NEOPROBE CORP
Form 424B3
April 01, 2010

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Registration No. 333-156810

PROSPECTUS SUPPLEMENT

Number 1

to

Prospectus dated December 29, 2009,

of

NEOPROBE CORPORATION

11,500,000 Shares of Common Stock

This Prospectus Supplement relates to the sale of up to 11,500,000 shares of Neoprobe Corporation common stock (the "Shares") by Fusion Capital Fund II, LLC ("Fusion Capital"). We will not receive proceeds from the sale of the Shares by Fusion Capital.

This Prospectus Supplement No. 1 includes the attached Annual Report on Form 10-K (the "Form 10-K") of Neoprobe Corporation (the "Company") for the fiscal year ended December 31, 2009, filed by the Company with the Securities and Exchange Commission on March 31, 2010. The exhibits to the Form 10-K are not included with this Prospectus Supplement No. 1 and are not incorporated by reference herein.

Our common stock is traded on the OTC Bulletin Board under the symbol "NEOP."

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS SUPPLEMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus Supplement No. 1 is April 1, 2010.

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

FORM 10-K

(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2009

or

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE EXCHANGE ACT

For the transition period from to _____ to _____

Commission file number 0-26520

NEOPROBE CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	31-1080091
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
425 Metro Place North, Suite 300, Dublin, Ohio	43017-1367
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code (614) 793-7500

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

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

Common Stock, par value $.001 per share
(Title of Class)

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 Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 if this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ¨ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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. Yes oNo x

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

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 12-b-2 of the Act.) Yes ¨ No x

The aggregate market value of shares of common stock held by non-affiliates of the registrant on June 30, 2009 was $66,881,198.

The number of shares of common stock outstanding on March 26, 2010 was 81,890,508.

DOCUMENTS INCORPORATED BY REFERENCE

None.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things:

- general economic and business conditions, both nationally and in our markets,
- our history of losses, negative net worth and uncertainty of future profitability;
- our expectations and estimates concerning future financial performance, financing plans and the impact of competition;
- our ability to implement our growth strategy;
- anticipated trends in our business;
- advances in technologies; and
- other risk factors set forth under “Risk Factors” in this report.

In addition, in this report, we use words such as “anticipate,” “believe,” “plan,” “expect,” “future,” “intend,” and similar expressions to identify forward-looking statements.

We undertake no obligation to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this report. In light of these risks and uncertainties, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially from those anticipated or implied in the forward-looking statements.

PART I

Item 1. Business

Development of the Business

Neoprobe Corporation (Neoprobe, the company or we) is a biomedical company that develops and commercializes innovative oncology products that enhance patient care and improve patient outcome. We were originally incorporated in Ohio in 1983 and reincorporated in Delaware in 1988. Our executive offices are located at 425 Metro Place North, Suite 300, Dublin, Ohio 43017. Our telephone number is (614) 793-7500.

From our inception through 1998, we devoted substantially all of our efforts and resources to the research and clinical development of radiopharmaceutical and medical device technologies related to the intraoperative diagnosis and treatment of cancers, including our proprietary radioimmunoguided surgery (RIGS®) technology. In 1998, U.S. and European regulatory agencies completed evaluations and discussions of the status of the regulatory pathway for our RIGS products, which coupled with our limited financial resources at the time, caused us to suspend our radiopharmaceutical development activities and refocus our operating strategy on our medical device business. After achieving profitability in the fourth quarter of 1999 following this retrenchment, we expanded our medical device offerings at the beginning of 2002 through the acquisition of an Israeli company that was developing a line of blood flow measurement devices.

Although we had expanded our strategic focus with the addition of medical devices outside the oncology field, we continued to look for other avenues to reinvigorate our radiopharmaceutical development portfolio. In 2004, our efforts resulted in a number of positive events that caused us to take steps to re-activate our radiopharmaceutical and therapeutic initiatives. As a result of our efforts since 2004, we now have submitted data from a Phase 3 clinical trial of one of our radiopharmaceutical products, Lymphoseek®, to the U.S. Food and Drug Administration (FDA) for review and have held a successful meeting with FDA that has clarified the process for the near-term filing of a new drug application (NDA) to FDA. In addition, we are enrolling patients in a second Phase 3 clinical trial intended to further support and expand our proposed product labeling for Lymphoseek and to support European filing for the product. Interest in, and activity related to, our original radiopharmaceutical product, RIGScanTM CR, has also increased significantly in recent years as we received formal scientific advice in late 2008 from the European Medicinal Evaluation Agency (EMEA) regarding our regulatory and clinical development plans for RIGScan CR. We took steps during the fourth quarter of 2009 to obtain similar feedback from FDA through the submission of a pre-Phase 3 meeting request and Special Protocol Assessment (SPA) request for which we are currently waiting on a response. Our subsidiary, Cira Biosciences, Inc. (Cira Bio), is also evaluating the market opportunities for yet another technology platform, activated cellular therapy (ACT). The success we have been experiencing in recent years related to our drug development activities caused us, during 2009, to re-evaluate our product initiatives and strategies. As a result of this evaluation, we made the decision during the third quarter of 2009 to discontinue the operations of our blood flow measurement device product line and to look for opportunities to divest our Cardiosonix Ltd. subsidiary. We believe this decision will allow us to better focus on our oncology-related development platforms as we approach several key milestones in the coming twelve to eighteen months.

We believe that our virtual business model is unique within our industry as we combine revenue generation from medical devices to cover our public company overhead while we devote capital raised through financing efforts to the development of products such as Lymphoseek which possess even greater potential for shareholder return. In addition, we have sought to maintain a development pipeline with additional longer-term return potential such as RIGScan CR and ACT that provide the opportunity for incremental return on the achievement of key development and funding milestones.

Our Technology

Gamma Detection Devices

Through 2009, our line of gamma radiation detection devices has generated substantially all of our revenue. Our gamma detection systems are used by surgeons in the diagnosis and treatment of cancer and related diseases. Our currently-marketed line of gamma detection devices has been cleared by FDA and other international regulatory agencies for marketing and commercial distribution throughout most major global markets.

Our patented gamma detection device systems consist of hand-held detector probes and a control unit. The critical detection component is a highly radiosensitive crystal mounted in the tip of the probe that relays a signal through a preamplifier to the control unit to produce both a digital readout and an audible signal. The detector element fits into a housing approximately the size of a pen flashlight. The neoprobe® GDS gamma detection system, originally released in 1998 under the name neo2000®, is the fourth generation of our gamma detection products. The neoprobe GDS is designed as a platform for future growth of our instrument business. The neoprobe GDS is software upgradeable and is designed to support future surgical targeting probes without the necessity of costly factory remanufacture. Our most recent software release enables our entire installed base of neoprobe GDS and neo2000 users to use our wireless gamma detection probes, based on Bluetooth® wireless technology, that have been commercially launched over the last few years. During 2009, we also introduced a new gamma detection probe capable of detecting higher energy isotopes such as Fludeoxyglucose 18F (FDG or F18) that are frequently used in connection with Positron Emission Tomography (PET) scans.

Surgeons are using our gamma detection devices in a surgical application referred to as intraoperative lymphatic mapping (ILM or lymphatic mapping) or sentinel lymph node biopsy (SLNB). ILM helps trace the lymphatic drainage patterns in a cancer patient to evaluate potential tumor drainage and cancer spread in lymphatic tissue. The technique does not detect cancer; rather it helps surgeons identify the lymph node(s) to which a tumor is likely to drain and spread. The lymph node(s), sometimes referred to as the "sentinel" node(s), may provide critical information about the stage of a patient’s disease. ILM begins when a patient is injected at the site of the main tumor with a commercially available radioactive tracing agent. The agent is intended to follow the same lymphatic flow as the cancer would have if it had metastasized. The surgeon may then track the agent's path with a hand-held gamma radiation detection probe, thus following the potential avenues of metastases and identifying lymph nodes to be biopsied for evaluation and determination of cancer spread.

The application of ILM to solid tumor cancer treatment has been most widely developed in the breast cancer and melanoma indications. Numerous clinical studies, involving thousands of patients and published in peer-reviewed medical journals as far back as Oncology (January 1999) and The Journal of The American College of Surgeons (December 2000), have indicated SLNB is approximately 97% accurate in predicting the presence or absence of disease spread in melanoma and breast cancers. Consequently, it is estimated that more than 80% of breast cancer patients who would otherwise have undergone full axillary lymph node dissections (ALND), involving the removal of as many as 20 - 30 lymph nodes, might be spared this radical surgical procedure if the sentinel node was found to be free of cancer. Surgeons practicing SLNB have found that our gamma detection probes are well-suited to the procedure.

Hundreds of articles have been published in recent years in peer-reviewed journals on the topic of ILM or SLNB. Furthermore, a number of thought leaders and cancer treatment institutions have recognized and embraced the technology as standard of care for melanoma and for breast cancer. Our marketing partner continues to see strong sales, especially for use in breast cancer treatment. SLNB in breast cancer has been the subject of national and international clinical trials, including one major study sponsored by the U.S. Department of Defense and the National Cancer Institute (NCI) and one sponsored by the American College of Surgeons. The first of these trials completed accrual approximately four years ago. While we are not aware of the exact timing of publication or presentation of results from these trials, it is possible that such data may be available sometime later in 2010. Accrual on the second trial was halted early (in 2007), due, we believe, to the overwhelming desire of patients to be treated with SLNB rather than be randomized in a trial whereby they might receive a full axillary dissection. We believe that once data from these trials are widely published, there may be an additional demand for our devices from those surgeons who have not yet adopted the SLNB procedure. We also believe, based on an estimate of the total number of operating rooms in medical centers that are capable of performing the types of procedures in which our gamma detection devices are used, that while we continue to approach saturation at the major cancer centers and teaching institutions, a significant portion of the global market for gamma detection devices such as ours remains untapped. In addition, we believe we are beginning to see the development of a replacement device market in the gamma detection device sector, aided in part by new offerings such as our wireless probes, as devices purchased over ten years ago during the early years of lymphatic mapping begin to be retired.

Although lymphatic mapping has found its greatest acceptance thus far in breast cancer and melanoma, we believe that Lymphoseek may be instrumental in extending ILM into other solid tumor cancers in which surgeons are currently investigating such as prostate, gastric, colon, head and neck, and non-small cell lung cancers. Investigations in these other cancer types have thus far met with mixed levels of success due, we believe, to limitations associated with currently available radioactive tracing agents; however, we believe our development of Lymphoseek may positively impact the effectiveness of ILM in such indications. Surgeons have also been using our devices for other gamma-guided surgery applications, such as evaluating the thyroid function and conducting parathyroid surgery, and in determining the state of disease in patients with vulvar and penile cancers. Expanding the application of ILM beyond the current primary uses in the treatment of breast cancer and melanoma is a primary focus of our strategy regarding our gamma-guided surgery products and is consistent with our Phase 3 Lymphoseek clinical trial strategy. To support that expansion, we continue to work with our marketing and distribution partners to develop additional enhancements to the neoprobe GDS platform such as the wireless probes that were introduced over the last few years and the new F18 probe we launched at the Society of Surgical Oncology (SSO) 62nd Annual Cancer Symposium held in March of 2009. We believe the market for the intraoperative detection of higher energy isotope detection is just beginning to develop and may not significantly impact our sales for some time.

Lymphoseek

Our gamma detection devices are primarily capital in nature; as such, they generate revenue only on the initial sale. To complement the one-time revenue stream related to capital products, we are working on developing recurring revenue or "procedural" products that would generate revenue based on each procedure in which they are used. The product we are developing with the greatest near-term potential in this area is Lymphoseek, a proprietary drug compound under exclusive worldwide license from the Regents of the University of California through their UC, San Diego affiliate (UCSD). The UCSD license grants Neoprobe the commercialization rights to Lymphoseek for diagnostic imaging and intraoperative detection applications. If proven effective and cleared for commercial sale, Lymphoseek would be the first radiopharmaceutical product specifically designed and labeled for the targeting of sentinel lymph nodes.

The initial pre-clinical evaluations of Lymphoseek were completed in 2001. Since that time, Neoprobe, in cooperation with UCSD, has completed or initiated five Phase 1 clinical trials, a multi-center Phase 2 trial and multi-center Phase 3 trials involving Lymphoseek. The status of these trials is listed below:

Indication	Phase	Number of Patients	Status
Breast (peritumoral injection)	1	24	Completed
Melanoma	1	24	Completed
Breast (intradermal injection, next day surgery)	1	31	Ongoing
Prostate	1	20	Ongoing
Colon	1	20	Ongoing
Breast or Melanoma	2	80	Completed
Breast or Melanoma	3	179	Completed
Head and Neck Squamous Cell Carcinoma (“Sentinel”)	3	196*	Ongoing

*estimated number based upon interim analysis; actual number is dependent on statistical analysis at potential stoppage points

The Phase 1 studies to date have been substantially supported through research grants from a number of organizations such as the Susan G. Komen Breast Cancer Research Foundation, the American Cancer Society (ACS) and the NCI. Research data from some of these clinical evaluations of Lymphoseek have been presented at meetings of the Society of Nuclear Medicine, the Society of Surgical Oncology and the World Sentinel Node Congress. The ongoing breast, prostate and colon studies are being conducted under Neoprobe’s investigational new drug (IND) application that has been cleared with FDA using drug product supplied by Neoprobe.

In November 2003, we met with the Interagency Council on Biomedical Imaging in Oncology, an organization representing FDA, the NCI and the Centers for Medicare and Medicaid Services, to discuss the regulatory approval process and to determine the objectives for the next clinical trial involving Lymphoseek. During 2004, we prepared and submitted an IND application to FDA to support the marketing clearance of Lymphoseek.

In early 2005, we announced that FDA had accepted our application to establish a corporate IND for Lymphoseek. With the transfer of the UCSD physician IND to Neoprobe, we assumed full clinical and commercial responsibility for the development of Lymphoseek. Following the establishment of the corporate IND, Neoprobe’s clinical and regulatory personnel began discussions with FDA regarding the clinical development program for Lymphoseek.

As a “first in class” drug, Neoprobe was advised that additional non-clinical studies needed to be completed before additional clinical testing of the drug could occur in humans. The additional non-clinical testing was successfully completed in late 2005 and the reports were filed with FDA in December 2005. The seven studies included repeat administrations of Lymphoseek at dosages significantly in excess of the anticipated clinical dosage. None of the non-clinical studies revealed any toxicity issues associated with the drug.

