011, we announced the receipt of a notice of allowance from the USPTO for our fifth patent covering a combination of biomarkers that could be used in the diagnosis of PAD. The patent, entitled "Beta-2 Microglobulin (B2M) and C Reactive Protein (CRP) as Biomarkers for Peripheral Artery Disease," involves a unique combination of B2M and CRP, two proteins that have been demonstrated in numerous studies to be associated with PAD.

On December 19, 2011, we announced the completion of an asset purchase agreement with Correlogic, pursuant to which, subject to the satisfaction of certain conditions, we agreed to pay to Correlogic $435,000 and purchase from Correlogic substantially all of its assets, including, without limitation, certain documents, diagnostic samples and intellectual property owned by and licensed to Correlogic in connection with Correlogic's ovarian cancer diagnostics business, including a diagnostic test under the name "OvaCheck2™" for the detection of ovarian cancer. The assets were acquired under Sections 105 and 363 of the Chapter 11 of the U.S. Bankruptcy Code.

On February 9, 2012, we entered into a Settlement Agreement and Release (the "Settlement Agreement") with a third party related to losses on our short and long-term investments in previous years. Under the terms of the Settlement Agreement, we will receive a total settlement of $1,000,000 (the "Total Settlement Amount"); $535,000 was paid in March 2012 and $465,000 is payable by September 1, 2012. We expect to receive approximately 70% of the Total Settlement Amount, net of legal and related costs.

On March 5, 2012 we announced the receipt of a notice of allowance from the USPTO for "Platelet biomarkers for cancer." The patent resulted from a collaboration with the late Dr. Judah Folkman, a renowned cancer expert, and identifies three biomarkers that can be used to assess changes in endogenous angiogenesis in a subject. Angiogenesis is commonly associated with cancer, and novel therapeutics such as bevacizumab (Avastin ®) target angiogenesis to limit tumor recruitment of blood vessels. The patented biomarkers, which are associated with platelets, can be used to measure ongoing angiogenic activity. The patent covers the measurement of these biomarkers over time and correlating changes in expression with the changing level of endogenous angiogenic activity. Consequently, this patent also enables the use of these biomarkers to monitor efficacy of therapy directed at angiogenic pathways.

On March 6, 2012, the American Medical Association (AMA) Current Procedural Terminology (CPT ®) Panel voted to approve an application for a Category I CPT code for OVA1. The AMA recently disclosed the new code on its website, which will become effective January 1, 2013.

Critical Accounting Policies and Estimates

The notes to the consolidated financial statements contain a summary of the Company's significant accounting policies that are presented in Part II Item 8, "Financial Statements and Supplementary Data", of this Annual Report on Form 10-K. We believe that it is important to have an understanding of certain policies, along with the related estimates that we are required to make in recording the financial transactions of the Company, in order to have a complete picture of the Company's financial condition. In addition, in arriving at these estimates, we are required to make complex and subjective judgments, many of which include a high degree of uncertainty. The following is a discussion of these critical accounting policies and significant estimates related to these policies.

Revenue Recognition

Product Revenue. We derive our product revenues from sales of OVA1 through Quest Diagnostics. We recognize product revenues for tests performed when the following revenue recognition criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured.

License Revenue. Under the terms of the secured line of credit with Quest Diagnostics, portions of the borrowed principal amounts may be forgiven upon our achievement of certain milestones relating to the development, regulatory approval and commercialization of certain diagnostic tests. We account for forgiveness of principal debt balances as license revenues over the term of the exclusive sales period that Quest Diagnostics receives upon commercialization of an approved diagnostic test as we do not have a meaningful history of product sales that provides a reasonable basis for estimating future product sales. We recognize license revenue on a straight-line basis over the remaining period of Quest Diagnostics' sales exclusivity ending in September 2015.

Fair Value of Warrants

We classify certain of our outstanding warrants as liabilities on our balance sheet. In addition, we fair value these stock warrants at each reporting period, with the changes in fair value recognized in our consolidated statements of operations. We fair value the warrants using a Black Scholes valuation model. Since the outstanding common stock warrants are fair valued at the end of each reporting period, any change in the underlying assumptions to the Black Scholes valuation model, including the volatility and price of our common stock, may have a significant impact on our consolidated financial statements.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs consist primarily of payroll and related costs, materials and supplies used in the development of new products, and fees paid to third parties that conduct certain research and development activities on behalf of the Company. In addition, acquisitions of assets to be consumed in research and development, with no alternative future use, are expensed as incurred as research and development costs. Software development costs incurred in the research and development of new products are expensed as incurred until technological feasibility is established.

Stock-Based Compensation

We record the fair value of non-cash stock-based compensation costs for stock options and stock purchase rights related to our 2010 Stock Incentive Plan (the "2010 Plan") and 2000 Stock Plan (the "2000 Plan"). We estimate the fair value of stock options using a Black-Scholes option valuation model. This model requires the input of subjective assumptions including expected stock price volatility, expected life and estimated forfeitures of each award. We use the straight-line method to amortize the fair value over the vesting period of the award. Due to the limited amount of historical data available to us, particularly with respect to stock-price volatility, option exercise patterns and forfeitures, the actual value of stock options and stock purchase rights could differ from our estimates.

We also record the fair value of non-cash stock-based compensation costs for equity instruments issued to non-employees. We recalculate costs for these options each reporting period using a Black-Scholes option valuation model. Because we recalculate these costs each reporting period, changes in assumptions used in our calculations, including changes in the fair value of our common stock, can result in significant changes in the amounts we record from one reporting period to another.

Contingencies

We account for contingencies in accordance with ASC 450 Contingencies ("ASC 450"). ASC 450 requires that an estimated loss from a loss contingency shall be accrued when information available prior to issuance of the financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and when the amount of the loss can be reasonably estimated. Accounting for contingencies such as legal and contract dispute matters requires us to use our judgment. We believe that our accruals for these matters are adequate. Nevertheless, the actual loss from a loss contingency might differ from our estimates.

Income Taxes

Our income tax policy records the estimated future tax effects of temporary differences between the tax basis of assets and liabilities and amounts reported in the accompanying balance sheets, as well as operating loss and tax credit carry forwards. We have recorded a full valuation allowance to reduce our deferred tax assets, as based on available objective evidence; it is more likely than not that the deferred tax assets will not be realized. In the event that we were to determine that we would be able to realize our deferred tax assets in the future, an adjustment to the deferred tax assets would increase net income in the period such determination was made.

Recently Adopted Accounting Pronouncements

Comprehensive Income—In June 2011, the FASB issued new guidance on the presentation of comprehensive income. Specifically, the new guidance allows an entity to present components of net income and other comprehensive income in one continuous statement, referred to as the statement of comprehensive income, or in two separate, but consecutive statements. The new guidance eliminates the current option to report other comprehensive income and its components in the statement of changes in equity. While the new guidance changes the presentation of comprehensive income, there are no changes to the components that are recognized in net income or other comprehensive income under current accounting guidance. We will adopt this pronouncement in the first quarter of 2012, and it will have no effect on our financial position, results of operations or cash flows but it will impact the way we present comprehensive income.

Fair Value Measurement—In April 2011, the FASB issued new guidance to achieve common fair value measurement and disclosure requirements between GAAP and International Financial Reporting Standards. This new guidance amends current fair value measurement and disclosure guidance to include increased transparency around valuation inputs and investment categorization. The new guidance is effective for fiscal years and interim periods beginning after December 15, 2011. We do not believe the adoption of the new guidance will have an impact on our consolidated financial position, results of operations or cash flows.

Results of Operations—Year Ended December 31, 2011 as compared to Year Ended December 31, 2010

The selected summary financial and operating data of Vermillion for the years ended December 31, 2011 and 2010 were as follows:

(dollars in thousands)	Year Ended December 31, 2011	2010	Increase (Decrease) Amount	%
Revenue:				
Product	$ 1,469	$ 308	$ 1,161	377
License	454	867	(413)	(48)
Total revenue	1,923	1,175	748	64
Cost of revenue:				
Product	129	88	41	47
Total cost of revenue	129	88	41	47
Gross profit	1,794	1,087	707	65
Operating expenses:				
Research and development	5,387	3,848	1,539	40
Sales and marketing	5,539	2,857	2,682	94
General and administrative	8,509	8,984	(475)	(5)
Total operating expenses	19,435	15,689	3,746	24
Loss from operations	(17,641)	(14,602)	(3,039)	21
Interest income	64	40	24	60
Interest expense	(396)	(491)	95	(19)
Gain on investments in auction rate securities	-	58	(58)	-
Change in fair value and gain from warrant exercise, net	378	4,353	(3,975)	(91)
Debt conversion costs	-	(141)	141	-
Reorganization items	(96)	(1,677)	1,581	(94)
Reorganization items – related party incentive plan	-	(6,932)	6,932	-
Other income (expense), net	(99)	358	(457)	(128)
Loss before income taxes	(17,790)	(19,034)	1,244	(7)
Income tax benefit (expense)	-	-	-	-
Net loss	$ (17,790)	$ (19,034)	$ 1,244	(7)

Product Revenue . Product revenue was $1,469,000 for the year ended December 31, 2011 compared to $308,000 for the same period in 2010. We recognized product revenue for the year ended December 31, 2011 for the sale of OVA1 through Quest Diagnostics. Quest Diagnostics performed approximately 15,225 OVA1 tests during the year ended December 31, 2011 compared to approximately 6,155 tests for the same period in 2010. We commercially launched OVA1 on March 9, 2010. Product revenue increased $1,161,000 for the year ended December 31, 2011 compared to the same period in 2010 due to the increased volume of tests as well as the recognition of deferred revenue upon meeting the criteria for revenue recognition. During the fourth quarter of 2011, we recognized $549,000 of deferred revenue related to 2011 upon receipt of an annual royalty report from Quest Diagnostics based on final resolution for 11,708 tests. During the first quarter of 2011, we recognized $160,000 of deferred revenue related to 2010 upon receipt of an annual royalty report from Quest Diagnostics based on final resolution for 2,814 tests. Tests which do not yet have final resolution for 2011 will be included in our 2012 annual royalty report. During 2010, we recognized only the $50 fixed fee per test in product revenue and recorded additional payments as deferred revenue.

License Revenue . License revenue was $454,000 for the year ended December 31, 2011 compared to $867,000 for the same period in 2010. Under the terms of our secured line of credit with Quest Diagnostics, $3,000,000 principal was forgiven upon the achievement of FDA approval for OVA1. This amount is recognized

as license revenue over the period of sales exclusivity Quest Diagnostics received beginning on the OVA1 commercialization date of March 9, 2010. License revenue decreased $413,000, or 48%, for the year ended December 31, 2011 compared to the same period in 2010 due to the extension of the term of exclusivity for up to three additional years in Quest Amendment No. 4. The balance of the $3,000,000 forgiven is being recognized over the revised period of exclusivity.

Cost of Product Revenue . Cost of product revenue includes royalties on net sales paid to JHU, as well as sample acquisition and lot qualification costs related to the testing of reagent lots for the assays included in OVA1 to ensure they meet the specifications required for inclusion. Product cost of revenue was $129,000 for the year ended December 31, 2011 compared to $88,000 for the same period in 2010 due to increased sample acquisition and lot qualification costs as a result of the increased testing volume.

Research and Development Expenses . Research and development expenses represent costs incurred to develop our technology and carry out clinical studies, and include personnel-related expenses, regulatory costs, reagents and supplies used in research and development laboratory work, infrastructure expenses, including allocated facility occupancy and information technology costs, contract services and other outside costs. Research and development expenses also include costs related to activities performed under contracts with our collaborators and strategic partners. Research and development expenses increased by $1,539,000, or 40%, for the year ended December 31, 2011 compared to the same period in 2010. This increase was due primarily to a $1,919,000 increase in clinical trial and collaboration costs for the ongoing development of our ovarian cancer program and our PAD blood test, VASCLIR, as well as $435,000 for the Correlogic asset acquisition which was expensed as the assets acquired will be consumed in research and development activities, with no alternative future use. These increases were partially offset by decreases in stock-based compensation expense of $307,000 as well as decreases in depreciation expense and outside consulting services compared to the same period in 2010 as well as a loss on sale and disposal of property and equipment in 2010 which did not recur in 2011. We expect research and development expenses to be lower in 2012 as compared to 2011 as we completed our PAD intended-use study in 2011 and anticipated 2012 activities will be less cost intensive. Our research and development expenses may fluctuate from period to period due to the timing and scope of our activities as well as coordination of our activities with current and potential collaborators and strategic partners.

Sales and Marketing Expenses . Our sales and marketing expenses consist primarily of personnel-related expenses, education and promotional expenses, and infrastructure expenses, including allocated facility occupancy and information technology costs. These expenses include the costs of educating physicians, laboratory personnel and other healthcare professionals regarding OVA1. Sales and marketing expenses also include the costs of sponsoring continuing medical education, medical meeting participation and dissemination of scientific and health economic publications. Our personnel-related expenses include the cost of our Territory Development Managers, the subject matter experts responsible for market development and the coordination of interactions with the Quest Diagnostic’s sales team. Sales and marketing expenses increased by $2,682,000, or 94%, for the year ended December 31, 2011 compared to the same period in 2010. The increase was primarily due to a $1,844,000 increase in personnel and personnel-related expenses, reflecting a full year with the sales and marketing team while the Territory Development Managers were added over the course of 2010, a $540,000 increase in marketing expenses related to the continued commercialization and promotion of OVA1 as well as $141,000 increase in outside consulting services. We expect sales and marketing expenses to be lower in 2012 as compared to 2011 as a result of our reduction in our Territory Development and sales management personnel announced in January 2012. Our sales and marketing expenses may fluctuate from period to period due to the timing and scope of our activities as well as coordination of our activities with current and potential collaborators and strategic partners.

General and Administrative Expenses . General and administrative expenses consist primarily of personnel-related expenses, professional fees and other costs, including legal, finance and accounting expenses, and other infrastructure expenses, including allocated facility occupancy and information technology costs. General and administrative expenses decreased by $475,000, or 5%, for the year ended December 31, 2011 compared to the

same period in 2010. The decrease was primarily due to a $1,422,000 decrease in stock compensation expense as Incentive Plan costs were fully amortized in June 2011. In addition, audit and tax related service costs decreased $781,000 compared to the same period in 2010 due to the substantial effort in 2010 to bring current all periodic reports required by the Securities and Exchange Act of 1934 following emergence from bankruptcy. These decreases were partially offset by a $1,662,000 increase in legal costs due to the MAS litigation as well as Correlogic and shareholder activist litigation legal costs. General and administrative stock-based compensation expense was $2,446,000 and $3,868,000 for the years ended December 31, 2011 and 2010, respectively. We expect general and administrative expenses to be lower in 2012 as compared to 2011 as a result of our eliminating the positions of Chief Financial Officer and Vice President of Corporate Strategy as announced in January 2012. We also anticipate a reduction in our legal expenses in 2012 compared to 2011 as significant legal matters, including the MAS litigation, are expected to come to closure during 2012. Our general and administrative expenses may fluctuate from period to period due to the timing and scope of our activities as well as coordination of our activities with current and potential collaborators and strategic partners.

Interest Expense. Interest expense decreased by $95,000, or 19%, for the year ended December 31, 2011 compared to the same period in 2010 as we paid off $5,000,000 of our 7.00% Senior Convertible Notes upon maturity in September 2011.

Gain on Investment in Auction Rate Securities . There was no gain on investment in auction rate securities for the year ended December 31, 2011 compared to $58,000 in the same period in 2010. The auction rate securities were sold in July 2010.

Change in Fair Value and Gain from Warrant Exercise, Net. The change in fair value and gain from exercise of warrants was $378,000 for the year ended December 31, 2011 compared to $4,353,000 for the same period in 2010. The decrease of $3,975,000, or 91%, was primarily due to the relative decrease in the Company's stock price during the respective annual periods.

Debt Conversion Costs . There were no debt conversion costs for the year ended December 31, 2011 compared to $141,000 for the same period in 2010 as there was no conversion of debt to equity in 2011.

Reorganization Items . Reorganization items for the year ended December 31, 2011 totaled $96,000 compared to $1,677,000 for the same period in 2010. Reorganization items include professional advisory fees and other costs directly associated with our Chapter 11 bankruptcy activities. The activities were largely completed during 2010 resulting in lower expenses during the year ended December 31, 2011. We expect costs related to reorganization items to be immaterial in 2012.

Reorganization Items—Related Party Incentive Plan . All Incentive Plan expenses during 2011 were included in general and administrative expense. Reorganization items for the year ended December 31, 2010 amounted to $6,932,000. We paid $5,000,000 in cash and accrued $1,932,000 for the value of the vested portions of restricted stock under the Incentive Plan prior to us emerging from bankruptcy under the Bankruptcy Code.

Other Income (Expense), Net . Net other expense was $99,000 for the year ended December 31, 2011 compared to other income of $358,000 for the same period in 2010. Other expense for 2011 was due primarily to Delaware franchise tax. Other income for the year ended December 31, 2010 included an award of two grants for the aggregate sum of $489,000 under the Internal Revenue Service Qualifying Therapeutic Discovery Projects Grant Program for the OVA2 and PAD programs.

Income Tax Benefit (Expense) . There was no income tax benefit or expense for the year ended December 31, 2011 or 2010.

Results of Operations—Year Ended December 31, 2010 as compared to Year Ended December 31, 2009

The selected summary financial and operating data of Vermillion for the years ended December 31, 2010 and 2009 were as follows:

(dollars in thousands)	Year Ended December 31, 2010	2009	Increase (Decrease) Amount	%
Revenue:				
Product	$ 308	$ —	$ 308	—
License	867	—	867	—
Total revenue	1,175	—	1,175	—
Cost of revenue:				
Product	88	—	88	—
Total cost of revenue	88	—	88	—
Gross profit	1,087	—	1,087	—
Operating expenses:				
Research and development	3,848	2,346	1,502	64
Sales and marketing	2,857	455	2,402	528
General and administrative	8,984	2,562	6,422	251
Total operating expenses	15,689	5,363	10,326	193
Loss from operations	(14,602)	(5,363)	(9,239)	172
Interest income	40	28	12	43
Interest expense	(491)	(1,691)	1,200	(71)
Gain on investments in auction rate securities	58	—	58	—
Change in fair value and gain from warrant exercise, net	4,353	(12,106)	16,459	(136)
Debt conversion costs	(141)	(819)	678	(83)
Reorganization items	(1,677)	(2,066)	389	(19)
Reorganization items—related party incentive plan	(6,932)	—	(6,932)	—
Other income (expense), net	358	(20)	378	(1,890)
Loss before income taxes	(19,034)	(22,037)	3,003	(14)
Income tax benefit (expense)	—	(11)	11	—
Net loss	$ (19,034)	$ (22,048)	$ 3,014	(14)

Product Revenue . Product revenue was $308,000 for the year ended December 31, 2010. We recognized product revenue for the year ended December 31, 2010 for sales of OVA1 through Quest Diagnostics. OVA1 was launched on March 9, 2010 and thus there was no product revenue for the year ended December 31, 2009.

License Revenue . License revenue was $867,000 for the year ended December 31, 2010. Under the terms of our secured line of credit with Quest Diagnostics, $3,000,000 principal was forgiven upon the achievement of FDA approval for OVA1. This amount is recognized as license revenue over the period of sales exclusivity Quest Diagnostics received beginning on the OVA1 commercialization date of March 9, 2010. Thus, there was no license revenue for the year ended December 31, 2009.

Cost of Product Revenue . Cost of product revenue includes royalties on net sales paid to JHU, as well as sample acquisition and lot qualification costs related to the testing of reagent lots for the assays included in OVA1 to ensure they meet the specifications required for inclusion. Product cost of sales was $88,000 for the year ended December 31, 2010. There was no cost of product revenue for the year ended December 31, 2009.

Research and Development Expenses . Research and development expenses represent costs incurred to develop our technology and carry out clinical studies, and include personnel-related expenses, regulatory costs,

reagents and supplies used in research and development laboratory work, infrastructure expenses, including allocated facility occupancy and information technology costs, contract services and other outside costs. Research and development expenses also include costs related to activities performed under contracts with our collaborators and strategic partners. Research and development expenses increased by $1,502,000, or 64%, for the year ended December 31, 2010 compared to the same period in 2009. This increase included a $774,000 increase in stock-based compensation, a $454,000 increase in personnel-related expenses due to the increased headcount after the emergence from bankruptcy under the Bankruptcy Code, and a $137,000 increase in collaboration and clinical trial costs due to our development in other clinical aspects of ovarian cancer as well as our intended-use study for PAD. These items were partially offset by a $206,000 decrease in depreciation expense. Stock-based compensation expense increased to $992,000 for the year ended December 31, 2010 compared to $219,000 for the same period in 2009.

Sales and Marketing Expenses . Our sales and marketing expenses consist primarily of personnel-related expenses, education and promotional expenses, and infrastructure expenses, including allocated facility occupancy and information technology costs. These expenses include the costs of educating physicians, laboratory personnel and other healthcare professionals regarding OVA1. Sales and marketing expenses also include the costs of sponsoring continuing medical education, medical meeting participation and dissemination of scientific and health economic publications. Sales and marketing expenses increased by $2,402,000, or 528%, for the year ended December 31, 2010 compared to the same period in 2009. The increase was primarily due to a $1,492,000 increase in personnel and personnel-related expenses, reflecting the addition of fifteen sales and marketing employees in the year ended December 31, 2010, and a $540,000 increase in marketing expenses related to the commercialization and launch of OVA1.

General and Administrative Expenses . General and administrative expenses consist primarily of personnel-related expenses, professional fees and other costs, including legal, finance and accounting expenses, and other infrastructure expenses, including allocated facility occupancy and information technology costs. General and administrative expenses increased by $6,422,000, or 251%, for the year ended December 31, 2010 compared to the same period in 2009. The increase was primarily due to a $1,967,000 increase in legal, audit and tax related services and a $573,000 increase in personnel-related expenses. Personnel, consulting, legal, audit and tax related expenses increased due to significant efforts to bring current all periodic reports required by the Exchange Act upon our emergence from bankruptcy. Stock-based compensation expense was $831,000 and $328,000 for the years ended December 31, 2010 and 2009, respectively. Under the terms of the Debtor's Incentive Plan, we also incurred $3,037,000 as related party incentive expenses during the year ended December 31, 2010 for the value of the vested portions of restricted stock issued.

Interest Income. Interest income increased by $12,000, or 43%, for the year ended December 31, 2010, compared to the same period in 2009.

Interest Expense. Interest expense decreased by $1,200,000, or 71%, for the year ended December 31, 2010, compared to the same period in 2009. Interest expense in both periods consisted largely of interest related to our convertible senior notes and long-term debt; however, total debt outstanding at December 31, 2010 was $12,000,000 compared to $17,765,000 at December 31, 2009 and our rate of interest was reduced in 2010 compared to 2009.

Gain on Investment in Auction Rate Securities . Gain on investment in auction rate securities totaled $58,000 for the year ended December 31, 2010 compared to none in the same period for 2009. The auction rate securities were sold in July 2010, eliminating our position in the investment.

Change in Fair Value and Gain from Warrant Exercise, Net. The change in fair value and gain from exercise of warrants of $4,353,000 for the year ended December 31, 2010 was primarily due to the change in our stock price during the year then ended. Effective January 1, 2009, the adoption of the new accounting guidance resulted in the reclassification of certain outstanding common stock warrants from stockholders' deficit to liability, which further required re-measurement at the end of each reporting period.

Debt Conversion Costs . Debt conversion costs for the year ended December 31, 2010 totaled $141,000 compared to $819,000 for the same period in 2009. During the year ended December 31, 2009, we entered into exchange agreements with the 4.50% and 7.00% Note holders that included a more favorable conversion rate compared to the original conversion rates under the terms of the 4.50% and 7.00% Notes.

Reorganization Items . Reorganization items for the year ended December 31, 2010 totaled $1,677,000 compared to $2,066,000 for the same period in 2009. Reorganization items include professional advisory fees and other costs directly associated with our Chapter 11 bankruptcy activities.

Reorganization Items—Related Party Incentive Plan . Reorganization items for the year ended December 31, 2010 amounted to $6,932,000. We paid $5,000,000 in cash and accrued $1,932,000 for the value of the vested portions of restricted stock under the Incentive Plan prior to us emerging from bankruptcy under the Bankruptcy Code.

Other Income (Expense), Net . Net other income was $358,000 for the year ended December 31, 2010 compared to $20,000 of expense for the same period in 2009. Other income for the year ended December 31, 2010 included an award of two grants for the aggregate sum of $489,000 under the Internal Revenue Service Qualifying Therapeutic Discovery Projects Grant Program for the OVA2 and PAD programs.

Income Tax Benefit (Expense) . There was no income tax benefit or expense for the year ended December 31, 2010 compared to income tax expense of $11,000 for the same period in 2009. Income tax expense in 2009 was due to foreign income taxes.

Liquidity and Capital Resources

On March 9, 2010, we commercially launched OVA1. We will continue to expend resources in the selling and marketing of OVA1 and developing additional diagnostic tests.

On February 18, 2011, we completed an underwritten follow-on public offering of our common stock for net proceeds of $20,206,000 after deducting underwriting discounts and offering expenses. Our $5,000,000 of outstanding 7.00% Notes due in September 2011 were paid in full.

We have incurred significant net losses and negative cash flows from operations since inception. At December 31, 2011, we had an accumulated deficit of $316,299,000 and stockholders' equity of $10,359,000. On December 31, 2011, we had $22,477,000 of cash and cash equivalents and $11,476,000 of current liabilities including $7,000,000 principal amount under a secured line of credit from Quest Diagnostics due and payable on October 7, 2012.

We expect cash for OVA1 from Quest Diagnostics to be our only material, recurring source of cash in 2012. In order to continue our operations as currently planned through 2013 and beyond, we will need to raise additional capital. Given the above conditions, there is substantial doubt about the Company's ability to continue as a going concern.

The consolidated financial statements have been prepared on a going concern basis and do not include any adjustments that might result from these uncertainties.

The successful achievement of our business objectives will require additional financing and therefore, we will need to raise additional capital or incur indebtedness to continue to fund our future operations. We will seek to raise capital through a variety of sources, including the public equity market, private equity financing, collaborative arrangements, licensing arrangements, and/or public or private debt.

Any additional equity financing may be dilutive to stockholders, and debt financing, if available, may involve restrictive covenants. If we obtain additional funds through arrangements with collaborators or strategic partners, we may be required to relinquish our rights to certain technologies or products that we might otherwise

seek to retain. Additional funding may not be available when needed or on terms acceptable to us. If we are unable to obtain additional capital, we may be required to delay, reduce the scope of or eliminate our sales and marketing and/or research and development activities.

Our future liquidity and capital requirements will depend upon many factors, including, among others:

- resources devoted to establish sales, marketing and distribution capabilities;
- the rate of product adoption by physicians and patients;
- our determination to acquire or invest in other products, technologies and businesses;
- the market price of our common stock as it affects the exercise of stock options; and
- the insurance payer community's acceptance of and reimbursement for OVA1.

Cash and cash equivalents as of December 31, 2011 and December 31, 2010 were $22,477,000 and $22,914,000, respectively. At December 31, 2011 and 2010, working capital was $11,417,000 and $13,726,000, respectively.

Net cash used in operating activities was $15,581,000 for the year ended December 31, 2011, resulting primarily from operating losses incurred as adjusted for a change in fair value of warrants of $378,000 and non-cash license revenues of $454,000, partially offset by $3,286,000 of stock-based compensation expense.

Net cash used in operating activities was $20,935,000 for the year ended December 31, 2010, resulting primarily from operating losses incurred as adjusted for a change in fair value of warrants and warrant exercises of $4,353,000 and non-cash license revenues of $867,000, partially offset by $141,000 in debt conversion costs, $114,000 of depreciation and amortization, $1,900,000 of stock-based compensation expense and $4,969,000 of Debtor's Incentive Plan charges with related parties. Net cash used in operating activities also decreased by $3,803,000 of cash provided by changes in operating assets and liabilities mainly driven by the $3,928,000 in reorganization items.

Net cash used in investing activities was $99,000 for the year ended December 31, 2011, due to the purchase of property and equipment.

Net cash provided by investing activities was $350,000 for the year ended December 31, 2010, primarily due to the proceeds from the sale of investments of $465,000 and the maturity of a certificate of deposit pledged as collateral on a letter of credit of $60,000 partially offset by $180,000 purchase of property and equipment.

Net cash provided by financing activities was $15,240,000 for the year ended December 31, 2011, which resulted primarily from net proceeds of $20,206,000 in connection with our February 2011 follow-on public offering partially offset by our $5,000,000 repayment of our 7.00% Senior Convertible Notes in September 2011.

Net cash provided by financing activities was $40,050,000 for the year ended December 31, 2010, which resulted primarily from net proceeds of $42,782,000 in connection with our January 2010 private placement, offset by $2,195,000 in repayments of the 4.50% Notes and $400,000 of the debtor-in-possession financing with Quest Diagnostics.

Contractual Obligations

The following summarizes our contractual obligations at December 31, 2011, including the extension of our Austin, TX principal facility operating lease in March 2012, and the effect such obligations are expected to have on our liquidity and cash flow in future periods:

(in thousands)	Total	2012	2013	Thereafter
Loan from Quest Diagnostics Inc. (1)	$7,000	$7,000	—	$ —
Interest payable on loan from Quest Diagnostics Inc. (2)	202	202	—	—
Noncancelable collaboration obligations (3)	563	450	113	—
Noncancelable operating lease obligations	161	121	40	—
Purchase obligations	—	—	—	—
Total contractual obligations	$7,926	$7,773	$153	$ —

(1) Principal amounts, not including interest.
(2) Based on outstanding principal balance and interest rate as of December 31, 2011.
(3) The following are non-cancelable collaboration obligations: Research collaboration agreement with the Johns Hopkins University School of Medicine and Stanford University.

Off-Balance Sheet Arrangements

As of December 31, 2011, we had no off-balance sheet arrangements that are reasonably likely to have a current or future material effect on our consolidated financial condition, results of operations, liquidity, capital expenditures or capital resources.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Pursuant to Item 305(e) of Regulation S-K, information is not required.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements, including consolidated balance sheets as of December 31, 2011 and 2010, consolidated statements of operations for the years ended December 31, 2011 and 2010, consolidated statements of changes in stockholders' equity (deficit) and comprehensive loss for the years ended December 31, 2011 and 2010, consolidated statements of cash flows for the years ended December 31, 2011 and 2010 and notes to our consolidated financial statements, together with a report thereon of our independent registered public accounting firm, dated March 26, 2012, are attached hereto as pages F-1 through F-31.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act of 1934, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Principal Financial Officer, as appropriate, to allow timely decisions regarding required financial disclosure.

An evaluation was performed under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Accounting Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act, as of December 31, 2011.

Based on that evaluation, our Chief Executive Officer and Chief Accounting Officer have concluded that as of December 31, 2011 our disclosure controls and procedures, as defined in Rule 13a-15(e) and Rule 15(d)-15(e) under the Exchange Act, were effective.

Management Report on Internal Control over Financial Reporting

We are responsible for establishing and maintaining adequate internal control over our financial reporting. We have assessed the effectiveness of internal control over financial reporting as of December 31, 2011. Our assessment was based on criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in Internal Control-Integrated Framework.

Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP"). Our internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and board of directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on using the COSO criteria, management concluded our internal control over financial reporting as of December 31, 2011 was effective.

This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2011, was not subject to attestation by our independent registered public accounting firm pursuant to rules of the United States Securities and Exchange Commission ("SEC") that permit a smaller reporting company to provide only management's report in this Annual Report on Form 10-K.

Changes in internal control over financial reporting.

There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information regarding our Directors, committees of our Board of Directors, including our audit committee and nominating and corporate governance committee, our Director nomination process, and our Executive Officers appearing under the heading "Information Regarding the Board of Directors, Committees and Corporate Governance," "Management" and "Section 16(a) Beneficial Ownership Reporting Compliance," of our proxy statement relating to our 2012 Annual Meeting of Stockholders to be held on June 7, 2012 (the "2012 Proxy Statement") is incorporated by reference.

Our code of ethics is applicable to all employees, including both our President and Chief Executive Officer and Principal Financial Officer. This code of ethics is publicly available on our website at http://www.vermillion.com. If our Board makes any amendments to this code other than technical, administrative or other non-substantive amendments, or grants any waivers, including implicit waivers, from a provision of this code to any officer or person described in paragraph (a) of Item 5.05 of Form 8-K, we will disclose the nature of the amendment or waiver, its effective date and to whom it applies on our website.

ITEM 11. EXECUTIVE COMPENSATION

The information appearing under the headings "Board Compensation," "Compensation Discussion and Analysis," "Executive Officer Compensation," "Corporate Governance—Compensation Committee Interlocks and Insider Participation" and "Report of the Compensation Committee" of the 2012 Proxy Statement is incorporated by reference.

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

The information appearing under the heading "Security Ownership of Certain Beneficial Owners and Management" of the 2012 Proxy Statement is incorporated by reference.

See the description regarding our equity compensation plans contained in the notes to our financial statements, attached hereto.

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

The information appearing under the heading "Certain Relationships and Related Transactions" and "Information Regarding the Board of Directors, Committees and Corporate Governance" of the 2012 Proxy Statement is incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information appearing under the heading "Ratification of the Selection of the Independent Public Accounting Firm for Vermillion" of the 2012 Proxy Statement is incorporated by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) LIST OF DOCUMENTS FILED AS PART OF THIS REPORT:

1. *Financial Statements*
   The financial statements and notes thereto, and the report of the independent registered public accounting firm thereon, are set forth on pages F-1 through F-31.

2. *Exhibits*
   The exhibits listed in the accompanying index to exhibits are filed or incorporated by reference as part of this Annual Report on Form 10-K.

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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.

Vermillion, Inc.