Upon the submission of the IND and draft Phase 2 protocol, FDA advised Neoprobe that commercially produced Lymphoseek would need to be used in the Phase 2 clinical study, as opposed to using drug previously manufactured in laboratories at UCSD. Also, the regulatory agencies raised a number of Chemistry, Manufacturing and Control (CMC) questions regarding the drug compound and characterization. Neoprobe began the transfer of bulk drug manufacturing to Reliable Biopharmaceutical Corporation (Reliable) early in 2005 and engaged OSO BioPharmaceuticals Manufacturing LLC (OSO Bio, formerly Cardinal Health PTS) to develop and validate procedures and assays to establish commercial standards for the formulation, filling and lyophilization of the drug compound. We submitted an initial CMC response to FDA in 2006.

We received clearance from FDA in May 2006 to move forward with patient enrollment for a multi-center Phase 2 clinical study of Lymphoseek. The first of our Phase 2 clinical sites received clearance from its internal clinical review committee, or Institutional Review Board (IRB), in July 2006. The IRB clearance permitted us to finalize arrangements to begin patient screening and enrollment activities for the Phase 2 trial, and we began patient enrollment in September 2006 and completed enrollment of the 80 patients in June 2007. We announced positive preliminary efficacy results from our Phase 2 Lymphoseek trial in June 2007 and final results in December 2007. Localization of Lymphoseek to lymphoid tissue was confirmed by pathology in over 99% of the lymph node tissue samples removed during the Phase 2 trial. We held an end of Phase 2 meeting with FDA during late October 2007 during which the final results were reviewed. The Phase 2 study was conducted at five of the leading cancer centers in the U.S.: John Wayne Cancer Center; University of California, San Francisco; MD Anderson Cancer Center; University Hospital Cleveland (Case Western Reserve); and the University of Louisville.

Based on dialogue with FDA through 2007, we proposed to FDA a plan for conducting Phase 3 studies to support an NDA for marketing clearance of Lymphoseek. During 2008, we initiated patient enrollment in the first Phase 3 clinical study in patients with either breast cancer or melanoma (NEO3-05). In March 2009, we announced that this study had reached the accrual of 203 lymph nodes, the study's primary accrual objective. The NEO3-05 Phase 3 clinical trial was designed to provide, and achieved its primary endpoint of, the evaluation of the efficacy of Lymphoseek in anatomically delineating lymph nodes in both breast cancer and melanoma patients that may be predictive of determining whether cancer has spread into the lymphatic system. Final data from the trial in patients with breast cancer and melanoma has now been reviewed and audited. The NEO3-05 study has also been closed on the national clinical trials website, www.clinicaltrials.gov. In December 2009, Neoprobe submitted an end-of-Phase 3 meeting request to FDA to discuss the results of the clinical trial as part of our continuing preparation of a NDA In March 2010, Neoprobe met with FDA regarding NEO3-05. The FDA review included the efficacy and safety results of the NEO3-05 study and Neoprobe's plans for the submission of a NDA for Lymphoseek. The NDA submission will be based on the clinical results of NEO3-05 and other already completed clinical evaluations of Lymphoseek. FDA encouraged Neoprobe to request a series of pre-NDA meetings in the coming months to review the components of the NDA prior to its formal submission. Neoprobe indicated to FDA that the Company plans to submit the NDA following satisfactory completion of these meetings.

The NEO3-05 Phase 3 study was an open label trial of node-negative subjects with either breast cancer or melanoma. It was designed to evaluate the safety and the accuracy of Lymphoseek while identifying the lymph nodes draining from the subject's tumor site. To demonstrate the accuracy of Lymphoseek, each subject consenting to participate in the study was injected in proximity to the tumor with Lymphoseek and one of the vital blue dyes that are commonly used in lymphatic mapping procedures. The primary efficacy objective of the study was to identify lymph nodes that contained the vital blue dye and to demonstrate a statistically acceptable concordance rate between the identification of lymph nodes with the vital blue dye and Lymphoseek. To be successful, the study needed to achieve a statistical p-value of at least 0.05.

In this review meeting with FDA, the full analysis of the NEO3-5 clinical data was discussed. The protocol compliant clinical sites that participated in the NEO3-05 study contributed 136 Intent-To-Treat (ITT) subjects who provided 215

lymph nodes that contained the vital blue dye. 210 of the vital blue dye positive lymph nodes contained Lymphoseek for an overall concordance rate of 98% achieving a statistical p-value of 0.0001. In addition to the nodes identified by vital blue dye and Lymphoseek, Lymphoseek was able to identify 85 additional lymph nodes that did not contain the vital blue dye, and 18% of these nodes were found by pathology to contain cancer. There were no significant safety events related to Lymphoseek. The FDA indicated that the clinical data would be supportive of a NDA submission for Lymphoseek.

In future pre-NDA meetings, Neoprobe will continue discussions with the FDA reviewers regarding the pre-clinical and chemistry, manufacturing and control quality data modules that will be part of the NDA submission. Neoprobe will be discussing elements of the statistical analysis plan that would support the NDA, including the design of any prospective clinical evaluations to support the primary indication, and to potentially expand the future indications for Lymphoseek.

A second Phase 3 study is also underway to further validate Lymphoseek as a sentinel lymph node targeting agent. This second trial, NEO3-06 or the “Sentinel” trial, is being conducted in patients with head and neck squamous cell carcinoma. The Sentinel study is designed to validate Lymphoseek as a sentinel lymph node targeting agent. Our discussions with FDA and EMEA have also suggested that the Sentinel trial will further support the use of Lymphoseek in sentinel lymph node biopsy procedures. We believe the outcome of the trial will be beneficial to the marketing and commercial adoption of Lymphoseek in the U.S. and European Union (EU). We plan to have approximately 20 participating institutions in the Sentinel trial. Patient recruitment and enrollment is actively underway at a number of institutions and the trial protocol is currently under review at several other institutions. The accrual rate for trials of this nature is highly dependent on the timing of IRB approvals of the NEO3-06 protocol. Our experience in the NEO3-05 trial has shown that this process may be lengthening due to risk management concerns on the part of hospitals participating in clinical trials and other factors.

We plan to use the safety and efficacy results from the Phase 3 clinical evaluations of Lymphoseek, which will include sites in the EU, to support the drug registration application process in the EU as well as to amend the filing in the U.S. for expanded product labeling. Based on the positive outcome of the recent meeting regarding NEO3-05, Neoprobe expects to submit the NDA for Lymphoseek later in the summer of 2010. Depending on the timing of the planned pre-NDA meetings with FDA and the outcome of the FDA regulatory review cycle, we believe that Lymphoseek could be commercialized in mid-2011. We cannot assure you, however, that this product will achieve regulatory approval, or if approved, that it will achieve market acceptance. See Risk Factors.

RIGS

From inception until 1998, Neoprobe devoted significant efforts and resources to the development of its proprietary RIGS® technology. The RIGS system combines a patented hand-held gamma radiation detection probe with proprietary radiolabeled cancer-specific targeting agents to provide surgeons with real-time information to locate tumor deposits generally not detectable by conventional methods. The RIGS system is designed to assist the surgeon in the more thorough removal of the cancer, thereby leading to improved surgical treatment of the patient. The targeting agents used in the RIGS process are monoclonal antibodies, labeled with a radioactive isotope that emits low energy gamma rays. The device used is a very sensitive radiation detection instrument that is capable of detecting small amounts of radiation bound to the targeting agent. Before surgery, a cancer patient is injected with one of the targeting agents which circulates throughout the patient’s body and binds specifically to cancer cell antigens or receptors. Concentrations of the targeting agent are then located during surgery by Neoprobe's gamma detection device, which emits an audible tone to direct the surgeon to targeted tissue.

RIGScanTM CR is an intraoperative targeting agent consisting of a radiolabeled murine monoclonal antibody (CC49 MAb). The radiolabel used is 125I, a 27 - 35 KeV emitting isotope. The CC49 MAb was developed by the NCI and is licensed to Neoprobe by the National Institutes of Health (NIH). The CC49 MAb is produced from a murine cell line generated by the fusion of splenic lymphocytes from mice immunized with tumor-associated glycoprotein-72 (TAG-72) with non-immunoglobulin secreting P3-NS-1-Ag4 myeloma cells. The CC49 MAb localizes or binds to TAG-72 antigen and shows a strong reactivity with both LS-174T colon cancer extract and to a breast cancer extract.

RIGScan CR is the biologic component for the RIGS system to be used in patients with colon or rectal cancer. The RIGS system was conceived to be a diagnostic aid in the intraoperative detection of clinically occult disease. RIGScan CR is intended to be used in conjunction with other diagnostic methods, for the detection of the extent and location of tumor in patients with colorectal cancer. The detection of clinically occult tumor provides the surgeon with a more accurate assessment of the extent of disease, and therefore may impact the surgical and therapeutic management of the patient. Clinical trials suggest that RIGScan CR provides additional information outside that provided by standard diagnostic modalities (including surgical exploration) that may aid in patient management. Specifically, RIGScan CR, used as a component of the RIGS system, confirms the location of surgically suspicious metastases, evaluates the margins of surgical resection, and detects occult tumor in perihepatic (portal and celiac axis) lymph nodes.

Neoprobe conducted two Phase 3 studies, NEO2-13 and NEO2-14, of RIGScan CR in the mid-1990s in patients with primary and metastatic colorectal cancer, respectively. Both studies were multi-institutional involving cancer treatment institutions in the U.S., Israel, and the EU. The primary endpoint of both studies was to demonstrate that RIGScan CR detected pathology-confirmed disease that had not been detected by traditional preoperative (i.e., CT Scans) or intraoperative (i.e., surgeon's visual observations and palpation) means. That is, the trials were intended to show that the use of RIGScan CR assisted the surgeon in the detection of occult tumor. In 1996, Neoprobe submitted applications to EMEA and FDA for marketing approval of RIGScan CR for the detection of metastatic colorectal cancer.

Clinical study NEO2-14, which was submitted to FDA in the RIGScan CR Biologic License Application (BLA), enrolled 151 colorectal cancer patients with either suspected metastatic primary colorectal disease or recurrent colorectal disease. During FDA's review of the BLA, 109 of the enrolled patients were determined to be evaluable patients. Clinical study NEO2-13 was conducted in 287 enrolled patients with primary colorectal disease. The primary end-point for clinical study NEO2-13 was the identification of occult tumor.

NEO2-14 was the pivotal study submitted with Neoprobe's referenced BLA. Two additional studies evaluating patients with either primary or metastatic colorectal disease, NEO2-11 (a multi-center study) and NEO2-18 (a single institution study), were included in the BLA and provided supportive proof of concept (i.e., localization and occult tumor detection) and safety data. A study summary report for NEO2-13 was submitted under the BLA; however, FDA undertook no formal review of the study.

Following review of our applications, we received requests for further information from FDA and from the European Committee for Proprietary Medicinal Products on behalf of EMEA. Both FDA and EMEA acknowledged that our studies met the diagnostic endpoint of the Phase 3 clinical study, which was to provide incremental information to the surgeon regarding the location of hidden tumor. However, both agencies wanted to know how the finding of additional tumor provided clinical benefit that altered patient management or outcome for patients with metastatic colorectal cancer. In a series of conversations with FDA, the product claims were narrowed to the intraoperative detection of hepatic and perihepatic disease in patients with advanced colorectal cancer and patients with recurrent colorectal cancer.

FDA determined during its review of the BLA that the clinical studies of RIGScan CR needed to demonstrate clinical utility in addition to identifying additional pathology-confirmed disease. In discussions between Neoprobe and the agency, an FDA-driven post hoc analysis plan was developed to limit the evaluation of RIGScan CR to patients with hepatic and perihepatic disease with known metastasis to the liver. Findings of occult disease and subsequent changes in patient management (i.e., abandoning otherwise risky hepatic resections) in this limited population would serve as a measure of patient benefit. FDA's analysis of the patients enrolled in NEO2-14 matching the limited criteria was evaluated with a determination to confirm the surgical resection abandonment outcome. The number of evaluable patients in this redefined patient population was deemed too small by the agency and the lack of pre-stated protocol guidance precluded consistent sets of management changes given similar occult findings. The number of evaluable

patients for any measure of clinical utility, therefore, was too small to meet relevant licensing requirements and FDA ultimately issued a not approvable letter for the BLA on December 22, 1997, describing certain clinical and manufacturing deficiencies. Neoprobe withdrew its application to EMEA in November 1997.

We developed a clinical response plan for both agencies during the first half of 1998. However, following our analysis of the regulatory pathways for approval that existed at that time, we determined that we did not have sufficient financial resources to conduct the additional studies requested and sought to identify others with an interest in continuing the development process.

In 2004, we obtained access to survival analyses of patients treated with RIGScan CR which have been prepared by third parties, indicating that RIGScan CR may be predictive of, or actually contribute to, a positive outcome when measuring survival of the patients that participated in our original BLA studies. The data or its possible significance was unknown at the time of the BLA review given the limited maturity of the follow-up experience. The data includes publication by some of the primary investigators involved in the Phase 3 RIGS trials who have independently conducted survival follow-up analyses to their own institution's RIGS trial patients with apparently favorable results relating to the long-term survival prognosis of patients who were treated with RIGS. Based primarily on this survival-related information, we requested a meeting with FDA in 2004 to discuss the possible next steps for evaluating the survival related to our previous Phase 3 clinical trials as well as the possible submission of this data, if acceptable, as a prospective analysis in response to questions originally asked by FDA in response to our original BLA.

The April 2004 meeting with FDA was an important event in the re-activation of the RIGS program. The meeting was very helpful from a number of aspects: we confirmed that the RIGS BLA remains active and open. We believe this will improve both the cost effectiveness and timeliness of future regulatory submissions for RIGScan CR. Additionally, FDA preliminarily confirmed that the BLA may be applicable to the general colorectal population; and not just the recurrent colorectal market as applied for in 1996. Applicability to a general colorectal population could result in a greater market potential for the product than if applicable to just the recurrent population. During the meeting, FDA also indicated that it would consider possible prognostic indications for RIGScan CR and that survival data from one of our earlier Phase 3 studies could be supportive of a prognostic indication.

Our statistical analyses following the 2004 meeting with FDA indicated a potential trial size of 2,400 to 2,800 patients, which proved cost prohibitive to us and our potential development partners in evaluating continued development for RIGScan CR. However, during 2008 we developed a protocol design which we believe could support our desired clinical endpoints but in a much smaller patient population. We made the decision to initially approach the EMEA with this trial design under their formal process for seeking scientific advice. After holding a successful pre-submission meeting with EMEA in July 2008, we received positive feedback in October 1998 to the clinical trial design which involved approximately 400 patients in a randomized trial of patients with colorectal cancer. The participants in the trial would be randomized to either a control or RIGS treatment arm. Patients randomized to the RIGS arm would have their disease status evaluated at the end of their cancer surgery to determine the presence or absence of RIGS-positive tissue. Patients in both randomized arms would be followed to determine if patients with RIGS-positive status have a lower overall survival rate and/or a higher occurrence of disease recurrence. The hypothesis for the trial is based upon the data from the earlier NEO2-13 and NEO2-14 trial results.

Our desire has been, and continues to be, to develop a clinical development plan which is harmonized between the U.S. and the EU. To that end, during December 2009 we submitted an investigational new drug (IND) amendment to the United States FDA which includes the design of a proposed Phase 3 clinical trial of RIGScan CR. The IND amendment includes a Special Protocol Assessment (SPA) in accordance with the Prescription Drug User Fee Act of 1992 (PDUFA) and current regulatory guidelines, and will be registered on the clinicaltrials.gov website following discussions with FDA regarding the SPA, which we expect will take place sometime in the second quarter of 2010.

The Phase 3 clinical study as currently designed would be a randomized clinical study that would evaluate the ability of RIGScan CR to identify tumor-associated tissue in a group of patients as compared to a group of patients provided with traditional surgical care. Based on our current statistical analysis, we now believe the sample size for the

proposed Phase 3 clinical study may be as few as 300 patients including both the RIGScan CR and traditional treatment groups. In addition to assessing the ability of RIGScan CR to identify tumor-associated tissue, the survival rate of the RIGScan CR treated patients will be compared to the patients treated with conventional treatment modalities.

It should also be noted that the RIGScan CR biologic drug has not been produced for several years. We would have to perform some additional work related to ensuring the drug cell line is still viable and submit this data to EMEA and possibly FDA for their evaluation in connection with preparations to restart pivotal clinical trials. During the third quarter of 2009, we announced that we had executed a Biopharmaceutical Development and Supply Agreement with Laureate Pharma, Inc. This agreement will support the initial evaluation of the viability of the CC49 master working cell bank as well as the initial steps in re-validating the commercial production process for the biologic agent used in RIGScan CR. In addition, we will need to re-establish radiolabeling capabilities for the CC49 antibody in order to meet the regulatory needs for the RIGScan CR product. We have also begun discussions with parties capable of supporting such activities.

We continue to believe it will be necessary for us to identify a development partner or an alternative funding source in order to prepare for and fund the pivotal clinical testing that will be necessary to gain marketing clearance for RIGScan CR. In the past, we have engaged in discussions with various parties regarding such a partnership. We believe the recently clarified regulatory pathway approved by EMEA is very valuable, but we believe clarifying the regulatory pathway in the U.S. is important for us and our potential partners in assessing the full potential for RIGScan CR. However, even if we are able to make such arrangements on satisfactory terms, we believe that the time required for continued development, regulatory approval and commercialization of a RIGS product would likely be a minimum of five years before we receive any significant product-related royalties or revenues. We cannot assure you that we will be able to complete definitive agreements with a development partner or obtain financing to fund development of the RIGS technology and do not know if such arrangements could be obtained on a timely basis on terms acceptable to us, or at all. We also cannot assure you that FDA or EMEA will clear our RIGS products for marketing or that any such products will be successfully introduced or achieve market acceptance. See Risk Factors.

Activated Cellular Therapy

Through various research collaborations, we performed early-stage research during the late 1990’s on another technology platform, ACT, based on work originally done in conjunction with the RIGS technology. ACT is intended to boost the patient’s own immune system by removing lymph nodes identified during surgery and then, in a cell processing technique, activating and expanding “helper” T-cells found in the nodes. Within 10 to 14 days, the patient’s own immune cells, activated and numbering more than 20 billion, are infused into the patient in an attempt to trigger a more effective immune response to the cancer.

In the course of our research into ACT performed with RIGS, we learned that these lymph node lymphocytes containing helper T-cells could be activated and expanded to treat patients afflicted with viral and autoimmune disease as well as oncology patients. We have seen promising efficacy of this technology demonstrated from six Phase 1 clinical trials covering the oncology, viral and autoimmune applications.

In 2005, we formed a new subsidiary, Cira Bio, to explore the development of ACT. Neoprobe owns approximately 90% of the outstanding shares of Cira Bio with the remaining shares being held by the principals of a private holding company, Cira LLC. In conjunction with the formation of Cira Bio, an amended technology license agreement also was executed with The Ohio State University, from whom both Neoprobe and Cira LLC had originally licensed or optioned the various cellular therapy technologies. As a result of the cross-license agreements, Cira Bio has the exclusive development and commercialization rights to three issued U.S. patents that cover the oncology and autoimmune applications of its technology. In addition, Cira Bio has exclusive licenses to several pending patent applications.

In 2006, Cira Bio engaged the Battelle Memorial Institute to complete a technology and manufacturing process assessment of the cellular therapy approach. Cira Bio has attempted over the past few years to raise the necessary capital to move this technology platform forward. In August 2007 we entered into a Stock and Technology Option Agreement whereby Neoprobe gained the option to purchase the remaining 10% of Cira Bio from Cira LLC for $250,000; however, this option expired in 2008. The prospects for the ACT technology were buoyed during the fourth quarter of 2009 as a result of the publication of the discovery of a retrovirus linked to chronic fatigue syndrome, an autoimmune dysfunction the treatment of which showed promise the early clinical trials for ACT. Scientists are continuing to evaluate the data regarding the linkage. Should the link to the retrovirus be further substantiated, the development prospects for ACT will likely improve. We do not know if our assessment of the technology's prospects will ultimately yield positive results or if we will be successful in obtaining funding on terms acceptable to us, or at all. In the event we fail to obtain financing for Cira Bio, the technology rights for the oncology applications of ACT may revert back to Neoprobe and the technology rights for the viral and autoimmune applications may revert back to Cira LLC upon notice by either party. See Risk Factors.

Market Overviews

The medical device marketplace is a fast growing market. Epsicom Business Intelligence estimated in 2009 an annual medical device market of $91 billion in the U.S. and $131 billion internationally.

Cancer Market Overview

Cancer is the second leading cause of death in the U.S. and Western Europe and has been estimated to be responsible for over 562,000 deaths annually in 2009 in the U.S. alone. The NIH has estimated the overall annual costs for cancer (the primary focus of our gamma detection and pharmaceutical products) for the U.S. for 2008 at $228.1 billion: $93.2 billion for direct medical costs, $18.8 billion for indirect morbidity, and $116.1 billion for indirect mortality. Our line of gamma detection systems is currently used primarily in the application of ILM in breast cancer and melanoma which, according to the ACS, have been estimated to account for 13% and 5%, respectively, of new cancer cases which occurred in the U.S. in 2009.

The NIH has estimated that 1.3 million new cases of invasive breast cancer are expected to occur annually among women worldwide. Breast cancer is the second leading cause of death from cancer among all women in the U.S. The incidence of breast cancer, while starting to show minor declines in the past few years, generally increases with age, rising from about 120 cases per 100,000 women at age 40 to about 400 cases per 100,000 women at age 65. While the incidence rate for breast cancer appears to be decreasing, the overall number of new cases of breast cancer is still increasing. According to the ACS, over 192,000 new cases of invasive breast cancer are expected to be diagnosed and approximately 40,000 women are estimated to have died from the disease during 2009 in the U.S. alone. Thus, we believe that the significant aging of the population, combined with improved education and awareness of breast cancer and diagnostic methods, will continue to lead to an increased number of breast cancer surgical diagnostic procedures.

Approximately 80% of the patients diagnosed with breast cancer undergo a lymph node dissection (either ALND or SLNB) to determine if the disease has spread. While many breast cancer patients are treated in large cancer centers or university hospitals, regional and/or community hospitals continue to treat the majority of breast cancer patients. Over 10,000 hospitals are located in the markets targeted for our gamma detection SLNB products. We believe a significant portion of the potential market for gamma detection devices remains unpenetrated and that a replacement market is beginning to develop as units placed in the early years of SLNB begin to exceed over ten years of use. In addition, if the potential of Lymphoseek as a radioactive tracing agent is ultimately realized, it has the potential to address not only the current breast and melanoma markets on a procedural basis, but also to assist in the clinical evaluation and staging of solid tumor cancers and expanding SLNB to additional indications, such as gastric, non-small cell lung and other solid tumor cancers.

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We estimate the total market potential for Lymphoseek, if ultimately approved for all of these indications, could exceed $250 million. However, we cannot assure you that Lymphoseek will be cleared to market, or if cleared to market, that it will achieve the prices or sales we have estimated.

The ACS has also estimated that nearly 147,000 new incidences of colon and rectal cancers were expected to occur in the U.S. in 2009. Based on an assumed recurrence rate of 40%, this would translate into total potential surgical procedures of over 200,000 annually in the U.S. alone. We believe the number of procedures in other markets of the world to be approximately two times the estimated U.S. market. As a result, we believe the total potential global market for RIGScan CR could be in excess of $3 billion annually, depending on the level of reimbursement allowed. However, we cannot assure you that RIGScan CR will be cleared to market, or if cleared to market, that it will receive the reimbursement or achieve the level of sales we have currently estimated.

Marketing and Distribution

Gamma Detection Devices

We began marketing the neo2000 gamma detection system in October 1998. Since October of 1999, our gamma detection systems have been marketed and distributed throughout most of the world through Ethicon Endo-Surgery, Inc. (EES), a Johnson & Johnson company. In Japan, however, we market our products through a pre-existing relationship with Century Medical, Inc.

The heart of our gamma detection product line, the neoprobe GDS, is a control unit that is software-upgradeable, permitting product enhancements without costly remanufacturing. Since the original launch of the GDS' predecessor platform, the neo2000 (in 1998), we have also introduced a number of enhanced radiation detection probes optimized for lymphatic mapping procedures, including three wireless probes, as well as a new probe optimized for the detection of high energy radioisotopes. We have also developed four major software upgrades for the system that have been made available for sale to customers. We intend to continue developing additional SLNB-related probes and instrument products in cooperation with EES to maintain our leadership position in the gamma detection field.

Physician training is critical to the use and adoption of SLNB products by surgeons and other medical professionals. Our company and our marketing partners have established relationships with leaders in the SLNB surgical community and have established and supported training courses internationally for lymphatic mapping. We intend to continue to work with our partners to expand the number of SLNB training courses available to surgeons.

We entered into a distribution agreement with EES effective October 1, 1999 for an initial five-year term with options to extend for two successive two-year terms. In March 2004, EES exercised its first two-year extension option, and in March 2006 EES exercised its option for the second and final two-year term extension, thus extending the term of our the agreement through the end of 2008. In December 2007, Neoprobe and EES executed an amendment to the distribution agreement which extended the agreement through the end of 2013. Under this agreement, we manufacture and sell our SLNB products almost exclusively to EES, who distributes the products globally (except for Japan). EES has no ongoing purchase or reimbursement commitments to us other than the rolling four-month binding purchase commitment for gamma detection devices and certain annual minimum sales levels in order to maintain their exclusivity in distribution in most global markets. In addition, the economic terms of the revenue sharing from the end customer sale of our gamma detection devices increased commencing in January 2009. Our agreement with EES also contains certain termination provisions and licenses to our intellectual property that take effect only in the event we fail to supply product, or for other reasons such as a change of control. See Risk Factors.

Gamma Detection Radiopharmaceuticals

During the fourth quarter of 2007, we executed an agreement with Cardinal Health, Inc.'s radiopharmaceutical distribution division (Cardinal Health) for the exclusive distribution of Lymphoseek in the United States. The agreement is for a term of five years from the date of marketing clearance of a NDA from FDA. Under the terms of our agreement with Cardinal Health, Neoprobe will receive a share of each patient dose sold. In addition, Neoprobe will receive up to $3 million in payments upon the achievement of certain sales milestones by Cardinal Health. We do not currently have collaborative agreements covering Lymphoseek in other areas of the world or for RIGScan CR or ACT. We cannot assure you that we will be successful in securing collaborative partners for other global markets or radiopharmaceutical products, or that we will be able to negotiate acceptable terms for such arrangements. We believe the most preferable and likely distribution partners for Lymphoseek would be entities with established radiopharmaceutical distribution channels, although it is possible that other entities with more traditional oncology pharmaceutical portfolios may also have interest.

With respect to RIGScan CR, we believe there are development milestones that can be achieved prior to the need for significant capital investment in RIGScan CR, such as harmonizing the regulatory requirements in the US and EU for the planned Phase 3 trial. We continue to believe it will be necessary for us to identify a development partner or an alternative funding source in order to prepare for and to fund the pivotal clinical testing that will be necessary to gain marketing clearance for RIGScan CR. At the present time, while we have parties who have indicated an interest in entering into a development relationship, we do not believe these efforts will result in a definitive partnership at least until a regulatory and development pathway is obtained. We anticipate continuing discussions for RIGScan CR as we move forward with the clinical development of the product; however, we cannot assure you that we will be able to secure marketing and distribution partners for the product, or if secured, that such arrangements will result in significant sales of RIGScan CR.

Manufacturing

Gamma Detection Devices

We rely on independent contract manufacturers, some of which are single-source suppliers, for the manufacture of the principal components of our current line of gamma detection system products. See Risk Factors. We have devoted significant resources to develop production capability of our gamma detection systems at qualified contract manufacturers. Production of the neoprobe GDS control unit, the 14mm probe, the 11mm laparoscopic probe, and the wireless probes involve the manufacture of components by a combination of subcontractors, including but not limited to, eV Microelectronics, a division of Endicott Interconnect Technologies, Inc. (eV), and TriVirix International, Inc. (TriVirix). We also purchase certain accessories for our line of gamma detection systems from other qualified manufacturers.

We have purchased certain solid-state crystals and associated electronics used in the manufacture of our proprietary line of hand-held gamma detection probes from eV. We do not currently have a supply agreement with eV, however we currently purchase from them under extended blanket purchase orders. The number of potential suppliers of such solid-state crystals is limited. In the event we are unable to secure a viable alternative source of supply should we become unable to obtain crystals from eV, any prolonged interruption of this source could restrict the availability of our probe products, which would adversely affect our operating results.

In February 2004, we executed a Product Supply Agreement with TriVirix for the manufacture and/or final assembly of our gamma detection products, including probes and control units. The original term of this agreement expired in February 2007 but has been extended under the automatic renewal terms of the agreement through February 2011. The Agreement will continue to be automatically extended for successive one-year periods unless six months

notice is provided by either party.

We cannot assure you that we will be able to maintain agreements or other purchasing arrangements with our subcontractors on terms acceptable to us, or that our subcontractors will be able to meet our production requirements on a timely basis, at the required levels of performance and quality. In the event that any of our subcontractors is unable or unwilling to meet our production requirements, we cannot assure you that an alternate source of supply could be established without significant interruption in product supply or without significant adverse impact to product availability or cost. Any significant supply interruption or yield problems that we or our subcontractors experience would have a material adverse effect on our ability to manufacture our products and, therefore, a material adverse effect on our business, financial condition, and results of operations until a new source of supply is qualified. See Risk Factors.