Date: March 26, 2012

/s/ GAIL S. PAGE
Gail S. Page
President and Chief Executive Officer
(Principal Executive Officer)

Date: March 26, 2012

/s/ ERIC J. SCHOEN
Eric J. Schoen
Chief Accounting Officer

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

Name	Title	Date
/s/ GAIL S. PAGE **Gail S. Page**	President and Chief Executive Officer (Principal Executive Officer)	March 26, 2012
/s/ ERIC J. SCHOEN **Eric J. Schoen**	Chief Accounting Officer (Principal Financial Officer)	March 26, 2012
/s/ JAMES S. BURNS **James S. Burns**	Chairman of the Board of Directors	March 26, 2012
/s/ JOHN F. HAMILTON **John F. Hamilton**	Director	March 26, 2012
/s/ BRUCE A. HUEBNER **Bruce A. Huebner**	Director	March 26, 2012
/s/ PETER S. RODDY **Peter S. Roddy**	Director	March 26, 2012
/s/ CARL SEVERINGHAUS **Carl Severinghaus**	Director	March 26, 2012
/s/ WILLIAM C. WALLEN, PH.D. **William C. Wallen, Ph.D.**	Director	March 26, 2012

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INDEX TO EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
2.1	Findings of Fact, Conclusions of Law and Order Confirming Debtor's (Vermillion Inc.'s) Second Amended Plan of Reorganization Under Chapter 11 of the Bankruptcy Code dated January 7, 2010	8-K	000-31617	2.1	January 12, 2010	
3.1	Fourth Amended and Restated Certificate of Incorporation of Vermillion, Inc. dated January 22, 2010	8-K	000-31617	3.1	January 25, 2010	
3.2	Third Amended and Restated Bylaws of Vermillion, Inc.					ü
4.1	Form of Vermillion, Inc.'s (formerly Ciphergen Biosystems, Inc.) Common Stock Certificate	S-1/A	333-32812	4.1	August 24, 2000	
4.2	Preferred Shares Rights Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Continental Stock Transfer & Trust Company dated March 20, 2002	8-A	000-31617	4.2	March 21, 2002	
4.3	Amendment to Rights Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Wells Fargo Bank, N.A. dated July 22, 2005	8-K	000-31617	4.4	July 28, 2005	
4.4	Second Amendment to Rights Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Wells Fargo Bank, N.A. dated September 30, 2005	8-K	000-31617	4.5	October 4, 2005	
4.5	Third Amendment to Rights Agreement between Vermillion, Inc. and Wells Fargo Bank, N.A., dated September 11, 2007	8-K	000-31617	10.1	September 12, 2007	
10.1	1993 Stock Option Plan #	S-1	333-32812	10.3	March 20, 2000	
10.2	Form of Stock Option Agreement #	S-1/A	333-32812	10.4	August 24, 2000	
10.3	2000 Stock Plan and related form of Stock Option Agreement #	S-1/A	333-32812	10.5	August 4, 2000	
10.4	Amended and Restated 2000 Employee Stock Purchase Plan #	10-Q	000-31617	10.6	November 14, 2007	
10.5	Vermillion, Inc. 2010 Stock Incentive Plan #	8-K	000-31617	10.1	February 12, 2010	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.6	Ciphergen Biosystems, Inc. 401(k) Plan #	10-K	000-31617	10.7	March 22, 2005	
10.7	Securities Purchase Agreement by and among Vermillion, Inc. and the purchasers party thereto dated August 23, 2007	S-1	333-146354	10.57	September 27, 2007	
10.8	Form of Warrant	10-Q	000-31617	10.51	November 14, 2007	
10.9	Form of Securities Purchase Agreement between Vermillion, Inc. and the purchasers party thereto dated December 24, 2009	8-K	000-31617	10.1	December 29, 2009	
10.10	Employment Agreement between Sandra A. Gardiner and Vermillion, Inc. dated April 9, 2010 #	8-K	000-31617	10.1	April 22, 2010	
10.11	Employment Agreement between Gail S. Page and Vermillion, Inc. dated September 28, 2010 #	8-K	000-34810	10.1	September 30, 2010	
10.12	Employment Agreement between Eric T. Fung and Vermillion, Inc. dated September 28, 2010 #	8-K	000-34810	10.2	September 30, 2010	
10.13	Form of Severance Agreement between key executive employees and Vermillion, Inc. #	8-K	000-31617	10.1	August 29, 2008	
10.14	Form of Proprietary Information Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and certain of its employees #	S-1/A	333-32812	10.9	August 24, 2000	
10.15	Consulting Agreement between Richard G. Taylor and Vermillion, Inc. dated August 26, 2008 #	8-K	000-31617	10.1	August 29, 2008	
10.16	MAS License Agreement with IllumeSys Pacific, Inc. dated April 7, 1997	S-1/A	333-32812	10.23	August 24, 2000	
10.17	MAS License Agreement with Ciphergen Technologies, Inc. (formerly ISP Acquisition Corporation) dated April 7, 1997	S-1	333-32812	10.24	August 24, 2000	
10.18	Settlement Agreement and Mutual General Release by and among Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.), IllumeSys Pacific, Inc., Ciphergen Technologies, Inc., Molecular Analytical Systems, Inc., LumiCyte, Inc. and T. William Hutchens dated May 28, 2003 †	8-K	000-31617	99.2	June 11, 2003	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.19	Assignment Agreement by and among Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.), IllumeSys Pacific, Inc., Ciphergen Technologies, Inc., Molecular Analytical Systems, Inc., LumiCyte, Inc. and T. William Hutchens dated May 28, 2003 †	8-K	000-31617	99.3	June 11, 2003	
10.20	License Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Molecular Analytical Systems, Inc. dated May 28, 2003 †	8-K	000-31617	99.4	June 11, 2003	
10.21	Collaborative Research Agreement between University College London, UCL Biomedica plc and Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) dated September 22, 2005 †	10-K	000-31617	10.54	March 17, 2006	
10.22	Distribution and Marketing Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Ciphergen Biosystems KK dated March 24, 1999	S-1/A	333-32812	10.26	September 22, 2000	
10.23	Strategic Alliance Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated July 22, 2005	8-K	000-31617	10.44	July 28, 2005	
10.24	Amendment to Strategic Alliance Agreement between Vermillion, Inc. and Quest Diagnostics Incorporated dated October 7, 2009	8-K	000-31617	10.2	October 21, 2009	
10.25	Amendment to Strategic Alliance Agreement between Vermillion, Inc. and Quest Diagnostics Incorporated dated November 10, 2010	8-K	000-34810	10.1	November 12, 2010	
10.26	Amendment No. 5 to Strategic Alliance Agreement by and among Vermillion, Inc. and Quest Diagnostics Incorporated and Quest Diagnostics India Private Limited, dated April 2, 2011†	10-Q	001-34810	10.1	May 10, 2011	
10.27	Stock Purchase Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated July 22, 2005	8-K	000-31617	10.45	July 28, 2005	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.28	Warrant between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated July 22, 2005	8-K	000-31617	10.46	July 22, 2005	
10.29	Amendment to Warrant between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated August 29, 2007	8-K	000-31617	10.2	August 29, 2007	
10.30	Letter Agreement between Vermillion, Inc. and Quest Diagnostics Incorporated dated August 29, 2007	S-1	333-146354	10.38	September 27, 2007	
10.31	Credit Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated July 22, 2005	8-K	000-31617	10.47	July 28, 2005	
10.32	Debtor-In-Possession Credit and Security Agreement between Vermillion, Inc. and Quest Diagnostics Incorporated dated October 7, 2009	8-K	000-31617	10.1	October 21, 2009	
10.33	Memorialization Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated January 12, 2006	S-1	333-146354	10.40	September 27, 2007	
10.34	Patent Security Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Quest Diagnostics Incorporated dated July 22, 2005	8-K	000-31617	10.48	July 28, 2005	
10.35	Asset Purchase Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated August 14, 2006	14a	000-31617	Annex A	September 12, 2006	
10.36	Amendment to Asset Purchase Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006	S-1	333-146354	10.47	September 27, 2007	

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.37	Stock Purchase Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006	S-1	333-146354	10.48	September 27, 2007	
10.38	Transition Services Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006 †	S-1/A	333-146354	10.53	November 27, 2007	
10.39	Amendment No. 1 to Transition Services Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated May 11, 2007	S-1	333-146354	10.50	September 27, 2007	
10.40	Amendment No. 2 to Transition Services Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated June 15, 2007	S-1	333-146354	10.51	September 27, 2007	
10.41	Manufacture and Supply Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006 †	S-1/A	333-146354	10.56	November 27, 2007	
10.42	Amendment No. 1 to Manufacture and Supply Agreement between Vermillion, Inc. and Bio-Rad Laboratories, Inc. dated August 27, 2007	S-1	333-146354	10.53	September 27, 2007	
10.43	Cross License Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006 †	S-1/A	333-146354	10.58	November 27, 2007	
10.44	Sublicense Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006	S-1	333-146354	10.13	September 27, 2007	
10.45	Letter Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006	S-1	333-146354	10.55	September 27, 2007	

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Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.46	Sublease Agreement between Vermillion, Inc. (formerly Ciphergen Biosystems, Inc.) and Bio-Rad Laboratories, Inc. dated November 13, 2006 †	S-1/A	333-146354	10.60	November 27, 2007	
10.47	Exclusive Distribution Agreement between Vermillion, Inc. and Pronto Diagnostics Ltd., dated August 1, 2011†	10-Q	001-34810	10.1	August 9, 2011	
10.48	Consulting Agreement between Vermillion, Inc. and Bruce A. Huebner, dated June 17, 2011#	10-Q	001-34810	10.2	August 9, 2011	
10.49	Consulting Agreement between Vermillion, Inc. and Eric T. Fung, dated November 4, 2011#	10-Q	001-34810	10.1	November 9, 2011	
10.50	Asset Purchase Agreement between Vermillion, Inc. and Correlogic Systems, Inc., dated November 8, 2011					ü
10.51	Settlement Agreement and Release between Vermillion, Inc. and a third party, dated February 9, 2012††					ü
14.1	Code of Ethics	8-K	001-34810	14.1	December 7, 2010	
21.0	Subsidiaries of Registrant					ü
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm					ü
31.1	Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					ü
31.2	Certification of the Chief Accounting Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					ü
32.0	Certification of the Chief Executive Officer and Chief Accounting Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					(1)
101.INS	XBRL Instance Document					(1)
101.SCH	XBRL Taxonomy Extension Schema Document					(1)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					(1)

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					(1)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					(1)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					(1)

Attached as Exhibit 101 to this report are documents formatted in XBRL (Extensible Business Reporting Language). Users of this data are advised that, pursuant to Rule 406T of Regulation S-T, the interactive data file is 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, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is otherwise not subject to liability under these sections.

(1) Furnished herewith
Management contracts or compensatory plan or arrangement.
† Confidential treatment has been granted with respect to certain provisions of this agreement. Omitted portions have been filed separately with the SEC.
†† Certain portions of this exhibit have been omitted and filed separately with the SEC. Confidential treatment has been requested with respect to such omitted portions.

Table of Contents

VERMILLION, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Vermillion, Inc.:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Vermillion, Inc. and its subsidiarie **s** (the "Company") at December 31, 2011 and 2010, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements 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 financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 2 to the consolidated financial statements, the Company voluntarily filed for Chapter 11 bankruptcy protection on March 30, 2009 and subsequently emerged from bankruptcy on January 22, 2010.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As described in Note 1 to the consolidated financial statements, the Company has incurred recurring losses and negative cash flows from operations and has debt outstanding due and payable in October 2012, all of which raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/ s/ PricewaterhouseCoopers LLP
Austin, Texas
March 26, 2012

Vermillion, Inc.
Consolidated Balance Sheets
(Amounts in Thousands, Except Share and Par Value Amounts)

	December 31, 2011	December 31, 2010
Assets		
Current assets:		
Cash and cash equivalents	$ 22,477	$ 22,914
Accounts receivable	99	136
Prepaid expenses and other current assets	317	779
Total current assets	22,893	23,829
Property and equipment, net	216	194
Other assets	2	12
Total assets	$ 23,111	$ 24,035
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,331	$ 998
Accrued liabilities	2,592	3,056
Short-term debt	7,000	—
Convertible senior notes	—	5,000
Deferred revenue	553	1,049
Total current liabilities	11,476	10,103
Non-current liabilities:		
Long-term debt	—	7,000
Warrant liability	—	378
Long-term deferred revenue	1,224	1,679
Other liabilities	52	259
Total liabilities	12,752	19,419
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.001 par value, 5,000,000 shares authorized, none issued and outstanding at December 31, 2011 and 2010	—	—
Common stock, $0.001 par value, 150,000,000 shares authorized; 14,900,831 and 10,657,564 shares issued and outstanding at December 31, 2011 and 2010, respectively	15	11
Additional paid-in capital	326,796	303,270
Accumulated deficit	(316,299)	(298,509)
Accumulated other comprehensive loss	(153)	(156)
Total stockholders' equity	10,359	4,616
Total liabilities and stockholders' equity	$ 23,111	$ 24,035

See accompanying Notes to Consolidated Financial Statements

Vermillion, Inc.
Consolidated Statements of Operations
(Amounts in Thousands, Except Share and Per Share Amounts)

	Year Ended December 31,	
	2011	2010
Revenue:		
Product	$ 1,469	$ 308
License	454	867
Total revenue	1,923	1,175
Cost of revenue:		
Product	129	88
Total cost of revenue	129	88
Gross profit	1,794	1,087
Operating expenses:		
Research and development [1]	5,387	3,848
Sales and marketing [2]	5,539	2,857
General and administrative [3]	8,509	8,984
Total operating expenses	19,435	15,689
Loss from operations	(17,641)	(14,602)
Interest income	64	40
Interest expense	(396)	(491)
Gain on investments in auction rate securities	—	58
Change in fair value and gain from warrant exercise, net	378	4,353
Debt conversion costs	—	(141)
Reorganization items	(96)	(1,677)
Reorganization items—related party incentive plan	—	(6,932)
Other income (expense), net	(99)	358
Loss before income taxes	(17,790)	(19,034)
Income tax benefit (expense)	—	—
Net loss	$ (17,790)	$ (19,034)
Net loss per share—basic and diluted	$ (1.25)	$ (1.83)
Weighted average common shares used to compute basic and diluted net loss per common share	14,249,570	10,404,741
Non-cash stock-based compensation expense included in operating expenses:		
(1) Research and development	$ 686	$ 992
(2) Sales and marketing	158	77
(3) General and administrative	2,446	3,868

See accompanying Notes to Consolidated Financial Statements

Vermillion, Inc.
Consolidated Statements of Changes in Stockholders' Equity (Deficit) and Comprehensive Loss
(Amounts in Thousands, Except Share Amounts)

	Common Stock		Additional	Accumulated	Accumulated Other Comprehensive	Total Stockholders'	Comprehensive
	Shares	Amount	Paid-In Capital	Deficit	Loss	Equity (Deficit)	Loss
Balance at December 31, 2009	7,918,705	8	252,196	(279,475)	(46)	(27,317)	
Net loss	—	—	—	(19,034)	—	(19,034)	$ (19,034)
Change in unrealized gain(loss) on auction rate securities	—	—	—	—	(119)	(119)	(119)
Foreign currency translation adjustment	—	—	—	—	9	9	9
Comprehensive loss						—	$ (19,144)
Common stock issued in conjunction with private placement sale, net of issuance costs	2,327,869	2	42,780	—	—	42,782	
Common stock issued in conjuntion with execise of stock options	21,083	—	42	—	—	42	
Warrant exercises, net of issuance cost	46,972	—	926	—	—	926	
Conversion of convertible senior notes, net of issuance cost	16,283	—	458	—	—	458	
Common stock issued for debtor's incentive plan	226,904	—	4,969	—	—	4,969	
Common stock issued for restricted stock awards	99,748	1	535	—	—	536	
Stock compensation charge	—	—	1,364	—	—	1,364	
Balance at December 31, 2010	10,657,564	11	303,270	(298,509)	(156)	4,616	
Net loss	—	—	—	(17,790)	—	(17,790)	$ (17,790)
Foreign currency translation adjustment	—	—	—	—	3	3	3
Comprehensive loss							$ (17,787)
Common stock issued in conjunction with follow-on public offering, net of issuance costs	4,000,000	4	20,202	—	—	20,206	
Common stock issued in conjuntion with execise of stock options	21,833	—	34	—	—	34	
Common stock issued for debtor's incentive plan	75,637	—	1,656	—	—	1,656	
Common stock issued for restricted stock awards	145,797	—	587	—	—	587	
Warrants issued for services	—	—	4	—	—	4	
Stock compensation charge	—	—	1,043	—	—	1,043	
Balance at December 31, 2011	14,900,831	$ 15	$ 326,796	$ (316,299)	$ (153)	$ 10,359	

See accompanying Notes to Consolidated Financial Statements

Vermillion, Inc.
Consolidated Statements of Cash Flows
(Amounts in Thousands)

	Year Ended December 31, 2011	2010
Cash flows from operating activities:		
Net loss	$ (17,790)	$ (19,034)
Adjustments to reconcile net loss to net cash used in operating activities:		
Gain on sale of investments	—	(58)
Change in fair value and gain from warrant exercise, net	(378)	(4,353)
Common stock issued for debtor's incentive plan with related parties	—	4,969
Non-cash license revenue	(454)	(867)
Debt conversion costs	—	141
Loss on sale and disposal of property and equipment	—	56
Depreciation and amortization	77	114
Stock-based compensation expense	3,286	1,900
Warrants issued for services	4	—
Changes in operating assets and liabilities:		
Decrease (increase) in accounts receivable	37	(136)
Decrease (increase) in prepaid expenses and other current assets	462	(385)
Decrease (increase) in other assets	10	(12)
Increase in accounts payable and accrued liabilities	253	63
Increase (decrease) in deferred revenue	(497)	595
Decrease in other liabilities	(207)	—
Reorganization items	(384)	(3,928)
Net cash used in operating activities	(15,581)	(20,935)
Cash flows from investing activities:		
Proceeds from sales of investments	—	465
Proceeds from sale of property and equipment	—	5
Purchase of property and equipment	(99)	(180)
Proceeds from maturity of CD pledged as collateral on letter of credit	—	60
Net cash (used in) / provided by investing activities	(99)	350
Cash flows from financing activities:		
Repayment of debtor-in-possession loan financing	—	(400)
Principal repayment of 7.00% convertible senior notes	(5,000)	—
Principal repayment of 4.50% convertible senior notes	—	(2,195)
Proceeds from sale of common stock, net of issuance costs	20,206	42,782
Proceeds from issuance of common stock from exercise of stock options	34	42
Costs related to issuance of common stock from warrant exercises	—	(133)
Issuance costs related to conversion of convertible senior notes	—	(46)
Net cash provided by financing activities	15,240	40,050
Effect of exchange rate changes on cash and cash equivalents	3	9
Net increase (decrease) in cash and cash equivalents	(437)	19,474
Cash and cash equivalents, beginning of year	22,914	3,440
Cash and cash equivalents, end of year	$ 22,477	$ 22,914
Supplemental disclosure of cash flow information:		
Cash paid during the period for:		
Interest	$ 462	$ 1,407
Income taxes	—	—
Non-cash investing and financing activities:		
Principal reduction from conversion of senior convertible notes	$ —	$ (170)
Principal reduction from forgiveness of Quest secured line of credit	—	(3,000)
Issuance of common stock from warrant exercise	—	1,059
Issuance of common stock from conversion of principal and interest for senior convertible notes	—	504

See accompanying Notes to Consolidated Financial Statements

Vermillion, Inc.

Notes to Consolidated Financial Statements

NOTE 1: BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING AND REPORTING POLICIES

Organization

Vermillion, Inc. ("Vermillion"; Vermillion and its wholly-owned subsidiaries are collectively referred to as "we" or the "Company") is incorporated in the state of Delaware, and is engaged in the business of developing and commercializing diagnostic tests in the fields of oncology, cardiology and women's health. On March 9, 2010, we commercially launched OVA1 ™ ovarian tumor triage test ("OVA1"). As discussed in Note 4, we distribute OVA1 through Quest Diagnostics, which has the non-exclusive right to commercialize OVA1 on a worldwide basis, with exclusive commercialization rights in each exclusive territory, beginning on the date OVA1 was first commercialized and ending on the fifth anniversary of the date that OVA1 was cleared by the FDA, with the right to extend the exclusivity period for one additional year. These exclusive territories include the United States, India, Mexico, and the United Kingdom.

On August 1, 2011, we entered into an Exclusive Distribution Agreement (the "Pronto Agreement") with Pronto Diagnostics Ltd. ("Pronto Diagnostics"). Pursuant to the Pronto Agreement, Pronto Diagnostics will have the exclusive right to distribute OVA1 in Israel and areas under Palestinian control for a certain period of time as specified in the Pronto Agreement, provided that Pronto Diagnostics achieves certain minimum sales of OVA1 to maintain the exclusive distribution rights.

On December 19, 2011, we completed the purchase of substantially all of the assets of Correlogic Systems, Inc. ("Correlogic") for $435,000. The purchase included certain documents, diagnostic samples and intellectual property owned by and licensed to Correlogic in connection with Correlogic's ovarian cancer diagnostics business, including a diagnostic test under the name "OvaCheck2 ™ " for the detection of ovarian cancer. The purchase was expensed during the year ended December 31, 2011 as the assets acquired will be consumed in research and development activities, with no alternative future use.

Liquidity

On March 9, 2010, we commercially launched OVA1. We will continue to expend resources in the selling and marketing of OVA1 and developing additional diagnostic tests.

On February 18, 2011, we completed an underwritten follow-on public offering of our common stock for net proceeds of $20,206,000 after deducting underwriting discounts and offering expenses. Our $5,000,000 of outstanding 7.00% Notes due in September 2011 were paid in full.

We have incurred significant net losses and negative cash flows from operations since inception. At December 31, 2011, we had an accumulated deficit of $316,299,000 and stockholders' equity of $10,359,000. On December 31, 2011, we had $22,477,000 of cash and cash equivalents and $11,476,000 of current liabilities including $7,000,000 principal amount under a secured line of credit from Quest Diagnostics due and payable on October 7, 2012.

We expect cash for OVA1 from Quest Diagnostics to be our only material, recurring source of cash in 2012. In order to continue our operations as currently planned through 2013 and beyond, we will need to raise additional capital. Given the above conditions, there is substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements have been prepared on a going concern basis and do not include any adjustments that might result from these uncertainties.

The successful achievement of our business objectives will require additional financing and therefore, we will need to raise additional capital or incur indebtedness to continue to fund our future operations. We will seek

to raise capital through a variety of sources, including the public equity market, private equity financing, collaborative arrangements, licensing arrangements, and/or public or private debt.

Any additional equity financing may be dilutive to stockholders, and debt financing, if available, may involve restrictive covenants. If we obtain additional funds through arrangements with collaborators or strategic partners, we may be required to relinquish our rights to certain technologies or products that we might otherwise seek to retain. Additional funding may not be available when needed or on terms acceptable to us. If we are unable to obtain additional capital, we may be required to delay, reduce the scope of or eliminate our sales and marketing and/or research and development activities.

Principals of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany transactions have been eliminated in consolidation.

Basis of Presentation

The Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC" or "Codification") 852, "Reorganizations" applied to our financial statements while we operated under the provisions of Chapter 11. ASC 852 does not change the application of generally acceptable accounting principles in the United States of America ("U.S. GAAP") in the preparation of financial statements. However, for periods including and subsequent to the filing of the Chapter 11 petition, ASC 852 does require that the financial statements distinguish transactions and events that are directly associated with the reorganization from the ongoing operations of the business. Accordingly, certain expenses that were realized or incurred during the Chapter 11 proceedings have been classified as "reorganization items" on the accompanying consolidated statements of operations.

Use of Estimates

The preparation of consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The primary estimates underlying our consolidated financial statements include assumptions regarding variables used in calculating the fair value of our equity awards, income taxes and contingent liabilities. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid investments with maturities of three months or less from the date of purchase, which are readily convertible into known amounts of cash and are so near to their maturity that they present an insignificant risk of changes in value because of interest rate changes. Highly liquid investments that are considered cash equivalents include money market funds, certificates of deposits, treasury bills and commercial paper. The carrying value of cash equivalents approximates fair value due to the short-term maturity of these securities.

Fair Value Measurement

ASC 820, "Fair Value and Measurements" defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

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

Level 2—Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

If a financial instrument uses inputs that fall in different levels of the hierarchy, the instrument will be categorized based upon the lowest level of input that is significant to the fair value calculation.

Concentration of Credit Risk

Financial instruments that potentially subject us to a concentration of credit risk consist of cash and cash equivalents and accounts receivable. We maintain the majority of our cash and cash equivalents in recognized financial institutions in the United States. We also maintain cash deposits with banks in China and Japan. We have not experienced any losses associated with our deposits of cash and cash equivalents. We do not invest in derivative instruments or engage in hedging activities.

Our accounts receivable are derived from sales made to a customer located in North America. We perform ongoing credit evaluations of our customer's financial condition and generally do not require collateral. We maintain an allowance for doubtful accounts based upon the expected collectability of accounts receivable. Our accounts receivable at December 31, 2011 and 2010 and revenues for the years then ended are from one active customer.

Property and Equipment

Property and equipment are carried at cost less accumulated depreciation and amortization. Property and equipment are depreciated using the straight-line method over the estimated useful lives, generally three to five years. Leasehold improvements are amortized using the straight-line method over the shorter of the estimated useful life of the asset or the remaining term of the lease. Maintenance and repairs are charged to operations as incurred. Upon sale or retirement of assets, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is reflected in operations.

Property and equipment are reviewed for impairment when events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. If property and equipment are considered to be impaired, an impairment loss is recognized.

Revenue Recognition

Product Revenue. We derive our product revenues from sales of OVA1 through Quest Diagnostics. We recognize product revenues for tests performed when the following revenue recognition criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured. Accounts receivable from Quest Diagnostics Incorporated ("Quest Diagnostics") totaled $85,000 and $121,000 at December 31, 2011 and 2010, respectively.

License Revenue. Under the terms of the secured line of credit with Quest Diagnostics, portions of the borrowed principal amounts may be forgiven upon our achievement of certain milestones relating to the development, regulatory approval and commercialization of certain diagnostic tests (see Note 4). We account for forgiveness of principal debt balances as license revenues over the term of the exclusive sales period that Quest Diagnostics receives upon commercialization of an approved diagnostic test as we do not have a meaningful history of product sales that provides a reasonable basis for estimating future product sales. We recognized license revenue on a straight-line basis over the 2.5-year period of Quest Diagnostics' sales exclusivity beginning on OVA1 commercialization date of March 9, 2010 through November 10, 2010. On November 10, 2010, the period of Quest Diagnostics' sales exclusivity for OVA1 was amended for up to three additional years. Accordingly, the balance of the principle amount forgiven at November 10, 2010 is recognized as license revenue on a straight-line basis over the amended term of exclusivity for OVA1 ending in September 2015. Through December 31, 2011, a total of $3,000,000 has been forgiven by Quest Diagnostics based upon milestone achievement.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs consist primarily of payroll and related costs, materials and supplies used in the development of new products, and fees paid to third parties that conduct certain research and development activities on our behalf. In addition, acquisitions of assets to be consumed in research and development are expensed as incurred as research and development costs. Software development costs incurred in the research and development of new products are expensed as incurred until technological feasibility is established.

Stock-Based Compensation

We record the fair value of non-cash stock-based compensation costs for stock options and stock purchase rights related to our 2010 Stock Incentive Plan (the "2010 Plan") and 2000 Stock Plan (the "2000 Plan"). We estimate the fair value of stock options using a Black-Scholes option valuation model. This model requires the input of subjective assumptions including expected stock price volatility, expected life and estimated forfeitures of each award. We use the straight-line method to amortize the fair value over the vesting period of the award. These assumptions consist of estimates of future market conditions, which are inherently uncertain, and therefore are subject to management's judgment.

The expected life of options is based on historical data of our actual experience with the options we have granted and represents the period of time that the options granted are expected to be outstanding. This data includes employees' expected exercise and post-vesting employment termination behaviors. The expected stock price volatility is estimated using a combination of historical and peer group volatility for a blended volatility in deriving the expected volatility assumption. We made an assessment that blended volatility is more representative of future stock price trends than just using historical or peer group volatility, which corresponds to the expected life of the options. The expected dividend yield is based on the estimated annual dividends that we expect to pay over the expected life of the options as a percentage of the market value of our common stock as of the grant date. The risk-free interest rate for the expected life of the options granted is based on the United States Treasury yield curve in effect as of the grant date.

We also record the fair value of non-cash stock-based compensation costs for equity instruments issued to non-employees. We recalculate costs for these options each reporting period using a Black-Scholes option valuation model. Because we recalculate these costs each reporting period, changes in assumptions used in our calculations, including changes in the fair value of our common stock, can result in significant changes in the amounts we record from one reporting period to another.

Contingencies

We account for contingencies in accordance with ASC 450 Contingencies ("ASC 450"). ASC 450 requires that an estimated loss from a loss contingency shall be accrued when information available prior to issuance of the financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and when the amount of the loss can be reasonably estimated. Accounting for contingencies such as legal and contract dispute matters requires us to use our judgment. We believe that our accruals for these matters are adequate. Nevertheless, the actual loss from a loss contingency might differ from our estimates.

Income Taxes

We account for income taxes using the liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and the tax bases of assets and liabilities using the current tax laws and rates. A valuation allowance is established when necessary to reduce deferred tax assets to the amounts more likely than not expected to be realized.

Financial Interpretation ("FIN") 48, "Accounting for Uncertainty in Income Taxes", (codified primarily in FASB ASC Topic 740-10-50, "Accounting for Uncertainty in Income Taxes") clarifies the accounting for uncertainty in income taxes recognized in the financial statements in accordance with Statement of Financial Accounting Standards ("SFAS") 109, "Accounting for Income Taxes" (codified primarily in FASB ASC Topic 740, Income Taxes). ASC Topic 740-10-50 provides that a tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, based on the technical merits. Income tax positions must meet a more likely than not recognition threshold at the effective date to be recognized upon the adoption of ASC Topic 740-10-50 and in subsequent periods. This interpretation also provides guidance on measurement, derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

We recognize interest and penalties related to unrecognized tax benefits within the interest expense line and other expense line, respectively, in the consolidated statement of operations. Accrued interest and penalties are included within the related liability lines in the consolidated balance sheet.

Foreign Currency Translation

The functional currency of Ciphergen Biosystems KK, a wholly owned subsidiary, is the Japanese yen. Accordingly, all balance sheet accounts of this operation are translated into United States dollars using the current exchange rate in effect at the balance sheet date. The expenses of Ciphergen Biosystems KK are translated using the average exchange rates in effect during the period, and the gains and losses from foreign currency translation are recorded in accumulated other comprehensive loss.

The functional currency of all other foreign operations is the United States dollar. Accordingly, all foreign currency denominated monetary assets and liabilities of these foreign operations are remeasured in United States dollars at exchange rates in effect at the balance sheet date and non-monetary assets and related elements of expense are remeasured using historical rates of exchange. Income and expense elements are remeasured in United States dollars using average exchange rates in effect during the period. Gains and losses from the foreign currency transactions of these subsidiaries are recorded as other income (expense).

Other Income

On November 2, 2010, we received notice of an award of two grants for the aggregate sum of $489,000 under the Internal Revenue Service Qualifying Therapeutic Discovery Projects Grant Program for our ongoing cancer related and peripheral arterial disease ("PAD") programs. The grant relates to fiscal 2010 expenditures and was awarded to therapeutic or diagnostic discovery projects that show a reasonable potential to result in new therapies or diagnostic tests that address areas of unmet medical need or that prevent, detect or treat chronic or acute diseases and conditions. These grants were included in other income for the year ended December 31, 2010 and were recorded as other current assets at December 31, 2010. We received payment for these grants on February 3, 2011.

Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss consists of unrealized gain (losses) from available-for-sale securities and foreign currency translation adjustment.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted average number of common stock shares outstanding during the period. Diluted loss per share is computed by dividing the net loss by the weighted average number of common stock shares adjusted for the dilutive effect of common stock equivalent shares outstanding during the period. Common stock equivalents consist of convertible senior notes (using the "as if converted" method), stock options, restricted stock units and stock warrants. Common equivalent shares are excluded from the computation in periods in which they have an anti-dilutive effect on earnings per share.

Fair Value of Financial Instruments

Financial instruments include cash and cash equivalents, marketable securities, accounts receivable, accounts payable, accrued liabilities, convertible senior notes and the amount owed on a secured line of credit with Quest Diagnostics. The estimated fair value of financial instruments has been determined using available market information or other appropriate valuation methodologies. However, considerable judgment is required in interpreting market data to develop estimates of fair value; therefore, the estimates are not necessarily indicative of the amounts that could be realized or would be paid in a current market exchange. The effect of using different market assumptions and/or estimation methodologies may be material to the estimated fair value amounts. The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities are at cost, which approximates fair value due to the short maturity of those instruments. We believe the fair value of our debt at December 31, 2011 approximates its carrying value due to the short term to the debt's maturity in October 2012 and variable rate of interest (prime plus 0.5%).

Certain of our outstanding warrants are classified as liabilities in accordance with ACS 815 "Derivatives and Hedging". We fair value these stock warrants at each reporting period, with the changes in fair value recognized in our consolidated statement of operations. We fair value the warrants using a Black Scholes valuation model. Since the outstanding common stock warrants are fair valued at the end of each reporting period, any change in the underlying assumptions to the Black Scholes valuation model, including the volatility and price of our common stock, may have a significant impact on our consolidated financial statements.

Segment Reporting

We operate one reportable segment, novel diagnostic tests.

NOTE 2: C HAPTER 11 B ANKRUPTCY

On March 30, 2009, we filed a voluntary petition for relief under Chapter 11 in the Bankruptcy Court. We operated our business and managed our properties as debtors in possession under the jurisdiction of the Bankruptcy Court and in accordance with the applicable provisions of the Bankruptcy Code and orders of the Bankruptcy Court. On January 22, 2010, we emerged from bankruptcy under Chapter 11 and our Bankruptcy Filing was formally closed on January 19, 2012.

Financial Statement Presentation

Our consolidated financial statements have been prepared in accordance with ASC 852, "Reorganizations" (ASC 852) and on a going-concern basis, which contemplates continuity of operations, realization of assets and liquidation of liabilities in the ordinary course of business.

Reorganization Items

Professional advisory fees and other costs directly associated with our reorganization are reported separately as reorganization items pursuant to ASC 852. Professional fees include legal fees undertaken as part of the reorganization process. Certain actions within the non-Debtor companies have occurred as a result of the Chapter 11 bankruptcy proceedings. In addition, we have made adjustments to the carrying value of certain pre-petition liabilities. The costs associated with these actions are also reported as reorganization items. The reorganization items in the consolidated statement of operations at December 31, 2011 and 2010 consisted of the following items:

(in thousands)	Year Ended December 31, 2011	2010
Debtors reorganization items		
Professional fees associated with bankruptcy proceedings	$ 80	$ 928
Related party incentive plan	—	6,932
Debtors reorganization items	$ 80	$ 7,860
Non-Debtors reorganization items		
Professional fees associated with bankruptcy proceedings	$ 16	$ 749
Total reorganization items	$ 96	$ 8,609

Plan of Reorganization

On January 7, 2010, the Bankruptcy Court issued a confirmation order approving our Plan of Reorganization. The Plan of Reorganization contemplates the reorganization of the Company and the discharge of all outstanding claims against and interests in the Company. Pursuant to the Plan of Reorganization, as confirmed, each holder of an allowed priority claim received cash in an amount equal to such allowed claim. The secured claim arising from the Quest Diagnostics secured line of credit was reinstated and unimpaired. Holders of the outstanding 4.50% Convertible Senior Notes due in 2009 received the payment of $2,195,000 of principal, $140,000 of unpaid interest and 9,044 shares of common stock in exchange of their claims. $5,000,000 in principal of the outstanding 7.00% Convertible Senior Notes due in 2011 were reinstated. Holders of unpaid interest on previously converted 7.00% Notes received $362,000 in cash and 7,239 shares related to the unpaid interest of the 7.00% Notes. All holders of allowed general unsecured claims elected to receive cash and were entitled to be paid in full.

On January 22, 2010, the confirmation order issued by the Bankruptcy Court approving our Plan of Reorganization became final and all conditions precedent to January 22, 2010 were satisfied or waived. Accordingly, we emerged from bankruptcy under Chapter 11 and reinstated our common stock, par value $0.001. Our Bankruptcy Filing was formally closed on January 19, 2012.

NOTE 3: R ECENT A CCOUNTING P RONOUNCEMENTS

Fair Value Measurement—In April 2011, the FASB issued new guidance to achieve common fair value measurement and disclosure requirements between GAAP and International Financial Reporting Standards. This new guidance amends current fair value measurement and disclosure guidance to include increased transparency around valuation inputs and investment categorization. The new guidance is effective for fiscal years and interim periods beginning after December 15, 2011. We do not believe the adoption of the new guidance will have an impact on our consolidated financial position, results of operations or cash flows.

Comprehensive Income—In June 2011, the FASB issued new guidance on the presentation of comprehensive income. Specifically, the new guidance allows an entity to present components of net income and other comprehensive income in one continuous statement, referred to as the statement of comprehensive income,

or in two separate, but consecutive statements. The new guidance eliminates the current option to report other comprehensive income and its components in the statement of changes in equity. While the new guidance changes the presentation of comprehensive income, there are no changes to the components that are recognized in net income or other comprehensive income under current accounting guidance. We will adopt this pronouncement in the first quarter of 2012, and it will have no effect on our financial position, results of operations or cash flows but it will impact the way we present comprehensive income.

NOTE 4: STRATEGIC ALLIANCE WITH QUEST DIAGNOSTICS INCORPORATED

Quest Diagnostics is a significant holder of our common stock. On July 22, 2005, we entered into a strategic alliance agreement (the "Strategic Alliance Agreement") with Quest Diagnostics to develop and commercialize up to three diagnostic tests from our product pipeline (the "Strategic Alliance"). The Strategic Alliance Agreement was set to expire on the earlier of (i) the three-year anniversary of the agreement, which was July 22, 2008, and (ii) the date on which Quest Diagnostics commercializes three diagnostic tests. On July 21, 2008, the Strategic Alliance Agreement was amended to extend the term of the agreement to end on the earlier of (i) September 1, 2008 and (ii) the date on which Quest Diagnostics commercializes three diagnostic tests. On October 24, 2008, the Strategic Alliance Agreement was amended to extend the term of the agreement to end on the earlier of (i) September 1, 2009 and (ii) the date on which Quest Diagnostics makes its third development election. On October 7, 2009, the Strategic Alliance Agreement was amended to extend the term of the agreement to end on the earlier of (i) October 7, 2012 and (ii) the date on which Quest Diagnostics makes its third development election. On November 10, 2010, we further amended the Strategic Alliance Agreement to give Quest Diagnostics the exclusive right to commercialize OVA1 for two additional years from the period as specified in the Strategic Alliance Agreement, with an option to extend such exclusive period in its sole discretion for one additional year, and to establish royalties, fees, and other payments related to the performance of OVA1. To date, Quest Diagnostics has selected two diagnostic tests to commercialize, our peripheral arterial disease blood test ("VASCLIR") which is under development and OVA1. On April 2, 2011, we entered into Amendment No. 5 (the Strategic Alliance Agreement and the July 21, 2008, October 24, 2008, October 7, 2009, November 10, 2010 and April 2, 2011 amendments are collectively referred to as the "Amended Strategic Alliance Agreement") with Quest Diagnostics and Quest Diagnostics India. Pursuant to Amendment No. 5, Quest Diagnostics India will have the exclusive right to commercialize OVA1 in India for a certain period of time, as specified in the Strategic Alliance Agreement, as amended. The Amendment also establishes amounts due to Vermillion related to the performance of OVA1 in India.