Gamma Detection Radiopharmaceuticals

In preparation for the commencement of a multi-center clinical evaluation of Lymphoseek, Neoprobe engaged drug manufacturing organizations to produce the drug that was used in the Phase 2 trial and is expected to be used in the pivotal (i.e., Phase 3) clinical trials. Reliable has produced the active pharmaceutical ingredient (API) and OSO Bio has performed final product manufacturing including final drug formulation, lyophilization (i.e., freeze-drying) and packaging processes. Once packaged, the vialed drug can then be shipped to a hospital or regional commercial radiopharmacy where it can be made radioactive (i.e., radiolabeled) with Tc99m to become Lymphoseek. The commercial manufacturing processes at Reliable and OSO Bio are being validated and both organizations have assisted Neoprobe in the preparation of the chemistry, manufacturing and control sections of our submissions to FDA and EMEA. Both Reliable and OSO Bio are registered manufacturers with FDA and/or EMEA. In November 2009, we completed a Manufacture and Supply Agreement with Reliable for the manufacture of the bulk API material with an initial term of 10 years. At this point, drug product produced by OSO Bio has been manufactured under clinical development agreements. A commercial supply agreement is being negotiated with OSO Bio. We cannot assure you that we will be successful in reaching an agreement with OSO Bio on terms satisfactory to us, or at all. We also cannot assure you that we will be able to maintain agreements or other purchasing arrangements with our subcontractors on terms acceptable to us, or that our subcontractors will be able to meet our production requirements on a timely basis, at the required levels of performance and quality. In the event that any of our subcontractors are unable or unwilling to meet our production requirements, we cannot assure you that an alternate source of supply could be established without significant interruption in product supply or without significant adverse impact to product availability or cost. Any significant supply interruption or yield problems that we or our subcontractors experience would have a material adverse effect on our ability to manufacture our products and, therefore, a material adverse effect on our business, financial condition, and results of operations until a new source of supply is qualified. See Risk Factors.

During the third quarter of 2009, we announced that we had executed a Biopharmaceutical Development and Supply Agreement with Laureate Pharma, Inc. This agreement will support the initial evaluation of the viability of the CC49 master working cell bank as well as the initial steps in re-validating the commercial production process for the biologic agent used in RIGScan CR. In addition, we will need to re-establish radiolabeling capabilities for the CC49 antibody in order to meet the regulatory needs for the RIGScan CR product. We have also begun discussions with parties capable of supporting such activities.
We cannot assure you that we will be successful in securing and/or maintaining the necessary biologic, product and/or radiolabeling capabilities. See Risk Factors.

Competition

We face competition from medical product and biotechnology companies, as well as from universities and other non-profit research organizations in the field of cancer diagnostics and treatment. Many emerging medical product companies have corporate partnership arrangements with large, established companies to support the research, development, and commercialization of products that may be competitive with our products. In addition, a number of large established companies are developing proprietary technologies or have enhanced their capabilities by entering into arrangements with or acquiring companies with technologies applicable to the detection or treatment of cancer. Many of our existing or potential competitors have substantially greater financial, research and development, regulatory, marketing, and production resources than we have. Other companies may develop and introduce products and processes competitive with or superior to those of ours. See Risk Factors.

For our products, an important factor in competition is the timing of market introduction of our products or those of our competitors' products. Accordingly, the relative speed with which we can develop products, complete the regulatory clearance processes and supply commercial quantities of the products to the market is an important

competitive factor. We expect that competition among products cleared for marketing will be based on, among other things, product efficacy, safety, reliability, availability, price, and patent position.

Gamma Detection Devices

With the continued emergence of SLNB, a number of companies have begun to market gamma radiation detection instruments. Most of the competitive products have been designed from an industrial or nuclear medicine perspective rather than being developed initially for surgical use. We compete with products produced and/or marketed by Care Wise Medical Products Corporation, Intra-Medical Imaging LLC, RMD Instruments LLC (a subsidiary of Dynasil Corporation), SenoRx, Eurorad S.A and other companies.

It is often difficult to glean accurate competitive information within the lymphatic mapping field, primarily because most of our competitors are either subsidiaries or divisions of larger corporations or privately held corporations, whose sales revenue or volume data is not readily available or determinable. In addition, lymphatic mapping does not currently have a separate reimbursement code in most healthcare systems. As such, determining trends in the actual number of procedures being performed using lymphatic mapping is difficult. We believe, based on our understanding of EES' success rate in competitive bid situations, that our market share has remained relatively constant or increased slightly in light of changes in the competitive landscape over the past few years. As we have discussed, we believe that current sales levels indicate that some prospective customers may be waiting on the results of important international clinical trials prior to adoption of the SLNB procedure and purchasing a gamma detection device. We expect the results from these trials, when announced, will likely have a positive impact on sales volumes. We believe our intellectual property portfolio will be a barrier to competitive products; however, we cannot assure you that competitive products will not be developed, be successful in eroding our market share or affect the prices we receive for our gamma detection devices. See Risk Factors.

Gamma Detection Radiopharmaceuticals

We do not believe there are any directly competitive intraoperative diagnostic radiopharmaceuticals with RIGScan CR that would be used intraoperatively in the colorectal cancer application that RIGScan CR is initially targeted for. There are other radiopharmaceuticals that are used as preoperative imaging agents; however, we are unaware of any that could be used as a real-time diagnostic aid during surgery such as RIGScan CR.

Surgeons who practice the lymphatic mapping procedure for which Lymphoseek is intended currently use other radiopharmaceuticals such as a sulphur-colloid compound in the U.S. and other colloidal compounds in other markets. However, these drugs are being used "off-label" in most major global markets (i.e., they are not specifically indicated for use as a sentinel node targeting agent). As such, we believe that Lymphoseek, if ultimately approved, would be the first drug specifically labeled for use as a sentinel lymph node targeting agent.

Patents and Proprietary Rights

We regard the establishment of a strong intellectual property position in our technology as an integral part of the development process. We attempt to protect our proprietary technologies through patents and intellectual property positions in the United States as well as major foreign markets. Approximately 30 instrument patents issued in the United States as well as major foreign markets protect our gamma detection technology.

Lymphoseek is also the subject of patents and patent applications in the United States and certain major foreign markets. The patents and patent applications are held by The Regents of the University of California and have been licensed exclusively to Neoprobe for lymphatic tissue imaging and intraoperative detection worldwide. The first composition of matter patent covering Lymphoseek was issued in the United States in June 2002. The claims of the composition of matter patent covering Lymphoseek have been allowed in the EU and issued in the majority of EU countries in 2005. The composition of matter patent is being prosecuted in Japan and we have received notice of the allowance of the underlying claims included in the patent application. We have filed additional patent applications in

the United States related to the manufacturing processes for Lymphoseek.

We continue to support proprietary protection for the products related to RIGS and ACT in major global markets such as the U.S. and the EU, which although not currently integral to our near-term business plans, may be important to a potential RIGS or ACT development partner. Composition of matter patents have been issued in the U.S. and EU that cover the antibodies used in clinical studies. The most recent of these patents was issued in 2004 and additional patent applications are pending. We have a license to these patents through the NIH; however, our license is subject to ongoing diligence requirements.

The activated cellular therapy technology of Cira Bio is the subject of issued patents in the United States to which Neoprobe has exclusive license rights. European patent statutes do not permit patent coverage for treatment technologies such as Cira Bio's. The oncology applications of Cira Bio's treatment approach are covered by issued patents with expiration dates of 2018 and 2020, unless extended. The autoimmune applications are covered by an issued patent with an expiration date of 2018, unless extended. The viral applications are the subject of patent applications and other aspects of the Cira Bio technology that are in the process of being reviewed by the United States Patent and Trademark Office. Cira Bio has received favorable office action correspondence on both applications.

The patent position of biotechnology and medical device firms, including our company, generally is highly uncertain and may involve complex legal and factual questions. Potential competitors may have filed applications, or may have been issued patents, or may obtain additional patents and proprietary rights relating to products or processes in the same area of technology as that used by our company. The scope and validity of these patents and applications, the extent to which we may be required to obtain licenses thereunder or under other proprietary rights, and the cost and availability of licenses are uncertain. We cannot assure you that our patent applications will result in additional patents being issued or that any of our patents will afford protection against competitors with similar technology; nor can we assure you that any of our patents will not be designed around by others or that others will not obtain patents that we would need to license or design around.

We also rely upon unpatented trade secrets. We cannot assure you that others will not independently develop substantially equivalent proprietary information and techniques, or otherwise gain access to our trade secrets, or disclose such technology, or that we can meaningfully protect our rights to our unpatented trade secrets.

We require our employees, consultants, advisers, and suppliers to execute a confidentiality agreement upon the commencement of an employment, consulting or manufacturing relationship with us. The agreement provides that all confidential information developed by or made known to the individual during the course of the relationship will be kept confidential and not disclosed to third parties except in specified circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual will be the exclusive property of our company. We cannot assure you, however, that these agreements will provide meaningful protection for our trade secrets in the event of an unauthorized use or disclosure of such information. See Risk Factors.

Government Regulation

Most aspects of our business are subject to some degree of government regulation in the countries in which we conduct our operations. As a developer, manufacturer and marketer of medical products, we are subject to extensive regulation by, among other governmental entities, FDA and the corresponding state, local and foreign regulatory bodies in jurisdictions in which our products are sold. These regulations govern the introduction of new products, the observance of certain standards with respect to the manufacture, safety, efficacy and labeling of such products, the maintenance of certain records, the tracking of such products and other matters.

Failure to comply with applicable federal, state, local or foreign laws or regulations could subject us to enforcement action, including product seizures, recalls, withdrawal of marketing clearances, and civil and criminal penalties, any one or more of which could have a material adverse effect on our business. We believe that we are in substantial compliance with such governmental regulations. However, federal, state, local and foreign laws and regulations regarding the manufacture and sale of medical devices are subject to future changes. We cannot assure you that such changes will not have a material adverse effect on our company.

For some products, and in some countries, government regulation is significant and, in general, there is a trend toward more stringent regulation. In recent years, FDA and certain foreign regulatory bodies have pursued a more rigorous enforcement program to ensure that regulated businesses like ours comply with applicable laws and regulations. We devote significant time, effort and expense addressing the extensive governmental regulatory requirements applicable to our business. To date, we have not received any notifications or warning letters from FDA or any other regulatory bodies of alleged deficiencies in our compliance with the relevant requirements, nor have we recalled or issued safety alerts on any of our products. However, we cannot assure you that a warning letter, recall or safety alert, if it occurred, would not have a material adverse effect on our company.

In the early- to mid-1990s, the review time by FDA to clear medical products for commercial release lengthened and the number of marketing clearances decreased. In response to public and congressional concern, FDA Modernization Act of 1997 (the 1997 Act) was adopted with the intent of bringing better definition to the clearance process for new medical products. While FDA review times have improved since passage of the 1997 Act, we cannot assure you that FDA review process will not continue to delay our company's introduction of new products in the U.S. in the future. In addition, many foreign countries have adopted more stringent regulatory requirements that also have added to the delays and uncertainties associated with the release of new products, as well as the clinical and regulatory costs of supporting such releases. It is possible that delays in receipt of, or failure to receive, any necessary clearance for our new product offerings could have a material adverse effect on our business, financial condition or results of operations.

While we are unable to predict the extent to which our business may be affected by future regulatory developments, we believe that our substantial experience dealing with governmental regulatory requirements and restrictions on our operations throughout the world, and our development of new and improved products, should enable us to compete effectively within this environment.

Gamma Detection Devices

As a manufacturer of medical devices sold in various global markets, we are required by regulatory agency regulations to manufacture the devices under recognized quality standards and controls. Our medical devices are regulated in the United States by FDA in accordance with 21CFR requirements, in the EU according to the Medical Device Directive (93/42/EEC), and in Canada and Japan according to the Medical Devices Regulation. These regulatory requirements for quality systems are prescribed in the international standard ISO 13485 Medical devices – Quality management systems – Requirements for regulatory purposes. To ensure continued compliance in our daily processes, we have established and maintain the Neoprobe Corporate Quality Management System, which is based on the ISO 13485 standard. These requirements can also be extended to drug and biologic products regarding our future product portfolio.

Our first generation gamma detection instrument received 510(k) marketing clearance from FDA in December 1986 with modified versions receiving similar clearances in 1992 through 1997. In March 1998, FDA reclassified "nuclear uptake detectors" as Class 1 and conditionally exempt from 510(k) with full quality controls. We obtained the European CE mark, by “self-declaration,” for the neo2000 device in January 1999, with full quality controls. The gamma detection products are Class IIa in the EU. We maintain a “manufacturer’s license” in order to import our

gamma detection products into Canada, with full quality controls. The gamma detection products are Class II in Canada.

Gamma Detection Radiopharmaceuticals

Our radiolabeled targeting agents and biologic products, if developed, would require a regulatory license to market by FDA and by comparable agencies in foreign countries. The process of obtaining regulatory licenses and approvals is costly and time consuming, and we have encountered significant impediments and delays related to our previously proposed biologic products.

The process of completing pre-clinical and clinical testing, manufacturing validation and submission of a marketing application to the appropriate regulatory bodies usually takes a number of years and requires the expenditure of substantial resources, and we cannot assure you that any approval will be granted on a timely basis, if at all. Additionally, the length of time it takes for the various regulatory bodies to evaluate an application for marketing approval varies considerably, as does the amount of preclinical and clinical data required to demonstrate the safety and efficacy of a specific product. The regulatory bodies may require additional clinical studies that may take several years to perform. The length of the review period may vary widely depending upon the nature and indications of the proposed product and whether the regulatory body has any further questions or requests any additional data. Also, the regulatory bodies will likely require post-marketing reporting and surveillance programs to monitor the side effects of the products. We cannot assure you that any of our potential drug or biologic products will be approved by the regulatory bodies or approved on a timely or accelerated basis, or that any approvals received will not subsequently be revoked or modified.

In addition to regulations enforced by FDA, the manufacture, distribution, and use of radioactive targeting agents, if developed, are also subject to regulation by the Nuclear Regulatory Commission (NRC), the Department of Transportation and other federal, state, and local government authorities. We, or our manufacturer of the radiolabeled antibodies, must obtain a specific license from the NRC to manufacture and distribute radiolabeled antibodies, as well as comply with all applicable regulations. We must also comply with Department of Transportation regulations on the labeling and packaging requirements for shipment of radiolabeled antibodies to licensed clinics, and must comply with federal, state, and local governmental laws regarding the disposal of radioactive waste. We cannot assure you that we will be able to obtain all necessary licenses and permits and be able to comply with all applicable laws. The failure to obtain such licenses and permits or to comply with applicable laws would have a materially adverse effect on our business, financial condition, and results of operations.

Research and Development

We spent approximately $5.0 million and $4.3 million on research and development activities in the fiscal years ended December 31, 2009 and 2008, respectively.

Employees

As of March 26, 2010, we had 28 full-time and 6 part-time employees. We consider our relations with our employees to generally be good.

Item 1A. Risk Factors

An investment in our common stock is highly speculative, involves a high degree of risk, and should be made only by investors who can afford a complete loss. You should carefully consider the following risk factors, together with the other information in this prospectus, including our financial statements and the related notes, before you decide to buy our common stock. Our most significant risks and uncertainties are described below; however, they are not the only risks we face. If any of the following risks actually occur, our business, financial condition, or results of operations could be materially adversely affected, the trading of our common stock could decline, and you may lose all or part of

your investment therein.

We have suffered significant operating losses for several years in our history and we may not be able to again achieve profitability.

We had an accumulated deficit of approximately $193 million and had an overall deficit in stockholders' equity as of December 31, 2009. Although we were profitable in 2000 and 2001, we incurred substantial losses in the years prior to that, and again in subsequent years. The deficit resulted because we expended more money in the course of researching, developing and enhancing our technology and products and establishing our marketing and administrative organizations than we generated in revenues. We expect to continue to incur significant expenses in the foreseeable future, primarily related to the completion of development and commercialization of Lymphoseek, but also potentially related to RIGS and our device product lines. As a result, we are sustaining substantial operating and net losses, and it is possible that we will never be able to sustain or develop the revenue levels necessary to again attain profitability.

Our products and product candidates may not achieve the broad market acceptance they need in order to be a commercial success.

Widespread use of our handheld gamma detection devices is currently limited to one surgical procedure, sentinel lymph node biopsy (SLNB), used in the diagnosis and treatment of two primary types of cancer: melanoma and breast cancer. While the adoption of SLNB within the breast and melanoma indications appears to be widespread, we believe expansion of SLNB to other indications such as head and neck, colorectal and prostate cancers is likely dependent on a better lymphatic tissue targeting agent than is currently available. Without expanded indications in which to apply SLNB, it is likely that gamma detection devices will eventually reach market saturation. Our efforts and those of our marketing and distribution partners may not result in significant demand for our products, and the current demand for our products may decline.

Our radiopharmaceutical product candidates, Lymphoseek and RIGScan CR, are still in the process of development, and even if we are successful in commercializing them, we cannot assure you that they will obtain significant market acceptance.

We may have difficulty raising additional capital, which could deprive us of necessary resources.

We expect to continue to devote significant capital resources to fund research and development and to maintain existing and secure new manufacturing capacity. In order to support the initiatives envisioned in our business plan, we may need to raise additional funds through the sale of assets, public or private debt or equity financing, collaborative relationships or other arrangements. Our ability to raise additional financing depends on many factors beyond our control, including the state of capital markets, the market price of our common stock and the development or prospects for development of competitive technology by others. Because our common stock is not listed on a major stock market, many investors may not be willing or allowed to purchase it or may demand steep discounts. Sufficient additional financing may not be available to us or may be available only on terms that would result in further dilution to the current owners of our common stock.

We believe that we have access to sufficient financial resources with which to fund our operations or those of our subsidiaries for the foreseeable future. Depending on market conditions and/or changes in our business plans, we may raise additional capital during 2010. The continuation of the current worldwide financial crisis and depressed stock market valuations may adversely affect our ability to raise additional capital, either under facilities in place or from new sources of capital. If we are unsuccessful in raising additional capital, closing on financing under already agreed to terms, or the terms of raising such capital are unacceptable, we may have to modify our business plan and/or significantly curtail our planned development activities and other operations.

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In December 2006, we entered into a common stock purchase agreement with Fusion Capital, an Illinois limited liability company, to sell $6.0 million of our common stock over a 24-month period which ended on November 21, 2008. Through November 21, 2008, we sold to Fusion Capital under the agreement 7,568,671 shares for proceeds of $1.9 million. In December 2008, we entered into an amendment to the agreement which gave us a right to sell an additional $6.0 million of our common stock to Fusion Capital before March 1, 2011, along with the $4.1 million of the unsold balance of the $6.0 million we originally had the right to sell to Fusion Capital under the original agreement. In March 2010, we sold to Fusion Capital under the amended agreement 540,541 shares for proceeds of $1.0 million. Subsequent to this sale, the remaining aggregate amount of our common stock we can sell to Fusion Capital is $9.1 million, and we have reserved a total of 10,113,459 shares of our common stock for sale under the amended agreement. Our right to make sales under the amended agreement is limited to $50,000 every two business days, unless our stock price equals or exceeds $0.30 per share, in which case we can sell greater amounts to Fusion Capital as the price of our common stock increases. Fusion Capital does not have the right or any obligation to purchase any shares on any business day that the market price of our common stock is less than $0.20 per share. Assuming all 10,113,459 shares are sold, the selling price per share would have to average approximately $0.90 for us to receive the full $9.1 million remaining proceeds under the agreement as amended. Assuming we sell to Fusion Capital all 10,113,459 shares at a sale price of $1.50 per share (the closing sale price of the common stock on March 26, 2010), we would receive the full remaining $9.1 million under the agreement. Under the agreement, we have the right but not the obligation to sell more than the 10,113,459 shares to Fusion Capital. As of the date hereof, we do not currently have any plans or intent to sell to Fusion Capital any shares beyond the 10,113,459 shares. However, if we elect to sell more than the 10,113,459 shares, we must first register any additional shares we may elect to sell to Fusion Capital under the Securities Act before we can sell such additional shares.

The extent to which we rely on Fusion Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources, such as through the sale of our products. To the extent that we are unable to make sales to Fusion Capital to meet our capital needs, or to the extent that we decide not to make such sales because of excessive dilution or other reasons, and if we are unable to generate sufficient revenues from sales of our products, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we are able to access the full $9.1 million potentially remaining under the agreement with Fusion Capital, we may still need additional capital to fully implement our business, operating and development plans. Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

Clinical trials for our radiopharmaceutical product candidates will be lengthy and expensive and their outcome is uncertain.

Before obtaining regulatory approval for the commercial sale of any product candidates, we must demonstrate through preclinical testing and clinical trials that our product candidates are safe and effective for use in humans. Conducting clinical trials is a time consuming, expensive and uncertain process and may take years to complete. During 2009, we successfully completed a Phase 3 clinical trial in patients with breast cancer or melanoma for our most advanced radiopharmaceutical product candidate, Lymphoseek. We are in the process of completing a second Phase 3 trial for this product in patients with head and neck squamous cell carcinoma. In late 2008, we obtained approval from EMEA for a Phase 3 clinical protocol for our next radiopharmaceutical candidate, RIGScan CR, and are preparing to approach FDA to obtain similar clearance. Historically, the results from preclinical testing and early clinical trials have often not been predictive of results obtained in later clinical trials. Frequently, drugs that have shown promising results in preclinical or early clinical trials subsequently fail to establish sufficient safety and efficacy data necessary to obtain regulatory approval. At any time during the clinical trials, we, the participating institutions, FDA or EMEA might delay or halt any clinical trials for our product candidates for various reasons, including:

- ineffectiveness of the product candidate;
- discovery of unacceptable toxicities or side effects;
- development of disease resistance or other physiological factors;
- delays in patient enrollment; or

- other reasons that are internal to the businesses of our potential collaborative partners, which reasons they may not share with us.

While we have achieved some level of success in our recent Phase 2 and Phase 3 clinical trials for Lymphoseek, the results of these clinical trials, as well as pending and future trials, are subject to review and interpretation by various regulatory bodies during the regulatory review process and may ultimately fail to demonstrate the safety or effectiveness of our product candidates to the extent necessary to obtain regulatory approval or such that commercialization of our product candidates is worthwhile. Any failure or substantial delay in successfully completing clinical trials and obtaining regulatory approval for our product candidates could severely harm our business.

If we fail to obtain collaborative partners, or those we obtain fail to perform their obligations or discontinue clinical trials for particular product candidates, our ability to develop and market potential products could be severely limited.

Our strategy for the development and commercialization of our product candidates depends, in large part, upon the formation of collaborative arrangements. Collaborations may allow us to:

- generate cash flow and revenue;
- offset some of the costs associated with our internal research and development, preclinical testing, clinical trials and manufacturing;
- seek and obtain regulatory approvals faster than we could on our own; and,
- successfully commercialize existing and future product candidates.

We have an agreement in place with Cardinal Health for the distribution of Lymphoseek in the United States. We do not currently have collaborative agreements covering Lymphoseek in other areas of the world or for RIGScan CR or ACT. We cannot assure you that we will be successful in securing collaborative partners for other markets or radiopharmaceutical products, or that we will be able to negotiate acceptable terms for such arrangements. The development, regulatory approval and commercialization of our product candidates will depend substantially on the efforts of collaborative partners, and if we fail to secure or maintain successful collaborative arrangements, or if our partners fail to perform their obligations, our development, regulatory, manufacturing and marketing activities may be delayed, scaled back or suspended.

We rely on third parties for the worldwide marketing and distribution of our gamma detection devices, who may not be successful in selling our products.

We currently distribute our gamma detection devices in most global markets through two partners who are solely responsible for marketing and distributing these products. The partners assume direct responsibility for business risks related to credit, currency exchange, foreign tax laws or tariff and trade regulation. While we believe that our distribution partners intend to continue to aggressively market our products, we cannot assure you that the distribution partners will succeed in marketing our products on a global basis. We may not be able to maintain satisfactory arrangements with our marketing and distribution partners, who may not devote adequate resources to selling our products. If this happens, we may not be able to successfully market our products, which would decrease our revenues.

Our radiopharmaceutical product candidates are subject to extensive government regulations and we may not be able to obtain necessary regulatory approvals.

We may not receive the regulatory approvals necessary to commercialize our Lymphoseek and RIGScan product candidates, which could cause our business to be severely harmed. Our product candidates are subject to extensive and rigorous government regulation. FDA regulates, among other things, the development, testing, manufacture, safety, record-keeping, labeling, storage, approval, advertising, promotion, sale and distribution of pharmaceutical products. If our potential products are marketed abroad, they will also be subject to extensive regulation by foreign governments. None of our radiopharmaceutical product candidates have been approved for sale in the United States or in any foreign market. The regulatory review and approval process, which includes preclinical studies and clinical trials of each product candidate, is lengthy, complex, expensive and uncertain. Securing FDA clearance to market requires the submission of extensive preclinical and clinical data and supporting information to FDA for each indication to establish the product candidate's safety and efficacy. Data obtained from preclinical and clinical trials are susceptible to varying interpretation, which may delay, limit or prevent regulatory approval. The approval process may take many years to complete and may involve ongoing requirements for post-marketing studies. In light of the limited regulatory history of monoclonal antibody-based therapeutics, regulatory approvals for our products may not be obtained without lengthy delays, if at all. Any FDA or other regulatory approvals of our product candidates, once obtained, may be withdrawn. The effect of government regulation may be to:

- delay marketing of potential products for a considerable period of time;
- limit the indicated uses for which potential products may be marketed;
- impose costly requirements on our activities; and
- provide competitive advantage to other pharmaceutical and biotechnology companies.

We may encounter delays or rejections in the regulatory approval process because of additional government regulation from future legislation or administrative action or changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. Failure to comply with applicable FDA or other regulatory requirements may result in criminal prosecution, civil penalties, recall or seizure of products, total or partial suspension of production or injunction, as well as other regulatory action against our product candidates or us. Outside the United States, our ability to market a product is contingent upon receiving clearances from the appropriate regulatory authorities. This foreign regulatory approval process includes risks similar to those associated with FDA approval process.

Our radiopharmaceutical product candidates will remain subject to ongoing regulatory review even if they receive marketing approval. If we fail to comply with continuing regulations, we could lose these approvals and the sale of our products could be suspended.

Even if we receive regulatory clearance to market a particular product candidate, the approval could be conditioned on us conducting additional costly post-approval studies or could limit the indicated uses included in our labeling. Moreover, the product may later cause adverse effects that limit or prevent its widespread use, force us to withdraw it from the market or impede or delay our ability to obtain regulatory approvals in additional countries. In addition, the manufacturer of the product and its facilities will continue to be subject to FDA review and periodic inspections to ensure adherence to applicable regulations. After receiving marketing clearance, the manufacturing, labeling, packaging, adverse event reporting, storage, advertising, promotion and record-keeping related to the product will remain subject to extensive regulatory requirements. We may be slow to adapt, or we may never adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements.

If we fail to comply with the regulatory requirements of FDA and other applicable U.S. and foreign regulatory authorities or previously unknown problems with our products, manufacturers or manufacturing processes are

discovered, we could be subject to administrative or judicially imposed sanctions, including:

- restrictions on the products, manufacturers or manufacturing processes;
- warning letters;
- civil or criminal penalties;
- fines;
- injunctions;
- product seizures or detentions;
- import bans;
- voluntary or mandatory product recalls and publicity requirements;
- suspension or withdrawal of regulatory approvals;
- total or partial suspension of production; and
- refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications.

Our existing products are highly regulated and we could face severe problems if we do not comply with all regulatory requirements in the global markets in which these products are sold.

FDA regulates our gamma detection products in the United States. Foreign countries also subject these products to varying government regulations. In addition, these regulatory authorities may impose limitations on the use of our products. FDA enforcement policy strictly prohibits the marketing of FDA cleared medical devices for unapproved uses. Within the European Union, our products are required to display the CE Mark in order to be sold. We have obtained FDA clearance to market and European certification to display the CE Mark on our current line of gamma detection systems. We may not be able to obtain clearance to market any new products in a timely manner, or at all. Failure to comply with these and other current and emerging regulatory requirements in the global markets in which our products are sold could result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal of the government to grant pre-market clearance for devices, withdrawal of clearances, and criminal prosecution.

We rely on third parties to manufacture our medical device products and our business will suffer if they do not perform.

We rely on independent contract manufacturers for the manufacture of our current neoprobe GDS line of gamma detection systems. Our business will suffer if our contract manufacturers have production delays or quality problems. Furthermore, medical device manufacturers are subject to the quality system regulations of FDA, international quality standards, and other regulatory requirements. If our contractors do not operate in accordance with regulatory requirements and quality standards, our business will suffer. We use or rely on components and services used in our devices that are provided by sole source suppliers. The qualification of additional or replacement vendors is time consuming and costly. If a sole source supplier has significant problems supplying our products, our sales and revenues will be hurt until we find a new source of supply. In addition, our distribution agreement with Ethicon Endo-Surgery, Inc., a Johnson & Johnson company, (EES) for gamma detection devices contains failure to supply provisions, which, if triggered, could have a significant negative impact on our business.

We may be unable to establish the pharmaceutical manufacturing capabilities necessary to develop and commercialize our potential products.