Secured Line of Credit with Quest Diagnostics Incorporated

In connection with the Strategic Alliance Agreement, Quest Diagnostics provided us with a $10,000,000 secured line of credit, which is collateralized by certain of our intellectual property and may only be used for payment of certain costs and expenses directly related to the Strategic Alliance. Under the terms of this secured line of credit, the interest rate is at the prime rate plus 0.5% and is payable monthly. The effective interest rate was 3.75% at December 31, 2011 and 2010. This secured line of credit also contains provisions for Quest Diagnostics to forgive portions of the amounts borrowed that corresponds to our achievement of certain milestones related to development, regulatory approval and commercialization of certain diagnostic tests. The amounts to be forgiven and the corresponding milestones that we must achieve are:

(i) $1,000,000 for each application that allows a licensed laboratory test to be commercialized with a maximum of three applications for $3,000,000;

(ii) $3,000,000 for the earlier of FDA clearance of the first diagnostic test kit or commercialization of the first diagnostic test kit; and

(iii) $2,000,000 upon each FDA clearance of up to two subsequent diagnostic test kits but no later than the first commercialization of each such diagnostic test kit, with a maximum forgiveness of $4,000,000 for two diagnostic test kits.

If not otherwise forgiven, the principal amount outstanding and any unpaid interest of this secured line of credit will become due and payable on October 7, 2012.

We have drawn on this secured line of credit in monthly increments of $417,000 on the last day of each month during the first two years of the Strategic Alliance. The outstanding principal balance of this secured line of credit was $7,000,000 at December 31, 2011 and 2010. Interest expense related to this secured line of credit was $263,000 and $278,000 for the years ended December 31, 2011 and 2010, respectively. From the inception of the Strategic Alliance through December 31, 2008, we spent $10,000,000 of the amounts drawn on in-house research and development, as well as collaborations with others, directed towards achieving the milestones. On September 11, 2009, we achieved the FDA clearance of OVA1 milestone provision in the secured line of credit agreement providing for a reduction in the principal amount of the loan of $3,000,000 but was only able to apply the milestone once it was no longer in default under the terms of the secured line of credit while under Chapter 11 bankruptcy protection. On January 22, 2010 we cured the default upon payment of accrued interest totaling approximately $472,000. On January 23, 2010, the principal was reduced to $7,000,000. We are in discussions with Quest Diagnostics regarding the achievement of an additional $1,000,000 forgiveness milestone as a result of the FDA clearance of OVA1 under the terms of the Strategic Alliance Agreement. However, Quest Diagnostics has not acknowledged that such milestone has been achieved.

NOTE 5: F AIR V ALUE M EASUREMENTS

Historically, our investments consisted of auction rate securities, which were classified as available-for-sale long-term investments due to failed auctions related to these investments through December 31, 2009.

On July 26, 2010, we sold the auction rate securities investments for total proceeds of $465,000 and recorded a realized gain on investment of $58,000 for the year ended December 31, 2010. We did not hold any short or long term investments at December 31, 2011.

We measure certain common stock warrants at fair value on a recurring basis (see Note 10). All other financial assets and liabilities are measured at fair value on a nonrecurring basis. These financial assets and liabilities are recognized at fair value when they are deemed to be other-than-temporarily impaired.

The reconciliation of financial assets measured at fair value using significant unobservable inputs (Level 3) for the years ended December 31, 2011 and 2010 was as follows:

(in thousands)	Long-Term Investments Available-for-Sale (Level 3) Auction Rate Securities
Balance at January 1, 2010	$ 526
Total realized gains included in earnings	58
Change in unrealized gain(loss) included in other comprehensive loss	(119)
Sales	(465)
Balance at December 31, 2010	$ —

We determine the fair value of our debt based on the then-current rates available to us for debt of a similar term and remaining maturity. We determined the estimated fair value amount by using available market information and commonly accepted valuation methodologies. We believe the fair value of our debt at December 31, 2011 approximates its carrying value due to the short term to the debt’s maturity in October 2012 and variable rate of interest (prime plus 0.5%.

NOTE 6: PROPERTY AND EQUIPMENT

The components of property and equipment as of December 31, 2011 and 2010 were as follows:

(in thousands)	December 31, 2011	2010
Machinery and equipment	$ 184	$ 123
Demonstration equipment	30	—
Computer equipment and software	251	244
Furniture and fixtures	65	64
Gross property and equipment	530	431
Accumulated depreciation and amortization	(314)	(237)
Property and equipment, net	$ 216	$ 194

Depreciation expense for property and equipment was $77,000 and $114,000 for the years ended December 31, 2011 and 2010, respectively. During the year ended December 31, 2010, we disposed of significant fully depreciated assets in conjunction with our exit of our Fremont, California facility and move to Austin, Texas.

NOTE 7: ACCRUED LIABILITIES

The components of accrued liabilities as of December 31, 2011 and 2010 were as follows:

(in thousands)	December 31, 2011	2010
Payroll and benefits related expenses	$ 641	$ 596
Collaboration and research agreements expenses	303	276
Professional services	279	669
Contingencies	1,025	925
Tax-related liabilities	76	251
Accrued interest	238	304
Other accrued liabilities	30	35
Total accrued liabilities	$2,592	$3,056

NOTE 8: CONVERTIBLE SENIOR NOTES

7.00% Convertible Senior Notes Due September 1, 2011

On November 15, 2006, we closed the sale of $16,500,000 of convertible senior notes due September 1, 2011. Offering costs were $104,000 and fees of $514,500, which were paid on behalf of the debt holders, were recorded as debt discount on the 7.00% Notes. Fees paid on behalf of debt holders included the fair value of two warrants issued to underwriters to purchase a total of 20,000 shares of our common stock at $12.60 per share. The warrants were valued at $140,000 based on the fair value as determined by a Black-Scholes model using the following assumptions: a risk free interest rate of 4.75%, 5 year contractual life, and 88.00% volatility rate. The 7.00% Notes were sold pursuant to separate exchange and redemption agreements between Vermillion and each of Highbridge International LLC, Deerfield International Limited, Deerfield Partners, L.P., Bruce Funds, Inc. and Professional Life & Casualty, each holders of the existing 4.50% convertible senior notes due September 1, 2008, pursuant to which holders of an aggregate of $27,500,000 of the 4.50% Notes agreed to exchange and redeem their 4.50% Notes for an aggregate of $16,500,000 in aggregate principal amount of the 7.00% Notes and $11,000,000 in cash, plus accrued and unpaid interest on the 4.50% Notes of $254,000. Debt discount related to the 7.00% Notes was amortized to interest expense using the effective interest method. There was no amortization of the debt discount related to the 7.00% Notes for the years ended December 31, 2011 and 2010.

The 7.00% Notes are unsecured senior indebtedness of Vermillion initially bearing interest at the rate of 7.00% per annum. The 7.00% Notes were reduced to 4.00% per annum on September 11, 2009 upon FDA clearance of OVA1.

The 7.00% Notes were convertible at the option of each holder prior to September 1, 2011 into shares of our common stock at a conversion price of $20.00 per share, equivalent to a conversion rate equal to 50 shares of our common stock per $1,000 principal of the 7.00% Notes, subject to adjustment for standard anti-dilution provisions including distributions to common stockholders and stock splits as well as occurrence of a change in control, in which case the conversion rate was to be adjusted for a make-whole premium. The conversion feature, including the make-whole premium, expired unexercised in September 2011.

Holders of the 7.00% Notes had the option to require us to repurchase the 7.00% Notes under certain circumstances, including at any time after September 1, 2009, if we did not receive approval or clearance for commercial sale of any of our ovarian cancer tests by the FDA. We could redeem the 7.00% Notes at our option, in whole or in part, after September 1, 2009, at specified redemption prices plus accrued and unpaid interest; provided that the 7.00% Notes will be redeemable only if the closing price of the stock equals or exceeds 200.0% of the conversion price then in effect for at least 20 trading days within a period of 30 consecutive trading days ending on the trading day before the date of the notice of the optional redemption. Upon a change of control, each holder of the 7.00% Notes could have required us to repurchase some or all of the 7.00% Notes at specified redemption prices, plus accrued and unpaid interest. The 7.00% Notes contained a put option that entitles the holder to require us to redeem the 7.00% Notes at a price equal to 105.0% of the principal balance upon a change in control of the Company. These provisions expired with the repayment of the 7.00% Notes in September 2011.

We identified the guaranteed interest payment for any conversion of any 7.00% Note prior to October 31, 2008, and the written put option permitting the holder to put the debt at 105.0% of principal plus accrued and unpaid interest upon a change of control as embedded derivatives, which needed to be separated and measured at fair value. The factors impacting the fair value of the guaranteed interest payment for any conversion of any 7.00% Note prior to October 31, 2008, was based upon certain factors including our stock price, the time value of money and the likelihood holders would convert. The provision for the guaranteed interest payment for any conversion of any 7.00% Note lapsed on October 31, 2008. The factors impacting the fair value of the written put option permitting the holder to put the 7.00% Note at 105.0% of principal plus accrued and unpaid interest upon a change of control was contingent upon a change of control. However, due to significant related party holdings of our common stock shares and the presence of certain anti-takeover provisions in our bylaws, a change of control was deemed to be remote. Thus, the fair values of these features were determined to be de minimis from the date of their inception through the repayment of the debt in September 2011.

From October through November 2009, we exchanged a total of 220,000 shares of common stock for $4,400,000 in principal under the terms of the original 7.00% Notes. In November through December 2009, we exchanged a total of 421,667 shares of common stock for $7,100,000 in principal and $589,000 in unpaid interest. The conversion rate for the November and December 2009 redemption was approximately 55 shares per $1,000 principal amount. We recorded an additional debt conversion expense of $819,000 relating to the more favorable exchange rate during the year ended December 31, 2009.

The 7.00% Notes and common stock issuable upon conversion of the 7.00% Notes were registered with the SEC on Form S-3 on December 15, 2006. We were in default of the 7.00% Notes as of December 31, 2009. However, we cured the default upon payment of accrued interest totaling approximately $362,000 upon emergence from bankruptcy under Chapter 11 on January 22, 2010. At December 31, 2010, $5,000,000 in aggregate principal amount of the 7.00% Notes remained outstanding and the 7.00% Notes were repaid in full in September 2011.

4.50% Convertible Senior Notes Due September 1, 2009

On August 22, 2003, we closed the sale of $30,000,000 of the 4.50% Notes with an original maturity date of September 1, 2008. Offering costs were $1,866,000. Interest on the notes is 4.50% per annum on the principal amount. The effective interest rate was 6.28% per annum. The 4.50% Notes were convertible, at the option of the

holder prior to maturity into shares of our common stock initially at a conversion rate of 10.88329 shares per $1,000 principal amount of the 4.50% Notes, which is equal to a conversion price of $91.88 per share. The conversion price, and hence the conversion rate, was subject to adjustment upon the occurrence of certain events, such as stock splits, stock dividends and other distributions or recapitalizations. Because the market value of the stock rose above the conversion price between the day the 4.50% Notes were priced and the closing date, we recorded a discount of $2,677,000 related to the intrinsic value of the beneficial conversion feature resulting from this price change and the fact that the initial purchaser of the 4.50% Notes was not required to purchase the 4.50% Notes until the closing date. Immediately after the closing, our common stock had a market price of $100.10 per share, or $8.22 per share higher than the conversion price. The value of the beneficial conversion feature was determined by multiplying this difference in the per share price of our common stock by the 326,498 underlying shares. This amount was amortized to interest expense using the effective interest method over the five-year term of the notes, or shorter period in the event of conversion of the 4.50% Notes. Debt discount related to the 4.50% Notes was amortized to interest expense using the effective interest method. There was no remaining amortization of the beneficial conversion feature for the years ended December 31, 2011 and 2010.

Following the closing of the November 15, 2006 sale of $16,500,000 of the 7.00% Notes due September 1, 2011, holders of an aggregate of $27,500,000 of the 4.50% Notes agreed to exchange and redeem their 4.50% Notes for an aggregate of $16,500,000 in aggregate principal amount of the 7.00% Notes and $11,000,000 in cash, plus accrued and unpaid interest on the 4.50% Notes of $254,000. As a result of negotiations between us and the holders of the 4.50% Notes, the $2,500,000 outstanding principal balance related to the 4.50% Notes was not redeemed by us on the original maturity date of September 1, 2008. Interest of $56,000 related to the 4.50% Notes was paid on September 1, 2008. Subsequently on December 11, 2008, the trustee of the Indenture and the holders of the $2,500,000 outstanding principal balance related to the 4.50% Notes agreed to extend the maturity date of the 4.50% Notes to September 1, 2009, and to waive any past default by us of our obligation to make payment on the principal of and interest on the 4.50% Notes. We agreed to extend each holder's rights to require us to repurchase the 4.50% Notes at 105% of such holder's outstanding principal amount upon a change in control, as defined in the indenture governing the 4.50% Notes, and to convert the 4.50% Notes into common stock accordingly. In addition, the holders of the 4.50% Notes agreed to permit the full redemption of the outstanding principal related to the 4.50% Notes at a redemption price of 100% on or before August 31, 2009, and we agreed to adjust the conversion rate for the 4.50% Notes to 20 shares per $1,000 principal amount of the 4.50% Notes, which is equal to a conversion price of $50.00 per share. The impact from adjusting the conversion rate was de minimis.

In November 2009, we exchanged a total of 6,750 shares of common stock for $135,000 in principal and $8,000 in unpaid interest. The conversion rate for redemption was approximately 47 shares per $1,000 principal amount. We recorded an additional debt conversion expense of $69,000 relating to the more favorable exchange rate.

We were in default of the 4.50% Notes as of December 31, 2009. However, upon the emergence from bankruptcy under Chapter 11, we cured the default with a payment of $2,365,000 of principal and $140,000 of unpaid interest with $2,195,000 of cash and 9,044 shares of common stock. This payment settled the 4.50% Notes in full. There was no remaining principal amount of the 4.50% Notes remaining at December 31, 2011 or 2010.

NOTE 9: COMMITMENTS AND CONTINGENCIES

Operating Leases

We lease various equipment and facilities to support our business of discovering, developing and commercializing diagnostic tests in the fields of oncology, cardiology and women's health. On June 1, 2010, we entered into a noncancelable operating lease for a new principal facility located in Austin, Texas in conjunction with our relocation of our corporate headquarters to Austin, Texas. The term was from June 1, 2010 through May 31, 2012, with an annual base rent of $57,000 and annual estimated common area charges, taxes and insurance of $37,000. In March 2012, we amended this lease on the same terms and extended the term to May 31, 2013.

On June 3, 2008, we entered into a noncancelable operating lease for a new principal facility located in Fremont, California. Under the lease agreement, the term was from July 1, 2008 through June 30, 2010, with an annual base rent of $87,000 and $92,000 for the first year and second year, respectively. We also paid common area charges, taxes and insurance with an annual estimated cost of $21,000. This lease was extended to and expired on August 31, 2010. Additionally, under the lease agreement, we pledged a $100,000 certificate of deposit as collateral on a letter of credit serving as a security deposit for the first year. For the second year, the certificate of deposit pledged as collateral on a letter of credit serving as a security deposit was reduced to $60,000. The letter of credit expired during the year ended December 31, 2010 and the $60,000 security deposit was returned to us.

Rental expense under operating leases for the years ended December 31, 2011 and 2010 totaled $129,000 and $149,000, respectively.

As of December 31, 2011, including the extension of our Austin, TX facility operating lease in March 2012, future minimum rental payments under noncancelable operating leases were $121,000 and $40,000 for the years ending December 31, 2012 and 2013, respectively.

Noncancelable Collaboration Obligations and Other Commitments

Under the terms of a research collaboration agreement with The Johns Hopkins University School of Medicine ("JHU") directed at the discovery and validation of biomarkers in human subjects, including but not limited to clinical application of biomarkers in the understanding, diagnosis and management of human diseases, we were required to pay JHU $600,000, $618,000 and $637,000 for the years ending December 31, 2008, 2009 and 2010, respectively. In June 2010, the research collaboration agreement was amended by extending the term and reducing the payments to $300,000 for 2010, $400,000 for 2011, $400,000 for 2012 and $100,000 for 2013. In conjunction with the amendment, JHU forgave the previously outstanding amounts owed of $623,000, which we recognize as a reduction to research and development expenses straight line over the term of the amended agreement. Collaboration expenses under the JHU collaboration were $235,000 and $400,000 for the years ended December 31, 2011 and 2010, respectively. Collaboration expenses under the JHU collaboration are included in research and development expenses. In addition, under the terms of the amended research collaboration agreement, we are required to pay the greater of 4% royalties on net sales of diagnostic tests using the assigned patents or annual minimum royalties of $52,500. As of December 31, 2011 and 2010, we owed $4,000 related to research collaboration agreements with JHU.

Contingent Liabilities

Molecular Analytical Systems, Inc. Litigation

On July 9, 2007, Molecular Analytical Systems ("MAS") filed a lawsuit in the Superior Court of California for the County of Santa Clara naming Vermillion and Bio-Rad Laboratories, Inc. ("Bio-Rad") as defendants (the "State Court lawsuit"). In connection with the State Court lawsuit, MAS sought an unspecified amount of damages and alleged, among other things, that we breached our license agreement with MAS relating to SELDI technology by entering into a sublicense agreement with Bio-Rad. We filed our general denial and affirmative defenses on April 1, 2008. The State Court lawsuit was automatically stayed when we filed a Voluntary Petition for Relief under Chapter 11 in the Bankruptcy Court on March 30, 2009. MAS filed a proof of claim in the Bankruptcy Court on July 15, 2009. The proof of claim mirrored the State Court lawsuit, alleging that we breached our license agreement with MAS by transferring certain technologies to Bio-Rad without obtaining MAS's consent. MAS listed the value of its claim as in excess of $5,000,000. On December 28, 2009, we objected to MAS's Proof of Claim in the Bankruptcy Court. On January 7, 2010, the Bankruptcy Court confirmed our Plan of Reorganization. After the Plan of Reorganization was confirmed, MAS filed a motion with the Bankruptcy Court requesting that it abstain from hearing its proof of claim and that it grant MAS relief from the automatic stay so that MAS could proceed with the State Court lawsuit in California. Over our objection, the Bankruptcy Court granted that motion on March 16, 2010. Thereafter, the Superior Court ordered that the dispute

be arbitrated before the Judicial Arbitration and Mediation Service. MAS filed its demand for arbitration on September 15, 2010. The demand did not include any additional detail regarding MAS's claims and attached the same complaint for unspecified damages that MAS filed in the Superior Court in 2007. The parties thereafter conducted discovery, and the arbitration hearing commenced on September 21, 2011. Both sides presented evidence over five hearing days ending on October 4, 2011. The parties completed post-hearing briefing on November 9, 2011 and presented closing arguments on November 11, 2011. On February 23, 2012, an interim arbitration award was issued by the Arbitrator. In the interim arbitration award, the Arbitrator denied MAS's claim for breach of the license agreement as well as several other of MAS's claims. The Arbitrator found that MAS was entitled to an accounting concerning our 2% royalty obligation either for 10 years (from February 21, 2003 through February 21, 2013) or until cumulative royalty payments reached $10 million, whichever comes first, and ordered that such royalties should be based on our total GAAP revenues, less revenues attributable to certain excluded entities, not just SELDI-related revenues. The Arbitrator also ordered that the parties meet and confer regarding further proceedings relating to the accounting. We have accrued for the amount deemed estimable and probable of loss, and not previously paid to MAS, pursuant to the interim arbitration award within general and administrative expense at December 31, 2011. The amount was not material to the financial statements for the year ended December 31, 2011. We anticipate receiving a final arbitration award consistent with the interim arbitration award by June 2012 and believe the possibility of any material loss in excess of the amount accrued is remote; however, management cannot predict the content nor control the timing of the final arbitration award at this time.

Bio-Rad Laboratories, Inc. Matters

On November 13, 2006, we sold assets and liabilities of our protein research tools and collaborative services business (the "Instrument Business Sale"), to Bio-Rad, in order to concentrate our resources on developing clinical protein biomarker diagnostic products and services. The Instrument Business Sale included our SELDI technology, ProteinChip arrays and accompanying software. Pursuant to the terms of the sales agreement, the total sales price was $20,000,000, of which $16,000,000 was paid by Bio-Rad to us at the closing of the transaction on November 13, 2006. A total of $4,000,000 was held back from the sales proceeds contingent upon our meeting certain obligations, of which $2,000,000 was subsequently paid to us in fiscal 2007 upon the issuance by the United States Patent and Trademark Office of a reexamination certificate for United States Patent No. 6,734,022. From the amounts held back, the remaining $2,000,000, subject to certain adjustments, is being held in escrow to serve as security for us to fulfill certain obligations.

In connection with the Instrument Business Sale, we entered into a letter agreement with Bio-Rad pursuant to which we agreed to indemnify Bio-Rad and its subsidiaries with respect to certain payments made by Bio-Rad in connection with the termination of employees of its former subsidiary in the United Kingdom in the six-month period immediately following the Instrument Business Sale. On May 4, 2007, Bio-Rad delivered a claim for indemnification under the agreement for $307,000, which was paid out of $2,000,000 held in escrow. In August 2009, Bio-Rad also filed a proof of claim in the bankruptcy case for indemnification of the MAS lawsuit. Management is disputing the claim and cannot predict the ultimate outcome of this matter at this time.

In connection with the Instrument Business Sale, we also entered into a manufacture and supply agreement with Bio-Rad on November 13, 2006, whereby we agreed to purchase ProteinChip Systems and ProteinChip Arrays (collectively, the "Research Tools Products") from Bio-Rad. Under the terms of the manufacture and supply agreement, we agreed to provide Bio-Rad quarterly, non-binding, twelve-month rolling forecasts setting forth our anticipated needs for Research Tools Products over the forecast period. We were permitted to provide revised forecasts as necessary to reflect changes in demand for the products, and Bio-Rad was required to use commercially reasonable efforts to supply amounts in excess of the applicable forecast. Either party was permitted to terminate the agreement for convenience upon 180 days' prior written notice, or upon default if the other party failed to cure such default within 30 days after notice thereof. In a letter from us to Bio-Rad dated May 2, 2008, we exercised our right to terminate the November 13, 2006 manufacture and supply agreement for convenience upon 180 days' written notice. Consequently, termination of the agreement became effective on

October 29, 2008. In October 2009, Bio-Rad filed a proof of claim in our bankruptcy case based on certain contract claims for approximately $1,000,000. We are attempting to resolve the contract claims and have accrued for this contingency within general and administrative expense at December 31, 2011 and 2010. Management cannot predict the ultimate outcome of this matter at this time.

Patrick Gillespie Litigation

On February 28, 2012, Robert Goggin III, a purported shareholder of Vermillion, filed for and obtained a writ of summons in Pennsylvania state court as a precursor to filing a lawsuit against Vermillion. Goggin discontinued his case on February 29, 2012. Thereafter, on March 12, 2012, Patrick Gillespie, a purported shareholder of Vermillion, represented by the same counsel as Goggin, filed for and obtained a writ of summons in Pennsylvania state court as a precursor to filing a lawsuit against Vermillion. On March 22, 2012, Gillespie asked the court to issue letters rogatory to permit pre-suit discovery. We dispute any claims that Gillespie may make and intend to defend this matter vigorously. Due to the fact that complaints have not yet been filed in the proceedings, we cannot estimate its likely impact on us.

In addition, from time to time, we are involved in legal proceedings and regulatory proceedings arising out of our operations. We establish reserves for specific liabilities in connection with legal actions that we deem to be probable and estimable. Other than as disclosed above, we are not currently a party to any proceeding, the adverse outcome of which would have a material adverse effect on our financial position or results of operations.

NOTE 10: C OMMON S TOCK

Stockholders' Rights Plan

We adopted a Stockholder Rights Plan, the purpose of which is, among other things, to enhance our Board of Directors' ability to protect stockholder interests and to ensure that stockholders receive fair treatment in the event any coercive takeover attempt of the Company is made in the future. The Stockholder Rights Plan could make it more difficult for a third party to acquire, or could discourage a third party from acquiring us or a large block of our common stock. The following summary description of the Stockholder Rights Plan does not purport to be complete.

The rights issued pursuant to Vermillion's Stockholder Rights Plan will become exercisable the tenth day after a person or group announces acquisition of 15.0% or more of our common stock or announces commencement of a tender or exchange offer the consummation of which would result in ownership by the person or group of 15.0% or more of our common stock. If the rights become exercisable, the holders of the rights (other than the person acquiring 15.0% or more of our common stock) will be entitled to acquire, in exchange for the rights' exercise price, shares of our common stock or shares of any company in which we are merged, with a value equal to twice the rights' exercise price.

2010 Private Placement Sale

On January 7, 2010, in connection with the Second Amended Plan of Reorganization under Chapter 11 ("Plan of Reorganization"), we completed a private placement sale of 2,327,869 shares of our common stock to a group of new and existing investors for $43,050,000 in gross proceeds.

2007 Private Placement Sale

On August 29, 2007 (the "Closing Date"), we completed a private placement sale of 2,451,309 shares of our common stock and warrants to purchase up to an additional 1,961,047 shares of our common stock with an exercise price of $9.25 per share and expiration date of August 29, 2012, to a group of new and existing investors for $20,591,000 in gross proceeds (collectively referred to as the "August 29, 2007, Private Placement Sale"). Existing investors included affiliates of the Company, who purchased 964,285 shares of our common stock and

warrants to purchase up to an additional 771,428 shares of our common stock for $8,100,000. In connection with Quest Diagnostics' participation in this transaction, we amended a warrant to purchase an additional 220,000 shares of our common stock that was originally issued to Quest Diagnostics on July 22, 2005. Pursuant to the terms of the amendment, the exercise price for the purchase of our common stock was reduced from $35.00 per share to $25.00 per share and the expiration date of such warrant was extended from July 22, 2010 to July 22, 2011. The warrant expired unexercised in 2011. For services as placement agent, we paid Oppenheimer & Co. Inc. ("Oppenheimer") $1,200,000 and issued a warrant to purchase up to 92,100 shares of our common stock with an exercise price of $9.25 per share and expiration date of August 29, 2012. The warrants issued to the investors and Oppenheimer were valued at $7,194,000 and $581,000, respectively, based on the fair value as determined by the Black-Scholes model. The amended value of the warrant issued to Quest Diagnostics on July 22, 2005, increased by $356,000, which is reflected in additional paid-in capital, from its original value of $2,200,000. Assumptions used to value the warrants issued to the investors and Oppenheimer, and the amended value of the warrant issued to Quest Diagnostics were as follows:

	Private Investors and Oppenheimer & Co. Inc.	Amendment to Quest Diagnostics Incorporated
Dividend yield	— %	— %
Volatility	80.14%	82.92%
Risk-free interest rate	4.31%	4.24%
Expected lives (years)	5.0	3.9

Our outstanding warrants from the August 2007 offering are classified as liabilities in accordance with ASC 815, which requires the warrants to be fair valued at each reporting period, with the changes in fair value recognized as interest and other expense in our consolidated statement of operations.

At December 31, 2011 and 2010, we had warrants outstanding to purchase 195,012 shares of common stock which were required to be classified as a liability. The fair value of these warrants at December 31, 2011 and 2010 was determined using a Black Scholes valuation model with the following level 3 inputs:

	December 31, 2011	2010
Risk-free interest rate	0.08%	0.52%
Expected life (in years)	0.66	1.66
Dividend yield	— %	— %
Volatility	72.16%	64.62%
Stock price	$ 1.17	$ 7.52

For the years ended December 31, 2011 and 2010, we recorded gains of $378,000 and $4,353,000 in the consolidated statements of operations under ASC 815.

Our warrant liability at December 31, 2011 was de minimis. The following table sets forth our financial liabilities related to warrants subject to fair value measurements as of December 31, 2010:

		Fair Value Measurements at Reporting Date		
(in thousands)	Total Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities at December 31, 2010 Common stock warrants	$ 378	$ —	$ —	$ 378
Total	$ 378	$ —	$ —	$ 378

The following table is a reconciliation of the warrant liability measured at fair value using Level 3 inputs:

(in thousands)	Year Ended December 31, 2011	2010
Balance at beginning of period	$ 378	$ 5,659
Change in fair value of common stock warrants	(378)	(4,132)
Warrant exercise gain	—	(223)
Reclassification of warrant fair value to equity upon exercise and issuance of common stock	—	(926)
Balance at end of period	$ —	$ 378

Warrants

Warrants outstanding as of December 31, 2011 and 2010 were as follows:

Issuance Date	Expiration Date	Exercise Price per Share	Number of Shares Outstanding under Warrant December 31, 2011	December 31, 2010
July 22, 2005	July 22, 2011	$ 25.00	—	220,000
August 3, 2006	August 3, 2011	12.60	—	385
November 15, 2006	November 15, 2011	12.60	—	385
August 29, 2007	August 29, 2012	9.25*	195,012	195,012
November 1, 2011	October 31, 2013	3.23	21,000	—
			216,012	415,782

* The exercise price of the warrants issued on August 29, 2007 is adjustable in accordance with the term of the warrants.

On November 1, 2011, we issued warrants to purchase up to 21,000 shares of our common stock with an exercise price of $3.23 per share and an expiration date and an expiration date of October 31, 2013 to a vendor in exchange for services. The warrants vest pro-rata on a monthly basis over a six month period. The value of the warrants as determined by the Black-Sholes model was not significant and is classified as equity.

Debtor's Incentive Plan

In connection with the Bankruptcy Filing, on April 21, 2009, we filed the Debtor's Motion for Entry of an Order Approving the Debtor's Incentive Plan (the "Debtor's Incentive Plan") and Authorizing Payments thereunder pursuant to §§ 363(b) and 503(b) of the Bankruptcy Code (the "Incentive Plan Motion") which sought to provide proper incentives to the directors (Gail Page, John Hamilton and James Burns, collectively, the "Directors") to help achieve a successful sale or restructuring of the Company. At a hearing on June 22, 2009, the Court entered an Order approving the Incentive Plan Motion (the "Incentive Plan Order"). The Debtor's Incentive Plan is only triggered upon the occurrence of a qualified transaction defined as the closing of any sale pursuant to section 363 of the Bankruptcy Code or the effectiveness of a Reorganization Plan confirmed pursuant to section 1129 of the Bankruptcy Code. The Debtor's Incentive Plan payment was based upon a percentage of (A) the gross proceeds of Asset Sales, both prior to and after the Food and Drug Administration approval of the ovarian tumor triage test, and (B) the value of consideration—cash, debt and equity - distributed pursuant to a confirmed Reorganization Plan. In the end, the Incentive Plan Order provided that the Directors would receive: (i) zero, on Qualified Transaction Proceeds of 3,000,000 or less, (ii) 6% on Qualified Transaction Proceeds of $3,000,001 to $10,000,000, and (iii) 8% on Qualified Transaction Proceeds of greater than $10,000,000. While the Incentive Plan Order provided us with the authority to make distributions under the Debtor's Incentive Plan, we agreed as part of the Plan of Reorganization to seek final judicial approval of the amounts to be paid pursuant to the Debtor's Incentive Plan. On April 13, 2010, our counsel, the Official Committee of the Equity Security

Holders, and the Directors submitted a proposed settlement to the Bankruptcy Court. On April 14, 2010, after a hearing, an order was issued by the Bankruptcy Court approving the Debtor's Incentive Plan. Under the Debtor's Incentive Plan, we were directed to distribute an aggregate of $5,000,000 in cash and 302,541 shares of restricted stock having a fair value of $6,626,000 in Debtor's Incentive Plan payments to the Directors. All such restricted stock vests with respect to 1/24th of the total distributed on each monthly anniversary of the vesting commencement date, June 22, 2009. The total Debtor's Incentive Plan payments were allocated to Gail Page, James Burns and John Hamilton on a 60%-20%-20% basis, respectively. The contingency was accounted for upon the occurrence of the qualified transaction on January 7, 2010 when the Bankruptcy Courts issued a confirmation order approving our Reorganization Plan. For the year ended December 31, 2011, we incurred $1,657,000 under the terms of the Debtor's Incentive Plan recorded in general and administrative expenses. For the year ended December 31, 2010, we incurred $9,969,000 under the terms of the Debtor's Incentive Plan, of which $6,932,000 was recorded in Reorganization Items for the period prior to emerging from bankruptcy under Chapter 11 and $3,037,000 was recorded in general and administrative expenses for the period subsequent to emerging from bankruptcy under Chapter 11. In April 2010, we distributed an aggregate of $5,000,000 in cash to the Directors. We distributed 75,637 and 226,904 shares of common stock to the Directors under the Debtor's Incentive Plan during the year ended December 31, 2011 and 2010, respectively.

NOTE 11: ACCUMULATED OTHER COMPREHENSIVE LOSS

The components of accumulated other comprehensive loss as of December 31, 2011 and 2010, were as follows:

(In thousands)	Year Ended December 31, 2011	2010
Cumulative translation adjustment	(153)	(156)
Accumulated other comprehensive loss	$ (153)	$ (156)

NOTE 12: LOSS PER SHARE

The reconciliation of the numerators and denominators of basic and diluted loss per share for the years ended December 31, 2011 and 2010 was as follows:

(In thousands, except per share data)	Loss (Numerator)	Shares (Denominator)	Per Share Amount
Year ended December 31, 2010:			
Net loss—basic	$ (19,034)	10,404,741	$ (1.83)
Dilutive effect of common stock shares issuable upon exercise of stock options, exercise of warrants, conversion of convertible senior notes and unvested restricted stock awards	—	—	
Net loss—diluted	$ (19,034)	10,404,741	$ (1.83)
Year ended December 31, 2011:			
Net loss—basic	$ (17,790)	14,249,570	$ (1.25)
Dilutive effect of common stock shares issuable upon exercise of stock options, exercise of warrants, and unvested restricted stock awards	—	—	
Net loss—diluted	$ (17,790)	14,249,570	$ (1.25)

Due to net losses for the years ended December 31, 2011 and 2010, diluted loss per share is calculated using the weighted average number of common shares outstanding and excludes the effects of potential common stock

shares that are antidilutive. The potential shares of common stock that have been excluded from the diluted loss per share calculation above for the years ended December 31, 2011 and 2010 were as follows:

	Year Ended December 31,	
	2011	2010
Stock options	930,060	849,485
Stock warrants	216,012	415,782
Convertible senior notes	—	250,000
Restricted stock units	114,748	81,889
Potential common shares	1,260,820	1,597,156

NOTE 13: EMPLOYEE BENEFIT PLANS

1993 Stock Option Plan

We have no shares of our common stock reserved for future grants to employees, directors or consultants under our 1993 Stock Option Plan (the "1993 Plan"). Under the 1993 Plan, options were granted at prices not lower than 85% and 100% of the fair market value of the common stock for non-statutory and statutory stock options, respectively. All outstanding options under the 1993 Plan are now fully vested, and unexercised options generally expire ten years from the date of grant. The authority of our Board of Directors to grant new stock options and awards under the 1993 Plan terminated in 2001. At December 31, 2011 and 2010, no shares of our common stock were subject to repurchase by us. There were no 1993 Plan option exercises for the years ended December 31, 2011 and 2010. There are no shares of stock options that remain outstanding under the 1993 Plan.

2000 Stock Plan

Under the Amended and Restated 2000 Stock Plan (the "2000 Plan"), options may be granted at prices not lower than 85% and 100% of the fair market value of the common stock for non-statutory and statutory stock options, respectively. Options generally vest monthly over a period of four years and unexercised options generally expire ten years from the date of grant. The authority of our Board of Directors to grant new stock options and awards under the 2000 Plan terminated in 2010. Options to purchase 21,833 and 21,083 shares of common stock were exercised during the years ended December 31, 2011 and 2010, respectively. As of December 31, 2011, options to purchase 596,047 shares of common stock remained outstanding under the 2000 Plan. No additional shares of our common stock were reserved for future option grants under the 2000 Plan.

2000 Employee Stock Purchase Plan

The Amended and Restated 2000 Employee Stock Purchase Plan (the "2000 ESPP") provides for eligible employees to purchase our common stock through payroll deductions during six-month offering periods. Each offering period begins on May 1 or November 1 and ends October 31 or April 30, respectively.

The 2000 ESPP provides for the purchase of our common stock at the lower of 85.00% of the closing price of our common stock on the first day of the offering period or 85.00% of the closing price of our common stock on the last day of the offering period. No additional common stock shares were reserved for issuance under the 2000 ESPP for the years ended December 31, 2011 and 2010.

2010 Stock Incentive Plan

On February 8, 2010, our Board of Directors approved the Vermillion, Inc. 2010 Stock Incentive Plan (the "2010 Plan"). The 2010 Plan is administered by the Compensation Committee of the Board of Directors. Our employees, directors, and consultants are eligible to receive awards under the 2010 Plan. The 2010 Plan permits the granting of a variety of awards, including stock options, share appreciation rights, restricted shares, restricted

share units, unrestricted shares, deferred share units, performance and cash-settled awards, and dividend equivalent rights. The 2010 Plan provides for issuance of up to 1,322,983 shares of common stock, par value $0.001 per share under the 2010 Plan, subject to adjustment as provided in the 2010 Plan. Unexercised options generally expire ten years from the date of grant. There were no 2010 Plan option exercises for the years ended December 31, 2011 and 2010.

During the year ended December 31, 2011, we awarded 177,000 shares of restricted stock from the 2010 Plan having a fair value of $724,000 to our executive officers. All such restricted stock vests ratably on a quarterly basis over a three year period beginning on the vesting commencement in March 2011. We distributed 42,250 of these shares of common stock to our officers during the year ended December 31, 2011.

On September 29, 2011, our Board of Directors approved the Company making income tax gross-up payments to our Chief Executive Officer in connection with the distribution of the 85,000 shares of restricted stock granted on March 18, 2011. A letter agreement to this effect was executed on October 3, 2011. We expensed approximately $22,000 related to this letter agreement during the year ended December 31, 2011. A total of 21,250 of the 85,000 common shares have been distributed through December 31, 2011.

During the year ended December 31, 2010, we awarded 25,000 shares of restricted stock from the 2010 Plan having a fair value of $146,000 to employees in connection with our emergence from bankruptcy. All such restricted stock vests with respect to 1/24th of the total distributed on each monthly anniversary of the vesting commencement on June 22, 2009. We distributed 6,252 and 18,748 of these shares of common stock to employees during the years ended December 31, 2011 and 2010, respectively.

During the year ended December 31, 2011, we issued 97,295 shares of restricted stock from the 2010 Plan having a fair value of $373,000 to the Board of Directors as payment for services rendered in 2011. During the year ended December 31, 2010, we issued 81,000 shares of restricted stock from the 2010 Plan having a fair value of $426,000 to the Board of Directors as payment for services rendered in 2010.

The activity related to shares available for grant under the 1993 Plan, 2000 Plan, 2000 ESPP and 2010 Plan for the years ended December 31, 2011 and 2010 were as follows:

	1993 Stock Option Plan	2000 Stock Plan	2000 Employee Stock Purchase Plan	2010 Stock Option Plan	Total
Shares available at December 31, 2009	—	6,553,859	1,369,273	—	7,923,132
Additional shares reserved	—	—	—	1,322,983	1,322,983
Options canceled	1,720	9,013	—	500	11,233
Reduction in shares reserved	(1,720)	—	—	—	(1,720)
Options granted	—		—	(203,500)	(203,500)
Restricted stock units granted	—	—	—	(106,000)	(106,000)
Shares expired	—	(6,562,872)	(1,369,273)	—	(7,932,145)
Shares available at December 31, 2010	—	—	—	1,013,983	1,013,983
Options canceled	—	28,605	—	60,917	89,522
Reduction in shares reserved	—	(28,605)	—	—	(28,605)
Options granted	—	—	—	(191,930)	(191,930)
Restricted stock units canceled	—	—	—	20,000	20,000
Restricted stock units granted	—	—	—	(274,295)	(274,295)
Shares expired	—	—	—	—	—
Shares available at December 31, 2011	—	—	—	628,675	628,675

The stock option activity under the 1993 Plan, 2000 Plan and 2010 Plan for the years ended December 31, 2011 and 2010 was as follows:

	Number of Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Weighted Average Remaining Contractual Term
Options outstanding at December 31, 2009	678,301	$ 14.22	$12,648	5.86
Granted	203,500	20.93		
Exercised	(21,083)	1.99		
Canceled	(11,233)	14.76		
Options outstanding at December 31, 2010	849,485	$ 16.13	$ 1,924	5.81
Granted	191,930	2.40		
Exercised	(21,833)	1.55		
Canceled	(89,522)	23.04		
Options outstanding at December 31, 2011	930,060	$ 12.97	$ 16	5.90
Shares exercisable:				
December 31, 2011	644,688	$ 15.48	$ 16	4.46
Shares expected to vest:				
December 31, 2011	170,052	$ 7.30	$ —	9.04

The range of exercise prices for options outstanding and exercisable at December 31, 2011 are as follows:

Exercise Price	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Life in Years	Options Exercisable	Weighted Average Exercise Price
$0.01 – $0.75	37,499	$ 0.75	2.43	37,499	$ 0.75
0.76 – 2.04	255,250	1.99	7.26	100,861	2.04
2.05 – 2.30	175,209	2.30	6.54	148,955	2.30
2.31 – 5.52	62,013	4.93	8.91	14,363	5.07
5.53 – 10.20	78,748	9.33	2.86	77,133	9.32
10.21 – 14.70	122,548	13.29	4.77	115,650	13.40
14.71 – 29.60	146,998	26.85	6.53	98,432	25.97
29.61 – 96.00	51,795	87.05	1.38	51,795	87.05
$0.01 – $96.00	930,060	$ 12.97	5.90	644,688	$ 15.48

(in thousands)	Total Intrinsic Value of Options Exercised	Total Fair Value of Vested Options
Year ended December 31, 2011	$ 52	$ 1,218
Year ended December 31, 2010	$ 183	$ 1,124

Stock-Based Compensation

Employee Stock-based Compensation Expense

The assumptions used to calculate the fair value of options granted under the 2010 Plan that were incorporated in the Black-Scholes pricing model for the years ended December 31, 2011 and 2010 were as follows:

	Year Ended December 31, 2011	2010
Dividend yield	— %	— %
Volatility	77%	81%
Risk-free interest rate	1.28%	2.25%
Expected lives (years)	5.7	5.6
Weighted average grant-date fair value	$ 1.60	$ 14.49

The allocation of stock-based compensation expense by functional area for the years ended December 31, 2011 and 2010 was as follows:

(in thousands)	Year Ended December 31, 2011	2010
Research and development	$ 683	$ 954
Sales and marketing	158	72
General and administrative	2,442	3,768
Total	$ 3,283	$ 4,794

We have a 100.0% valuation allowance recorded against our deferred tax assets, and as a result ASC 718 had no effect on income tax expense in the consolidated statement of operations or the consolidated statement of cash flows. As of December 31, 2011, total unrecognized compensation cost related to nonvested stock option awards was $461,000 and the related weighted average period over which it is expected to be recognized was 2.63 years.

Non-employee Stock-based Compensation Expense

Stock-based compensation expense related to stock options granted to non-employees is recognized as the stock options are earned. Certain former employees were converted into consultants to the Company whereby their existing stock options continued to vest, under the original terms of their stock option grants, as they provided consulting services to us. The values attributable to these options are amortized over the service period and the unvested portion of these options was remeasured at each vesting date. We believe that the fair value of the stock options is more reliably measurable than the fair value of the services received. The fair value of the stock options granted were revalued at each reporting date using the Black-Scholes valuation model as prescribed by ASC 505, “Equity,” using the following average assumptions:

	Year Ended December 31, 2011	2010
Dividend yield	— %	— %
Volatility	80%	82%
Risk-free interest rate	1.07%	3.19%
Expected lives (years)	5.66	7.81
Weighted average fair value	$ 1.07	$ 14.44

The stock-based compensation expense will fluctuate as the fair market value of the common stock fluctuates. In connection with stock options relating to non-employees, we recorded stock-based compensation allocated by functional area for the years ended December 31, 2011 and 2010 as follows:

(in thousands)	Year Ended December 31, 2011	2010
Research and development	$ 3	$ 38
Sales and marketing	—	5
General and administrative	4	100
Total	$ 7	$ 143

401(k)Plan

Our 401(k) Plan allows eligible employees to defer up to an annual limit of the lesser of 90.0% of eligible compensation or a maximum contribution amount subject to the Internal Revenue Service annual contribution limit. We are not required to make contributions under the 401 (k) Plan. As of December 31, 2011 and 2010, we have not contributed to the 401(k) Plan.

NOTE 14: INCOME TAXES

Domestic and foreign components of loss before income taxes for the years ended December 31, 2011 and 2010 were as follows:

(in thousands)	Year Ended December 31, 2011	2010
Domestic	$(17,696)	$(18,907)
Foreign	(94)	(127)
	$(17,790)	$(19,034)

Based on the available objective evidence, management believes it is more likely than not that the net deferred tax assets will not be fully realizable. Accordingly, we have provided a full valuation allowance against our net deferred tax assets at December 31, 2011 and 2010. There was no income tax expense or benefit for the years ended December 31, 2011 or 2010.

The components of deferred tax assets (liabilities) at December 31, 2011 and 2010 were as follows:

(in thousands)	Year Ended December 31, 2011	2010
Deferred tax assets:		
Depreciation and amortization	$ 11,158	$ 14,068
Other	1,617	1,606
Net operating losses	42,443	41,789
Total deferred tax assets	55,218	57,463
Valuation allowance	(55,210)	(57,433)
Net deferred tax assets	$ 8	$ 30
Deferred tax liabilities:		
Other	$ (8)	$ (30)
Total deferred tax liabilities	$ (8)	$ (30)
Net deferred tax asset (liabilitiy)	$ —	$ —

The reconciliation of the statutory federal income tax rate to the Company's effective tax rate for the years ended December 31, 2011 and 2010 was as follows:

	Year Ended December 31, 2011	2010
Tax at federal statutory rate	34%	34%
State tax, net of federal benefit	2	7
Valuation allowance	(17)	(14)
Change in warrant valuation	1	8
Net operating loss and credit reduction due to section 382 limitations	(11)	(32)
Permanent items	(9)	(4)
Other	—	1
Effective income tax rate	— %	— %

As of December 31, 2011, we had a net operating loss of approximately $114,000,000 for federal and $87,000,000 for state tax purposes. If not utilized, these carryforwards will begin to expire beginning in 2017 for federal and 2012 for state purposes. In 2012, approximately $2,100,000 of state net operating loss will expire and the state net operating losses will continue to expire in 2013. If not utilized, the remaining federal net operating loss will begin to expire in 2017, and the state net operating loss will continue to expire in 2013. As of December 31, 2010, we had a net operating loss of approximately $103,000,000 for federal and $75,000,000 for state tax purposes.

Our ability to use our net operating loss credit carryforwards may be restricted due to ownership change limitations occurring in the past or that could occur in the future, as required by Section 382 of the Internal Revenue Code of 1986 ("Section 382"), as amended, as well as similar state provisions. These ownership changes may also limit the amount of net operating loss credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively.

We believe that a Section 382 ownership change occurred as a result of our follow-on public offering in February 2011. Any limitation may result in the expiration of a portion of the net operating loss credit carryforwards before utilization and any net operating loss credit carryforwards that expire prior to utilization as a result of such limitations will be removed from deferred tax assets with a corresponding reduction of our valuation allowance. Due to the existence of a valuation allowance, it is not expected that such limitations, if any, will have an impact on our results of operations or financial position.

As of December 31, 2011 and 2010, we had $6,300,000 and $6,100,000 of net operating loss carryforwards from our Japan operations, respectively. If not utilized, this carryforward will begin to expire in 2012.

We believe that it is more likely than not that the benefit from certain deferred tax assets will not be realized due to the history of our operating losses. In recognition of this risk, we have provided a valuation allowance on the deferred tax assets relating to these assets. The valuation allowance was $55,210,000 and $57,433,000 at December 31, 2011 and 2010, respectively. The decrease of $2,223,000 between 2011 and 2010 is primarily due to adjustments to the domestic deferred tax assets, including a decrease in the effective state tax rate.

We file income tax returns in the U.S. and in various state jurisdictions with varying statutes of limitations. We have not been audited by the Internal Revenue Service or any state income or franchise tax agency. As of December 31, 2011, our federal returns for the years ended 2008 through the current period and most state returns for the years ended 2007 through the current period are still open to examination. In addition, all of the net operating losses and research and development credits generated in years earlier than 2008 and 2007, respectively, are still subject to Internal Revenue Service audit. The federal and California tax returns for the year ended December 31, 2010 reflect research and development carryforwards of $545,000 and $5,089,000, respectively. We have recognized additional deferred tax assets for federal and California research and development credits of $136,000 and $102,000 for the year ended December 31, 2011, respectively. As of December 31, 2011, our gross unrecognized tax benefits are approximately $5,872,000 which are attributable to research and development credits. A reconciliation of the change in our unrecognized tax benefits is as follows:

(in thousands)	Federal Tax	State Tax	Total
Balance at December 31, 2009	$ —	$ —	$ —
Increase in tax position during 2010	545	5,089	5,634
Balance at December 31, 2010	$ 545	$ 5,089	$5,634
Increase in tax position during 2011	136	102	238
Balance at December 31, 2011	$ 681	$ 5,191	$5,872

The increase for the year ended December 31, 2011 relates to a tax position taken during 2011. The increase for the year ended December 31, 2010 is related to tax positions taken during 2010 and prior years. If the $5,900,000 of unrecognized income tax benefit is recognized, approximately $5,900,000 would impact the effective tax rate in the period in which each of the benefits is recognized.

We do not expect our unrecognized tax benefits to change significantly over the next 12 months. We recognize interest and penalties related to unrecognized tax benefits within the interest expense line and other expense line, respectively, in the consolidated statement of operations. We have not recorded any interest or penalties as a result of uncertain tax positions as of December 31, 2011 and 2010. Accrued interest and penalties would be included within the related liability in the consolidated balance sheet.

NOTE 15: OTHER RELATED PARTY TRANSACTIONS

Consulting Agreements

On March 26, 2009, we entered into a consulting agreement with our former chief executive officer and current Director. For the years ended December 31, 2011 and 2010, we incurred none and $24,000 in general and administrative expenses under the consultant arrangement, respectively. On February 1, 2010, we re-hired the consultant as our chief executive officer.

On September 14, 2009, we entered into a consulting agreement with our former Vice President and Chief Science Officer, Eric T. Fung, M.D., Ph.D. For the year ended December 31, 2010, we incurred $48,000 in research and development expenses under the consulting arrangement. On February 1, 2010, this consulting agreement was terminated when we re-hired Dr. Fung as our Senior Vice President and Chief Science Officer. On November 2, 2011, we again entered into a consulting agreement with Dr. Fung, who resigned effective on November 4, 2011. Pursuant to the terms of the consulting agreement, Dr. Fung will serve as our Chief Medical Officer and a member of our Scientific Advisory Board. For the year ended December 31, 2011, the total amount of consulting fee expense for Dr. Fung was $6,000.

On June 17, 2011, we entered into a consulting agreement with Bruce A. Huebner. Pursuant to the terms of the consulting agreement, Mr. Huebner provides consulting services regarding sales, marketing, business development and corporate strategy. For the year ended December 31, 2011, the total amount of consulting fee expense for Mr. Huebner was $9,200.

On March 1, 2012, we entered into a consulting agreement with our former Vice President of Strategy, who resigned effective February 29, 2012. Pursuant to the terms of the consulting agreement, our former Vice President of Strategy will provide consulting services.

NOTE 16: SUBSEQUENT EVENTS

In January 2012, we announced a restructuring plan to streamline our organization and reduce our cash expenditures compared to 2011. This plan included eliminating the positions of Chief Financial Officer and Vice President of Corporate Strategy as well as a reduction in our Territory Development and sales management personnel.

On February 9, 2012, we entered into a Settlement Agreement and Release (the “Settlement Agreement”) with a third party related to losses on our short and long-term investments in previous years. Under the terms of the Settlement Agreement, we will receive a total settlement of $1,000,000 (the “Total Settlement Amount”); $535,000 was paid in March 2012 and $465,000 is payable by September 1, 2012. We expect to receive approximately 70% of the Total Settlement Amount, net of legal and related costs, and will record the net amount in other income when realized.

On March 22, 2012, we granted approximately 264,000 stock options to our executive officers and employees, vesting monthly over a three year period. In addition, we granted approximately 191,000 stock options to our executive officers and employees vesting 100% at March 31, 2013.

Exhibit 3.2

THIRD AMENDED AND RESTATED BYLAWS

OF

VERMILLION, INC.

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THIRD AMENDED AND RESTATED BYLAWS

OF

VERMILLION, INC.

ARTICLE I

CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of the corporation shall be in the City of Wilmington, County of New Castle, State of Delaware. The name of the registered agent of the corporation at such location is Corporation Trust Company.

1.2 OTHER OFFICES

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

ARTICLE II

MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the board of directors. In the absence of any such designation, stockholders' meetings shall be held at the registered office of the corporation.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held each year on a date and at a time designated by the board of directors. In the absence of such designation, the annual meeting of stockholders shall be held on the Second Tuesday of May in each year at 10:00 a.m. However, if such day falls on a legal holiday, then the meeting shall be held at the same time and place on the next succeeding full business day. At the meeting, directors shall be elected and any other proper business may be transacted.

2.3 SPECIAL MEETING

A special meeting of the stockholders may be called, at any time for any purpose or purposes, by the board of directors.

2.4 NOTICE OF STOCKHOLDERS' MEETINGS

All notices of meetings with stockholders shall be in writing and shall be sent or otherwise given in accordance with Section 2.5 of these bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place, date, and hour of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

2.5 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE

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

2.6 QUORUM

The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, then the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.7 ADJOURNED MEETING; NOTICE

When a meeting is adjourned to another time or place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.8 VOTING

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

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

2.9 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice unless so required by the certificate of incorporation or these bylaws.

2.10 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING; GIVING CONSENTS

In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, nor more than sixty (60) days prior to any other action.

If the board of directors does not so fix a record date:

(a) The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

(b) The record date for determining stockholders entitled to express consent to corporate action in writing without a meeting when no prior action by the board of directors is necessary, shall be the day on which the first written consent is expressed.

(c) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the board of directors may fix a new record date for the adjourned meeting.

2.11 PROXIES

Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action may authorize another person or persons to act for him by a written proxy, signed by the stockholder and filed with the secretary of the corporation, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder's name is placed on the proxy (whether by manual signature, typewriting, telegraphic transmission or otherwise) by the stockholder or the stockholder's attorney-in-fact. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

2.12 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The officer who has charge of the stock ledger of a corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

2.13 ADVANCE NOTICE PROVISIONS FOR STOCKHOLDER PROPOSALS

(a) At an annual meeting or at a special meeting of the stockholders, only such business shall be conducted as shall have been properly brought before such meeting. To be properly brought before a meeting, business must be (i) brought before the meeting by the corporation and specified in the notice of meeting (or any supplement thereto) given by or at the direction of the board of directors or any committee thereof, (ii) brought before the meeting by or at the direction of the board of directors or any committee thereof, or (iii) otherwise properly brought before the meeting by a stockholder who (A) was a stockholder of record (and, with respect to any beneficial owner, if different from such stockholder of record, on whose behalf such business is proposed, only if such beneficial owner was the beneficial owner of shares of the corporation) both at the time of giving the notice provided for in this Section 2.13 and at the time of the meeting, (B) is entitled to vote at the meeting, and (C) has complied with this Section 2.13 as to such business. Except for proposals properly made in accordance with Rule 14a-8 (or any successor thereto) under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (as so amended and inclusive of such rules and regulations, the " *Exchange Act* "), and included in the notice of meeting given by or at the direction of the board of directors, the foregoing clause (iii) shall be the exclusive means for a stockholder to propose business to be brought before a meeting of the stockholders. Stockholders seeking to nominate a person or persons for election to the board of directors must comply with Section 2.14, and this Section 2.13 shall not be applicable to nominations except as expressly provided in Section 2.14.

(b) Without qualification, for business to be properly brought before a meeting by a stockholder, the stockholder must (i) provide Timely Notice (as defined below) thereof in writing and in proper form (as provided for in Section 2.13(c)) to the secretary of the corporation and (ii) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.13. To be timely, a stockholder's notice must be delivered to, or mailed and received at, the principal executive offices of the corporation either, as applicable (such notice within the following time periods, " *Timely Notice* "):

(1) for an annual meeting, not earlier than the one hundred twentieth (120th) day nor later than the ninetieth (90th) day prior to the one-year anniversary of the preceding year's annual meeting; provided, however, that if the date of the annual meeting is more than thirty (30) days before or more than sixty (60) days after such anniversary date, notice by the stockholder to be timely must be so delivered, or mailed and received, on or before the later of (x) the ninetieth (90th) day prior to such annual meeting or (y) the tenth (10th) day following the date on which Public Disclosure (as defined below) of the date of such annual meeting was first made, or

(2) for a special meeting, not earlier than the one hundred twentieth (120th) day nor later than the ninetieth (90th) day prior to such special meeting or, if later, the tenth (10th) day following the date on which Public Disclosure of the date of such special meeting was first made.

In no event shall any adjournment or postponement of an annual meeting or of a special meeting or the announcement thereof commence a new time period (or extend any time period) for the giving of Timely Notice as described above.

(c) To be in proper form for purposes of this Section 2.13, a stockholder's notice to the secretary shall set forth:

(i) As to each Proposing Person (as defined below), (A) the name and address of such Proposing Person (including, if applicable, the name and address that appear on the corporation's books and records) and (B) the class or series and number of shares of the corporation that are, directly or indirectly, owned of record or beneficially owned (within the meaning of Rule 13d-3 under the Exchange Act) by such Proposing Person, except that such Proposing Person shall in all events be deemed to beneficially own any shares of any class or series of the corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future (the disclosures to be made pursuant to the foregoing clauses (A) and (B) are referred to as " *Stockholder Information* ");

(ii) As to each Proposing Person, (A) any derivative, swap or other transaction or series of transactions engaged in, directly or indirectly, by such Proposing Person, the purpose or effect of which is to give such Proposing Person economic risk similar to ownership of shares of any class or series of the corporation, including due to the fact that the value of such derivative, swap or other transaction or series of transactions is determined by reference to the price, value or volatility of any shares of any class or series of the corporation, or which derivative, swap or other transaction or series of transactions provides, directly or indirectly, the opportunity to profit from any increase in the price or value of shares of any class or series of the corporation (any such derivative, swap or other transaction or series of transactions as described in this clause (A) is referred to as a " *Synthetic Equity Interest* "), all of which Synthetic Equity Interests shall be disclosed without regard to whether (x) any such Synthetic Equity Interest conveys any voting rights in shares of any class or series of the corporation to such Proposing Person, (y) any such Synthetic Equity Interest is required to be, or is capable of being, settled through delivery of shares of any class or series of the corporation or (z) such Proposing Person may have entered into other transactions that hedge or mitigate the economic effect of such Synthetic Equity Interest, (B) any proxy (other than a revocable proxy or consent given in response to a solicitation made pursuant to, and in accordance with, Section 14(a) of the Exchange Act by way of a solicitation statement filed on Schedule 14A), agreement, arrangement, understanding or relationship pursuant to which such Proposing Person has or shares a right to vote any shares of any class or series of the corporation, (C) any agreement, arrangement, understanding or relationship, including any repurchase or similar stock borrowing agreement or arrangement, engaged in, directly or indirectly, by such Proposing Person, the purpose or effect of which is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of shares of any class or series of the corporation by, manage the risk of share price changes for, or increase or decrease the voting power of, such Proposing Person with respect to the shares of any class or series of the corporation, or which provides, directly or indirectly, the opportunity to profit from any decrease in the price or value of the shares of any class or series of the corporation (any such agreement, arrangement, understanding or relationship as described in this clause (C) is referred to as a " *Short Interest* "), (D) any rights to dividends on the shares of any class or series of the corporation owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the corporation, (E) any performance related fees (other than an asset based fee) that such Proposing Person is entitled to based on any increase or decrease in the price or value of shares of any class or series of the corporation, or any Synthetic Equity Interests or Short Interests, if any, and (F) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act (the disclosures to be made pursuant to the foregoing clauses (A) through (F) are referred to as " *Disclosable Interests* "); provided, however, that Disclosable Interests shall not include any such disclosures with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these bylaws on behalf of a beneficial owner; and

(iii) As to each item of business that the stockholder proposes to bring before the meeting, (A) a reasonably brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of each Proposing Person, (B) the text of the proposal or business (including the text of any resolutions proposed for consideration), and (C) a reasonably detailed description of all agreements, arrangements understandings and relationships (x) between or among any of the Proposing Persons or (y) between or among any Proposing Person and any other person, including the name of such other person, in connection with the proposal of such business by such stockholder.

For purposes of this Section 2.13, the term " *Proposing Person* " shall mean (i) the stockholder providing the notice of business proposed to be brought before a meeting, (ii) the beneficial owner or beneficial owners, if different from any Proposing Person pursuant to the foregoing clause (i), on whose behalf the notice of the business proposed to be brought before the meeting is made, (iii) any affiliate or associate (each within the meaning of Rule 12b-2 under the Exchange Act for purposes of these bylaws) of any Proposing Person pursuant to the foregoing clauses (i) or (ii), and (iv) any other person with whom any Proposing Person pursuant to the foregoing clauses (i), (ii) or (iii) is Acting in Concert (as defined below).

A person shall be deemed to be " *Acting in Concert* " with another person for purposes of these bylaws if such person knowingly acts (whether or not pursuant to an express agreement, arrangement or understanding) in concert with, or towards a common goal relating to the management, governance or control of the corporation in parallel with, such other person where (A) each person is conscious of the other person's conduct or intent and this awareness is an element in their decision-making processes and (B) at least one additional factor suggests that such persons intend to act in concert or in parallel, which such additional factors may include, without limitation, exchanging information (whether publicly or privately), attending meetings, conducting discussions, or making or soliciting invitations to act in concert or in parallel; provided, however, that a person shall not be deemed to be Acting in Concert with any other person solely as a result of the solicitation or receipt of revocable proxies or consents from such other person in response to a solicitation made pursuant to, and in accordance with, Section 14(a) of the Exchange Act by way of a proxy or consent solicitation statement filed on Schedule 14A. A person Acting in Concert with another person shall be deemed to be Acting in Concert with any third party who is also Acting in Concert with such other person.

(d) A stockholder providing notice of business proposed to be brought before a meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.13 shall be true and correct as of the record date for the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting in the case of the update and supplement required to be made as of the record date, and not later than eight (8) business days, if practicable (or, if not practicable, on the first practicable date) prior to the date for the meeting or any adjournment or postponement thereof, in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof.

(e) Notwithstanding anything in these bylaws to the contrary, no business shall be conducted at a meeting except in accordance with this Section 2.13. The board of directors, chairman of the board, presiding officer of the meeting or president shall, if the facts warrant, determine that the business was not properly brought before the meeting in accordance with this Section 2.13, and if he or she should so determine, he or she shall so declare to the meeting and any such business not properly brought before the meeting shall not be transacted.

(f) This Section 2.13 is expressly intended to apply to any business proposed to be brought before a meeting of stockholders regardless of whether (i) such proposal is made pursuant to Rule 14a-8 under the Exchange Act (or any successor thereto) or (ii) such business is already the subject of any notice to the stockholders or Public Disclosure from the board of directors. In addition to the requirements of this Section 2.13 with respect to any business proposed to be brought before a meeting, each Proposing Person shall comply with all applicable requirements of the Exchange Act with respect to any such business; provided, however, that references in these bylaws to the Exchange Act, or the rules and regulations promulgated thereunder are not intended to and shall not limit the requirements of these bylaws applicable to nominations or proposals or any other business to be considered pursuant to these bylaws regardless of the stockholder's intent to utilize Rule 14a-8 under the Exchange Act (or any successor thereto). Nothing in this Section 2.13 shall be deemed to affect the rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act (or any successor thereto).

(g) For purposes of these bylaws, " *Public Disclosure* " shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Sections 13, 14 or 15(d) of the Exchange Act.

2.14 ADVANCE NOTICE PROVISIONS FOR STOCKHOLDER NOMINATIONS

(a) Nominations of any person for election to the board of directors at an annual meeting or at a special meeting may be made at such meeting only (i) by or at the direction of the board of directors, including by any committee or persons appointed by the board of directors, or (ii) by a stockholder who (A) was a stockholder of record (and, with respect to any beneficial owner, if different from such stockholder of record, on whose behalf such nomination is proposed to be made, only if such beneficial owner was the beneficial owner of shares of the corporation) both at the time of giving the notice provided for in this Section 2.14 and at the time of the meeting, (B) is entitled to vote at the meeting, and (C) has complied with this Section 2.14 as to such nomination. The foregoing clause (ii) shall be the exclusive means for a stockholder to make any nomination of a person or persons for election to the board of directors at an annual meeting or at a special meeting.

(b) Without qualification, for a stockholder to make any nomination of a person or persons for election to the board of directors at an annual meeting or at a special meeting, the stockholder must (i) provide Timely Notice (as defined in Section 2.13) thereof in writing and in proper form (as set forth in Section 2.14(c)) to the secretary of the corporation at the principal executive offices of the corporation, and (ii) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.14. In no event shall any adjournment or postponement of an annual meeting or of a special meeting or the announcement thereof commence a new time period (or extend any time period) for the giving of a stockholder's notice as described in this Section 2.14(b).

(c) To be in proper form for purposes of this Section 2.14, a stockholder's notice to the secretary shall set forth:

(i) As to each Nominating Person (as defined below), the Stockholder Information (as defined in Section 2.13(c)(i), except that for purposes of this Section 2.14 the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.13(c)(i));

(ii) As to each Nominating Person, any Disclosable Interests (as defined in Section 2.13(c)(ii), except that for purposes of this Section 2.14 the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.13(c)(ii) and the disclosure in clause (F) of Section 2.13(c)(ii) shall be made with respect to the election of directors at the meeting);

(iii) As to each person whom a Nominating Person proposes to nominate for election as a director, (A) all information with respect to such proposed nominee that would be required to be set forth in a stockholder's notice pursuant to this Section 2.14 if such proposed nominee were a Nominating Person, (B) all information relating to such proposed nominee that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14(a) under the Exchange Act (including but not limited to such proposed nominee's written consent to being named in the proxy statement as a nominee and to serving as a director if elected), and (C) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among any Nominating Person, on the one hand, and each proposed nominee, such proposed nominee's respective affiliates and associates, and any other persons with whom such proposed nominee (or any of such proposed nominee's respective affiliates or associates) is Acting in Concert, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 under Regulation S-K if such Nominating Person were the "registrant" for purposes of such rule and the proposed nominee were a director or executive officer of such registrant; and

(iv) If required by the corporation, as to any proposed nominee, such other information (A) as may reasonably be required by the corporation to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or (B) that could be material to a reasonable stockholder's understanding of the independence or lack of independence of such proposed nominee.

For purposes of this Section 2.14, the term " *Nominating Person* " shall mean (i) the stockholder providing the notice of the nomination proposed to be made at the meeting, (ii) the beneficial owner or beneficial owners, if different from any Nominating Person pursuant to the foregoing clause (i), on whose behalf the notice of the nomination proposed to be made at the meeting is made, (iii) any affiliate or associate of any Nominating Person pursuant to the foregoing clauses (i) or (ii), and (iv) any other person with whom any Nominating Person pursuant to the foregoing clauses (i), (ii), or (iii) is Acting in Concert.

(d) A stockholder providing notice of any nomination proposed to be made at a meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.14 shall be true and correct as of the record date for the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting in the case of the update and supplement required to be made as of the record date, and not later than eight (8) business days, if practicable (or, if not practicable, on the first practicable date) prior to the date for the meeting or any adjournment or postponement thereof, in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof.

(e) Notwithstanding anything in these bylaws to the contrary, no person shall be eligible for election as a director of the corporation unless nominated in accordance with this Section 2.14. The board of directors, chairman of the board, presiding officer of the meeting or president shall, if the facts warrant, determine that a nomination was not properly made in accordance with this Section 2.14, and if he or she should so determine, he or she shall so declare such determination to the meeting and any such nomination not properly made shall be disregarded.

(f) This Section 2.14 is expressly intended to apply to any nomination proposed to be made at an annual or special meeting of stockholders regardless of whether the election of directors is already the subject of any notice to the stockholders or Public Disclosure from the board of directors. In addition to the requirements of this Section 2.14 with respect to any nomination proposed to be made at a meeting, each Nominating Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations; provided, however, that references in these bylaws to the Exchange Act, or the rules and regulations promulgated thereunder are not intended to and shall not limit the requirements of these bylaws applicable to nominations or proposals or any other business to be considered pursuant to these bylaws regardless of the stockholder's intent to utilize Rule 14a-8 under the Exchange Act (or any successor thereto). Nothing in this Section 2.14 shall be deemed to affect the rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act (or any successor thereto).

ARTICLE III

DIRECTORS

3.1 POWERS

Subject to the provisions of the General Corporation Law of Delaware and any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the board of directors.

3.2 NUMBER OF DIRECTORS

The board of directors shall consist of seven (7) members. The number of directors may be changed by an amendment to this bylaw, duly adopted by the board of directors or by the stockholders, or by a duly adopted amendment to the certificate of incorporation. Upon the closing of the first sale of the corporation's common stock pursuant to a firmly underwritten registered public offering (the " *IPO* "), the directors shall be divided into three classes, with the term of office of the first class, which class shall initially consist of two directors, to expire at the first annual meeting of stockholders held after the IPO; the term of office of the second class, which shall initially consist of three directors, to expire at the second annual meeting of stockholders held after the IPO; the term of office of the third class, which class shall initially consist of three directors, to expire at the third annual meeting of stockholders held after the IPO; and thereafter for each such term to expire at each third succeeding annual meeting of stockholders held after such election.

No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws, wherein other qualifications for directors may be prescribed. Each director, including a director elected to fill a vacancy, shall hold office until his successor is elected and qualified or until his earlier resignation or removal.

Elections of directors need not be by written ballot.

3.4 RESIGNATION AND VACANCIES

Any director may resign at any time upon written notice to the corporation. When one or more directors so resigns and the resignation is effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in this section in the filling of other vacancies.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(a) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(b) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the General Corporation Law of Delaware.

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

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

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

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

3.6 FIRST MEETINGS

The first meeting of each newly elected board of directors shall be held at such time and place as shall be fixed by the vote of the stockholders at the annual meeting and no notice of such meeting need be given to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present. In the event of the failure of the stockholders to fix the time or place of such first meeting of the newly elected board of directors, or in the event such meeting is not held at the time and place so fixed by the stockholders, the meeting may be held at such time and place as shall be specified in a notice given as hereinafter provided for special meetings of the board of directors, or as shall be specified in a written waiver signed by all of the directors.

3.7 REGULAR MEETINGS

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

3.8 SPECIAL MEETINGS; NOTICE

Special meetings of the board may be called by the president on 48 hours' notice to each director, either personally or by mail, telegram, telex, or telephone; special meetings shall be called by the president or secretary in like manner and on like notice on the written request of two (2) directors unless the board consists of only one (1) director, in which case special meetings shall be called by the president or secretary in like manner and on like notice on the written request of the sole director.

3.9 QUORUM

At all meetings of the board of directors, a majority of the authorized number of directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the board of directors, except as may be otherwise specifically provided by statute or by the certificate of incorporation. If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

3.10 WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the certificate of incorporation or these bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice unless so required by the certificate of incorporation or these bylaws.

3.11 ADJOURNED MEETING; NOTICE

If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

3.12 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

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

3.13 FEES AND COMPENSATION OF DIRECTORS

Unless otherwise restricted by the certificate of incorporation or these bylaws, the board of directors shall have the authority to fix the compensation of directors.

3.14 APPROVAL OF LOANS TO OFFICERS

The corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiary, including any officer or employee who is a director of the corporation or its subsidiary, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the board of directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing contained in this section shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

3.15 REMOVAL OF DIRECTORS

Unless otherwise restricted by statute, by the certificate of incorporation or by these bylaws, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

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

ARTICLE IV

COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The board of directors may, by resolution passed by a majority of the whole board, designate one or more committees, with each committee to consist of one or more of the directors of the corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors or in the bylaws of the corporation, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) amend the certificate of incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in Section 151(a) of the General Corporation Law of Delaware, fix any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the corporation), (ii) adopt an agreement of merger or consolidation under Sections 251 or 252 of the General Corporation Law of Delaware, (iii) recommend to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, (iv) recommend to the stockholders a dissolution of the corporation or a revocation of a dissolution, or (v) amend the bylaws of the corporation; and, unless the board resolution establishing the committee, the bylaws or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of Delaware.

4.2 COMMITTEE MINUTES

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

4.3 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Article III of these bylaws, Section 3.5 (place of meetings and meetings by telephone), Section 3.7 (regular meetings), Section 3.8 (special meetings and notice), Section 3.9 (quorum), Section 3.10 (waiver of notice), Section 3.11 (adjournment and notice of adjournment), and Section 3.12 (action without a meeting), with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members; provided, however, that the time of regular meetings of committees may also be called by resolution of the board of directors and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

ARTICLE V

OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a president, one or more vice presidents, a secretary, and a treasurer. The corporation may also have, at the discretion of the board of directors, a chairman of the board, one or more assistant vice presidents, assistant secretaries, assistant treasurers, and any such other officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws. Any number of offices may be held by the same person.

5.2 ELECTION OF OFFICERS

The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Sections 5.3 or 5.5 of these bylaws, shall be chosen by the board of directors, subject to the rights, if any, of an officer under any contract of employment.

5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or empower the president to appoint, such other officers and agents as the business of the corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

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

Any officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

Any vacancy occurring in any office of the corporation shall be filled by the board of directors.