We do not have our own manufacturing facility for the manufacture of the radiopharmaceutical compounds necessary for clinical testing or commercial sale. We intend to rely on third-party contract manufacturers to produce sufficiently large quantities of drug materials that are and will be needed for clinical trials and commercialization of our potential products. Third-party manufacturers may not be able to meet our needs with respect to timing, quantity or quality of materials. We are in the process of finalizing supply contracts with third-party manufacturers for our Lymphoseek product. However, if we are unable to contract for a sufficient supply of needed materials on acceptable terms, or if we should encounter delays or difficulties in our relationships with manufacturers, our clinical trials may be delayed, thereby delaying the submission of product candidates for regulatory approval and the market introduction and subsequent commercialization of our potential products. Any such delays may lower our revenues and potential profitability.

We and any third-party manufacturers that we may use must continually adhere to current Good Manufacturing Practices regulations enforced by FDA through its facilities inspection program. If our facilities or the facilities of third-party manufacturers cannot pass a pre-approval plant inspection, FDA will not grant approval to our product candidates. In complying with these regulations and foreign regulatory requirements, we and any of our third-party manufacturers will be obligated to expend time, money and effort on production, record-keeping and quality control to assure that our potential products meet applicable specifications and other requirements. If we or any third-party manufacturer with whom we may contract fail to maintain regulatory compliance, we or the third party may be subject

to fines and/or manufacturing operations may be suspended.

Unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives applicable to our radiopharmaceutical products and product candidates could limit our potential product revenue and adversely affect our business.

The regulations governing drug pricing and reimbursement vary widely from country to country. Some countries require approval of the sale price of a drug before it can be marketed and, in many of these countries, the pricing review period begins only after approval is granted. In some countries, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. Although we monitor these regulations, our product candidates are currently in the development stage and we will not be able to assess the impact of price regulations for at least several years. As a result, we may obtain regulatory approval for a product in a particular country, but then be subject to price regulations that may delay the commercial launch of the product and may negatively impact the revenues we are able to derive from sales in that country.

The healthcare industry is undergoing fundamental changes resulting from political, economic and regulatory influences. In the United States, comprehensive programs have been proposed that seek to increase access to healthcare for the uninsured, to control the escalation of healthcare expenditures within the economy and to use healthcare reimbursement policies to balance the federal budget. On March 23, 2010, health reform legislation was approved by Congress and has been signed into law. The reform legislation provides that most individuals must have health insurance, will establish new regulations on health plans, create insurance pooling mechanisms and other expanded public health care measures, and impose new taxes on sales of medical devices and pharmaceuticals. Since this legislation is recently enacted and will require the adoption of implementing regulations, we cannot predict the effect, if any, that it will have on our business, but this legislation and similar federal and state initiatives may have the effect of lowering reimbursements for our products, reducing medical procedure volumes, increasing our taxes and otherwise adversely affect our business, possibly materially.

We expect that Congress and state legislatures will continue to review and assess healthcare proposals, and public debate of these issues will likely continue. We cannot predict which, if any, of such reform proposals will be adopted and when they might be adopted. Other countries also are considering healthcare reform. Significant changes in healthcare systems could have a substantial impact on the manner in which we conduct our business and could require us to revise our strategies.

The sale of our common stock to Fusion may cause dilution and the sale of common stock acquired by Fusion could cause the price of our common stock to decline.

In connection with our agreement with Fusion Capital, we have authorized the sale of up to 18,222,671 shares of our common stock and the issuance of 1,800,000 shares in commitment fees, and we have filed a registration statement with the SEC for the sale to the public of 11,500,000 shares issuable to Fusion Capital pursuant to the agreement. Through March 26, 2010, we have sold Fusion Capital 8,109,212 shares of common stock and issued 1,434,000 shares of stock as commitment fees to Fusion Capital. The number of shares ultimately offered for sale to the public will be dependent upon the number of shares purchased by Fusion Capital under the agreement. It is anticipated that these shares will be sold over a period of up to 26 months from the date of the December 24, 2008 amendment to the agreement, at prices that will fluctuate based on changes in the market price of our common stock over that period. Depending upon market liquidity at the times sales are made, these sales could cause the market price of our common stock to decline. Consequently, sales to Fusion Capital may result in substantial dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock by Fusion Capital, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to Fusion Capital and the agreement may be terminated by us at any time at our discretion without any cost to us.

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The sale of the shares of common stock acquired in private placements could cause the price of our common stock to decline.

Over the past few years, we completed various financings in which we issued common stock, convertible notes, warrants and other securities convertible into common stock to certain private investors. The terms of these transactions require that we file registration statements with the Securities and Exchange Commission under which the investors may resell to the public common stock acquired in these transactions, as well as common stock acquired on the exercise of the warrants and convertible securities held by them. Further, some or all of the common stock sold in these transactions may become eligible for resale without registration under the provisions of Rule 144, upon satisfaction of the holding period and other requirements of the Rule.

As required by our financing arrangements with Fusion Capital, we have filed a registration statement registering for resale a total of 11,500,000 common shares, consisting of (i) 10,654,000 shares which we may sell to Fusion Capital pursuant to the amended common stock purchase agreement, (ii) 360,000 shares issued to Fusion Capital in consideration for its agreement to the amendment; and (iii) 486,000 commitment fee shares to be issued pro rata as we sell the first $4.1 million of common stock under the amended agreement. The number of shares ultimately sold under the registration statement will be dependent upon the number of shares purchased by Fusion Capital under the amended agreement. It is anticipated that these shares will be sold from time to time over a period ending on March 1, 2011, at prices that will fluctuate based on changes in the market price of our common stock over that period. We have the right to control the timing and amount of any sales of our shares to Fusion Capital and the agreement may be terminated by us at any time at our discretion without any cost to us.

On December 26, 2007, we entered into a Securities Purchase Agreement (SPA) with Platinum-Montaur Life Sciences, LLC (Montaur), pursuant to which we issued Montaur a 10% Series A Convertible Senior Secured Promissory Note in the principal amount of $7,000,000, due December 26, 2011 (the Series A Note) and a five-year Series W Warrant to purchase 6,000,000 shares of our common stock at an exercise price of $0.32 per share. On April 16, 2008, following receipt by the Company of clearance by the FDA to commence a Phase 3 clinical trial for Lymphoseek in patients with breast cancer or melanoma, we amended the SPA and issued Montaur a 10% Series B Convertible Senior Secured Promissory Note in the principal amount of $3,000,000, also due December 26, 2011 (the Series B Note, and hereinafter referred to collectively with the Series A Note as the Montaur Notes), and a five-year Series X Warrant to purchase 8,333,333 shares of our common stock at an exercise price of $0.46 per share. On December 5, 2008, after the Company had obtained 135 vital blue dye lymph nodes from patients who had completed surgery and the injection of the drug in the Phase 3 clinical trial of Lymphoseek in patients with breast cancer or melanoma, we issued Montaur 3,000 shares of our 8% Series A Cumulative Convertible Preferred Stock (the Preferred Stock) and a five-year Series Y Warrant (hereinafter referred to collectively with the Series W Warrant and Series X Warrant as the Montaur Warrants) to purchase 6,000,000 shares of our common stock, at an exercise price of $0.575 per share, also for an aggregate purchase price of $3,000,000. On July 24, 2009, we entered into a Securities Amendment and Exchange Agreement (Amendment Agreement) with Montaur, pursuant to which Montaur agreed to the amendment and restatement of the terms of the Montaur Notes, the Montaur Warrants and the Preferred Stock, to remove price-based anti-dilution adjustment provisions that had created a significant non-cash derivative liability on the Company’s balance sheet, and upon the surrender of the Montaur Notes and the Montaur warrants we issued Montaur an Amended and Restated 10% Series A Convertible Senior Secured Promissory Note in the principal amount of $7,000,000, due December 26, 2011 (the Amended Series A Note), an Amended and Restated 10% Series B Convertible Senior Secured Promissory Note in the principal amount of $3,000,000, due December 26, 2011 (the Amended Series B Note, and together with the Amended Series A Note the Amended Montaur Notes), an Amended and Restated Series W Warrant (the Amended Series W Warrant), an Amended and Restated Series X Warrant (the Amended Series X Warrant), an Amended and Restated Series Y Warrant (the Amended Series Y Warrant), and in consideration for the agreement of Montaur to enter into the Amendment Agreement, a Series AA Warrant to purchase 2,400,000 shares of our common stock at an exercise price of $0.97 per share (the Series AA Warrant, and

together with the Amended Series W Warrant, Amended Series X Warrant and Amended Series Y Warrant, the Amended Montaur Warrants).

The Amended Series A Note bears interest at a rate per annum equal to 10%, and Montaur may convert the full $7,000,000 principal amount of the Amended Series A Note into shares of Common Stock in two tranches. Montaur may convert the first tranche of up to $3,500,000 of the outstanding principal balance of the Amended Series A Note at the conversion price of $0.26 per share, and a second tranche of the remaining $3,500,000 of the outstanding principal balance of the Amended Series A Note at the conversion price of $0.9722 per share. The Amended Series B Note also bears interest at a rate per annum equal to 10%, and is convertible into shares of common stock at the conversion price of $0.36 per share. Pursuant to the provisions of the Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series A 8% Cumulative Convertible Preferred Stock, Montaur may convert all or any portion of the shares of the Preferred Stock into an aggregate 6,000,000 shares of our common stock, subject to adjustment as described in the Certificate of Designations.

Pursuant to a Registration Rights Agreement we entered into with Montaur in connection with the SPA, we have filed a registration statement covering the sale by Montaur of up to: (i) 3,600,000 shares issuable upon the conversion of the Amended Series A Note; (ii) 6,000,000 shares of Common Stock issued upon exercise of the Amended Series Y Warrant; (iii) 3,500,000 shares of Common Stock issued or issuable as interest or dividends on the Amended Montaur Notes and the Preferred Stock; and (iv) 2,400,000 shares issuable upon exercise of the Series AA Warrant, for a total of 15,500,000 shares. Additionally, we agreed that within thirty-five days of receipt from Montaur of written request therefor, we would prepare and file an additional "resale" registration statement providing for the resale of: (i) the remaining shares of Common Stock issuable upon the conversion of the Amended Series A Note; (ii) the shares of Common Stock issuable upon the exercise of the Amended Series W Warrant; (iii) the shares of Common Stock issuable upon the conversion of the Amended Series B Note; (iv) the shares of Common Stock issuable upon the exercise of the Amended Series X Warrant; and (v) the shares of Common Stock issuable upon conversion of the Preferred Stock.

The selling stockholders may sell none, some or all of the shares of common stock acquired from us, as well as common stock acquired on the exercise of the warrants and convertible securities held by them. We have no way of knowing whether or when the selling stockholders will sell these shares. Depending upon market liquidity at the time, a sale of these shares at any given time could cause the trading price of our common stock to decline. The sale of a substantial number of shares of our common stock, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

We may lose out to larger and better-established competitors.

The medical device and biotechnology industries are intensely competitive. Some of our competitors have significantly greater financial, technical, manufacturing, marketing and distribution resources as well as greater experience in the medical device industry than we have. The particular medical conditions our product lines address can also be addressed by other medical devices, procedures or drugs. Many of these alternatives are widely accepted by physicians and have a long history of use. Physicians may use our competitors' products and/or our products may not be competitive with other technologies. If these things happen, our sales and revenues will decline. In addition, our current and potential competitors may establish cooperative relationships with large medical equipment companies to gain access to greater research and development or marketing resources. Competition may result in price reductions, reduced gross margins and loss of market share.

Our products may be displaced by newer technology.

The medical device and biotechnology industries are undergoing rapid and significant technological change. Third parties may succeed in developing or marketing technologies and products that are more effective than those developed or marketed by us, or that would make our technology and products obsolete or non-competitive. Additionally, researchers could develop new surgical procedures and medications that replace or reduce the

importance of the procedures that use our products. Accordingly, our success will depend, in part, on our ability to respond quickly to medical and technological changes through the development and introduction of new products. We may not have the resources to do this. If our products become obsolete and our efforts to develop new products do not result in any commercially successful products, our sales and revenues will decline.

We may not have sufficient legal protection against infringement or loss of our intellectual property, and we may lose rights to our licensed intellectual property if diligence requirements are not met.

Our success depends, in part, on our ability to secure and maintain patent protection, to preserve our trade secrets, and to operate without infringing on the patents of third parties. While we seek to protect our proprietary positions by filing United States and foreign patent applications for our important inventions and improvements, domestic and foreign patent offices may not issue these patents. Third parties may challenge, invalidate, or circumvent our patents or patent applications in the future. Competitors, many of which have significantly more resources than we have and have made substantial investments in competing technologies, may apply for and obtain patents that will prevent, limit, or interfere with our ability to make, use, or sell our products either in the United States or abroad.

In the United States, patent applications are secret until patents are issued, and in foreign countries, patent applications are secret for a time after filing. Publications of discoveries tend to significantly lag the actual discoveries and the filing of related patent applications. Third parties may have already filed applications for patents for products or processes that will make our products obsolete or will limit our patents or invalidate our patent applications.

We typically require our employees, consultants, advisers and suppliers to execute confidentiality and assignment of invention agreements in connection with their employment, consulting, advisory, or supply relationships with us. They may breach these agreements and we may not obtain an adequate remedy for breach. Further, third parties may gain access to our trade secrets or independently develop or acquire the same or equivalent information.

Agencies of the United States government conducted some of the research activities that led to the development of antibody technology that some of our proposed antibody-based surgical cancer detection products use. When the United States government participates in research activities, it retains rights that include the right to use the technology for governmental purposes under a royalty-free license, as well as rights to use and disclose technical data that could preclude us from asserting trade secret rights in that data and software.

We may lose the license rights to certain in-licensed products if we do not exercise adequate diligence.

Our license agreements for Lymphoseek, RIGS, and ACT contain provisions that require that we demonstrate ongoing diligence in the continuing research and development of these potential products. Cira Bio’s rights to certain applications of the ACT technology may be affected by its failure to achieve certain capital raising milestones although no such notices to that effect have been received to date. We have provided information, as required or requested, to the licensors of our technology indicating the steps we have taken to demonstrate our diligence and believe we are adequately doing so to meet the terms and/or intent of our license agreements. However, it is possible that the licensors may not consider our actions adequate in demonstrating such diligence. Should we fail to demonstrate the requisite diligence required by any such agreements or as interpreted by the respective licensors, we may lose our development and commercialization rights for the associated product.

We could be damaged by product liability claims.

Our products are used or intended to be used in various clinical or surgical procedures. If one of our products malfunctions or a physician misuses it and injury results to a patient or operator, the injured party could assert a product liability claim against our company. We currently have product liability insurance with a $10 million per occurrence limit, which we believe is adequate for our current activities. However, we may not be able to continue to obtain insurance at a reasonable cost. Furthermore, insurance may not be sufficient to cover all of the liabilities resulting from a product liability claim, and we might not have sufficient funds available to pay any claims over the limits of our insurance. Because personal injury claims based on product liability in a medical setting may be very large, an underinsured or an uninsured claim could financially damage our company.