5.6 CHAIRMAN OF THE BOARD

The chairman of the board, if such an officer be elected, shall, if present, preside at meetings of the board of directors and exercise and perform such other powers and duties as may from time to time be assigned to him by the board of directors or as may be prescribed by these bylaws. If there is no president, then the chairman of the board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these bylaws.

5.7 PRESIDENT

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairman of the board, if there be such an officer, the president shall be the chief executive officer of the corporation and shall, subject to the control of the board of directors, have general supervision, direction, and control of the business and the officers of the corporation. He shall preside at all meetings of the stockholders and, in the absence or nonexistence of a chairman of the board, at all meetings of the board of directors. He shall have the general powers and duties of management usually vested in the office of president of a corporation and shall have such other powers and duties as may be prescribed by the board of directors or these bylaws.

5.8 VICE PRESIDENT

In the absence or disability of the president, the vice presidents, if any, in order of their rank as fixed by the board of directors or, if not ranked, a vice president designated by the board of directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the board of directors, these bylaws, the president or the chairman of the board.

5.9 SECRETARY

The secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the board of directors may direct, a book of minutes of all meetings and actions of directors, committees of directors, and stockholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings, and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the board of directors, a share register, or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the board of directors required to be given by law or by these bylaws. He shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the board of directors or by these bylaws.

5.10 TREASURER

The treasurer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection, by any director.

The treasurer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositaries as may be designated by the board of directors. He shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the president and directors, whenever they request it, an account of all of his transactions as treasurer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

5.11 ASSISTANT SECRETARY

The assistant secretary, or, if there is more than one, the assistant secretaries in the order determined by the stockholders or board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors or the stockholders may from time to time prescribe.

5.12 ASSISTANT TREASURER

The assistant treasurer, or, if there is more than one, the assistant treasurers, in the order determined by the stockholders or board of directors (or if there be no such determination, then in the order of their election), shall, in the absence of the treasurer or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the board of directors or the stockholders may from time to time prescribe.

5.13 AUTHORITY AND DUTIES OF OFFICERS

In addition to the foregoing authority and duties, all officers of the corporation shall respectively have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors or the stockholders.

ARTICLE VI

INDEMNITY

6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, indemnify each of its directors and officers against expenses (including attorneys' fees), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation. For purposes of this Section 6.1, a "director" or "officer" of the corporation includes any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.2 INDEMNIFICATION OF OTHERS

The corporation shall have the power, to the extent and in the manner permitted by the General Corporation Law of Delaware, to indemnify each of its employees and agents (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation. For purposes of this Section 6.2, an "employee" or "agent" of the corporation (other than a director or officer) includes any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.3 INSURANCE

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

ARTICLE VII

RECORDS AND REPORTS

7.1 MAINTENANCE AND INSPECTION OF RECORDS

The corporation shall, either at its principal executive office or at such place or places as designated by the board of directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal place of business.

The officer who has charge of the stock ledger of a corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

7.2 INSPECTION BY DIRECTORS

Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court may summarily order the corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

7.3 ANNUAL STATEMENT TO STOCKHOLDERS

The board of directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the corporation.

7.4 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

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

ARTICLE VIII

GENERAL MATTERS

8.1 CHECKS

From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.2 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS

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

8.3 STOCK CERTIFICATES; PARTLY PAID SHARES

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

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

8.4 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.5 LOST CERTIFICATES

Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or his legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

8.6 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the Delaware General Corporation Law shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term “person” includes both a natural person and a legally created entity, such as but not limited to a corporation.

8.7 DIVIDENDS

The directors of the corporation, subject to any restrictions contained in the certificate of incorporation, may declare and pay dividends upon the shares of its capital stock pursuant to the General Corporation Law of Delaware. Dividends may be paid in cash, in property, or in shares of the corporation’s capital stock.

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

8.8 FISCAL YEAR

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

8.9 SEAL

The seal of the corporation shall be such as from time to time may be approved by the board of directors.

8.10 TRANSFER OF STOCK

Upon surrender to the corporation or the transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

8.11 STOCK TRANSFER AGREEMENTS

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

8.12 REGISTERED STOCKHOLDERS

The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE IX

AMENDMENTS

The original or other bylaws of the corporation may be adopted, amended or repealed by the stockholders entitled to vote; provided, however, that the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

ARTICLE X

DISSOLUTION

If it should be deemed advisable in the judgment of the board of directors of the corporation that the corporation should be dissolved, the board, after the adoption of a resolution to that effect by a majority of the whole board at any meeting called for that purpose, shall cause notice to be mailed to each stockholder entitled to vote thereon of the adoption of the resolution and of a meeting of stockholders to take action upon the resolution.

At the meeting a vote shall be taken for and against the proposed dissolution. If a majority of the outstanding stock of the corporation, entitled to vote thereon votes for the proposed dissolution, then a certificate stating that the dissolution has been authorized in accordance with the provisions of Section 275 of the General Corporation Law of Delaware and setting forth the names and residences of the directors and officers shall be executed, acknowledged, and filed and shall become effective in accordance with Section 103 of the General Corporation Law of Delaware. Upon such certificate’s becoming effective in accordance with Section 103 of the General Corporation Law of Delaware, the corporation shall be dissolved.

Whenever all the stockholders entitled to vote on a dissolution consent in writing, either in person or by duly authorized attorney, to a dissolution, no meeting of directors or stockholders shall be necessary. The consent shall be filed and shall become effective in accordance with Section 103 of the General Corporation Law of Delaware. Upon such consent's becoming effective in accordance with Section 103 of the General Corporation Law of Delaware, the corporation shall be dissolved. If the consent is signed by an attorney, then the original power of attorney or a photocopy thereof shall be attached to and filed with the consent. The consent filed with the Secretary of State shall have attached to it the affidavit of the secretary or some other officer of the corporation stating that the consent has been signed by or on behalf of all the stockholders entitled to vote on a dissolution; in addition, there shall be attached to the consent a certification by the secretary or some other officer of the corporation setting forth the names and residences of the directors and officers of the corporation.

ARTICLE XI

CUSTODIAN

11.1 APPOINTMENT OF A CUSTODIAN IN CERTAIN CASES

The Court of Chancery, upon application of any stockholder, may appoint one or more persons to be custodians and, if the corporation is insolvent, to be receivers, of and for the corporation when:

(a) at any meeting held for the election of directors the stockholders are so divided that they have failed to elect successors to directors whose terms have expired or would have expired upon qualification of their successors; or

(b) the business of the corporation is suffering or is threatened with irreparable injury because the directors are so divided respecting the management of the affairs of the corporation that the required vote for action by the board of directors cannot be obtained and the stockholders are unable to terminate this division; or

(c) the corporation has abandoned its business and has failed within a reasonable time to take steps to dissolve, liquidate or distribute its assets.

11.2 DUTIES OF CUSTODIAN

The custodian shall have all the powers and title of a receiver appointed under Section 291 of the General Corporation Law of Delaware, but the authority of the custodian shall be to continue the business of the corporation and not to liquidate its affairs and distribute its assets, except when the Court of Chancery otherwise orders and except in cases arising under Sections 226(a)(3) or 352(a)(2) of the General Corporation Law of Delaware.

Certificate by Secretary of Adoption by Board of Directors

The undersigned hereby certifies that he is the duly elected, qualified, and acting Secretary of Vermillion, Inc. and that the foregoing Third Amended and Restated Bylaws, comprising 26 pages, were duly adopted as the Bylaws of the corporation by the Board of Directors on January 3, 2012.

/s/ Eric J. Schoen
Eric J. Schoen, Secretary

Exhibit 10.50

ASSET PURCHASE AGREEMENT

BY AND BETWEEN

Vermillion, Inc.

as Purchaser,

and

Correlogic Systems, Inc.

as Seller

Dated as of November 8, 2011

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ASSET PURCHASE AGREEMENT

THIS ASSET PURCHASE AGREEMENT (this " Agreement "), dated as of November 8, 2011 (the " Agreement Date "), is entered into by and between Correlogic Systems, Inc., a Delaware corporation (" Seller "), and Vermillion, Inc., a Delaware corporation (" Purchaser "). For the purposes of this Agreement, capitalized terms used in herein shall have the meanings set forth in ARTICLE IX .

RECITALS

WHEREAS, Seller is a debtor and debtor in possession in that certain bankruptcy case under chapter 11 of title 11 of the United States Code, 11 U.S.C. § 101 et seq. (the " Bankruptcy Code ") captioned In re Correlogic Systems, Inc., filed on July 16, 2010 (the " Petition Date ") in the United States Bankruptcy Court for the District of Maryland (the " Bankruptcy Court "), Case No. 10-25974 (WIL) (the " Bankruptcy Case "); and

WHEREAS, Seller is involved in, among other things, the ovarian cancer diagnostics business, including without limitation developing, testing and commercializing blood tests under the names "OvaCheck®" and "OvaCheck2™" for the detection of epithelial ovarian cancer (collectively, the " Business ");

WHEREAS, Purchaser desires to purchase the Purchased Assets (as hereinafter defined) and assume the Assumed Liabilities (as hereinafter defined) from Seller and Seller desires to sell, convey, assign and transfer to Purchaser the Purchased Assets together with the Assumed Liabilities, all in the manner and subject to the terms and conditions set forth in this Agreement and in accordance with Sections 105 and 363 and other applicable provisions of the Bankruptcy Code; and

WHEREAS, the Purchased Assets and Assumed Liabilities shall be purchased and assumed by Purchaser pursuant to the Sale Order approving such sale, free and clear of all Claims and Encumbrances (other than Permitted Encumbrances), pursuant to Sections 105 and 363 of the Bankruptcy Code, and Rules 6004 and 6006 of the Federal Rules of Bankruptcy Procedure, all in the manner and subject to the terms and conditions set forth in this Agreement and the Sale Order and in accordance with other applicable provisions of the Bankruptcy Code and the Federal Rules of Bankruptcy Procedure and the local rules for the Bankruptcy Court (together, the " Bankruptcy Rules ").

NOW, THEREFORE, in consideration of the foregoing and the mutual representations, warranties, covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, Purchaser and Seller hereby agree as follows:

ARTICLE I.

PURCHASE AND SALE OF THE PURCHASED ASSETS; ASSUMPTION OF ASSUMED LIABILITIES

1.1 Purchase and Sale of the Purchased Assets . Pursuant to Sections 105 and 363 of the Bankruptcy Code and on the terms and subject to the conditions set forth herein, at the Closing Seller shall sell, transfer, assign, convey and deliver to Purchaser, and Purchaser shall purchase, acquire and accept from Seller all of Seller's right, title and interest in, to and under the Purchased Assets, free and clear of all Claims and Encumbrances (other than Permitted Encumbrances) in accordance with Section 363(f) of the Bankruptcy Code. As used herein, the term " Purchased Assets " shall mean all of the properties, assets and rights, tangible and intangible, real or personal, of Seller of whatever kind and nature, to the extent related to the Business, used in the Business or held for use in connection with the Business, including, without limitation, the following, but excluding the Excluded Assets (as hereinafter defined):

(a) all Documents, including without limitation (i) all correspondence with and Documents relating to the U.S. Food and Drug Administration and other Governmental Bodies and (ii) all clinical and statistical data and information and all Documents related thereto, including all primary source data and case report forms;

(b) all Governmental Authorizations and pending applications therefor, including without limitation all institutional review board approvals and all Documents related thereto;

(c) all Equipment, including without limitation all Samples;

(d) the Seller Intellectual Property and all Documents related thereto, including without limitation that listed on Schedule 1.1(d) , the Purchased Names and all biomarker assay rights with respect to the Business (including without limitation the OvaCheck® and OvaCheck2™ diagnostic tests); provided, however, that Seller shall have the limited, non-transferable right following the Closing to use the trademarks "Correlogic" and "Correlogic Systems, Inc." solely to the extent expressly required for purposes of the Bankruptcy Case and the related winding-down and dissolution of Seller;

(e) all rights of Seller under non-disclosure or confidentiality, non-disparagement, non-compete or non-solicitation agreements with employees of Seller, agents of Seller or with third parties;

(f) all express or implied guarantees, warranties, representations, covenants, indemnities, rights, claims, counterclaims, defenses, credits, causes of action or rights of set off against third parties relating to the Purchased Assets or Assumed Liabilities, including rights under vendors' and manufacturers' warranties, indemnities, guaranties and avoidance claims and causes of action under the Bankruptcy Code or applicable Law;

(g) all goodwill payment intangibles and general intangible assets and rights of Seller;

(h) all other or additional assets, properties, privileges, rights and interests of Seller related to the Business of every kind and description and wherever located, whether known or unknown, fixed or unfixed, accrued, absolute, contingent or otherwise, and whether or not specifically referred to in this Agreement; and

(i) all proceeds and products of any and all of the foregoing Purchased Assets (other than proceeds collected prior to the Closing Date);

provided , however , that none of the parties hereto intends that Purchaser, or any of its Affiliates, shall be deemed to be a successor to Seller with respect to the Purchased Assets.

1.2 Excluded Assets . Notwithstanding anything to the contrary in this Agreement, in no event shall Seller be deemed to sell, transfer, assign or convey, and Seller shall retain all right, title and interest to, in and under, any assets, properties, interests and rights of Seller other than the Purchased Assets (collectively, the " Excluded Assets ").

1.3 Assumption of Liabilities . On the terms and subject to the conditions set forth in this Agreement and the Sale Order, effective as of the Closing, Purchaser shall assume from Seller (and thereafter pay, perform, discharge or otherwise satisfy in accordance with their respective terms), and Seller shall irrevocably convey, transfer and assign to Purchaser, only the following Liabilities and no others (collectively, the " Assumed Liabilities "):

(a) any Liabilities arising out of the conduct of the Business or the ownership of the Purchased Assets, in each case, from and after the Closing Date;

(b) all Taxes related to the operation of the Business by Purchaser attributable to periods or portions thereof beginning on or after the Closing Date, including, without limitation, Liabilities for Taxes attributable to the ownership of the Purchased Assets from and after the Closing Date;

(c) all Liabilities relating to amounts required to be paid by Purchaser under this Agreement; and

(d) all Liabilities set forth on Schedule 1.3(d) .

1.4 Excluded Liabilities . Notwithstanding any provision in this Agreement to the contrary, Purchaser is assuming only the Assumed Liabilities and is not assuming, and shall not be deemed to have assumed, any Liabilities of Seller (or any predecessor of Seller or any prior owner of all or part of its business and assets) of whatever nature (whether arising prior to, at the time of, or subsequent to Closing) and Seller shall be solely and exclusively liable for any and all such Liabilities, including those relating to, arising out of or in connection with the operation of the Business or the Purchased Assets (including the use and ownership thereof) at any time prior to the Closing Date, and those Liabilities set forth below (collectively, the " Excluded Liabilities "):

(a) all Liabilities of Seller relating to or otherwise arising, whether before, on or after the Closing, out of, or in connection with, any of the Excluded Assets;

(b) any and all Liabilities of Seller in respect of Contracts that are Non-Assigned Contracts;

(c) any and all Liabilities with respect to any environmental, health or safety matter, relating to, arising out of or in connection with (i) Seller's operation of its businesses (other than the Business) or its leasing, ownership or operation of real property at any time, or (ii) the operation of the Business or the Purchased Assets on or prior to the Closing Date;

(d) all Liabilities of Seller in respect of Indebtedness, whether or not relating to the Business or the Purchased Assets, including without limitation that certain Loan Agreement by and between Seller and Ahn-Gook Pharmaceutical Company, Ltd. dated as of October 30, 2009;

(e) all warranty and return obligations, including, without limitation, all Liabilities and obligations to repair or replace, or to refund the sales price (or any other related expenses) for inventory sold prior to the Closing Date;

(f) any and all Liabilities for Taxes arising in connection with the transactions contemplated by this Agreement;

(g) any and all Liabilities for Taxes attributable to the operation of the Business on or prior to the Closing Date;

(h) any and all Liabilities of Seller in respect of the WARN Act or under any similar provision of any federal, state, provincial, regional, foreign or local Law that might arise or have arisen on or prior to the Closing Date;

(i) any and all Liabilities of Seller in respect of the Employees, Seller's officers and directors, or the Seller Plans;

(j) any and all Liabilities of Seller in respect of any Actions;

(k) any costs and expenses related to the Bankruptcy Case; and

(l) all Liabilities set forth on Schedule 1.4(l) .

1.5 Disclosure Schedule Updates . Notwithstanding anything in this Agreement to the contrary, subject to Seller's consent, which consent shall not be unreasonably withheld, delayed or conditioned, Purchaser may revise any Schedule setting forth the Purchased Assets and the Excluded Assets to (i) include in the definition of Purchased Assets (pursuant to the applicable Schedule) and to exclude from the definition of Excluded Assets, any Contract of Seller not previously included in the Purchased Assets, at any time on or prior to the third (3 rd) Business Day prior to the Sale Hearing and require Seller to give notice to the parties to any such Contract and (ii) to exclude from the definition of Purchased Assets (pursuant to the applicable Schedule) and to include in the definition of Excluded Assets, any asset of Seller previously included in the Purchased Assets and not otherwise included in the definition of Excluded Assets, at any time on or prior to the third (3 rd) Business Day prior to the Sale Hearing, provided , however , that any

such change to a Schedule, the definition of "Purchased Assets" or the definition of "Excluded Assets" shall not reduce the amount of the Purchase Price.

1.6 Non-Assignment of Contracts . No Contacts shall be, or shall be deemed to be, assigned by Seller to Purchaser under this Agreement. Seller shall be solely responsible for any cure costs or rejection damages arising from the assumption or rejection of any executory Contracts to which Seller is a party.

ARTICLE II.

CONSIDERATION; PAYMENT

2.1 Consideration; Payment . The aggregate consideration (collectively, the " Purchase Price ") to be paid for the purchase of the Purchased Assets shall be Four Hundred Thirty-Five Thousand United States Dollars ($435,000). On the Closing Date Purchaser shall deliver the Purchase Price and any payment required to be made pursuant to any other provision hereof in cash by wire transfer of immediately available funds to such bank account as shall be designated in writing by Seller.

ARTICLE III.

CLOSING AND TERMINATION

3.1 Closing . Subject to the satisfaction or waiver by the appropriate party of the conditions set forth in ARTICLE VIII , the closing of the purchase and sale of the Purchased Assets, the delivery of the Purchase Price, the assumption of the Assumed Liabilities and the consummation of the other transactions contemplated by this Agreement (the " Closing ") shall occur as soon as practicable following the satisfaction or waiver of all conditions set forth in this Agreement (other than those conditions that by their terms are to be satisfied at the Closing, but subject to the satisfaction or waiver of such conditions). The Closing shall take place at the offices of McNamee Hosea Jernigan Kim Greenan & Lynch, P.A. 6411 Ivy Lane, Suite 200, Greenbelt, Maryland 20770, or at such other place as the Parties may agree; provided, however, that Purchaser may participate telephonically. Unless otherwise agreed by the Parties in writing, the Closing shall be deemed effective and all right, title and interest of Seller in the Purchased Assets to be acquired by Purchaser hereunder shall be deemed to have passed to Purchaser and the assumption of all of the Assumed Liabilities shall be deemed to have occurred as of 12:01 a.m. Central Time on the Closing Date.

3.2 Closing Deliveries by Seller . At or prior to the Closing, Seller shall deliver to Purchaser:

(a) a bill of sale substantially in the form of Exhibit A (the " Bill of Sale ") duly executed by Seller;

(b) a copy of the Sale Order;

(c) a copy of the Section 365(n) Order;

(d) a duly executed non foreign person affidavit of Seller dated as of the Closing Date, sworn under penalty of perjury and in form and substance required under the Treasury Regulations issued pursuant to Section 1445 of the Code, stating that Seller is not a "foreign person" as defined in Section 1445 of the Code;

(e) copies of all instruments, certificates, documents and other filings (if applicable) necessary to release the Purchased Assets from all Encumbrances, including any applicable UCC termination statements, all in a form reasonably satisfactory to Purchaser;

(f) an officer's certificate, dated as of the Closing Date, executed by a duly authorized officer of Seller certifying that the conditions set forth in Section 8.3 have been satisfied;

(g) a copy of the resolutions adopted by the Board of Directors of Seller evidencing its authorization of the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby, certified by an authorized officer of Seller; and

(h) all other certificates, agreements and other documents required by this Agreement (or as Purchaser may reasonably request) to be delivered by Seller at or prior to the Closing in connection with the transactions contemplated by this Agreement, including without limitation any such documents necessary or advisable to validly transfer and assign to Purchaser the Seller Intellectual Property.

3.3 Closing Deliveries by Purchaser . At the Closing, Purchaser shall deliver to (or at the direction of) Seller:

(a) the Purchase Price;

(b) an officer's certificate, dated as of the Closing Date, executed by a duly authorized officer of Purchaser certifying that the conditions set forth in Section 8.2(a) have been satisfied; and

(c) all other certificates, agreements and other documents required by this Agreement (or as Seller may reasonably request) to be delivered by Purchaser at or prior to the Closing in connection with the transactions contemplated by this Agreement.

3.4 Termination of Agreement . This Agreement may be terminated only in accordance with this Section 3.4 . This Agreement may be terminated at any time before Closing, as follows:

(a) by the mutual written consent of Seller and Purchaser;

(b) by written notice of either Seller or Purchaser, if the Closing shall not have been consummated prior to December 10, 2011 (the " Outside Date "); provided , however , that (i) the Outside Date may be extended by the mutual written consent of Seller and Purchaser, for a period up to thirty (30) days to the extent that all conditions to Closing set forth in this Agreement are capable of being satisfied as of such time and (ii) the Outside Date may be

extended by the written consent of Purchaser for up to four (4) periods of three (3) months each in the event that the Section 365(n) Order is appealed following entry by the Bankruptcy Court; provided further , however , that a Party shall not be permitted to terminate this Agreement pursuant to this Section 3.4(b) if such Party is in material breach of this Agreement;

(c) by written notice of either Seller or Purchaser, if there shall be any Law that makes consummation of the transactions contemplated hereby illegal or otherwise prohibited, or there shall be in effect a final non-appealable order, writ, injunction, judgment or decree restraining, enjoining or otherwise prohibiting the consummation of the transactions contemplated hereby;

(d) by written notice from Purchaser to Seller, if the Bankruptcy Case is dismissed or converted into a case under Chapter 7 of the Bankruptcy Code, or if a trustee or examiner with expanded powers to operate or manage the financial affairs, the Business or the reorganization of Seller is appointed in the Bankruptcy Case;

(e) by written notice of either Seller or Purchaser, if Seller has entered into an Alternative Transaction;

(f) automatically upon the consummation of an Alternative Transaction by Seller;

(g) by written notice from Seller to Purchaser, if Purchaser breaches any of its representations and warranties that would reasonably be expected to have a Material Adverse Effect or fails to perform in any material respect any of its covenants contained in this Agreement and such breach or failure to perform: (i) would give rise to the failure of a condition set forth in ARTICLE VIII , (ii) cannot be or has not been cured within twenty (20) days following delivery of notice to Purchaser of such breach or failure to perform and (iii) has not been waived by Seller; provided , however , that Seller shall not be permitted to terminate this Agreement pursuant to this Section 3.4(g) if Seller is then in material breach of the terms of this Agreement;

(h) by written notice from Purchaser to Seller, if Seller breaches any of its representations and warranties that would reasonably be expected to have a Material Adverse Effect or fails to perform in any material respect any of its covenants contained in this Agreement and such breach or failure to perform: (i) would give rise to the failure of a condition set forth in ARTICLE VIII , (ii) cannot be or has not been cured within twenty (20) days following delivery of notice to Seller of such breach or failure to perform and (iii) has not been waived by Purchaser; provided , however , that Purchaser shall not be permitted to terminate this Agreement pursuant to this Section 3.4(h) if Purchaser is then in material breach of the terms of this Agreement; or

(i) by written notice from Seller to Purchaser, if all of the conditions set forth in Sections 8.1 and 8.3 have been satisfied (other than conditions that by their nature are to be satisfied at the Closing) or waived and Purchaser fails to deliver the Purchase Price at the Closing.

3.5 Effect of Termination; Expense Reimbursement .

(a) Survival . In the event of termination of this Agreement pursuant to Section 3.4 , this Agreement shall forthwith become void and there shall be no liability on the part of any Party or any of its partners, officers, directors or shareholders; provided , however , that (a) this Section 3.5 (Effect of Termination; Expense Reimbursement), Section 7.8 (Publicity), ARTICLE IX (Defined Terms) and ARTICLE XI (Miscellaneous) shall survive any such termination and (b) in no event shall any termination of this Agreement relieve Seller of any Liability for any willful breach of this Agreement by Seller.

(b) Purchaser Expense Reimbursement . If this Agreement is terminated pursuant to Section 3.4 (other than pursuant to Section 3.4(g) or any other provision of Section 3.4 due to Purchaser's material breach of any of its obligations under this Agreement), Purchaser shall be entitled to the reimbursement of, and Seller shall promptly reimburse Purchaser in immediately available funds for, its actual, reasonable out-of-pocket legal fees and expenses (the " Expense Reimbursement ") in an amount up to $100,000. The Parties agree that the Expense Reimbursement is not a penalty, but rather is to reimburse Purchaser for reasonable out-of-pocket fees and expenses incurred in connection with the preparation, execution and performance of the transactions contemplated by this Agreement, including filing and notification fees, and reasonable out-of-pocket fees and expenses of Purchaser (including professionals' fees and expenses) and its Representatives in connection with the preparation, execution and negotiation of this Agreement, complying with its terms and otherwise effectuating the transactions contemplated hereby. The obligations of Seller to pay the Expense Reimbursement (i) shall be entitled to administrative expense claim status under Sections 503(b)(1)(A) and 507(a)(2) of the Bankruptcy Code, (ii) shall not be subordinate to any other administrative expense claim against Seller, other than any adequate protection order in existence at the time the Expense Reimbursement is approved, and (iii) shall survive the termination of this Agreement in accordance with Section 3.5(a) . The Sale Order, and any order entered by the Bankruptcy Court approving an Alternative Transaction, shall approve the Expense Reimbursement as set forth in this Section 3.5(b) .

ARTICLE IV.

REPRESENTATIONS AND WARRANTIES OF SELLER

Seller hereby represents and warrants to Purchaser as follows:

4.1 Organization and Qualification . Seller is duly organized, validly existing and in good standing under the Laws of its jurisdiction of organization. Seller is duly qualified or registered as a foreign entity to transact business and is in good standing under the Laws of each jurisdiction where the character of its activities or the location of the properties owned, leased or operated by it requires such qualification or registration, except where the failure to be so qualified or registered would not have a Material Adverse Effect. Seller has all requisite power and authority to own, lease and operate its properties and to carry on its business (including the Business) as it is now being conducted, subject to the provisions of the Bankruptcy Code. Seller has previously delivered to Purchaser complete and correct copies of its organizational documents, as amended and in effect on the Agreement Date (the " Organizational Documents ").

4.2 Authorization of Agreement . Subject to the entry of the Sale Order and the Section 365(n) Order, Seller has all requisite power and authority to execute and deliver this Agreement and each of the Ancillary Documents to which it is a party, to perform its obligations hereunder and thereunder, and to consummate the transactions contemplated hereby and thereby. The execution and delivery of this Agreement and each of the Ancillary Documents to which it is a party, the performance by Seller of its obligations hereunder and thereunder and the consummation of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary action on the part of Seller. This Agreement has been, and at or prior to the Closing, each of the Ancillary Documents to which it is a party will be, duly and validly executed and delivered by Seller and (assuming the due authorization, execution and delivery by the other Party, and the entry of the Sale Order) this Agreement constitutes, and each Ancillary Document to which it is a party when so executed and delivered (assuming the due authorization, execution and delivery by the other parties thereto) will constitute, legal, valid and binding obligations of Seller, enforceable against Seller in accordance with its terms.

4.3 Conflicts; Consents; Compliance with Law .

(a) The execution, delivery and performance by Seller of this Agreement or any Ancillary Document to which it is a party, the compliance by Seller with any of the provisions hereof or thereof, the consummation of the transactions contemplated hereby or thereby and the taking by Seller of any other action contemplated hereby or thereby, do not and will not (i) contravene, violate or conflict with any term or provision of its Organizational Documents; (ii) subject to the entry of the Sale Order and the Section 365(n) Order, contravene, violate or conflict with, constitute a breach of or default under (with or without notice or lapse of time, or both), result in the loss of any benefit under, or give rise to a right of acceleration, payment, amendment, termination or cancellation under any provision of any Material Contract to which it is a party or by which any of its properties or assets are bound; (iii) subject to the entry of the Sale Order and the Section 365(n) Order, contravene, violate or conflict with any order, writ, injunction, judgment or decree applicable to Seller or any of the properties or assets (including the Purchased Assets) of Seller, or the Business; (iv) subject to the entry of the Sale Order and the Section 365(n) Order, contravene, violate or conflict with any Law applicable to Seller, (v) create or impose any Encumbrances (other than Permitted Encumbrances) on any Purchased Asset, or (vi) adversely affect any Governmental Authorization; other than, in the case of clauses (iii) through (vi), any such contravention, violation, conflict, creation, imposition or affect that would not have a Material Adverse Effect.

(b) Except (i) for the entry of the Sale Order and the Section 365(n) Order and (ii) as set forth on Schedule 4.3(b) , no filing with, notice to or consent from any Person is required in connection with the execution, delivery and performance by Seller of this Agreement or the Ancillary Documents to which it is a party, the compliance by Seller with any of the provisions hereof or thereof, the consummation of the transactions contemplated hereby or thereby, or the taking by Seller of any other action contemplated hereby or thereby.

(c) Seller is, and has at all times been, in compliance, in all material respects, with all applicable Laws, including without limitation the Health Insurance Portability and Accountability Act of 1996, the Health Information Technology for Economic and Clinical Health Act, Pub. L. No. 111-5, and regulations promulgated thereunder by the U.S. Department

of Health and Human Services. Seller has not received any notice or other communication from any Governmental Body regarding any actual or possible violation of, or failure to comply with, any Law. Seller is not in default of any order, writ, injunction, judgment or decree applicable to the Business or the Purchased Assets.

4.4 Absence of Certain Developments . Except for actions taken in connection with the Bankruptcy Case, or as set forth on Schedule 4.4 , since the date of the Most Recent United States Trustee Operating Report, there has not occurred any (a) Material Adverse Effect, (b) damage, destruction, loss or casualty to the Purchased Assets with a value in excess of $25,000, whether or not covered by insurance, (c) event, and no action has been taken, that would be prohibited by the terms of Section 7.1 if such Section had been in effect as of and at all times since such date.

4.5 Litigation . Except as set forth on Schedule 4.5 , there is no material Action pending, or to the Knowledge of Seller, threatened, against Seller, any property or asset of Seller or the Business, or which could give rise to or increase an Assumed Liability, or which challenge the validity or propriety of the transactions contemplated by this Agreement or any of the Ancillary Documents. Except as set forth on Schedule 4.5 , Seller is not subject to any order, writ, injunction, judgment or decree that relates to the Business or the Purchased Assets.

4.6 Intellectual Property .

(a) Set forth on Schedule 4.6(a) is a true, complete and correct list of each (i) registration which has been issued to Seller and has not expired with respect to any Owned Intellectual Property (with any relevant registration numbers identified), (ii) pending application for registration which Seller has made with respect to any Owned Intellectual Property, (iii) license, sublicense, agreement or other permission pursuant to which any third party has granted to Seller the right to use any Licensed Intellectual Property (other than licenses of commercially available off-the-shelf software licensed pursuant to shrink wrap, click wrap or similar licenses) and (iv) license, sublicense, agreement or other permission pursuant to which Seller has granted to any third party the right to use any Seller Intellectual Property.

(b) Except as set forth on Schedule 4.6(a) , each item of Owned Intellectual Property disclosed on Schedule 4.6(a) , and all Internet web site content (provided that any biographical information of Seller's employees, principals, officers and/or directors contained therein shall not be used or reproduced for any commercial purposes) and software developed internally by Seller, is (i) owned by Seller, free and clear of any Encumbrances, other than Permitted Encumbrances, and (ii) not the subject of any Action, except for Actions in order to prosecute pending applications for registration of Owned Intellectual Property.

(c) Except as set forth on Schedule 4.6(c) , Seller is not required to pay any material royalty, license fee or similar compensation with respect to any Licensed Intellectual Property in connection with the conduct of the Business as currently conducted. Seller currently owns or possesses licenses or other rights to use all Licensed Intellectual Property necessary to conduct the Business as currently conducted, consistent with past practice, and as proposed to be conducted. The Seller Intellectual Property includes all Intellectual Property necessary to

conduct the Business as currently conducted, consistent with past practice, and as proposed to be conducted.

(d) Seller has not interfered with, infringed upon, misappropriated, diluted, violated or otherwise come into conflict with the Intellectual Property of any other Person or engaged in any act of unlawful use or unfair competition, and no written, or to Seller's Knowledge oral, claims have been asserted by any Person alleging such interference, infringement, misappropriation, dilution, violation, conflict, act of unlawful use or act of unfair competition.

(e) Seller has not notified any Person that it believes that such Person is interfering with, infringing upon, misappropriating, diluting, violating or otherwise acting in conflict with any Seller Intellectual Property, or engaging in any act of unlawful use or unfair competition, or has done any of the foregoing and, to the Knowledge of Seller, no Person is interfering with, infringing upon, misappropriating, diluting, violating or otherwise acting in conflict with any Seller Intellectual Property.

(f) There is no Intellectual Property developed by any shareholder, director, officer, consultant or employee of Seller that is used by the Business and that has not been transferred to Seller, or is not owned by Seller free and clear of any Encumbrances, other than Permitted Encumbrances.

(g) Seller has taken all necessary action, including the payment of maintenance and renewal fees (excluding deferral fees) due and owing prior to the date of this Agreement, in all appropriate jurisdictions to register and maintain the registration or to otherwise preserve the proprietary nature of all of the Owned Intellectual Property, except for such actions that would not have a Material Adverse Effect.

4.7 Agreements, Contracts and Commitments; Certain Other Agreements . Set forth on Schedule 4.7 is a true, correct and complete list of the Contracts currently in force relating to the Business or any of the Purchased Assets to which Seller is a party or under which Seller has continuing Liabilities (collectively, the " Material Contracts "), excluding this Agreement, but including without limitation:

(a) Contracts that were not entered into in the Ordinary Course of Business;

(b) Contracts granting any Person an Encumbrance on all or any part of any of the Purchased Assets;

(c) joint venture, partnership or other similar Contracts entitling any Person to any profits, revenues or cash flows of Seller or requiring payments or other distributions based on such profits, revenues or cash flows;

(d) Contracts with any customers, vendors, suppliers or distributors;

(e) Contracts with any Affiliated Party;

(f) Contracts that: (A) limit or restrict Seller or any of its Affiliates from engaging in any business or other activity in any jurisdiction; or (B) create or purport to create any exclusive relationship or arrangement;

(g) Contracts for the granting or receiving of a license, sublicense or franchise or under which any Person is obligated to pay or has the right to receive a royalty, license fee, franchise fee or similar payment;

(h) Contracts (A) with respect to Seller Intellectual Property licensed or transferred to any third party or (B) pursuant to which a third party has licensed or transferred any Intellectual Property to Seller (in the case of both (A) and (B), except for off the shelf software and licenses implied in the sale of such software);

(i) Contracts with any Governmental Body; and

(j) Contracts (other than those described in clauses (a) through (i) of this Section 4.7) to which Seller is a party or by which any of its properties or assets are bound that is material to Seller or the Business.

4.8 Governmental Authorizations . Set forth on Schedule 4.8 is, to Seller's Knowledge, a true, complete and correct list of all of the material Governmental Authorizations that are necessary for the operation of the Business as currently conducted and the ownership of the Purchased Assets (collectively, the " Material Governmental Authorizations "). To Seller's Knowledge, all Material Governmental Authorizations are valid and in full force and effect and, to Seller's Knowledge, there exists no threatened suspension, cancellation or invalidation of any Material Governmental Authorization. Seller is in compliance with its obligations under each of the Material Governmental Authorizations and the rules and regulations of the Governmental Body issuing such Material Governmental Authorizations, and no condition exists that (with or without notice or lapse of time or both) would constitute a default under, or a violation of, any Material Governmental Authorization.

4.9 Brokers and Finders . Except as set forth on Schedule 4.9 , no Person has acted, directly or indirectly, as a broker, finder or financial advisor for Seller in connection with the transactions contemplated by this Agreement and Purchaser is not or will not become obligated to pay any fee or commission or like payment to any broker, finder or financial advisor as a result of the consummation of the transactions contemplated by this Agreement based upon any arrangement made by or on behalf of Seller or any of its Affiliates.

4.10 Title to Purchased Assets; Condition of Assets .

(a) Except as set forth on Schedule 4.10(a) , (i) Seller owns good and valid title to all of the Purchased Assets, free and clear of any and all Encumbrances other than Permitted Encumbrances and (ii) no Purchased Assets are the subject of any Action (except for Actions in order to prosecute pending applications for registration of Owned Intellectual Property and the adversary proceeding in the United States Bankruptcy Court for the District of Maryland captioned Correlogic Systems, Inc. v. Quest Diagnostics et al.). Except as set forth on Schedule 4.10(a) , Seller has and shall convey to Purchaser at the Closing good, valid,

transferable and marketable title to, or valid leasehold interests in, all of the Purchased Assets, free and clear of all Encumbrances, except for Permitted Encumbrances.

(b) Each of the Purchased Assets is in good operating condition and repair, reasonable wear and tear excepted, and is capable of being used in the Ordinary Course of Business in the manner necessary to operate the Business. Without limiting the generality of the foregoing or of Section 4.3(c) , each of the Samples was collected, stored, tested and maintained at all times in accordance with all Laws, Company standards and procedures as set forth in the Documents and disclosed to Purchaser, and industry best practice.

4.11 Affiliate Matters . Except as set forth on Schedule 4.11 , at any time since Seller's inception, no Affiliated Party (a) has had any direct or indirect interest in any asset used in or otherwise relating to the Business, (b) has competed, directly or indirectly, with the Business, (c) has entered into, or has had any direct or indirect financial interest in, any transaction or business dealing involving the Business, or (d) has any claim or right against Seller.

4.12 Absence of Undisclosed Liabilities . Except as set forth on Schedule 4.12 , there are no Liabilities with respect to the Business, except (i) Liabilities reflected on the liabilities side of the Most Recent Balance Sheet, (ii) Liabilities that have arisen after the date of the Most Recent Balance Sheet in the Ordinary Course of Business or otherwise in accordance with the terms and conditions of this Agreement and (iii) Liabilities that are or will be Excluded Liabilities.

4.13 Full Disclosure . Neither this Agreement nor any Schedule (i) contains any representation, warranty or information that is false or misleading with respect to any material fact, or (ii) omits to state any material fact necessary in order to make the representations, warranties and information contained herein and therein, in the light of the circumstances under which such representations, warranties and information were or will be made or provided, not false or misleading.

ARTICLE V.

REPRESENTATIONS AND WARRANTIES OF PURCHASER

Purchaser hereby represents and warrants to Seller as follows:

5.1 Organization and Qualification . Purchaser is duly organized, validly existing and in good standing under the Laws of its jurisdiction of organization. Purchaser is duly qualified or registered as a foreign entity to transact business, and is in good standing under the Laws of the jurisdiction where the character of its activities or the location of the properties owned, leased or operated by it requires such qualification or registration, except where the failure to be so qualified or registered would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Purchaser's ability to consummate the transactions contemplated hereby. Purchaser has all requisite power and authority to own, lease and operate its properties and to carry on its business as it is now being conducted, except as would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Purchaser's ability to consummate the transactions contemplated hereby.

5.2 Authority . Purchaser has the requisite power and authority to execute and deliver this Agreement and each of the Ancillary Documents to which it is a party, to perform its obligations hereunder and thereunder, to consummate the transactions contemplated hereby and thereby and to assume and perform the Assumed Liabilities. The execution and delivery of this Agreement by Purchaser and each of the Ancillary Documents to which it is a party, the performance by Purchaser of its obligations hereunder and thereunder, the consummation of the transactions contemplated hereby and thereby and the assumption and performance of the Assumed Liabilities have been duly and validly authorized by all necessary action on the part of Purchaser. This Agreement has been, and at or prior to the Closing, each of the Ancillary Documents to which it is a party will be, duly and validly executed and delivered by Purchaser. Assuming the due authorization, execution and delivery of this Agreement and the Ancillary Documents by Seller and subject to the effectiveness of the Sale Order, this Agreement constitutes, and each Ancillary Document to which Purchaser is a party when so executed and delivered will constitute, legal, valid and binding obligations of Purchaser, enforceable against Purchaser in accordance with its terms.

5.3 Conflicts; Consents .

(a) Except as set forth on Schedule 5.3(a) , the execution, delivery and performance by Purchaser of this Agreement or any Ancillary Document to which it is a party, the compliance by Purchaser with any of the provisions hereof or thereof, the consummation of the transactions contemplated hereby or thereby and the taking by Purchaser of any other action contemplated hereby or thereby, do not and will not (i) contravene, violate or conflict with any term or provision of its organizational documents, (ii) contravene, violate or conflict with any order, writ, injunction, judgment or decree applicable to Purchaser or any of its properties or assets, (iii) contravene, violate or conflict with any Law applicable to Purchaser, other than, in the case of clauses (ii) and (iii), any such contravention, violation, conflict, creation, imposition or affect that would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Purchaser's ability to perform its obligations under this Agreement and the Ancillary Documents to which it is a party, to assume and perform the Assumed Liabilities or to consummate on a timely basis the transactions contemplated hereby.

(b) Except as set forth on Schedule 5.3(b) , no consent, waiver, approval, order or authorization of, or registration, qualification, designation or filing with any Person or Governmental Body is required in connection with the execution, delivery and performance by Purchaser of this Agreement or the Ancillary Documents to which it is a party, the performance by Purchaser with its obligations hereunder or thereunder, the consummation of the transactions contemplated hereby or thereby, the assumption and performance of the Assumed Liabilities or the taking by Purchaser of any other action contemplated hereby or thereby, other than such filings, notices or consents, the failure of which to make or obtain would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Purchaser's ability to perform its obligations under this Agreement and the Ancillary Documents to which it is a party, to assume and perform the Assumed Liabilities or to consummate on a timely basis the transactions contemplated hereby or thereby.

5.4 Financing . Purchaser has sufficient funds, in an aggregate amount necessary to pay the Purchase Price and to consummate the other transactions contemplated by this Agreement and the Ancillary Documents to which it is a party.

5.5 Brokers . No Person has acted, directly or indirectly, as a broker, finder or financial advisor for Purchaser in connection with the transactions contemplated by this Agreement and Seller is not or will not become obligated to pay any fee or commission or like payment to any broker, finder or financial advisor as a result of the consummation of the transactions contemplated by this Agreement based upon any arrangement made by or on behalf of Purchaser or any of its Affiliates.

ARTICLE VI.

BANKRUPTCY COURT MATTERS

6.1 Sale Motion and Section 365(n) Motion; Non-Solicitation . No later than one (1) day after the Agreement Date, Seller shall file with the Bankruptcy Court applications or motions seeking approval of the Sale Order, the Section 365(n) Order and the transactions contemplated in this Agreement, which shall be acceptable to Purchaser in form and substance in Purchaser's sole discretion. Seller shall promptly serve true and correct copies of the Sale Motion and all related pleadings in accordance with the Bankruptcy Code, the Federal Rules of Bankruptcy Procedure, the Local Rules for the United States Bankruptcy Court for the District of Maryland and any other applicable order of the Bankruptcy Court. From the date of execution of this Agreement by Seller through the entry of the Sale Order, Seller shall not solicit or negotiate with respect to other offers to purchase the Purchased Assets or propose any plan of reorganization or plan of liquidation to retain or dispose of the Purchased Assets.

6.2 Sale Order . The Sale Order shall be entered by the Bankruptcy Court. The Sale Order shall be acceptable to Purchaser in form and substance in Purchaser's sole discretion, and shall, among other things, (i) approve, pursuant to Sections 105 and 363 of the Bankruptcy Code, (A) the execution, delivery and performance by Seller of this Agreement, (B) the sale of the Purchased Assets to Purchaser on the terms set forth herein and free and clear of all Encumbrances (other than Encumbrances included in the Assumed Liabilities and Permitted Encumbrances), and (C) the performance by Seller of its obligations under this Agreement; and (ii) find that Purchaser is a "good faith" purchaser within the meaning of Section 363(m) of the Bankruptcy Code, not a successor to Seller, and grant Purchaser the protections of Section 363(m) of the Bankruptcy Code. In the event that the Bankruptcy Court's approval of the Sale Order shall be appealed, Seller shall use reasonable efforts to defend such appeal.

6.3 Section 365(n) Order . The Section 365(n) Order shall be entered by the Bankruptcy Court. The Section 365(n) Order shall be acceptable to Purchaser in form and substance in Purchaser's sole discretion, and shall, among other things, (i) declare that LabCorp's and Quest's rights in or to any Licensed Technology (as defined in the License Agreements) are limited to the Licensed Technology that existed immediately before the Petition Date; (ii) Quest and LabCorp do not have, any license or any other rights in or to any improvement, enhancement, derivative work, modification, variation, new version, new release, upgrade, and update (collectively, " Improvement ") to or of any Licensed Technology to the

extent the Improvement is developed by or for Seller or any successor or assignee of Seller on or after the Petition Date; and (iii) grant to Seller such further relief as is just and appropriate under the circumstances. In the event that the Bankruptcy Court's approval of the Section 365(n) Order shall be appealed, Seller shall use reasonable efforts to defend such appeal.

ARTICLE VII.

COVENANTS AND AGREEMENTS

7.1 Conduct of Business of Seller . During the Pre-Closing Period, except (a) for any limitations on operations imposed by the Bankruptcy Court or the Bankruptcy Code, (b) as required by applicable Law, (c) as otherwise expressly contemplated by this Agreement or as set forth on Schedule 7.1 or (d) with the prior written consent of Purchaser, Seller shall:

(i) conduct the Business and operate and maintain the Purchased Assets in the Ordinary Course of Business, and without limiting the generality of the foregoing, will store and maintain all of the Samples at all times in accordance with all Laws, Company standards and procedures as set forth in the Documents and disclosed to Purchaser, and industry best practice;

(ii) use its commercially reasonable efforts to preserve the goodwill of and relationships with Governmental Bodies, customers, suppliers, vendors, lessors, licensors, licensees, contractors, distributors, agents, Employees and others having business dealings with the Business;

(iii) comply with all applicable Laws;

(iv) maintain in full force and effect policies of insurance comparable in amount and scope of coverage to that maintained as of the Agreement Date by or on its behalf;

(v) maintain the books of account and records of the Business as conducted by it in the Ordinary Course of Business and consistent with past practices;

(vi) not mortgage, pledge or subject to any Encumbrance (other than a Permitted Encumbrance) the Business or any of the Purchased Assets;

(vii) not sell, assign, license, transfer, convey, lease, surrender, relinquish or otherwise dispose of any of the Purchased Assets;

(viii) not cancel or compromise any material claim or waive or release any material right of Seller that constitutes a Purchased Asset or otherwise relates to the Business without the consent of the Purchaser, which consent shall be unreasonably withheld;

(ix) not enter into, renew, cancel, terminate, amend, modify, supplement, rescind or breach any Material Contract or any term of any Material

Contract, or waive, release or assign any material rights or claims thereunder (in each case, in a manner adverse to Seller or the Business);

(x) not make or rescind any material Tax election or take any material Tax position (unless required by Law) or file any amended Tax Return or change its fiscal year or financial or Tax accounting methods, policies or practices, or settle any Tax Liability, except in each case as would not reasonably be expected to result in Liability to Purchaser or the Business;

(xi) not settle or compromise any Action related to or in connection with the Business, the Purchased Assets or any Assumed Liability;

(xii) not (A) take any action that reasonably jeopardizes the validity of or results in the revocation, surrender or forfeiture of, any of the Material Governmental Authorizations, (B) fail to use commercially reasonable efforts to prosecute with due diligence any pending applications with respect to the Material Governmental Authorizations, or (C) fail to initiate appropriate steps to renew any Material Governmental Authorizations held by Seller that are scheduled to terminate prior to or within ninety (90) days after the Closing;

(xiii) not transfer, assign or abandon or grant any rights or modify any existing rights under or with respect to any Seller Intellectual Property other than in the Ordinary Course of Business; and

(xiv) not authorize, or commit or agree to take, any of the actions set forth in clauses (vi) through (xiii).

7.2 Delivery of Purchased Assets . Seller shall deliver to Purchaser at Purchaser's expense, the Purchased Assets, including without limitation the Samples, in accordance with all Laws, Company standards and procedures as set forth in the Documents and disclosed to Purchaser, and industry best practice, and subject to reasonable written requests and instructions from Purchaser.

7.3 Purchased Names . Within two (2) Business Days following the Closing Date, Seller shall cease using the Purchased Names, except as otherwise required for purposes of the Bankruptcy Case and the related winding-down and dissolution of the Seller. In connection with enabling Purchaser at or as soon as practicable following the Closing to use the Purchased Names, Seller shall, at or prior to the Closing, execute and deliver to Purchaser all consents related to such change of name as may be reasonably requested by Purchaser, and shall otherwise cooperate with Purchaser.

7.4 Access to Information .

(a) Seller agrees that, between the Agreement Date and the earlier of the Closing Date and the date on which this Agreement is terminated in accordance with Section 3.4 , Purchaser shall be entitled, through its officers, employees, legal counsel, accountants and other authorized representatives, agents and contractors (" Representatives "), to have such reasonable access to and make such reasonable investigation and examination of the books and records,

properties, businesses, assets, Employees, officers, directors, accountants, auditors, counsel and operations of Seller related to the Business and the Purchased Assets as Purchaser's Representatives may reasonably request, including access to the real property owned, leased or operated by or for Seller. Any such investigations and examinations shall be conducted during regular business hours upon reasonable advance notice and under reasonable circumstances. Pursuant to this Section 7.4 , Seller shall furnish to Purchaser and its Representatives such financial, technical, operating and property related data and other information as such Persons reasonably request. Seller shall use commercially reasonable efforts to cause its Representatives to reasonably cooperate with Purchaser and Purchaser's Representatives in connection with such investigations and examinations, and Purchaser shall, and use its commercially reasonably efforts to cause its Representatives to, reasonably cooperate with Seller and its Representatives, and shall use its commercially reasonable efforts to minimize any disruption to the Business.

(b) From and after the Closing Date, Seller shall give Purchaser and Purchaser's Representatives reasonable access during normal business hours to the offices, facilities, plants, properties, assets, Employees, officers, directors, Documents (including any Documents included in the Excluded Assets), personnel files and books and records of Seller pertaining to the Business and the Purchased Assets. In connection with the foregoing, Seller shall use commercially reasonable efforts to cause its Representatives to furnish to Purchaser such financial, technical, operating and other information pertaining to the Business as Purchaser's Representatives shall from time to time reasonably request and to discuss such information with such Representatives. Without limiting the generality of the foregoing, Seller shall, and shall use commercially reasonable efforts to cause its Employees, officers, directors and Affiliates to, cooperate with Purchaser as may reasonably be requested by Purchaser for purposes of (i) enabling an independent accounting firm selected by Purchaser to conduct an audit of the Business, including access to Seller's independent auditors' working papers pertaining to the Business or the Purchased Assets (including any environmental assessment); (ii) undertaking, with the consent of Seller, which consent shall not be unreasonably withheld or delayed, any study of the condition or value of the Purchased Assets; (iii) undertaking any study relating to Seller's compliance with Laws; and (iv) having consultations and discussions regarding the Purchased Assets and the Business upon Purchaser's request. Seller acknowledges that information or access may be requested and used for such purposes.

(c) No information received pursuant to any investigation or examination made under this Section 7.4 shall be deemed to (i) qualify, modify, amend or otherwise affect any representations, warranties, covenants or other agreements of Seller set forth in this Agreement or any Ancillary Document, (ii) amend or otherwise supplement the information set forth in any Schedule provided by Seller, (iii) limit or restrict the remedies available to Purchaser under applicable Law arising out of a breach by Seller of this Agreement or otherwise available at Law or in equity, or (iv) limit or restrict the ability of Purchaser to invoke or rely on the conditions to the obligations of Purchaser to consummate the transactions contemplated by this Agreement set forth in ARTICLE VIII .

7.5 Reasonable Efforts; Cooperation .

(a) Subject to the other provisions hereof, each Party shall use reasonable efforts to perform its obligations hereunder and to take, or cause to be taken, and do, or cause to

be done, all things necessary, proper or advisable under applicable Law to cause the transactions contemplated herein to be effected as soon as practicable, but in any event on or prior to the Outside Date, in accordance with the terms hereof and shall cooperate fully with each other Party and its Representatives in connection with any step required to be taken as a part of its obligations hereunder, including the following:

(i) each Party shall promptly make its filings and submissions and shall take all actions necessary, proper or advisable under applicable Laws to obtain any required approval of any Governmental Body with jurisdiction over the transactions contemplated hereby (except that Purchaser shall have no obligation to take or consent to the taking of any action required by any such Governmental Body that could adversely affect the Business, the Purchased Assets or the transactions contemplated by this Agreement or the Ancillary Documents); Seller shall furnish to Purchaser all information required for any application or other filing to be made by Seller pursuant to any applicable Law in connection with the transactions contemplated hereby;

(ii) each Party shall promptly notify the other Parties of (and provide written copies of) any communications from or with any Governmental Body in connection with the transactions contemplated hereby;

(iii) in the event any Action is commenced that questions the validity or legality of the transactions contemplated hereby or seeks damages in connection therewith, the Parties shall (A) cooperate and use commercially reasonable efforts to defend against such Action, (B) in the event an injunction or other order is issued in any such Action, use commercially reasonable efforts to have such injunction or other order lifted and (C) cooperate reasonably regarding any other impediment to the consummation of the transactions contemplated hereby; and

(iv) Seller shall give all notices to third parties and use its best efforts (in consultation with Purchaser) to obtain all third-party consents (A) necessary, proper or advisable to consummate the transactions contemplated hereby, (B) required to be given or obtained, or (C) required to prevent a Material Adverse Effect, whether prior to, on or following the Closing Date.

(b) In the event that any of the Parties to this Agreement discovers a Contract related to the Business, the Purchased Assets or the Assumed Liabilities during the period from and after the Agreement Date, and such Contract (i) was unknown as of the Agreement Date and (ii) is a Contract that Purchaser wishes to assume the rights and obligations of, Purchaser and Seller shall execute, acknowledge and deliver such other instruments and take such further actions as are reasonably practicable for Purchaser to assume the rights and obligations under such Contract.

7.6 Further Assurances .

(a) Each Party shall execute and cause to be delivered to each other Party such instruments and other documents, and shall take such other actions, as such other Party may reasonably request (prior to, at or after the Closing) for the purpose of carrying out or evidencing

any of the transactions contemplated by this Agreement, including without limitation any such documents necessary or advisable to validly transfer and assign to Purchaser the Seller Intellectual Property.

(b) Purchaser authorizes and empowers Seller from and after the Closing Date to receive and to open all mail received by Seller relating to the Purchased Assets, the Business or the Assumed Liabilities and to deal with the contents of such communications in accordance with the provisions of this Section 7.6(b) . Seller shall (i) promptly deliver to Purchaser any mail or other communication received by it after the Closing Date and relating to the Purchased Assets, the Business or the Assumed Liabilities, (ii) promptly transfer in immediately available funds to Purchaser any cash, electronic credit or deposit received by Seller but solely to the extent that such cash, electronic credit or deposit are Purchased Assets and (iii) promptly forward to Purchaser any checks or other instruments of payment that it receives but solely to the extent that such checks or other instruments are Purchased Assets. Purchaser shall (x) promptly deliver to Seller any mail or other communication received by it after the Closing Date and relating to the Excluded Assets or the Excluded Liabilities, (y) promptly transfer funds to Seller, any cash, electronic credit or deposit received by Purchaser but solely to the extent that such cash, electronic credit or deposit are Excluded Assets and (z) promptly forward to Seller any checks or other instruments of payment that it receives but solely to the extent that such checks or other instruments are Excluded Assets. From and after the Closing Date, Seller shall refer all inquiries with respect to the Business, the Purchased Assets and the Assumed Liabilities to Purchaser, and Purchaser shall refer all inquiries with respect to the Excluded Assets and the Excluded Liabilities to Seller.

7.7 Preservation of Records . Seller and Purchaser agree that each of them shall preserve and keep the records held by them or their Affiliates relating to the Business, the Purchased Assets and Assumed Liabilities for a period of two (2) years from the Closing Date, in the case of Purchaser, and until the closing of the Bankruptcy Case or the liquidation and winding up of Seller's estates, in the case of Seller, and shall make such records available to the other Party as may be reasonably requested by such other Party in connection with, among other things, any insurance claims by, Actions or Tax audits against or governmental investigations of Seller or Purchaser or any of their respective Affiliates, or in order to enable Seller or Purchaser to comply with their respective obligations under this Agreement or any Ancillary Document and the transactions contemplated hereby and thereby. In the event Seller or Purchaser wishes to destroy such records at the end of any such period, such Party shall first give sixty (60) days prior written notice to the other Party and such other Party shall have the right at its option and expense, upon prior written notice given to such Party within such sixty (60) day period, to take possession of the records within one hundred and twenty (120) days after the date of such notice, or such shorter period as the liquidation and winding up of Seller's estates shall permit.

7.8 Publicity . During the Pre-Closing Period, (a) Seller shall not (and Seller shall not permit any of its Representatives to) issue any press release or make any public statement regarding this Agreement, or regarding any of the transactions contemplated by this Agreement, without Purchaser's prior written consent; and (b) Purchaser will use commercially reasonable efforts to consult with Seller prior to issuing any press release or making any public statement regarding the transactions contemplated by this Agreement; provided , however , that nothing herein shall be deemed to prohibit Purchaser from making any public disclosure that Purchaser

deems necessary or appropriate under applicable Law, the regulations of any securities exchange, or by the Bankruptcy Court with respect to filings to be made with the Bankruptcy Court in connection with this Agreement; provided , further , that except as otherwise provided herein, without the prior written consent of Purchaser, Seller shall not, except as necessary and appropriate under applicable Law, the regulations of any securities exchange, or by the Bankruptcy Court, at any time disclose to any Person the fact that this Agreement has been entered into or any of the terms of this Agreement other than to such Parties' Representatives who Seller reasonably determines need to know such information for the purpose of advising Seller, it being understood that such Representatives will be informed of the confidential nature of this Agreement and the terms of this Agreement and will be directed to treat such information as confidential in accordance with the terms of this Agreement; provided , further , that, subject to Purchaser's written consent, nothing herein shall be deemed to prohibit Seller from making any disclosure in the Sale Motion that Seller deems necessary or appropriate.

7.9 Communication with Customers and Certain Other Parties . Seller and Purchaser shall send a joint letter to Seller's customers, in form and substance reasonably satisfactory to Purchaser, at a mutually satisfactory time after the Bankruptcy Court's entry of the Sale Order, which shall include, but not be limited to, advising such customers about the existence of (but not the terms of) this Agreement and the pending transfer of the customers' account(s) from Seller to Purchaser. In addition, Purchaser shall, with the prior consent of Seller, which consent shall not be unreasonably withheld or delayed, have the right to contact and negotiate directly with Seller's joint ventures and other partners and lenders with respect to any Purchased Assets or Assumed Liabilities. Seller shall have the right to participate in such negotiations and agree to cooperate with Purchaser, at Purchaser's request, in any such negotiations.

7.10 Notification of Certain Matters . Seller shall give prompt notice to Purchaser, and Purchaser shall give prompt notice to Seller, of (i) any notice or other communication from any Person alleging that the consent of such Person which is or may be required in connection with the transactions contemplated by this Agreement or the Ancillary Documents is not likely to be obtained prior to Closing, (ii) any written objection or proceeding that challenges the transactions contemplated hereby or the entry of the approval of the Bankruptcy Court and (iii) the status of matters relating to the completion of the transactions contemplated hereby, including promptly furnishing the other with copies of notices or other communications received by Seller or Purchaser or by any of their respective Affiliates (as the case may be), from any third party and/or any Governmental Body with respect to the transactions contemplated by this Agreement. To the extent permitted by applicable Law, Seller shall give prompt notice to Purchaser of (x) any notice of any alleged violation of Law applicable to Seller, (y) the commencement of any Action by any Governmental Body with respect to the Business or that any such Action, to the Knowledge of Seller, is contemplated, and (z) the infringement or unauthorized use by any Person of any material Intellectual Property (of which Seller has Knowledge).

7.11 Transfer Taxes . All sales, transfer, filing, recordation, registration, documentary, stamp, and similar Taxes and fees (" Transfer Taxes ") arising from or associated with the transactions contemplated hereunder, whether levied on Purchaser or Seller, shall be borne by Purchaser, unless waived pursuant to an order of the Bankruptcy Court.

7.12 Non-Competition .

(a) Background . The Parties agree that (i) it would be detrimental to Purchaser if Seller, directly or indirectly, were to engage in business in the field of the Business, particularly while it is in possession of and has knowledge of confidential and proprietary information with respect thereto; and (ii) the rights and restrictions set forth in this Section 7.12 are a condition precedent and a necessary and material inducement to Purchaser's entry into this Agreement and the Ancillary Documents and the transactions contemplated hereby and thereby, including without limitation payment of the Purchase Price hereunder.

(b) Non-Competition . Except as otherwise explicitly permitted by the last sentence of this Section 7.12(b) , from the Closing Date and continuing for a period of ten (10) years thereafter (the " Non-Compete Term "), Seller will not, either directly or indirectly, itself or by or through any Affiliate, acquire, lease, manage, consult for, provide services to, serve as agent or subcontractor for, finance, invest in (whether through debt or equity securities or otherwise), own any part of, exercise management control over be employed by, participate in, assist, aid or advise in any way, any business or enterprise that engages in or competes with the Business in the Non-Compete Territory. Notwithstanding the foregoing, nothing contained in this Section 7.12(b) prohibits Seller or Affiliates of Seller from owning in the aggregate less than one percent (1%) of any class of voting securities registered under the Securities Act and quoted on a national securities exchange or inter-dealer quotation system. This non-competition provision shall not be construed in any way whatsoever as a non-competition agreement between Purchaser and Seller's employees, former employees, principals, officers and/or directors. For the avoidance of doubt, Seller's employees, former employees, principals, officers and/or directors shall not, under any circumstances, be subject to or bound by any non-competition agreement due solely to Seller's entry into and performance under this Agreement.

(c) Tolling . In the event of the breach by Seller of Section 7.12(b) , the running of the Non-Compete Term shall be automatically tolled and suspended for the amount of time that the breach continues, and shall automatically recommence when the breach is remedied so that Purchaser shall receive the benefit of Seller's compliance with Section 7.12(b) for the full duration of the Non-Compete Term.

(d) Injunctive Relief . Seller agrees and acknowledges that Purchaser has a valid and legitimate business interest in protecting the Business in the Non-Compete Territory from any activity prohibited by this Section 7.12 . Seller acknowledges that Seller's expertise in the Business is of a special and unique character which gives this expertise a particular value, and that a breach of Section 7.12 by Seller will cause serious and potentially irreparable harm to Purchaser. Seller therefore acknowledges that a breach of Section 7.12 of this Agreement cannot be adequately compensated in an action for damages at law, and equitable relief would be necessary to protect Purchaser from a violation of this Section 7.12 and from the harm which this Section 7.12 is intended to prevent. By reason thereof, Seller acknowledges that Purchaser is entitled, in addition to any other remedies it may have under this Agreement or otherwise, to preliminary and permanent injunctive and other equitable relief to prevent or curtail any breach of this Section 7.12 without any requirement to post bond. Seller acknowledges, however, that no specification in this Agreement of a particular legal or equitable remedy may be construed as a waiver of, or prohibition against, pursuing other legal or equitable remedies in the event of a breach of this Agreement by Seller.

ARTICLE VIII.

CONDITIONS TO CLOSING

8.1 Conditions Precedent to the Obligations of Purchaser and Seller . The respective obligations of each Party to this Agreement to consummate the transactions contemplated by this Agreement are subject to the satisfaction (or to the extent permitted by Law, written waiver by Seller and Purchaser) on or prior to the Closing Date, of each of the following conditions:

(a) there shall not be in effect any order, writ, injunction, judgment or decree entered by a Governmental Body of competent jurisdiction, or any Law preventing, enjoining, restraining, making illegal or otherwise prohibiting the consummation of the transactions contemplated by this Agreement or the Ancillary Documents; and

(b) the Bankruptcy Court shall have entered the Sale Order and the Section 365(n) Order (as provided in ARTICLE VI) and each of such orders shall be a Final Order and in form and substance reasonably satisfactory to Purchaser in its sole discretion, which orders shall not have been reversed, modified, amended or stayed.

8.2 Conditions Precedent to the Obligations of Seller . The obligations of Seller to consummate the transactions contemplated by this Agreement are subject to the fulfillment, on or prior to the Closing Date, of each of the following conditions, any of which may be waived in writing by Seller in its sole discretion:

(a) the representations and warranties made by Purchaser in this Agreement or in any Ancillary Document shall be true and correct in all material respects (without giving effect to any materiality or similar qualification contained therein), in each case as of the Agreement Date and as of the Closing Date, with the same force and effect as though all such representations and warranties had been made as of the Closing Date (other than representations and warranties that by their terms address matters only as of another specified date, which shall be so true and correct only as of such other specified date), except where the failure of such representations or warranties to be so true and correct has not had, and would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on Purchaser's ability to consummate the transactions contemplated hereby;

(b) Purchaser shall have performed and complied in all material respects with all obligations and agreements required by this Agreement to be performed or complied with by Purchaser on or prior to the Closing Date; and

(c) Purchaser shall have delivered, or caused to be delivered, to Seller all of the items set forth in Section 3.3 .

8.3 Conditions Precedent to the Obligations of Purchaser . The obligations of Purchaser to consummate the transactions contemplated by this Agreement are subject to the fulfillment, on or prior to the Closing Date, of each of the following conditions, any of which may be waived in writing by Purchaser in its sole discretion:

(a) Seller shall have delivered to Purchaser (i) a certified copy of the Sale Order (which shall contain the terms described in Section 6.2) and (ii) copies of all affidavits of service of the Sale Motion or notice of such motion filed by or on behalf of Seller (which service shall comply with Section 6.1);

(b) Seller shall have delivered to Purchaser a certified copy of the Section 365(n) Order (which shall contain the terms described in Section 6.3) and (ii) copies of all affidavits of service of the Section 365(n) Motion or notice of such motion filed by or on behalf of Seller (which service shall comply with Section 6.1);

(c) the representations and warranties made by Seller in this Agreement or in any Ancillary Document shall be true and correct in all material respects (provided that any such representation or warranty that is subject to any materiality, Material Adverse Effect or similar qualification shall be true and correct in all respects after giving effect to any such qualification), in each case as of the Agreement Date and as of the Closing Date, with the same force and effect as though all such representations and warranties had been made as of the Closing Date (other than representations and warranties that by their terms address matters only as of another specified date, which shall be so true and correct only as of such other specified date);

(d) Seller shall have performed and complied in all material respects with all obligations and agreements required in this Agreement to be performed or complied with by them on or prior to the Closing Date;

(e) Seller shall have delivered, or caused to be delivered, to Purchaser all of the items set forth in Section 3.2 ;

(f) all of the Material Governmental Authorizations shall be in full force and effect as necessary for Purchaser to continue to conduct the Business in the Ordinary Course of Business immediately after the Closing Date; and

(g) since the Agreement Date, there shall not have occurred a Material Adverse Effect.

ARTICLE IX.

DEFINED TERMS

9.1 Defined Terms . As used herein:

(a) " Action " means any action, claim, complaint, grievance, summons, suit, litigation, arbitration, mediation, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), prosecution, contest, hearing, inquiry, inquest, audit, examination or investigation by or before any Governmental Body.

(b) " Affiliate " means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, such Person, and the term "control" (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to

direct or cause the direction of the management and policies of such Person, whether through ownership of voting securities, by Contract or otherwise.

(c) " Affiliated Party " means: (i) each individual who is, or who has at any time been, an officer or director of Seller; (ii) each member of the immediate family of each of the individuals referred to in clause (i) above; and (iii) any trust or other Person (other than Seller) in which any one of the individuals referred to in clauses (i) and (ii) above holds (or in which more than one of such individuals collectively hold), beneficially or otherwise, a material voting, proprietary, equity or other financial interest.

(d) " Agreement " shall have the meaning set forth in the preamble.

(e) " Agreement Date " shall have the meaning set forth in the preamble.

(f) " Allocation " shall have the meaning set forth in Section 10.2 .

(g) " Alternative Transaction " means (i) the approval by the Bankruptcy Court of a sale or sales of a material portion of the Purchased Assets to a Person other than Purchaser, and (ii) the filing of a plan of reorganization that does not contemplate the sale of the Purchased Assets to Purchaser in accordance with the terms hereof.

(h) " Ancillary Documents " means any certificate, agreement, document or other instrument (other than this Agreement) to be executed and delivered by a Party in connection with the consummation of the transactions contemplated this Agreement.

(i) " Assumed Liabilities " shall have the meaning set forth in Section 1.3 .

(j) " Bankruptcy Code " shall have the meaning set forth in the Recitals.

(k) " Bankruptcy Court " shall have the meaning set forth in the Recitals.

(l) " Business " shall have the meaning set forth in the Recitals.

(m) " Business Day " means any day other than a Saturday, Sunday or other day on which banks in New York City, New York are authorized or required by Law to be closed.

(n) " Bankruptcy Case " shall have the meaning set forth in the Recitals.

(o) " Claim " has the meaning given that term in Section 101(5) of the Bankruptcy Code and includes, *inter alia* , all rights, claims, causes of action, defenses, debts, demands, damages, offset rights, setoff rights, recoupment right, obligations, and liabilities of any kind or nature under contract, at law or in equity, known or unknown, contingent or matured, liquidated or unliquidated, and all rights and remedies with respect thereto.

(p) " Closing " shall have the meaning set forth in Section 3.1 .

(q) " Closing Date " means the date on which the Closing occurs.

(r) " Code " means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder, as the same may be in effect from time to time.

(s) " Contract " means any written or oral contract, purchase order, service order, sales order, indenture, note, bond, lease, sublease, license, understanding, instrument or other agreement, arrangement or commitment that is binding upon a Person or its property, whether express or implied.

(t) " Documents " means, in each case with respect to the Purchased Assets and the Business, all of Seller's written files, documents, instruments, papers, books, reports, records, tapes, microfilms, photographs, letters, budgets, forecasts, plans, operating records, safety and environmental reports, data (including clinical and statistical data and information, primary source data and case report forms), studies and documents, ledgers, journals, title policies, customer lists, regulatory filings (including all applications, submissions, approvals, licenses, and authorization applications or notifications, and all amendments, supplements, supporting files, data, studies, and reports relating thereto), operating data and plans, research material, technical documentation (design specifications, engineering information, test results, maintenance schedules, functional requirements, operating instructions, logic manuals, processes, flow charts, etc.), user documentation (installation guides, user manuals, training materials, release notes, working papers, etc.), marketing documentation (sales brochures, flyers, pamphlets, web pages, etc.), and other similar materials, in each case whether or not in electronic form.

(u) " Employee " means an individual who, as of the applicable date, is employed by Seller in connection with the Business.

(v) " Encumbrance " means any lien (as defined in Section 101(37) of the Bankruptcy Code), encumbrance, claim (as defined in Section 101(5) of the Bankruptcy Code), right, demand, charge, mortgage, deed of trust, option, pledge, security interest or similar interests, title defects, hypothecations, easements, rights of way, restrictive covenants, encroachments, rights of first refusal, preemptive rights, judgments, conditional sale or other title retention agreements and other impositions, imperfections or defects of title or restrictions on transfer or use of any nature whatsoever.

(w) " Equipment " means all inventory, supplies, Samples, raw materials and work in progress related to the Business maintained or held by, stored by or on behalf of, or in transit to, Seller (for the sake of clarity, "Equipment" shall not include office furniture, desktop and laptop computers and peripherals, freezers or the nitrogen generator).

(x) " ERISA Affiliate " means any entity which is a member of (A) a controlled group of corporations (as defined in Section 414(b) of the Code), (B) a group of trades or businesses under common control (as defined in Section 414(c) of the Code), (C) an affiliated service group (as defined under Section 414(m) of the Code) or (D) any group specified in regulations under Section 414(o) of the Code, any of which includes or included Seller.

(y) " Excluded Assets " shall have the meaning set forth in Section 1.2 .

(z) " Excluded Liabilities " shall have the meaning set forth in Section 1.4 .

(aa) " Expense Reimbursement " shall have the meaning set forth in Section 3.5(b) .

(bb) " Final Order " means an order or judgment of the Bankruptcy Court or any other court of competent jurisdiction entered by the Clerk of the Bankruptcy Court or such other court on the docket in Seller's Bankruptcy Case or the docket of such other court, which has not been modified, amended, reversed, vacated or stayed and as to which (a) the time to appeal, petition for *certiorari*, or move for a new trial, reargument or rehearing has expired and as to which no appeal, petition for *certiorari* or motion for new trial, reargument or rehearing shall then be pending or (b) if an appeal, writ of *certiorari* new trial, reargument or rehearing thereof has been sought, such order or judgment of the Bankruptcy Court or other court of competent jurisdiction shall have been affirmed by the highest court to which such order was appealed, or *certiorari* shall have been denied, or a new trial, reargument or rehearing shall have been denied or resulted in no modification of such order, and the time to take any further appeal, petition for *certiorari* or move for a new trial, reargument or rehearing shall have expired, as a result of which such order shall have become final in accordance with Rule 8002 of the Federal Rules of Bankruptcy Procedure; provided , that the possibility that a motion under Rule 60 of the Federal Rules of Civil Procedure, or any analogous rule under the Bankruptcy Rules, may be filed relating to such order, shall not cause such order not to be a Final Order.