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We may have difficulty attracting and retaining qualified personnel and our business may suffer if we do not.

Our business has experienced a number of successes and faced several challenges in recent years that have resulted in several significant changes in our strategy and business plan, including the shifting of resources to support our current product initiatives. Our management will need to remain flexible to support our business model over the next few years. However, losing members of the Neoprobe management team could have an adverse effect on our operations. Our success depends on our ability to attract and retain technical and management personnel with expertise and experience in the medical device business. The competition for qualified personnel in the biotechnology industry is intense and we may not be successful in hiring or retaining the requisite personnel. If we are unable to attract and retain qualified technical and management personnel, we will suffer diminished chances of future success.

Our secured indebtedness imposes significant restrictions on us, and a default could cause us to cease operations.

All of our material assets have been pledged as collateral for the $10 million in principal amount of our Series A and Series B Convertible Notes issued to Montaur, and a $1 million in principal amount Series B Convertible Note issued to our CEO and members of his family dated July 3, 2007, as amended December 26, 2007 (collectively, the Notes). In addition to the security interest in our assets, the Notes carry substantial covenants that impose significant requirements on us, including, among others, requirements that:

- we pay all principal by December 26, 2011;
- we use the proceeds from the sale of the Notes only for permitted purposes, such as Lymphoseek development and general corporate purposes;
- we keep reserved out of our authorized shares of common stock sufficient shares to satisfy our obligation to issue shares on conversion of the Notes and the exercise of the warrants issued in connection with the sale of the Notes; and
- we indemnify the purchasers of the Notes against certain liabilities.

Additionally, with certain exceptions, the Notes prohibit us from:

- amending our organizational or governing agreements and documents, entering into any merger or consolidation, dissolving the company or liquidating its assets, or acquiring all or any substantial part of the business or assets of any other person;
- engaging in transactions with any affiliate;
- entering into any agreement inconsistent with our obligations under the Notes and related agreements;
- incurring any indebtedness, capital leases, or contingent obligations outside the ordinary course of business;
- granting or permitting liens against or security interests in our assets;
- making any material dispositions of our assets outside the ordinary course of business;
- declaring or paying any dividends or making any other restricted payments; or
- making any loans to or investments in other persons outside of the ordinary course of business.

Our ability to comply with these provisions may be affected by changes in our business condition or results of our operations, or other events beyond our control. The breach of any of these covenants would result in a default under the Notes, permitting the holders of the Notes to accelerate their maturity and to sell the assets securing them. Such actions by the holders of the Notes could cause us to cease operations or seek bankruptcy protection.

Our common stock is traded over the counter, which may deprive stockholders of the full value of their shares.

Our common stock is quoted via the OTC Bulletin Board (OTCBB). As such, our common stock may have fewer market makers, lower trading volumes and larger spreads between bid and ask prices than securities listed on an exchange such as the New York Stock Exchange or the NASDAQ Stock Market. These factors may result in higher price volatility and less market liquidity for the common stock.

A low market price may severely limit the potential market for our common stock.

Our common stock is currently trading at a price substantially below $5.00 per share, subjecting trading in the stock to certain SEC rules requiring additional disclosures by broker-dealers. These rules generally apply to any non-NASDAQ equity security that has a market price share of less than $5.00 per share, subject to certain exceptions (a "penny stock"). Such rules require the delivery, prior to any penny stock transaction, of a disclosure schedule explaining the penny stock market and the risks associated therewith and impose various sales practice requirements on broker-dealers who sell penny stocks to persons other than established customers and institutional or wealthy investors. For these types of transactions, the broker-dealer must make a special suitability determination for the purchaser and have received the purchaser's written consent to the transaction prior to the sale. The broker-dealer also must disclose the commissions payable to the broker-dealer, current bid and offer quotations for the penny stock and, if the broker-dealer is the sole market maker, the broker-dealer must disclose this fact and the broker-dealer's presumed control over the market. Such information must be provided to the customer orally or in writing before or with the written confirmation of trade sent to the customer. Monthly statements must be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks. The additional burdens imposed upon broker-dealers by such requirements could discourage broker-dealers from effecting transactions in our common stock.

The price of our common stock has been highly volatile due to several factors that will continue to affect the price of our stock.

Our common stock traded as low as $0.35 per share and as high as $2.30 per share during the 12-month period ended March 26, 2010. The market price of our common stock has been and is expected to continue to be highly volatile. Factors, including announcements of technological innovations by us or other companies, regulatory matters, new or existing products or procedures, concerns about our financial position, operating results, litigation, government regulation, developments or disputes relating to agreements, patents or proprietary rights, may have a significant impact on the market price of our stock. In addition, potential dilutive effects of future sales of shares of common stock by the company and by stockholders, and subsequent sale of common stock by the holders of warrants and options could have an adverse effect on the market price of our shares.

Some additional factors which could lead to the volatility of our common stock include:

- price and volume fluctuations in the stock market at large which do not relate to our operating performance;
- financing arrangements we may enter that require the issuance of a significant number of shares in relation to the number of shares currently outstanding;
- public concern as to the safety of products that we or others develop; and
- fluctuations in market demand for and supply of our products.

An investor’s ability to trade our common stock may be limited by trading volume.

Generally, the trading volume for our common stock has been relatively limited. A consistently active trading market for our common stock may not occur on the OTCBB. The average daily trading volume for our common stock on the

OTCBB for the 12-month period ended March 26, 2010 was approximately 125,000 shares.

Some provisions of our organizational and governing documents may have the effect of deterring third parties from making takeover bids for control of our company or may be used to hinder or delay a takeover bid.

Our certificate of incorporation authorizes the creation and issuance of "blank check" preferred stock. Our Board of Directors may divide this stock into one or more series and set their rights. The Board of Directors may, without prior stockholder approval, issue any of the shares of "blank check" preferred stock with dividend, liquidation, conversion, voting or other rights, which could adversely affect the relative voting power or other rights of the common stock. Preferred stock could be used as a method of discouraging, delaying, or preventing a take-over of our company. If we issue "blank check" preferred stock, it could have a dilutive effect upon our common stock. This would decrease the chance that our stockholders would realize a premium over market price for their shares of common stock as a result of a takeover bid.

Because we will not pay dividends in the foreseeable future, stockholders will only benefit from owning common stock if it appreciates.

We have never paid dividends on our common stock and we do not intend to do so in the foreseeable future. We intend to retain any future earnings to finance our growth. Accordingly, any potential investor who anticipates the need for current dividends from his investment should not purchase our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We currently lease approximately 11,300 square feet of office space at 425 Metro Place North, Dublin, Ohio, as our principal offices. The current lease term is from June 1, 2007 through January 31, 2013, at a monthly base rent of approximately $8,500 during 2010. We must also pay a pro-rata portion of the operating expenses and real estate taxes of the building. We believe these facilities are in good condition, but that we may need to expand our leased space related to our radiopharmaceutical activities depending on the level of activities performed internally versus by third parties.

Item 3. Legal Proceedings

None.

Item 4. (Removed and Reserved)

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock trades on the OTC Bulletin Board (OTCBB) under the trading symbol NEOP. The prices set forth below reflect the quarterly high, low and closing sales prices for shares of our common stock during the last two fiscal years as reported by Reuters Limited. These quotations reflect inter-dealer prices, without retail markup, markdown or commission, and may not represent actual transactions.

	High	Low	Close
Fiscal Year 2009:			
First Quarter	$ 0.80	$ 0.42	$ 0.54
Second Quarter	1.20	0.35	0.95
Third Quarter	1.48	0.91	1.40
Fourth Quarter	1.40	0.95	1.22
Fiscal Year 2008:			
First Quarter	$ 0.42	$ 0.29	$ 0.35
Second Quarter	0.87	0.34	0.68
Third Quarter	0.75	0.42	0.57
Fourth Quarter	0.68	0.45	0.57

As of March 26, 2010, we had approximately 767 holders of common stock of record.

We have not paid any dividends on our common stock and do not anticipate paying cash dividends on our common stock in the foreseeable future. We intend to retain any earnings to finance the growth of our business. We cannot assure you that we will ever pay cash dividends. Whether we pay cash dividends in the future will be at the discretion of our Board of Directors and will depend upon our financial condition, results of operations, capital requirements and any other factors that the Board of Directors decides are relevant. See Management's Discussion and Analysis of Financial Condition and Results of Operations.

Recent Sales of Unregistered Securities

The following sets forth certain information regarding the sale of equity securities of our Company during the period covered by this report that were not registered under the Securities Act of 1933 (the Securities Act), and have not been previously reported by us in periodic reports filed under the Securities Exchange Act of 1934 (the Exchange Act).

During 2008, an outside investor who received warrants to purchase our common stock in connection with a November 2003 financing exercised a total of 200,200 Series R Warrants in exchange for issuance of 200,200 shares of our common stock, resulting in gross proceeds of $56,056. In addition, certain outside investors who also received warrants to purchase our common stock in connection with the November 2003 financing exercised a total of 2,658,698 Series R Warrants and 644,565 Series S Warrants on a cashless basis in exchange for issuance of 1,289,990 shares of our common stock. The issuances of the shares to the investors were exempt from registration under Sections 4(2) and 4(6) of the Securities Act and Regulation D.

During 2008, David C. Bupp, our President and CEO, who received warrants in connection with an April 2003 financing, exercised 375,000 Series Q Warrants in exchange for issuance of 375,000 shares of our common stock, resulting in gross proceeds of $48,750. In addition, an outside investor, who also received warrants in connection

with an April 2003 financing, exercised 500,000 Series Q Warrants in exchange for issuance of 500,000 shares of our common stock, resulting in gross proceeds of $65,000. During 2009, Mr. Bupp exercised a portion of his outstanding Series Q Warrants in exchange for issuance of 50,000 shares of our common stock, resulting in gross proceeds of $25,000. The issuances of the shares to Mr. Bupp and the outside investor were exempt from registration under Sections 4(2) and 4(6) of the Securities Act and Regulation D.

During 2009, a Bupp Investor (as defined below) exercised 50,000 Series V Warrants in exchange for issuance of 50,000 shares of our common stock, resulting in gross proceeds of $16,000. The issuance of the shares to the Bupp Investor was exempt from registration under Sections 4(2) and 4(6) of the Securities Act and Regulation D.

During 2009, certain outside investors, who received warrants in connection with a December 2004 financing, exercised a total of 1,480,000 Series U Warrants on a cashless basis in exchange for issuance of 848,507 shares of our common stock. The issuance of the shares to the outside investors was exempt from registration under Sections 4(2) and 4(6) of the Securities Act and Regulation D.

During 2009, we issued 1,126,767 shares of our common stock in payment of January 2009 and March-November 2009 interest of $833,333 on the 10% Series A and Series B Convertible Senior Secured Promissory Notes held by Platinum Montaur Life Sciences, LLC (Montaur). During the same period, we issued 266,472 shares of our common stock in payment of December 2008 through September 2009 dividends of $181,793 on the 8% Series A Cumulative Convertible Preferred Stock held by Montaur. Also during 2009, Montaur exercised 6,000,000 Series Y Warrants in exchange for issuance of 6,000,000 shares of our common stock, resulting in gross proceeds of $3,450,000, and we issued Montaur a Series AA Warrant to purchase 2,400,000 shares of our common stock at an exercise price of $0.97 per share, expiring in July 2014. The issuances of the shares and warrants to Montaur were exempt from registration under Sections 4(2) and 4(6) of the Securities Act and Regulation D.

Item 6. Selected Financial Data

Not applicable to smaller reporting companies.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read together with our Consolidated Financial Statements and the Notes related to those statements, as well as the other financial information included in this Form 10-K. Some of our discussion is forward-looking and involves risks and uncertainties. For information regarding risk factors that could have a material adverse effect on our business, refer to Item 1A of this Form 10-K, Risk Factors.

The Company

Neoprobe Corporation is a biomedical technology company that provides innovative surgical and diagnostic oncology products that enhance patient care and improve patient outcome. We currently market a line of medical devices, our neoprobe® GDS gamma detection systems. In addition to our medical device products, we have two radiopharmaceutical products, Lymphoseek® and RIGScanTM CR, in advanced phases of clinical development. We are also exploring the development of our activated cellular therapy (ACT) technology for patient-specific disease treatment through our majority-owned subsidiary, Cira Biosciences, Inc. (Cira Bio).

Executive Summary

This Overview section contains a number of forward-looking statements, all of which are based on current expectations. Actual results may differ materially. Our financial performance is highly dependent on our ability to continue to generate income and cash flow from our medical device product lines. We cannot assure you that we will achieve the volume of sales anticipated, or if achieved, that the margin on such sales will be adequate to produce positive operating cash flow.

We believe that the future prospects for Neoprobe continue to improve as we make progress in all of our key growth areas, especially related to our Lymphoseek initiative. Despite the current global economic conditions, our gamma device line continues to provide a strong revenue base. Due primarily to stocking orders related to products introduced in 2009 that we do not expect to recur in 2010, we expect overall revenue for our gamma device line for 2010 to be lower than 2009. We expect to continue to incur modest development expenses to support our device product lines as well as we work with our marketing partners to expand our product offerings in the gamma device arena. Our primary development efforts over the last few years have been focused on our oncology drug development initiatives: Lymphoseek and RIGScan CR. We continue to make progress with both initiatives; however, neither Lymphoseek nor RIGScan CR is anticipated to generate any significant revenue for us during 2010.

In August 2009, our Board of Directors decided to discontinue operations of Cardiosonix and to attempt to divest our Cardiosonix subsidiary. This decision was based on the determination that the blood flow measurement device segment was no longer considered a strategic initiative to the Company, due in large part to positive events in our other development initiatives. Until a sale is completed, we expect to continue to generate modest revenues and incur minimal expenses related to our blood flow measurement device business.

Our efforts in 2009 have resulted in the following milestone achievements:

- Completed a Phase 3 clinical trial of Lymphoseek (NEO3-05) in patients with breast cancer or melanoma and announced that the primary efficacy endpoint was exceeded with no drug-related safety events reported.

- Initiated patient enrollment in a second Phase 3 clinical trial of Lymphoseek (NEO3-06 or the “Sentinel” trial) in patients with head and neck squamous cell carcinoma.

- Initiated drug development activities for RIGScan CR to support a Phase 3 study.

- Began a new five-year term of our EES gamma detection device distribution agreement.

- Added a high energy (F-18) probe to our gamma detection device product portfolio.

- Completed a debt restructuring agreement allowing reclassification of a majority of the Company’s derivative liabilities and resulting in the exercise of the Series Y Warrants, producing $3.5 million in gross cash flow to the Company.