(cc) " GAAP " means United States generally accepted accounting principles as in effect from time to time.

(dd) " Governmental Authorization " means any: (i) permit, license, certificate, franchise, concession, approval, consent, ratification, permission, clearance, confirmation, endorsement, waiver, certification, designation, rating, registration, qualification or authorization issued, granted, given or otherwise made available by or under the authority of any Governmental Body or pursuant to any Law; or (ii) right under any Contract with any Governmental Body.

(ee) " Governmental Body " means any government, quasi governmental entity, or other governmental or regulatory body, agency or political subdivision thereof of any nature, whether foreign, federal, state or local, or any agency, branch, department, official, entity, instrumentality or authority thereof, or any court or arbitrator (public or private) of applicable jurisdiction.

(ff) " Improvement " shall have the meaning set forth in Section 6.3 .

(gg) " Indebtedness " of any Person means, without duplication, (i) the interest in respect of, principal of and premium (if any) in respect of (x) indebtedness of such Person for money borrowed and (y) indebtedness evidenced by notes, debentures, bonds or other similar instruments for the payment of which such Person is responsible or liable; (ii) all obligations of such Person with respect to any Contracts relating to the deferred and unpaid purchase price of property or services, including any interest accrued thereon and prepayment or similar penalties and expenses; (iii) all obligations of such Person under leases required to be capitalized in

accordance with GAAP; (iv) all obligations of such Person for the reimbursement of any obligor on any letter of credit, banker's acceptance or similar credit transaction; (v) all obligations of the type referred to in clauses (i) through (iv) of any Persons for the payment of which such Person is responsible or liable, directly or indirectly, as obligor, guarantor, surety or otherwise, including guarantees of such obligations; and (vi) all obligations of the type referred to in clauses (i) through (v) of other Persons secured by any Encumbrance (other than Permitted Encumbrances), on any property or asset of such Person (whether or not such obligation is assumed by such Person).

(hh) " Intellectual Property " means and includes all past, present and future intellectual property and proprietary rights of any kind, which may exist or be created under the Laws of any jurisdiction in the world, including the following: (i) trademarks, service marks, trade names, slogans, logos, trade dress, internet domain names, uniform resource identifiers, rights in design, brand names, and other similar designations of source or origin, whether registered, unregistered and/or under common law, together with all goodwill, registrations and applications related to the foregoing, throughout the world; (ii) patents, patent disclosures, utility models, industrial design registrations and certificates of invention and other governmental grants for the protection of inventions or industrial designs (and all continuations, divisionals, continuations in part, provisionals, renewals, reissues, re-examinations, applications and foreign counterparts throughout the world for or related to any of the foregoing); (iii) rights associated with works of authorship, including exclusive exploitation rights, copyrights, moral rights, mask works, database rights, design rights, industrial property rights, publicity rights, privacy rights and other copyrightable subject matter (including any registration and applications for any of the foregoing); (iv) trade secrets and other confidential or proprietary business information; (v) computer software, computer programs, and databases (whether in source code, object code or other form and all documentation relating thereto); (vi) other proprietary rights in Intellectual Property of every kind and nature (including inventions, invention disclosures, statutory invention registrations, manufacturing and production processes and techniques, clinical and statistical data and information, biomarker assays, research and development information, technology, drawings, specifications, designs, plans, proposals, technical data, financial, marketing and business data, pricing and cost information, business and marketing plans, customer and supplier lists and information), know how, proprietary processes, formulae, algorithms, models, and methodologies, whether patentable or non-patentable, whether copyrightable or non-copyrightable and whether or not reduced to practice; and (vii) all rights to sue for past, present and future infringement, misappropriation, dilution or other violation of any of the foregoing and all remedies at law or equity associated therewith.

(ii) " Knowledge " or (" Knowledge of Seller " or " Seller's Knowledge ") means the actual knowledge of Peter J. Levine, Esq. and Ping F. Yip, Ph.D., in each case, including facts of which any such individual should be aware in the reasonably prudent exercise of his or her duties.

(jj) " LabCorp " means Laboratory Corporation of America Holdings, a Delaware corporation.

(kk) " Law " means any federal, state, local, municipal, foreign or international, multinational or other law, statute, constitution, principle of common law, resolution, ordinance,

code, edict, decree, rule, regulation, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body.

(ll) " Liability " means, as to any Person, any debt, adverse claim, liability (including any liability that results from, relates to or arises out of tort or any other product liability claim), duty, responsibility, obligation, commitment, assessment, cost, expense, loss, expenditure, charge, fee, penalty, fine, contribution or premium of any kind or nature whatsoever, whether known or unknown, asserted or unasserted, absolute or contingent, direct or indirect, accrued or unaccrued, liquidated or unliquidated, or due or to become due, and regardless of when sustained, incurred or asserted or when the relevant events occurred or circumstances existed.

(mm) " License Agreements " means, collectively, (i) that certain Technology License and Development Agreement, dated as of October 31, 2002, by and between Quest and Seller, as amended; and (ii) that certain Technology License and Development Agreement, dated as of November 1, 2002, by and between LabCorp and Seller, as amended.

(nn) " Licensed Intellectual Property " means any Intellectual Property that is licensed to Seller, and used, or held for use, in connection with the operation of the Business.

(oo) " Material Adverse Effect " means any event, circumstance, change, occurrence or state of facts that has had, or would reasonably be expected to have, individually or in the aggregate, a material adverse effect on the (i) assets, Liabilities, Business, properties, condition (financial or otherwise) or results of operations of Seller or the Business, taken as a whole, or (ii) the ability of Seller to consummate the transactions contemplated by this Agreement or any Ancillary Document or perform its obligations hereunder or thereunder, provided , however , that in no event shall any of the following be deemed to constitute a Material Adverse Effect: any event, circumstance, change, occurrence or state of facts resulting from (a) changes in the U.S. economy or capital markets in general but that do not have a disproportionate effect on Seller relative to other participants in the industry in which Seller conducts the Business, (b) changes that affect generally the industry in which Seller operates but that do not have a disproportionate effect on Seller relative to other participants in the industry in which Seller conducts the Business, (c) changes after the Agreement Date in any applicable Law or GAAP, or (d) the commencement of the Bankruptcy Case.

(pp) " Material Contract " shall have the meaning set forth in Section 4.7 .

(qq) " Material Governmental Authorizations " shall have the meaning set forth in Section 4.8 .

(rr) " Most Recent Balance Sheet " means the audited balance sheet of Seller, including the notes thereto, for Seller's most recent completed fiscal year.

(ss) " Most Recent United States Trustee Operating Report " means the United States Trustee Operating Report filed in the Bankruptcy Case for the period dated September 1, 2011 through September 30, 2011.

(tt) " Non-Assigned Contracts " means any Contracts to which Seller is a party including the Contracts set forth on Schedule 9.1(tt) .

(uu) " Non-Compete Term " shall have the meaning set forth in Section 7.12(b) .

(vv) " Non-Compete Territory " shall mean the entire world.

(ww) " Ordinary Course of Business " means the ordinary and usual course of normal day to day operations of the Business consistent with past practice.

(xx) " Organizational Documents " shall have the meaning set forth in Section 4.1 .

(yy) " Outside Date " shall have the meaning set forth in Section 3.4(b) .

(zz) " Owned Intellectual Property " means all Intellectual Property owned by Seller, and used, or held for use, in connection with the operation of the Business.

(aaa) " Party " or " Parties " means, individually, Purchaser and Seller and, collectively, Purchaser and Seller.

(bbb) " Permitted Assign " shall have the meaning set forth in Section 11.8 .

(ccc) " Permitted Encumbrances " means (i) Encumbrances for utilities and current Taxes not yet due and payable or being contested in good faith; (ii) easements, rights of way, restrictive covenants, encroachments and similar non-monetary encumbrances or non-monetary impediments against any of the Purchased Assets which do not, individually or in the aggregate, adversely affect the operation of the Business, (iii) applicable zoning Laws, building codes, land use restrictions and other similar restrictions imposed by Law, (iv) materialmans', mechanics', artisans', shippers', warehousemans' or other similar common law or statutory liens incurred in the Ordinary Course of Business, (v) such other Encumbrances or title exceptions as Purchaser may approve in writing in its sole discretion or which do not, individually or in the aggregate, adversely affect the operation of the Business and (vi) Encumbrances arising from the Assumed Liabilities.

(ddd) " Person " means an individual, corporation, partnership, limited liability company, joint venture, association, trust, unincorporated organization, labor union, estate, Governmental Body or other entity or group.

(eee) " Pre-Closing Period " means the period commencing on the Agreement Date and ending on the earlier of the date upon which this Agreement is terminated pursuant to Section 3.4 or the Closing Date.

(fff) " Purchased Assets " shall have the meaning set forth in Section 1.1 .

(ggg) " Purchase Price " shall have the meaning set forth in Section 2.1 .

(hhh) " Purchased Names " means the names "OvaCheck®", "OvaCheck2™" and any derivations thereof.

(iii) " Quest " means Quest Diagnostics Incorporated, a Delaware corporation.

(jjj) " Representatives " shall have the meaning set forth in Section 7.4(a) .

(kkk) " Sale Hearing " means the hearing to approve this Agreement and seeking entry of the Sale Order.

(lll) " Sale Motion " means the motion or motions of Seller, in form and substance reasonably acceptable to Purchaser in its sole discretion, seeking approval and entry of the Sale Order.

(mmm) " Sale Order " means an order substantially in the form attached hereto as Exhibit B and otherwise in form and substance reasonably satisfactory to Purchaser in its sole discretion.

(nnn) " Samples " means all clinical and diagnostic samples (including secreta, blood, tissue and tissue fluids), excluding (i) the breast cancer samples, in whole or in part, leased by Seller from Winber Research Institute and (ii) any and all prostate cancer samples.

(ooo) " Section 365(n) Motion " means the motion or motions of Seller, in form and substance reasonably acceptable to Purchaser in its sole discretion, seeking approval and entry of the Section 365(n) Order.

(ppp) " Section 365(n) Order " means an order substantially in the form attached hereto as Exhibit C and otherwise in form and substance reasonably satisfactory to Purchaser in its sole discretion.

(qqq) " Securities Act " means the Securities Act of 1933, as amended, or any similar successor federal statute and the rules and regulations thereunder, all as the same shall be in effect from time to time.

(rrr) " Seller " shall have the meaning set forth in the preamble.

(sss) " Seller Intellectual Property " means, collectively, the Owned Intellectual Property and the Licensed Intellectual Property.

(ttt) " Seller Plan " means (i) all "employee benefit plans" (as defined in Section 3(3) of ERISA), including all employee benefit plans which are "pension plans" (as defined in Section 3(2) of ERISA) and any other employee benefit arrangements or payroll practices (including severance pay, vacation pay, company awards, salary continuation for disability, sick leave, death benefit, hospitalization, welfare benefit, group or individual health, dental, medical, life, insurance, survivor benefit, deferred compensation, profit sharing, retirement, retiree medical, supplemental retirement, bonus or other incentive compensation, stock purchase, stock option, stock appreciation rights, restricted stock and phantom stock arrangements or policies) and (ii) all material employment, termination, bonus, severance, change in control, collective

bargaining or other similar Contracts to which Seller or any ERISA Affiliate is a party, with respect to which Seller or any ERISA Affiliate has any obligation or which are maintained by Seller or any ERISA Affiliate or to which Seller or an ERISA Affiliate contributes or is obligated to contribute with respect to current or former directors, officers, consultants and Employees of Seller.

(uuu) " Subsidiary " or " Subsidiaries " means, with respect to any Person, any corporation, limited liability company, joint venture or partnership of which such Person (a) beneficially owns, either directly or indirectly, more than fifty percent (50%) of (i) the total combined voting power of all classes of voting securities of such entity, (ii) the total combined equity interests, or (iii) the capital or profit interests, in the case of a partnership; or (b) otherwise has the power to vote or to direct the voting of sufficient securities to elect a majority of the board of directors or similar governing body.

(vvv) " Tax " and " Taxes " mean any and all taxes, charges, fees, tariffs, duties, impositions, levies or other assessments, imposed by any Governmental Body, including any interest, penalties or additional amounts attributable to, or imposed upon, or with respect to, Taxes and any Liability for the Taxes of any other Person as a transferee or successor, by Law, Contract or otherwise.

(www) " Tax Return " means any return, report, information return, declaration, claim for refund or other document (including any schedule or related or supporting information) supplied or required to be supplied to any Governmental Body with respect to Taxes, including amendments thereto.

(xxx) " Transfer Taxes " shall have the meaning set forth in Section 7.11 .

(yyy) " Treasury Regulations " means the temporary and final income Tax regulations, promulgated under the Code.

(zzz) " WARN Act " means the United States Worker Adjustment and Retraining Notification Act, and the rules and regulations promulgated thereunder.

ARTICLE X.

TAXES

10.1 Additional Tax Matters . EACH PARTY PAYS ITS RESPECTIVE TAX LIABILITY TO THE EXTENT THE SALE OF THE PURCHASED ASSETS GIVES RISE TO A TAX LIABILITY. SELLER IS NOT RESPONSIBLE FOR PURCHASER'S TAX LIABILITY AS A RESULT OF THE SALE.

10.2 Allocation of Purchase Price . Purchaser shall determine the allocation of the Purchase Price among the Purchased Assets and the agreements provided for herein, for all purposes (including financial, accounting and tax) (the " Allocation "). Purchaser and Seller shall each report the federal, state and local income and other Tax consequences of the purchase and sale contemplated hereby in a manner consistent with the Allocation, including, if applicable, the preparation and filing of Forms 8594 under Section 1060 of the Code (or any successor form or

successor provision of any future Tax Law) with their respective federal income Tax Returns for the taxable year which includes the Closing Date, and neither will take any position inconsistent with the Allocation unless otherwise required under applicable Law. Seller shall provide to Purchaser and Purchaser shall provide to Seller a copy of any information required to be furnished to the Secretary of the Treasury under Code Section 1060.

ARTICLE XI.

MISCELLANEOUS

11.1 Payment of Expenses . Subject to Section 3.5(b) , except as otherwise provided in this Agreement and whether or not the transactions contemplated hereby are consummated, Seller and Purchaser shall bear their own expenses incurred or to be incurred in connection with the negotiation and execution of this Agreement and the Ancillary Documents and the consummation of the transactions contemplated hereby and thereby.

11.2 Survival of Representations and Warranties; Survival of Covenants . The Parties agree that the representations and warranties contained in this Agreement shall expire upon the Closing Date. The Parties agree that the covenants contained in this Agreement to be performed at or after the Closing shall survive in accordance with the terms of the particular covenant or until fully performed.

11.3 Entire Agreement; Amendments and Waivers . This Agreement, together with the Ancillary Documents, represents the entire understanding and agreement between the Parties with respect to the subject matter hereof. This Agreement may be amended, supplemented or changed, and any provision hereof may be waived, only by written instrument making specific reference to this Agreement signed by the Party against whom enforcement of any such amendment, supplement, modification or waiver is sought. No action taken pursuant to this Agreement, including any investigation by or on behalf of any Party shall be deemed to constitute a waiver by the Party taking such action of compliance with any representation, warranty, condition, covenant or agreement contained herein. The waiver by any Party of a breach of any provision of this Agreement shall not operate or be construed as a further or continuing waiver of such breach or as a waiver of any other or subsequent breach. No failure on the part of any Party to exercise, and no delay in exercising, any right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of such right, power or remedy by such Party preclude any other or further exercise thereof or the exercise of any other right, power or remedy. All remedies hereunder are cumulative and are not exclusive of any other remedies provided by applicable Law.

11.4 Execution of Agreement; Counterparts; Electronic Signatures .

(a) This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument, and shall become effective when counterparts have been signed by each of the Parties and delivered to the other Parties; it being understood that all Parties need not sign the same counterparts.

(b) The exchange of copies of this Agreement and of signature pages by facsimile transmission (whether directly from one facsimile device to another by means of a dial-up connection or whether mediated by the worldwide web), by electronic mail in "portable document format" (".pdf") form, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, or by combination of such means, shall constitute effective execution and delivery of this Agreement as to the Parties and may be used in lieu of the original Agreement for all purposes. Signatures of the Parties transmitted by facsimile shall be deemed to be their original signatures for all purposes.

11.5 Governing Law . THIS AGREEMENT IS TO BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH FEDERAL BANKRUPTCY LAW, TO THE EXTENT APPLICABLE, AND WHERE STATE LAW IS IMPLICATED, THE LAWS OF THE STATE OF NEW YORK SHALL GOVERN, WITHOUT GIVING EFFECT TO THE CHOICE OF LAW PRINCIPLES THEREOF (EXCEPT FOR ANY LAWS OF THAT STATE WHICH WOULD RENDER SUCH CHOICE OF LAWS INEFFECTIVE), INCLUDING ALL MATTERS OF CONSTRUCTION, VALIDITY AND PERFORMANCE.

11.6 Jurisdiction, Waiver of Jury Trial .

(a) THE BANKRUPTCY COURT WILL HAVE EXCLUSIVE JURISDICTION OVER ANY AND ALL DISPUTES BETWEEN THE PARTIES, WHETHER AT LAW OR IN EQUITY, ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY AGREEMENT CONTEMPLATED HEREBY AND THE PARTIES HEREBY CONSENT TO AND SUBMIT TO THE JURISDICTION AND VENUE OF THE BANKRUPTCY COURT.

(b) EACH OF THE PARTIES HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

11.7 Notices . Unless otherwise set forth herein, any notices, consents, waivers and other communications required or permitted by this Agreement shall be in writing and shall be deemed given to a Party when (a) delivered to the appropriate address by hand or by nationally recognized overnight courier service (costs prepaid), or (b) sent by facsimile or e-mail, in each case, if sent during the normal business hours of the recipient, with confirmation of transmission by the transmitting equipment confirmed with a copy delivered as provided in clause (a), in the case of each of clauses (a) and (b), to the following addresses, facsimile numbers or e-mail addresses and marked to the attention of the person (by name or title) designated below (or to such other address, facsimile number, e-mail address or person as a Party may designate by notice to the other Parties):

If to Seller, to:

Correlogic Systems, Inc.
20271 Goldenrod Lane, Suite 2070
Germantown, Maryland 20876

Attention: Chief Executive Officer
Facsimile.: (301) 515-3911
E-mail: plevine@correlogic.com

With a copy (which shall not constitute effective notice) to:

McNamee, Hosea, Jernigan, Kim, Greenan & Lynch, P.A.
6411 Ivy Lane, Suite 200
Greenbelt, Maryland 20770
Attention: Steven L. Goldberg, Esq.
Facsimile: (301) 982-9450
E-mail: sgoldberg@mhlawyers.com

If to Purchaser, to:

Vermillion, Inc.
12117 Bee Caves Road
Building II, Suite 100
Austin, Texas 78738
Attention: Chief Executive Officer
Facsimile: (512) 439-6980
E-mail: gpage@vermillion.com

With a copy (which shall not constitute effective notice) to:

Paul Hastings LLP
1117 South California Avenue
Palo Alto, California 94304
Attention: Robert A. Claassen, Esq.
Facsimile: (650) 320-1984
E-mail: robertclaassen@paulhastings.com

and

Paul Hastings LLP
75 East 55th Street, First Floor
New York, New York 10022
Attention: Bryan R. Kaplan, Esq.
Facsimile: (212) 230-5179
E-mail: bryankaplan@paulhastings.com

11.8 Binding Effect; Assignment . This Agreement shall be binding upon Purchaser and, subject to entry of the Sale Order, Seller, and inure to the benefit of the Parties and their respective successors and permitted assigns, including any trustee or estate representative appointed in the Bankruptcy Case or any successor Chapter 7 case. Nothing in this Agreement shall create or be deemed to create any third party beneficiary rights in any Person or entity not a party to this Agreement except as provided below. No assignment of this Agreement or of any

rights or obligations hereunder may be made by Seller or Purchaser (by operation of law or otherwise) without the prior written consent of the other Parties and any attempted assignment without such required consents shall be void; provided , however , that Purchaser may assign its rights and obligations hereunder in whole or in part to one or more wholly owned Subsidiaries of Purchaser (each, a " Permitted Assign ") (subject to the next succeeding sentence). No assignment of any obligations hereunder shall relieve the Parties of any such obligations. Upon any such permitted assignment, the references in this Agreement to Purchaser shall also be deemed to include any such Permitted Assign unless the context otherwise requires.

11.9 Severability . Whenever possible, each provision or portion of any provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable Law, but if any provision or portion of any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable Law in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other provision or portion of any provision in such jurisdiction and in lieu of such invalid, illegal or unenforceable provision or portion of any provision, there will be added automatically as a part of this Agreement a valid legal and enforceable provision as similar in terms to such invalid, illegal or unenforceable provision as may be possible.

11.10 Injunctive Relief . The Parties agree that damages at Law may be an inadequate remedy for the breach of any of the covenants, promises and agreements contained in this Agreement by Seller, and, accordingly, Purchaser shall be entitled to injunctive relief with respect to any such breach, including specific performance of such covenants, promises or agreements or an order enjoining Purchaser from any threatened, or from the continuation of any actual, breach of the covenants, promises or agreements contained in this Agreement by Seller. The rights set forth in this Section 11.10 shall be in addition to any other rights which Purchaser may have at Law or in equity pursuant to this Agreement.

11.11 Non Recourse . Except as expressly contemplated by this Agreement, no past, present or future director, officer, employee, incorporator, member, partner or equity holder of Seller or Purchaser shall have any liability for any obligations or liabilities of Seller or Purchaser under this Agreement or any Ancillary Documents of or for any claim based on, in respect of, or by reason of, the transactions contemplated hereby and thereby.

11.12 Bulk Sales Laws . To the extent that any "bulk sales," "bulk transfers" or similar Laws in any applicable jurisdictions are applicable in respect of the transactions contemplated by this Agreement or any Ancillary Document, each Party hereby waives compliance by the Parties with any and all of the foregoing.

11.13 Time of the Essence . Time is of the essence in the performance of each of the obligations of the Parties and with respect to all covenants and conditions to be satisfied by the Parties in this Agreement and all documents, acknowledgments and instruments delivered in connection herewith.

11.14 Certain Interpretations .

(a) Unless otherwise expressly provided, for purposes of this Agreement, the following rules of interpretation shall apply:

(i) All references in this Agreement to “Articles”, “Sections”, “Schedules” and “Exhibits” shall be deemed to refer to Articles and Sections of, and Schedules and Exhibits to, this Agreement.

(ii) All Exhibits and Schedules attached hereto or referred to herein are hereby incorporated in and made a part of this Agreement as if set forth in full herein. Any capitalized terms used in any Schedule or Exhibit but not otherwise defined therein shall be defined as set forth in this Agreement.

(iii) The Article, Section and paragraph captions herein are for convenience of reference only, do not constitute part of this Agreement and shall not be deemed to limit or otherwise affect any of the provisions hereof.

(iv) The words “include,” “includes” and “including,” when used herein shall be deemed in each case to be followed by the words “without limitation”.

(v) When calculating the period of time before which, within which or following which any act is to be done or step taken pursuant to this Agreement, the date that is the reference date in calculating such period shall be excluded. If the last day of such period is not a Business Day, the period in question shall end on the next succeeding Business Day.

(vi) Any reference in this Agreement to $ shall mean U.S. dollars.

(vii) Any reference in this Agreement to gender shall include all genders, and words imparting the singular number only shall include the plural and vice versa.

(viii) The words such as “herein,” “hereinafter,” “hereof,” and “hereunder” refer to this Agreement as a whole and not merely to a subdivision in which such words appear unless the context otherwise requires.

(b) The Parties agree that they have been represented by legal counsel during the negotiation and execution of this Agreement and, therefore, waive the application of any Law, regulation, holding or rule of construction providing that ambiguities in an agreement or other document shall be construed against the Party drafting such agreement or document.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF , the Parties have caused this Agreement to be executed by their respective duly authorized officers as of the date first above written.

CORRELOGIC SYSTEMS, INC.

By: /s/ Peter J. Levine
Name: Peter J. Levine
Title: President and Chief Executive Officer

VERMILLION, INC.

By: /s/ Ashish Kohli
Name: Ashish Kohli
Title: VP, Corporate Strategy

EXHIBIT A

FORM OF BILL OF SALE

THIS BILL OF SALE (this " Bill of Sale ") dated as of **[—]** , 2011 by Correlogic Systems, Inc., a Delaware corporation (" Seller "), in favor of Vermillion, Inc., a Delaware corporation (" Purchaser ").

WHEREAS , the Parties hereto have entered into an Asset Purchase Agreement dated as of November 8, 2011 (the " Purchase Agreement ") providing for the purchase by Purchaser of certain assets of Seller, and the Parties hereto now desire to carry out such transaction by Seller's execution and delivery to Purchaser of this instrument evidencing the vesting in Purchaser of all of the assets and rights of Seller hereinafter described. Capitalized terms used but not defined herein have the meanings given them in the Purchase Agreement.

NOW, THEREFORE , in consideration of the premises and of other valuable consideration to Seller in hand paid by Purchaser, at or before the execution and delivery hereof, the receipt and sufficiency of which by Seller are hereby acknowledged, Seller hereby conveys, grants, bargains, sells, transfers, sets over, assigns, remises, releases, delivers and confirms unto Purchaser, its successors and assigns forever, effective as of 12:01 a.m. Central Time on the date hereof (the " Effective Time "), all of Seller's right, title and interest in and to the Purchased Assets, free and clear of all Encumbrances other than Permitted Encumbrances.

Seller hereby covenants that, from time to time after the delivery of this instrument, at Purchaser's request and without further consideration, Seller will do, execute, acknowledge, and deliver, or will cause to be done, executed, acknowledged and delivered, all and every such further acts, deeds, conveyances, transfers, assignments, powers of attorney and assurances as reasonably may be required to more effectively convey, transfer to and vest in Purchaser, and to put Purchaser in possession of, any of the Purchased Assets.

Nothing in this instrument, express or implied, is intended or shall be construed to confer upon, or give to, any person, firm or corporation other than Purchaser and its successors and assigns, any remedy or claim under or by reason of this instrument or any terms, covenants or condition hereof, and all of the terms, covenants and conditions, promises and agreements in this instrument contained shall be for the sole and exclusive benefit of Purchaser and its successors and assigns.

This instrument is executed by, and shall be binding upon, Seller and its successors and assigns for the uses and purposes above set forth and referred to, effective as of the Effective Time.

This instrument shall be governed by, interpreted under, and construed and enforceable in accordance with, the laws of the State of New York, without regard to its conflict of law principle provisions.

To the extent this Bill of Sale is inconsistent with any terms or conditions of the Purchase Agreement, the terms and conditions of the Purchase Agreement shall control.

IN WITNESS WHEREOF , Seller has executed this Bill of Sale or caused this Bill of Sale to be executed on its behalf by a duly authorized officer of Seller as of **[—]** , 2011.

CORRELOGIC SYSTEMS, INC.

By: _____
Name:
Title:

EXHIBIT B

FORM OF SALE ORDER

See attached.

Entered: December 02, 2011
Signed: December 02, 2011

SO ORDERED

UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF MARYLAND
(GREENBELT DIVISION)

In re	*	**Chapter 11**
CORRELOGIC SYSTEMS, INC.	*	
	*	**Case No. 10-25974-WIL**
Debtor.	*	

* * * * * * * * * * * * *

ORDER (A) AUTHORIZING SALE OF SUBSTANTIALLY ALL OF DEBTOR'S ASSETS FREE AND CLEAR OF ALL CLAIMS, ENCUMBRANCES AND OTHER INTERESTS; (B) APPROVING THE AGREEMENT OF SALE; AND (C) GRANTING RELATED RELIEF

Upon consideration of the motion (the " Motion ") [Docket No. 186] of Correlogic Systems, Inc. (the " Debtor ") for entry of an order (the " Sale Order "), among other things: (i) approving the sale (the " Sale ") of the Purchased Assets [1] free and clear of all Claims and Encumbrances (other than Encumbrances included in the Assumed Liabilities and Permitted

1 Unless otherwise stated, all capitalized terms used but not otherwise defined herein shall have the same meaning as set forth in the Asset Purchase Agreement.

Encumbrances), (ii) Approving the Agreement of Sale and (iii) granting other related relief; and the Court having determined that the asset purchase agreement substantially in the form attached hereto as Exhibit A (as may be amended, the " Asset Purchase Agreement ") between the Debtor and Vermillion, Inc. (the " Purchaser ") is the highest and best offer; and it appearing that the relief requested in the Motion is in the best interests of the Debtor's estate, its creditors, and other parties in interest; and it appearing that this Court has jurisdiction over this matter pursuant to 28 U.S.C. §§ 157 and 1334; and it appearing that the Motion is a core proceeding pursuant to 28 U.S.C. § 157(b)(2); and adequate notice of the Motion and opportunity for objection having been given; and this Court having reviewed and considered the Motion and the objections thereto, if any; and upon consideration of all the pleadings filed with this Court; and this Court having determined that the legal and factual bases set forth in the Motion establish just cause for the relief granted herein; and after due deliberation and sufficient cause appearing therefor:

THE COURT HEREBY FINDS THAT:

Jurisdiction, Final Order and Statutory Predicates

1. This Court has jurisdiction to hear and determine the Motion pursuant to 28 U.S.C. §§ 157(b)(1) and 1334 (a). This is a core proceeding pursuant to 28 U.S.C. § 157(b)(2)(A), (N) and (O). Venue is proper in this District and in this Court pursuant to 28 U.S.C. §§ 1408 and 1409.

2. This Sale Order constitutes a final and appealable order within the meaning of 28 U.S.C. § 158(a). Notwithstanding Bankruptcy Rules 6004(h) and 6006(d), and to any extent necessary under Bankruptcy Rule 9014 and Rule 54(b) of the Federal Rules of Civil Procedure, as made applicable by Bankruptcy Rule 7054, this Court expressly finds that there is no just reason for delay in the implementation of this Sale Order, and the Sale Order shall be immediately effective upon its entry.

3. The statutory predicates for the relief requested in the Motion are sections 105(a), 363 and 365 of the Bankruptcy Code and Bankruptcy Rules 2002, 6004, 6006, 9007 and 9014.

Notice of the Sale

4. Notice of the Motion and a reasonable opportunity to object or be heard with respect to the Motion and relief requested therein has been afforded to all known interested persons and entities entitled to receive such notice, including, but not limited to the following parties:

(i) the Office of the United States Trustee for the District of Maryland;

(ii) the Debtor's thirty (30) largest unsecured creditors on a consolidated basis, as identified in their chapter 11 petitions;

(iii) all taxing authorities and other governmental agencies having jurisdiction over any of the Purchased Assets, including the Internal Revenue Service;

(iv) all parties that have requested or that are required to receive special notice pursuant to Bankruptcy Rule 2002;

(v) all Persons known or reasonably believed to have asserted a Claim or Encumbrance on any of the Purchased Assets;

(vi) the counterparties to each of the Assigned Contracts (the " Contract Counterparties ");

(vii) any applicable state environmental agency.

5. As evidenced by the affidavits of service previously filed with this Court, proper, timely, adequate, and sufficient notice of the Motion, and the Sale has been provided in accordance with sections 102(1), 363 and 365 of the Bankruptcy Code and Bankruptcy Rules 2002, 6004, 6006 and 9014. The notices described above were good, sufficient and appropriate under the circumstances, and no other or further notice of the Motion, the Sale or the Sale Hearing is required. No other or further notice of the Motion, the Sale, the Sale Hearing, or of the entry of this Order is necessary or shall be required.

6. The disclosures made by the Debtor concerning the Asset Purchase Agreement, the Sale, and the Sale Hearing were good, complete and adequate.

Section 363(f) Is Satisfied

7. The Purchaser would not have entered into the Asset Purchase Agreement and would not consummate the transactions contemplated thereby if the sale of the Purchased Assets to the Purchaser were not free and clear of all Claims and Encumbrances of any kind or nature whatsoever (other than Encumbrances included in the Assumed Liabilities and Permitted Encumbrances), or if the Purchaser would, or in the future could, be liable for any of such Claims and Encumbrances.

8. The Debtor may sell the Purchased Assets free and clear of all Encumbrances against the Debtor, its estate or any of the Purchased Assets (except for the Permitted Encumbrances and Assumed Liabilities) because, in each case, one or more of the standards set forth in sections 363(f)(1)-(5) of the Bankruptcy Code has been satisfied. Those holders of Encumbrances against the Debtor, its estate or any of the Purchased Assets who did not object, or who withdrew their objections, to the Sale or the Motion are deemed to have consented thereto pursuant to section 363(f)(2) of the Bankruptcy Code. Those holders of such Encumbrances who did object fall within one or more of the other subsections of section 363(f) and are adequately protected by having their Encumbrances, if any, in each instance against the Debtor, its estate or any of the Purchased Assets, attach to the proceeds of the Sale ultimately attributable to the Purchased Assets in which such party alleges an interest, in the same order of priority, with the same validity, force and effect that such creditor had prior to the Sale, subject to any claims and defenses the Debtor and its estate may possess with respect thereto.

Good Faith of the Purchaser

9. The Purchaser is not an "insider" of the Debtor, as that term is defined in section 101(31) of the Bankruptcy Code.

10. The Purchaser is purchasing the Purchased Assets in good faith and is a good faith buyer within the meaning of section 363(m) of the Bankruptcy Code, and is therefore entitled to the full protection of that provision, and otherwise has proceeded in good faith in all respects in connection with this proceeding in that, among other things: (i) all payments to be made by the Purchaser and other agreements or arrangements entered into by the Purchaser in connection with the Sale have been disclosed; (ii) neither Debtor nor Purchaser has violated section 363(n) of the Bankruptcy Code by any action or inaction; (iii) no common identity of directors or controlling stockholders exists between the Purchaser and the Debtor; and (iv) the negotiation and execution of the Asset Purchase Agreement was at arms' length and in good faith.

Highest and Best Offer

11. The Debtor and its professionals conducted a fulsome marketing process of the Purchased Assets whereby they (i) provided potential purchasers, upon request, sufficient information to enable them to make an informed judgment on whether to submit a bid on the Purchased Assets, and (ii) afforded interested parties a full, fair and reasonable opportunity to conduct due diligence and submit offers on the Purchased Assets. The marketing process was conducted in a noncollusive, fair and good faith manner and a reasonable opportunity has been given to any interested party to make a higher or otherwise better offer for the Purchased Assets.

12. The Asset Purchase Agreement constitutes the highest and best offer for the Purchased Assets.

13. The Asset Purchase Agreement represents a fair and reasonable offer to purchase the Purchased Assets under the circumstances.

14. Approval of the Motion and the Asset Purchase Agreement and the consummation of the transactions contemplated thereby are in the best interests of the Debtor, its creditors, its estate and other parties in interest.

15. The Debtor has demonstrated compelling circumstances and a good, sufficient, and sound business purpose and justification for the Sale prior to, and outside of, a plan of reorganization.

16. Entry of this Sale Order approving the Asset Purchase Agreement and all the provisions thereof is a necessary condition precedent to Purchaser's consummation of the Sale.

No Fraudulent Transfer

17. The consideration provided by the Purchaser pursuant to the Asset Purchase Agreement is fair and adequate and constitutes reasonably equivalent value and fair consideration under the Bankruptcy Code and under the laws of the United States, any state, territory, possession, or the District of Columbia.

18. The Purchaser is not a mere continuation of the Debtor, or its estate and there is no continuity between the Purchaser and the Debtor or its estate. The Purchaser is not holding itself out to the public as a continuation of the Debtor. The Purchaser is not a successor to the Debtor or its estate and the Sale does not amount to a consolidation, merger or de facto merger of the Purchaser and the Debtor.

Validity of Transfer

19. Upon entry of this Sale Order, the Debtor has full corporate power and authority to execute and deliver the Asset Purchase Agreement and all other documents contemplated thereby, and no further consents or approvals are required for the Debtor to consummate the transactions contemplated by the Asset Purchase Agreement, except as otherwise set forth in the Asset Purchase Agreement.

20. The transfer of each of the Purchased Assets to the Purchaser will be as of the Closing Date a legal, valid, and effective transfer of such Purchased Assets, and vests or will vest the Purchaser with all right, title, and interest of the Debtor to the Purchased Assets free and clear of all Claims and Encumbrances accruing, arising or relating thereto any time prior to the Closing Date, except for any Permitted Encumbrances and Assumed Liabilities.

21. The Closing shall be subject to the satisfaction (or to the extent permitted by Law, written waiver by Seller or Purchaser, as applicable) on or prior to the Closing Date, of each of the conditions set forth in Article VIII of the Asset Purchase Agreement (the " Closing Conditions ").

Compelling Circumstances for an Immediate Sale

22. To maximize the value of the Purchased Assets and preserve the viability of the business to which the Purchased Assets relate, it is essential that the Sale of the Purchased Assets occur within the time constraints set forth in the Asset Purchase Agreement. Time is of the essence in consummating the Sale.

23. The consummation of the transactions contemplated by the Asset Purchase Agreement is legal, valid and properly authorized under all applicable provisions of the Bankruptcy Code, including, without limitation, sections 105 (a), 363(b), 363(f), 363(m) 365(b), and 365(f), and all of the applicable requirements of such sections have been complied with in respect of the transaction.

24. The Sale does not constitute a de facto plan of reorganization or liquidation or an element of such a plan for the Debtor, as it does not and does not propose to: (i) impair or restructure existing debt of, or equity interests in, the Debtor; (ii) impair or circumvent voting rights with respect to any future plan proposed by the Debtor; (iii) circumvent chapter 11 plan safeguards, such as those set forth in sections 1125 and 1129 of the Bankruptcy Code; or

(iv) classify Claims or equity Encumbrances, compromise controversies or extend debt maturities.

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED THAT:

General Provisions

25. Relief Granted . The relief requested in the Motion is granted and approved, and the Sale to Purchaser under the Asset Purchase Agreement is approved as set forth in this Sale Order.

26. Objections Overruled . Any and all objections to the Motion, or the relief requested therein that has not been withdrawn, waived, or settled or otherwise resolved as announced to this Court at the Sale Hearing or by stipulation filed with this Court or as otherwise provided in this Sale Order, and all reservations of rights included therein, are hereby overruled on the merits.

27. Findings of the Court . The findings of the Court set forth above form an integral part of this Sale Order.

Approval of Asset Purchase Agreement

28. Agreement Approved . The Asset Purchase Agreement and all other ancillary documents, and all of the terms and conditions thereof, are hereby approved.

29. Authorization to Consummate Transactions . Pursuant to section 363(b) of the Bankruptcy Code, subject to the satisfaction (or to the extent permitted by Law, written waiver by Seller or Purchaser, as applicable) of the Closing Conditions, the Debtor is authorized and directed to (a) consummate the Sale of the Purchased Assets to the Purchaser pursuant to and in accordance with the terms and conditions of the Asset Purchase Agreement, and (b) execute and deliver, perform under, and implement the Asset Purchase Agreement, together with all

additional instruments and documents that may be reasonably necessary or desirable to implement the Asset Purchase Agreement and the Sale, including any other ancillary documents, or as may be reasonably necessary or appropriate to the performance of the obligations as contemplated by the Asset Purchase Agreement and such other ancillary documents.

30. Order Binding on All Parties . This Sale Order shall be binding in all respects upon the Debtor, its estate, all creditors, all holders of equity interests in the Debtor, all holders of any Claim(s) (whether known or unknown) against the Debtor, any holders of Encumbrances against or on all or any portion of the Purchased Assets, all Contract Counterparties, the Purchaser and all successors and assigns of the Purchaser, and any trustees, examiners, responsible officers, estate representatives, or similar entity for the Debtor, if any, subsequently appointed in the Bankruptcy Case or upon a conversion to chapter 7 under the Bankruptcy Code of the Bankruptcy Case. This Sale Order and the Asset Purchase Agreement shall inure to the benefit of the Debtor, its estate and creditors, the Purchaser and its respective successors and assigns.

31. Section 365(n) Rights . Notwithstanding anything to the contrary in this Sale Order or the Asset Purchase Agreement, the sale of the Purchased Assets shall be subject to Quest's and LabCorp's rights as set forth in the Section 365(n) Order. For the avoidance of doubt, Purchaser's obligations under the Asset Purchase Agreement shall be conditioned on the 365(n) Order being entered by this Court in form and substance acceptable to Purchaser in Purchaser's sole discretion, and such order shall be a Final Order.

Transfer of the Purchased Assets

32. Transfer of Purchased Assets Authorized . Pursuant to Bankruptcy Code sections 105(a), 363(b), and 363 (f), the Debtor is authorized to transfer the Purchased Assets to the

Purchaser on the Closing Date, and the Purchaser is directed to pay the Purchase Price to the Debtor as provided in the Asset Purchase Agreement.

33. Transfer of Assets . Except as otherwise provided in the Asset Purchase Agreement, the Purchased Assets shall be transferred to the Purchaser in accordance with the Asset Purchase Agreement upon and as of the Closing Date and such transfer shall constitute a legal, valid, binding, and effective transfer of such Purchased Assets and, upon the Debtor's receipt of the Purchase Price, shall be free and clear of all Encumbrances, except any Permitted Encumbrances and Assumed Liabilities. Upon the Closing of the Sale contemplated within the Asset Purchase Agreement, the Purchaser shall take title to and possession of the Purchased Assets, subject only to Permitted Encumbrances and Assumed Liabilities. For the avoidance of doubt, nothing contained herein shall in any way alter or modify the terms of the settlement between the Seller and Ahn-Gook Pharmaceutical Co., Ltd. approved by the Court by order entered March 22, 2011 [Docket No. 126].

34. Surrender of Purchased Assets by Third Parties . All entities that are in possession of some or all of the Purchased Assets on the Closing Date are directed to surrender possession of such Purchased Assets to the Purchaser at the Closing of the Sale. All entities are hereby forever prohibited and enjoined from taking any action that would adversely affect or interfere with the ability of the Debtor to sell and transfer the Purchased Assets to the Purchaser in accordance with the terms of the Asset Purchase Agreement and this Sale Order.

35. Transfer Free and Clear of Encumbrances . Pursuant to section 363(f) of the Bankruptcy Code, the transfer of title to the Purchased Assets shall be free and clear of any and all Encumbrances, except for any Permitted Encumbrances and Assumed Liabilities. The Purchaser is not and shall not be liable as a successor under any theory of successor liability for

Encumbrances (other than Permitted Encumbrances and Assumed Liabilities) that encumber or relate to the Purchased Assets.

36. Creditors Directed to Release Encumbrances . On the Closing Date, each creditor shall be authorized and directed to execute such documents and take all other actions as may be necessary to release Encumbrances (except for Permitted Encumbrances and Assumed Liabilities) on the Purchased Assets, if any, as provided for herein, as such Encumbrances may have been recorded or may otherwise exist.

37. Debtor's Authorization to Record Releases . If any person or entity which has filed statements or other documents or agreements evidencing Encumbrances (other than the Permitted Encumbrances and Assumed Liabilities) on or in all or any portion of the Purchased Assets shall not have delivered to the Debtor prior to the Closing, in proper form for filing and executed by the appropriate parties, termination statements, instruments of satisfaction, releases of liens and easements, and any other documents necessary or desirable to the Purchaser for the purpose of documenting the release of all Encumbrances, which the Person or entity has or may assert with respect to all or any portion of the Purchased Assets, the Debtor is hereby authorized and directed, and the Purchaser is hereby authorized, to execute and file such statements, instruments, releases and other documents on behalf of such person or entity with respect to the Purchased Assets. The transactions authorized herein shall be of full force and effect, regardless of the Debtor's lack of good standing in any jurisdiction in which it is formed or authorized to transact business. A certified copy of this Sale Order may be filed with the appropriate clerk(s) and/or recorded with the recorder(s) which, once filed, registered, or otherwise recorded, shall constitute conclusive evidence of the release of all Encumbrances in the Purchased Assets as of

the Closing Date of any kind or nature whatsoever, other than the Permitted Encumbrances or Assumed Liabilities.

38. Permanent Injunction . Except as expressly permitted or otherwise specifically provided by the Asset Purchase Agreement or this Sale Order, all persons and entities holding Encumbrances in or against all or any portion of the Purchased Assets (other than Permitted Encumbrances and the Assumed Liabilities) arising under or out of, in connection with, or in any way relating to the Debtor, the Purchased Assets, the operation of the Debtor's business prior to the Closing Date or the transfer of the Purchased Assets to the Purchaser, hereby are forever barred, estopped and permanently enjoined from asserting against the Purchaser or its successors or assigns, their property or the Purchased Assets, such persons' or entities' Encumbrances in and to the Purchased Assets.

39. Recording Offices . This Sale Order is and shall be binding upon and govern the acts of all persons and entities, including, without limitation, all filing agents, filing officers, title agents, title companies, recorders of mortgages, recorders of deeds, registrars of deeds, administrative agencies, governmental departments, secretaries of state, federal and local officials, and all other persons and entities who may be required by operation of law, the duties of their office, or contract, to accept, file, register or otherwise record or release any documents or instruments, or who may be required to report or insure any title or state of title in or to any lease; and each of the foregoing persons and entities is hereby directed to accept for filing any and all of the documents and instruments necessary and appropriate to consummate the transactions contemplated by the Asset Purchase Agreement.

Other Provisions

40. Injunction . Effective upon the Closing Date and except as explicitly provided in the Asset Purchase Agreement, all persons and entities are forever prohibited and permanently

enjoined from commencing or continuing in any manner any action or other proceeding, whether in law or equity, in any judicial, administrative, arbitral or other proceeding against the Purchaser, its successors and assigns, or the Purchased Assets, with respect to any (a) Encumbrance (other than an Assumed Liability or a Permitted Encumbrance) arising under, out of, in connection with or in any way relating to the Debtor, the Purchaser, the Purchased Assets, or the use and operation of the Purchased Assets prior to the Closing of the Sale, or (b) successor liability, including, without limitation, the following actions: (i) commencing or continuing in any manner any action or other proceeding against the Purchaser, its successors or assigns, or the Purchased Assets; (ii) enforcing, attaching, collecting or recovering in any manner any judgment, award, decree or order against the Purchaser, its successors, or the Purchased Assets; (iii) creating, perfecting or enforcing any Encumbrance against the Purchaser, its successors or assigns, or the Purchased Assets; (iv) asserting any setoff, right of subrogation or recoupment of any kind against any obligation due the Purchaser or its successors or assigns; (v) commencing or continuing any action, in any manner or place, that does not comply or is inconsistent with the provisions of this Sale Order or other orders of this Court, or the agreements or actions contemplated or taken in respect thereof; or (vi) revoking, terminating or failing or refusing to issue or renew any license, permit or authorization to use or operate any of the Purchased Assets or conduct any of the businesses operated with the Purchased Assets.

41. Fees, Expenses and Obligations . All obligations of the Debtor under the Asset Purchase Agreement, including all ancillary documents related thereto, shall be satisfied in the manner provided in the Asset Purchase Agreement, without need of further order of this Court. The obligations of the Debtor to pay the Expense Reimbursement set forth in Section 3.5(b) of the Asset Purchase Agreement are hereby approved and (i) shall be entitled to administrative

expense claim status under Sections 503(b)(1)(A) and 507(a)(2) of the Bankruptcy Code, (ii) shall not be subordinate to any other administrative expense claim against the Debtor, other than any adequate protection order in existence as of the date of entry of this Sale Order, and (iii) shall survive the termination of the Asset Purchase Agreement.

42. No Liability for Claims Against Debtor . Except for the Permitted Encumbrances and Assumed Liabilities or as otherwise expressly set forth in this Sale Order or the Asset Purchase Agreement, the Purchaser and its employees, officers, directors, advisors, attorneys, lenders, affiliates, owners, successors and assigns shall not have any liability (successor, vicarious or otherwise), or any other obligation of the Debtor. The Purchaser has given substantial consideration under the Asset Purchase Agreement for the benefit of the holders of any Encumbrance. The consideration given by the Purchaser shall constitute valid and valuable consideration for the releases of any potential claims of successor liability of the Purchaser, which releases shall be deemed to have been given in favor of the Purchaser by all holders of Encumbrances against or interests in the Debtor or any of the Purchased Assets.

43. Plan Not to Conflict . Nothing contained in any plan of reorganization or liquidation, or order of any type or kind entered in (a) the Debtor's chapter 11 Bankruptcy Case, (b) any subsequent chapter 7 case into which the chapter 11 Bankruptcy Case may be converted, or (c) any related proceeding subsequent to entry of this Sale Order, shall conflict with or derogate from the terms of this Sale Order

44. Good Faith . The transactions contemplated by the Asset Purchase Agreement are undertaken by the Purchaser without collusion and in good faith, as that term is defined in section 363(m) of the Bankruptcy Code, and accordingly, the reversal or modification on appeal of the authorization provided herein to consummate the Sale shall not affect the validity of the

Sale, unless such authorization and consummation of such Sale are duly stayed pending such appeal. The Purchaser is a good faith buyer within the meaning of section 363(m) of the Bankruptcy Code and, as such, is entitled to, and granted, the full protections of section 363(m) of the Bankruptcy Code.

45. Effective Immediately . Pursuant to Bankruptcy Rules 7062, 9014, and 6004(h), this Sale Order shall be effective immediately upon entry and the Debtor and the Purchaser are authorized to close the Sale upon entry of this Sale Order.

46. Bulk Sales Law . No bulk sales law or any similar law of any state or other jurisdiction applies in any way to the Sale.

47. Brokers . Except for the fees and expenses of brokers, finders, or financial advisors for the Debtor set forth on Schedule 4.9 of the Asset Purchase Agreement (for which the Debtor is solely responsible), the Parties do not have any obligation to pay any fees, commissions or other similar compensation to any broker, finder, or financial advisor in connection with the transactions authorized herein.

48. Asset Purchase Agreement Approved in Entirety . The failure specifically to include any particular provision of the Asset Purchase Agreement in this Sale Order shall not diminish or impair the effectiveness of such provision, it being the intent of this Court that the Asset Purchase Agreement be authorized and approved in its entirety.

49. Standing . The transactions authorized herein shall be of full force and effect, regardless of the Debtor's lack of good standing in any jurisdiction in which such Debtor is formed or authorized to transact business.

50. Timing . All time periods set forth in this Sale Order shall be calculated in accordance with Bankruptcy Rule 9006(a).

51. Authorization to Effect Order . The Debtor is authorized to take all actions necessary to effect the relief granted pursuant to this Sale Order.

52. Automatic Stay . The automatic stay pursuant to Section 362 is hereby lifted to the extent necessary, without further order of this Court, to (i) allow the Parties to deliver any notices, and (ii) allow the Parties to take any and all actions permitted under the Asset Purchase Agreement in accordance with the terms and conditions thereof.

53. Vacation of Order . In the event that the Closing Date has not occurred on or by December 10, 2011 (the " Outside Date "), this Sale Order shall be deemed vacated and of no further force and effect, unless otherwise agreed by the Debtor and the Purchaser; *provided, however*, that the Outside Date may be extended by the written consent of Purchaser for up to four (4) periods of three (3) months each in the event that the Section 365(n) Order is appealed following entry by this Court;

54. Retention of Jurisdiction . This Court shall retain jurisdiction to hear and determine all matters arising from or related to the Sale, this Sale Order and the matters contemplated herein.

Copies to:

Office of the United States Trustee
6305 Ivy Lane
Suite 600
Greenbelt, Maryland 20770

Bryan Kaplan, Esquire
Paul Hastings
75 East 55 th Street
New York, NY 10022

James M. Greenan, Esquire
McNamee Hosea
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Mark Taylor
Kilpatrick Townsend & Stockton, LLP
607 14 th Street, NW
Suite 900
Washington, DC 20005

EXHIBIT C

FORM OF SECTION 365(n) ORDER

See attached.

THE UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF MARYLAND
(Greenbelt Division)

In re:	*	
CORRELOGIC SYSTEMS, INC.	*	**Case No. 10-25974-WIL**
	*	**(Chapter 11)**
Debtor.	*	
CORRELOGIC SYSTEMS, INC.	*	**Adv. 11-00478-WIL**
Plaintiff,	*	
	*	**ORDER APPROVING SETTLEMENT AND CONFIRMING AND CLARIFYING SECTION 365 (n) RIGHTS**
v.	*	
QUEST DIAGNOSTICS, INC.	*	
One Malcolm Avenue	*	
Teterboro, NJ 07608-1070	*	
and	*	
LABORATORY CORPORATION OF AMERICA HOLDINGS	*	
531 South Spring Street	*	
Burlington, NC 27215	*	
Defendants.	*	

RECITALS

A. On or about October 31, 2002 Quest Diagnostics, Inc. ("QDI") and Correlogic Systems, Inc. ("Correlogic") entered into a co-exclusive Technology License and Development Agreement ("QDI License");

B. On or about November 1, 2002 Laboratory Corporation of America Holdings ("LabCorp") and Correlogic entered into a co-exclusive Technology License and Development Agreement ("LabCorp License");

C. The QDI License and the LabCorp License involve, among other things, the same intellectual property and same field of use (both licenses are collectively referred to as "Correlogic Licenses");

D. QDI and LabCorp allege that QDI and LabCorp were granted the right to use Correlogic's technology to market and distribute assays for the detection of ovarian cancer. Correlogic, on the other hand, contends that the Correlogic Licenses were limited to using Correlogic's technology only for marketing and distribution of certain assays under development by Correlogic for the detection of ovarian cancer.

E. Between the October 31, 2002 and July 16, 2010, Correlogic developed two versions of an assay for the detection of ovarian cancer: the Mass Spectrometer Test and the OvaCheck 1 Test (each defined below).

F. Correlogic has contended for several years that the OvaCheck 1 Test was not subject to the Correlogic Licenses; QDI and LabCorp have contended that both tests are subject to the Correlogic Licenses. This issue is currently before the court and scheduled for trial on December 6, 2011.

G. After Correlogic developed the Mass Spec Test and the OvaCheck 1 Test, Correlogic filed for protection under Chapter 11 of the United States Code in the Bankruptcy Court located in the District of Maryland ("Court") on or about July 16, 2010 ("Petition Date");

H. On July 16, 2010 Correlogic also filed with the Court, among other documents, a motion to reject the Correlogic Licenses. LabCorp and QDI each filed objections to the motion;

I. After a hearing on October 4, 2010, the Court granted Correlogic's motion and the Correlogic Licenses were deemed rejected;

J. Also as a result of said rejection, QDI and LabCorp each elected to exercise rights under 11 U.S.C. §365(n);

K. On June 11, 2011, Correlogic filed a Complaint for Declaratory Relief to obtain a judicial ruling on the scope of Licensees' rights under 11 U.S.C. §365(n) with the Court ("Declaratory Judgment Case") wherein Correlogic contended Licensees' rights to Correlogic intellectual property were limited to those rights pertaining to the Mass Spec Test and Licensees contended they had rights to all Correlogic intellectual property relating generally to ovarian cancer, including intellectual property developed post petition;

L. Correlogic has entered into an agreement in principle to sell substantially all of its assets to Vermillion, Inc.

M. Correlogic and Licensees have agreed to compromise and settle said dispute and agree to the entry of this order adjudging the rights of Correlogic and Licensees.

N. Vermillion agrees that any purchase of assets from Correlogic shall be subject to Licensees' rights as set forth in this order.

NOW THEREFORE IT IS HEREBY ORDERED AND ADJUDGED AS FOLLOWS:

1. Definitions . For purposes of this Order, the terms below shall have the meanings defined below.

Affiliates - "Affiliates" refers to, with respect to LabCorp or QDI, any current or future Entity which controls, is controlled by, or is under common control with such party. For purposes of this definition only, "control" means (i) in the case of corporate Entities, direct or indirect ownership of at least fifty percent (50%) of the stock or participating shares entitled to vote for the election of directors, and (ii) in the case of non-corporate Entities, direct or indirect ownership of at least fifty percent (50%) of the

equity interest with the power to participate in the management and policies of such non-corporate Entity.

Correlogic Tools – "Correlogic Tools" refers to all of the following, but solely to the extent useful in the Field and existing as of the Petition Date: (i) all of Correlogic's computational diagnostic models which are able to differentiate between samples taken from patients with ovarian cancer and samples from patients without ovarian cancer, (ii) software used to collect data, run tests, and interpret and report test results (limited to ProteomeDx and OvaCheckDx), in both object code and source code format, (iii) all of Correlogic's documentation, access codes, license keys or other materials required to maintain and use the ProteomeDx and OvaCheckDx, and (iv) all other algorithms, models, analytical techniques, processes, interfaces, methods, technology, developments, SOPs, protocols and data related to the Mass Spec Test and the OvaCheck 1 Test (each defined below). For the avoidance of doubt, the preceding sentence does not include (a) any of Correlogic's biomarker discovery and development software and algorithms, or (b) any patient data which cannot be provided to LabCorp or QDI under applicable law.

Entity – "Entity" refers to a person, corporation, partnership, association, limited liability company, unincorporated organization, firm, or other entity.

Field – "Field" refers to the field of screening and diagnosing (including staging) ovarian cancer and/or monitoring diagnosed patients from human patient samples, including without limitation in vitro diagnostic products, kits and testing services, such as immunoassays and mass spectrometry related to ovarian cancer.

Licensed Technology – "Licensed Technology" means all patents, copyrights, trademarks, service marks, trade secrets, or other intellectual property rights created, owned, in-licensed, controlled, or otherwise possessed by Correlogic prior to the Petition Date related to the Mass Spec Test and OvaCheck 1 Test (each defined below), including, without limitation, the rights to (i) the patents and patent applications listed on Exhibit I (ii) the Correlogic Tools, and (iii) the Mass Spec Test and OvaCheck 1 Test (each defined below). The Licensed Technology expressly excludes intellectual property

rights in the OvaCheck 2 Test (including any biomarker used with the OvaCheck 2 Test which was not used with the Mass Spec Test or the OvaCheck 1 Test) and any other intellectual property rights in Technology and Source Code (as those terms are defined in the Correlogic Licenses), inventions, biomarkers, products or assays, to the extent any of these intellectual property rights were conceived, developed, reduced to practice or created by or for Correlogic or any successor or assignee of Correlogic on or after the Petition Date. Licensees acknowledge that Licensees have no rights in any intellectual property developed by Correlogic on or after the Petition Date. Licensees acknowledge that the OvaCheck 2 Test was developed on or after the Petition Date.

Licensees – "Licensees" refers to LabCorp and QDI.

Mass Spec Test – "Mass Spec Test" refers to the mass spectrometry based assay(s) for ovarian cancer developed by Correlogic prior to the Petition Date.

OvaCheck 1 Test – "OvaCheck 1 Test" refers to the non-mass spectrometry based assay(s) for ovarian cancer developed by Correlogic as embodied in Correlogic patent family CORR-019 developed prior to the Petition Date.

OvaCheck 2 Test – "OvaCheck 2 Test" refers to the non-mass spectrometry based assay(s) for ovarian cancer developed by Correlogic as embodied in Correlogic patents CORR-025/01 and CORR-025/02 developed on or after the Petition Date.

2. Licensees' Rights . Pursuant to 11 U.S.C. §365(n), QDI and LabCorp shall each retain a separate, irrevocable, perpetual, non-transferrable (except in connection with the sale of the Licensee's business), royalty-free, fully paid up (for total combined consideration of $75,000.00) nonexclusive license (without the right to sublicense) to use and otherwise exploit the Licensed Technology in any manner and for any purpose in the Field in the United States and Canada ("Licensees' Rights"). Without limiting or expanding the foregoing and for illustrative purposes only, LabCorp and QDI shall have the right to (i) use the Licensed Technology to develop, import, make, have made, perform, market, offer for sale, sell or otherwise commercialize products or services of any nature in the Field; (ii) disclose, display, distribute, publish or otherwise provide the Licensed Technology to Affiliates or third parties performing services on behalf of a

Licensee solely for use within the Field in the United States and Canada; and (iii) copy, modify, and create derivative works and improvements to the Licensed Technology solely for purposes of developing, manufacturing, marketing, and/or selling products and providing services within the Field in the United States and Canada. For purposes of this Section 2, all references to QDI and LabCorp shall be deemed to also include their respective Affiliates. Except for the Licensees' Rights provided above in this Section 2, the QDI License and the LabCorp License shall be deemed terminated and none of its provisions shall survive such termination.

3. Licensees' Contingent Rights . Correlogic and its successors and assigns are hereby ordered to assign jointly to Licensees any patents or patent applications that are included in the Licensed Technology in the event Correlogic or its successors or assigns determine to abandon the prosecution or maintenance of said patents or patent applications, provided that Correlogic or its successor or assignee will retain for itself and its affiliates a non-exclusive, transferable, irrevocable, fully-paid up, royalty-free license (with the right to sublicense) to make, have made, use, sell, offer for sale, or import any product and to perform any process covered by the assigned patent.

4. Correlogic Deliverables . Within 10 days of the date of this Order, Correlogic shall turn over to Licensees all of the manifestations of the Licensed Technology, including (1) all patents and patent applications in the United States and Canada related to the Mass Spec Test and OvaCheck 1 Test existing immediately before the Petition Date, (2) all standard operating procedures, (3) all specifications, including performance criteria, (4) all study data, including copies of raw data and data behind all of the patients (including any patient data which was used to support any regulatory submissions, but excluding any patient information which cannot be provided to LabCorp or QDI under applicable law), (5) all regulatory submissions, (6) a list of vendors and reagents supplied by vendor, (7) the identity of vendors where Correlogic sources antibodies, (8) all Correlogic Tools, and (9) copies or originals of all descriptions, embodiments, reports, data, calculations, software, and all information Correlogic developed with regard to all SOPs, protocols, markers, marker related sequence information, antibodies and algorithms identified by Correlogic in connection with its

ovarian cancer research ("Correlogic Deliverables"). Correlogic shall cooperate in good faith with Licensees to deliver the Correlogic Deliverables at the sole expense of the Licensees. For the avoidance of doubt, Correlogic Deliverables include only those deliverables related to the Mass Spec Test and the OvaCheck 1 Test and do not include any clinical and diagnostic samples (including secreta, blood, tissue and tissue fluids) or patient information (except for data that was used to support any regulatory submissions).

5. Disclaimer . The rights of QDI and LabCorp in or to Licensees' Rights pursuant to this Order are limited to Correlogic's intellectual property related to the Mass Spec Test and the OvaCheck 1 Test that existed before the Petition Date and any improvements thereon made by QDI or LabCorp at any time. The Licensed Technology expressly excludes intellectual property rights in (a) the OvaCheck 2 Test (including any biomarker used with the OvaCheck 2 Test which was not used with the Mass Spec Test or the OvaCheck 1 Test), or (b) any other intellectual property rights in Technology and Source Code (as those terms are defined in the Correlogic Licenses), inventions, biomarkers, products or assays, to the extent any of these intellectual property rights were conceived, developed, reduced to practice or created by or for Correlogic or any successor or assignee of Correlogic on or after the Petition Date. Licensees acknowledge that Licensees have no rights in any intellectual property developed by Correlogic on or after the Petition Date or any improvement, enhancement, derivative work, modification, variation, new version, new release, upgrade, and update to or of any Correlogic intellectual property ("Improvement") to the extent the Improvement is developed by or for Correlogic or its assignee or successor on or after the Petition Date. For the avoidance of doubt, this disclaimer does not limit the Licensees' Rights as set forth in Section 2 of this Order. It clarifies the line drawn between pre-petition intellectual property and improvements being licensed to Licensees and post-petition intellectual property created by or on behalf of Correlogic that is not being licensed to Licensees. Licensees shall remain authorized to use and improve Licensees' Rights irrespective of the present or future rights of Correlogic or its successors or assigns, provided that Licensees have no licenses or rights to any patents (other than those expressly licensed hereunder) owned or controlled by Correlogic or its assignee or successor to the extent

any improvement created by or for any Licensee infringes any such patents. There are no implied licenses granted under this Agreement.

6. This Order shall bind and inure to the benefit of each party to this Adversary Proceeding and their successors and assigns and shall constitute a mutual release for all matters between (i) Correlogic and QDI, and (ii) Correlogic and LabCorp. For purposes of clarification, this does not release (a) any claims between LabCorp and QDI, or (b) any claims based on a violation of the terms of this Order.

Copies to:

Plaintiff
Counsel for Plaintiff
Defendant
Counsel for Defendant

**** END OF ORDER ****

SETTLEMENT AGREEMENT AND RELEASE

This Settlement Agreement and Release ("Agreement") is entered into by and among Vermillion, Inc. f/k/a Ciphergen Biosystems, Inc. (referred to herein as "Claimant"), on the one hand, and [***], on the other. (Claimant and [***] are collectively referred to herein as the "Parties," and separately as "Party," when appropriate.)

WHEREAS, a dispute has arisen between Claimant and [***] arising out of and relating to certain investments made by Claimant;

WHEREAS, [***] denies any and all liability to Claimant; and

WHEREAS, the Parties desire to finally and completely settle and resolve all disputes between them.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the Parties hereby agree as follows:

1. **Release** . The Parties hereby release and forever discharge one another, their present and former parents, affiliates, subsidiaries, predecessors, successors, and related entities, its present and former officers, directors, shareholders, employees (including but not limited to [***]'s former employee, [***]), partners, attorneys, affiliates, representatives, spouses, trustees, and agents, and each of such persons' heirs, successors, assigns, executors, administrators, and beneficiaries, of and from any and all claims (including claims for costs and attorneys' fees), damages, demands, suits, debts, actions or causes of action of any kind, whether known or unknown, suspected or unsuspected, that the Parties, or any of them, ever had or may now or hereafter own, hold, have or claim to have by reason of any matter, cause or thing whatsoever from the beginning of the world to the day of the date of this Agreement, ***including but not limited to*** any and all investments Claimant made at or through any employee or agent of [***], including but not limited to investments in [***], and any claims which are or could have been asserted by Claimant in the [***] arbitration matter entitled *Vermillion, Inc. f/k/a Ciphergen Biosystems, Inc. v.* [***], and identified as [***], (collectively, the "Claim").

2. **Section 1542 Waiver** . The Parties hereby expressly waives any and all rights that they may have under the provisions of California Civil Code section 1542, which reads as follows:

> **A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.**

The Parties further declare that they know and understand the full nature, extent, and import of section 1542 of the California Civil Code and of this entire Agreement, and if the Parties have any questions, they have asked their respective attorneys to answer them and have received such answers to enable them to knowingly waive the protections afforded by section 1542 of the California Civil Code.

3. **Unknown Claims** . It is possible that other injuries or damages not now known to the Parties will develop or be discovered, and this Agreement is expressly intended to cover and include all such injuries or damages, including all rights of action relating thereto.

4. **Dismissal of Arbitration** . Within ten (10) days of the total payment due under this Agreement by [***], Claimant shall dismiss [***] in its entirety, with prejudice.

5. **Payment by [***]** . For and in consideration of each of the terms set forth herein, [***] shall pay Claimant the total sum of $1,000,000 payable in two (2) installments as follows: $535,000 on or before March 1, 2012 and $465,000 on or before September 1, 2012. Such payments shall be made by wire transfer to the "Ackerman, Link & Sartory, P.A. Trust Account f/b/o Vermillion, Inc.," (tax identification number 65-0668726) as follows:

	FirstCity Bank of Commerce 11011 US Highway #1 North Palm Beach, FL 33408 (561-630-5595)
Account Name:	Ackerman, Link & Sartory, P.A. 222 Lakeview Avenue Suite 1250 West Palm Beach, FL 33401
Account Number:	200000339
Bank:	FirstCity Bank of Commerce
	Bank ABA Number: 067016367

6. **Assignment of Claims Based on Released Matters** . Claimant hereby transfers and assigns to [***] any and all claims, demands, and causes of action whatsoever that Claimant has or may have against any individual or entity arising out of or related to the Claim. [***] may in its own name and for its own benefit prosecute, collect, settle, compromise and grant releases on said claims, demands, and causes of action as it in its sole discretion deems advisable.

7. **Attorneys' Fees and Costs** . Each Party shall bear its own expenses, including any costs or attorneys' fees, incurred in connection with the Claim. Claimant is responsible for any tax liability that may be created as a result of this Agreement.

8. **Applicable Law** . This Agreement shall be construed, interpreted, governed, and enforced in accordance with the laws of the State of California.

9. **Entire Agreement** . This Agreement constitutes a binding and enforceable agreement of settlement among the Parties, and the Parties acknowledge that there are no other warranties, promises, assurances or representations of any kind, express or implied, upon which the Parties have relied in entering into this Agreement, unless expressly set forth herein. This Agreement shall not be modified except by written agreement signed by all Parties to this Agreement.

10. **Parties Affected** . This Agreement shall be binding upon and inure to the benefit of the officers, directors, shareholders, employees, partners, attorneys, affiliates, representatives, spouses, trustees, heirs, successors, and assigns of the Parties.

11. **Warranty** . Each Party warrants (a) that the person executing this Agreement on its behalf has the authority to do so; and (b) that the matters being released pursuant to this Agreement have not been assigned or otherwise transferred to any other person or entity.

12. **Acknowledgment of Terms** . The Parties have read and understand the terms of this Agreement, have consulted with their respective counsel, and understand and acknowledge the significance and consequence of each such term.

13. **Representation by Counsel** . The Parties agree that they are entering into this Agreement after having received full advice from counsel of their choosing with respect to this Agreement and all other matters related thereto.

14. **Execution of Documents** . This Agreement may be executed in counterparts, that is, all signatures need not appear on the same copy. All such executed copies shall together constitute the complete Agreement. Facsimile signatures shall for all purposes have the same effect as original signatures.

15. **Confidentiality** . The Parties agree that, other than acknowledging in response to any inquiry the fact that the Claim has been settled, Claimant shall not disclose or discuss, or cause or permit his/her counsel or anyone in privity with counsel to disclose or discuss, directly or indirectly, to any person, entity or representative thereof, who is not a Party or an employee or agent of a Party to the Claim, any of the terms of the settlement of the Claim, any documents received in connection with the Claim and/or the facts regarding the underlying controversies and disputes; provided, however, that nothing contained herein shall preclude Claimant from: (1) complying with disclosure and reporting laws applicable to public companies, (2) complying with any lawful subpoena or court order, (3) complying with any request for information or documents from any securities industry regulator or self-regulatory organization, (4) responding to any inquiry by or providing testimony to the United States Securities and Exchange Commission, any self-regulatory organization or any federal or state regulatory authority, or (5) from making disclosure of the fact and amount of this settlement to lawyers, accountants, tax

advisors, board members, shareholders, or during any 2012 quarterly earnings call as Claimant's counsel determines is reasonably necessary to comply with applicable securities laws, rules and regulations.

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective as of the date of the last signature herein.

Dated: February 7, 2012

/s/ Gail S. Page

VERMILLION, INC. f/k/a CIPHERGEN BIOSYSTEMS, INC.

By: Gail S. Page

Its: CEO

Dated: 2/9/2012

[/s/***]

By: [***]

Its: [***]

APPROVED AS TO FORM AND CONTENT

Dated: 2-7-2012

/s/ Wendy S. Link for
SCOTT J. LINK
ACKERMAN, LINK & SARTORY, P.A.
Attorneys for Claimant
VERMILLION, INC. f/k/a CIPHERGEN BIOSYSTEMS, INC.

Dated: 2.9.2012

[/s/ ***]
[***]
[***]
[***]
[***]
[***]
[***]

Exhibit 21.0

Vermillion, Inc. Subsidiaries
December 31, 2011

Subsidiary	State/Country of Incorporation/Formation
IllumeSys Pacific, Inc.	California
Ciphergen Technologies, Inc.	California
Ciphergen Biosystems KK	Japan
Ciphergen Biosystems International, Inc.	Delaware
Ciphergen (Beijing) Biosystems Co., Ltd.	China

Ciphergen Biosystems International, Inc. Subsidiaries
December 31, 2011

Subsidiary	State/Country of Incorporation/Formation
Ciphergen Biosystems GmbH	Germany
Ciphergen Biosystems EURL	France

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-167204) of Vermillion, Inc. of our report dated March 26, 2012 relating to the consolidated financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Austin, Texas

March 26, 2012

Exhibit 31.1

Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act Of 2002

I, Gail S. Page, certify that:

1. I have reviewed this annual report on Form 10-K of Vermillion, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: March 26, 2012

/s/ Gail S. Page
Gail S. Page
President and Chief Executive Officer

Exhibit 31.2

Certification of the Chief Accounting Officer Pursuant to Section 302 of the Sarbanes-Oxley Act Of 2002

I, Eric J. Schoen, certify that:

1. I have reviewed this annual report on Form 10-K of Vermillion, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: March 26, 2012

/s/ Eric J. Schoen
Eric J. Schoen
Chief Accounting Officer

Exhibit 32.0

Certification of the Chief Executive Officer and Chief Accounting Officer
Pursuant to 18 U.S.C. Section 1350,
as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
with Respect to the Annual Report on Form 10-K
for the Year Ended December 31, 2011

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, Chapter 63 of Title 18, United States Code), each of the undersigned officers of Vermillion, Inc., a Delaware corporation (the "Company"), does hereby certify, to the best of such officer's knowledge, that:

1. The Company's annual report on Form 10-K for the year ended December 31, 2011, (the "Form 10-K") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and
2. Information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 26, 2012

/s/ Gail S. Page
Gail S. Page
President and Chief Executive Officer (Principal Executive Officer)

Date: March 26, 2012

/s/ Eric J. Schoen
Eric J. Schoen
Chief Accounting Officer

The certification set forth above is being furnished as an Exhibit solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and is not being filed as part of the Form 10-K or as a separate disclosure document of the Company or the certifying officers.