Our Outlook for our Drug and Therapeutic Initiatives

Our operating expenses during 2009 were focused primarily on support of Lymphoseek product development. We expect our drug-related development expenses to increase significantly in 2010 as we continue the second multi-center Phase 3 clinical evaluation of Lymphoseek and support the other drug stability and production validation activities related to supporting the potential marketing registration of Lymphoseek.

Based on dialogue with FDA through 2007, we proposed to FDA a plan for conducting Phase 3 studies to support an NDA for marketing clearance of Lymphoseek. During 2008, we initiated patient enrollment in the first Phase 3 clinical study in patients with either breast cancer or melanoma (NEO3-05). In March 2009, we announced that this study had reached the accrual of 203 lymph nodes, the study's primary accrual objective. The NEO3-05 Phase 3 clinical trial was designed to provide, and achieved its primary endpoint of, the evaluation of the efficacy of Lymphoseek in anatomically delineating lymph nodes in both breast cancer and melanoma patients that may be predictive of determining whether cancer has spread into the lymphatic system. Final data from the trial in patients with breast cancer and melanoma has now been reviewed and audited. The NEO3-05 study has also been closed on the national clinical trials website www.clinicaltrials.gov. In December 2009, Neoprobe submitted an end-of-Phase 3 meeting request to FDA to discuss the results of the clinical trial as part of our continuing preparation of a New Drug Application (NDA) In March 2010, Neoprobe met with FDA regarding NEO3-05. The FDA review included the efficacy and safety results of the NEO3-05 study and Neoprobe's plans for the submission of a NDA for Lymphoseek. The NDA submission will be based on the clinical results of NEO3-05 and other already completed clinical evaluations of Lymphoseek. FDA encouraged Neoprobe to request a series of pre-NDA meetings in the coming months to review the components of the NDA prior to its formal submission. Neoprobe indicated to FDA that the Company plans to submit the NDA following satisfactory completion of these meetings.

The NEO3-05 Phase 3 study was an open label trial of node-negative subjects with either breast cancer or melanoma. It was designed to evaluate the safety and the accuracy of Lymphoseek while identifying the lymph nodes draining from the subject's tumor site. To demonstrate the accuracy of Lymphoseek, each subject consenting to participate in the study was injected in proximity to the tumor with Lymphoseek and one of the vital blue dyes that are commonly used in lymphatic mapping procedures. The primary efficacy objective of the study was to identify lymph nodes that contained the vital blue dye and to demonstrate a statistically acceptable concordance rate between the identification of lymph nodes with the vital blue dye and Lymphoseek. To be successful, the study needed to achieve a statistical p-value of at least 0.05.

In this review meeting with FDA, the full analysis of the NEO3-5 clinical data was discussed. The protocol compliant clinical sites that participated in the NEO3-05 study contributed 136 Intent-To-Treat (ITT) subjects who provided 215 lymph nodes that contained the vital blue dye. 210 of the vital blue dye positive lymph nodes contained Lymphoseek for an overall concordance rate of 98% achieving a statistical p-value of 0.0001. In addition to the nodes identified by vital blue dye and Lymphoseek, Lymphoseek was able to identify 85 additional lymph nodes that did not contain the vital blue dye, and 18% of these nodes were found by pathology to contain cancer. There were no significant safety events related to Lymphoseek. The FDA indicated that the clinical data would be supportive of a NDA submission for Lymphoseek.

In future pre-NDA meetings, Neoprobe will continue discussions with the FDA reviewers regarding the pre-clinical and chemistry, manufacturing and control quality data modules that will be part of the NDA submission. Neoprobe will be discussing elements of the statistical analysis plan that would support the NDA, including the design of any prospective clinical evaluations to support the primary indication, and to potentially expand the future indications for Lymphoseek.

In June 2009, we initiated a second Phase 3 clinical trial to be conducted in patients with head and neck squamous cell carcinoma (NEO3-06 or the "Sentinel" trial). The Sentinel study is designed to validate Lymphoseek as a sentinel lymph node targeting agent. Our discussions with FDA and EMEA have also suggested that the Sentinel trial will further support the use of Lymphoseek in sentinel lymph node biopsy procedures. We believe the outcome of the trial will be beneficial to the marketing and commercial adoption of Lymphoseek in the U.S. and European Union (EU). We plan to have approximately20 participating institutions in the Sentinel trial. Patient recruitment and enrollment is actively underway at a number of institutions and the trial protocol is currently under review at several other institutions. The accrual rate for trials of this nature is highly dependent on the timing of institutional review

board (IRB) approvals of the NEO3-06 protocol. Our experience in the NEO3-05 trial has shown that this process may be lengthening due to risk management concerns on the part of hospitals participating in clinical trials and other factors.

We plan to use the safety and efficacy results from the Phase 3 clinical evaluations of Lymphoseek, which will include sites in the EU, to support the drug registration application process in the EU as well as to amend the filing in the U.S. for expanded product labeling. Based on the positive outcome of the recent meeting regarding NEO3-05, Neoprobe expects to submit the NDA for Lymphoseek later in the summer of 2010. Depending on the timing of the planned pre-NDA meetings with FDA and the outcome of FDA regulatory review cycle, we believe that Lymphoseek could be commercialized in mid-2011. We cannot assure you, however, that this product will achieve regulatory approval, or if approved, that it will achieve market acceptance. See Risk Factors.

Over the past few years, we have made progress in advancing our RIGScan CR development program while incurring minimal research expenses. Our RIGS® technology, which had been essentially inactive since failing to gain approval following our original license application in 1997, has been the subject of renewed interest due primarily to the analysis of survival data related to patients who participated in the original Phase 3 clinical studies that were completed in 1996. After a successful pre-submission meeting with EMEA in July 2008, we submitted a plan during the third quarter of 2008 on how we would propose to complete clinical development for RIGScan CR. The clinical protocol we submitted to EMEA involves approximately 400 patients in a randomized trial of patients with colorectal cancer. The participants in the trial would be randomized to either a control or RIGS treatment arm. Patients randomized to the RIGS arm would have their disease status evaluated at the end of their cancer surgery to determine the presence or absence of RIGS-positive tissue. Patients in both randomized arms would be followed to determine if patients with RIGS-positive status have a lower overall survival rate and/or a higher occurrence of disease recurrence. The hypothesis for the trial is based upon the data from the earlier NEO2-13 and NEO2-14 trial results.

Our desire has been, and continues to be, to develop a clinical development plan which is harmonized between the U.S. and the EU. To that end, during December 2009 we submitted an investigational new drug (IND) amendment to the United States FDA which includes the design of a proposed Phase 3 clinical trial of RIGScan CR. The IND amendment includes a Special Protocol Assessment (SPA) in accordance with the Prescription Drug User Fee Act of 1992 (PDUFA) and current regulatory guidelines, and will be registered on the clinicaltrials.gov website following discussions with FDA regarding the SPA.

The Phase 3 clinical study as currently designed would be a randomized clinical study that would evaluate the ability of RIGScan CR to identify tumor-associated tissue in a group of patients as compared to a group of patients provided with traditional surgical care. Based on our current statistical analysis, we now believe the sample size for the proposed Phase 3 clinical study may be as few as 250 patients including both the RIGScan CR and traditional treatment groups. In addition to assessing the ability of RIGScan CR to identify tumor-associated tissue, the survival rate of the RIGScan CR treated patients will be compared to the patients treated with conventional treatment modalities.

It should also be noted that the RIGScan CR biologic drug has not been produced for several years. We would have to perform some additional work related to ensuring the drug cell line is still viable and submit this data to EMEA and possibly FDA for their evaluation in connection with preparations to restart pivotal clinical trials. During the third quarter of 2009, we announced that we had executed a Biopharmaceutical Development and Supply Agreement with Laureate Pharma, Inc. This agreement will support the initial evaluation of the viability of the CC49 master working cell bank as well as the initial steps in re-validating the commercial production process for the biologic agent used in RIGScan CR. In addition, we will need to re-establish radiolabeling capabilities for the CC49 antibody in order to meet the regulatory needs for the RIGScan CR product. We have also begun discussions with parties capable of supporting such activities.

We continue to believe it will be necessary for us to identify a development partner or an alternative funding source in order to prepare for and fund the pivotal clinical testing that will be necessary to gain marketing clearance for RIGScan CR. In the past, we have engaged in discussions with various parties regarding such a partnership. We believe the recently clarified regulatory pathway approved by EMEA is very valuable, but we believe clarifying the regulatory pathway in the U.S. is important for us and our potential partners is assessing the full potential for RIGScan CR. However, even if we are able to make such arrangements on satisfactory terms, we believe that the time required for continued development, regulatory approval and commercialization of a RIGS product would likely be a minimum of five years before we receive any significant product-related royalties or revenues. We cannot assure you that we will be able to complete definitive agreements with a development partner or obtain financing to fund development of the RIGS technology and do not know if such arrangements could be obtained on a timely basis on terms acceptable to us, or at all. We also cannot assure you that FDA or EMEA will clear our RIGS products for marketing or that any

such products will be successfully introduced or achieve market acceptance.

In 2005, we formed a new subsidiary, Cira Bio, to explore the development of ACT. Neoprobe owns approximately 90% of the outstanding shares of Cira Bio with the remaining shares being held by the principals of a private holding company, Cira LLC. In conjunction with the formation of Cira Bio, an amended technology license agreement also was executed with The Ohio State University, from whom both Neoprobe and Cira LLC had originally licensed or optioned the various cellular therapy technologies. As a result of the cross-license agreements, Cira Bio has the exclusive development and commercialization rights to three issued U.S. patents that cover the oncology and autoimmune applications of its technology. In addition, Cira Bio has exclusive licenses to several pending patent applications. We hope to identify a funding source to continue Cira Bio's development efforts. If we are successful in identifying a funding source, we expect that any funding would likely be accomplished by an investment directly into Cira Bio, so that the funds raised would not dilute current Neoprobe shareholders. Obtaining this funding would likely dilute Neoprobe's ownership interest in Cira Bio; however, we believe that moving forward such a promising technology will only yield positive results for the Neoprobe stockholders and the patients who could benefit from these treatments. We have been encouraged by recent media speculation regarding the potential connection of a retrovirus with chronic fatigue syndrome and the potential use of ACT to develop a treatment, which may stimulate some interest in our ACT platform. However, we do not know if we will be successful in obtaining funding on terms acceptable to us, or at all. In the event we fail to obtain financing for Cira Bio, the technology rights for the oncology applications of ACT may revert back to Neoprobe and the technology rights for the viral and autoimmune applications may revert back to Cira LLC upon notice by either party.

Our Outlook for our Gamma Detection Device Business

We believe our core gamma detection device business line will continue to achieve positive results in 2010. We believe that the surgical community will continue to adopt the sentinel lymph node biopsy (SLNB) application while a standard of care determination is still pending. We also believe that Lymphoseek, our lymphatic targeting agent, should it become commercially available, could significantly improve the adoption of SLNB in future years in areas beyond melanoma and breast cancer. To that end, we are supporting the clinical evaluation of Lymphoseek in human patients in a Phase 3 trial in head and neck squamous cell carcinoma and in Phase 1 trials in patients with either prostate or colon cancers.

We believe that most of the leading cancer treatment institutions in the U.S. and other major global markets have adopted SLNB and purchased gamma detection systems such as the neoprobe GDS. As a result, we may be reaching saturation within this segment of the market, except for a replacement sales market which we also believe is developing as devices introduced during the early years of lymphatic mapping begin to age over ten years. A decline in the adoption rate of SLNB or the development of alternative technologies by competitors may negatively impact our sales volumes, and therefore, revenues and net income in future years. In order to address the issue of potential saturation as well as to continue to provide our customers with the highest quality tools for performing SLNB, we have introduced several enhancements to our gamma device product line over the past few years, including a higher energy gamma detection probe which was launched in mid- 2009.

Our gamma detection devices are distributed in most global markets by Ethicon Endo-Surgery, Inc. (EES), a Johnson & Johnson company. Under the terms of our distribution agreement with EES, the transfer prices we receive on product sales to EES are based on a fixed percentage of their end-customer average sales price (ASP), subject to a floor transfer price. Throughout their sales history, our products have generally commanded a price premium in most of the markets in which they are sold, which we believe is due to their superior performance and ease of use. The end-customer ASP received by EES for our base gamma detection systems increased approximately 5% in 2009 as compared to 2008, primarily due to improved pricing on our neoprobe GDS system. While we continue to believe in the technical and user-friendly superiority of our products, the competitive landscape continues to evolve and current economic conditions present a number of challenges to the outlook for medical device sales. We may lose market share or experience price erosion and/or lower sales volumes as a result, any of which would have a direct negative

impact on net income. If price erosion occurs in 2010, or if the U.S. Dollar gains significantly against the Euro, there is a risk associated with future sales prices of our gamma detection devices to EES that may erode some or all of the premium we received in prior years in excess of the floor price. However, in December 2007, Neoprobe and EES executed an amendment to the distribution agreement which extended the agreement through the end of 2013. The amendment modified certain terms of the agreement including increasing the percentage of EES' sales which Neoprobe receives by 15-20% and setting minimum performance requirements in order to maintain exclusivity.

We expect that revenues from our gamma detection devices will likely decline from 2009 levels due to the previously discussed non-recurring stocking revenues, but should still result in a net profit in 2010 for that line of business, excluding general and administrative costs, interest and other financing-related charges. Our overall operating results for 2010 will also be greatly affected by the amount of development of our radiopharmaceutical products. Primarily as a result of the significant development costs we expect to incur related to the continued clinical development of Lymphoseek, we do not expect to achieve overall operating profitability during 2010. We cannot assure you that our current or potential new products will be successfully commercialized, that we will achieve significant product revenues, or that we will achieve or be able to sustain profitability in the future.

Results of Operations

Revenue for 2009 increased to $9.5 million from $7.6 million in the prior year. The increase was primarily due to increased unit prices of our control units and detector probes. The increase in net sales compared to the prior year can also be partially attributed to sales of our new high energy probes and wireless laparoscopic probes. Gross margins for 2009 increased to 67% as compared to 63% in 2008. The increase in gross margins was primarily due to the increased percentage of ASP received by Neoprobe from EES coupled with increased end-customer ASP for gamma detection devices.

Results for 2009 also reflect an increase in research and development expenditures of $681,000 to $5.0 million from $4.3 million in 2008. The increase was primarily due to higher Lymphoseek development expenses related to conducting the Phase 3 clinical trials offset by decreased non-clinical testing, validation and process development activities. Selling, general and administrative expenses increased to $3.2 million in 2009 from $3.0 million in 2008.

Net Sales and Margins. Net sales, comprised primarily of sales of our gamma detection systems, increased $2.0 million, or 27%, to $9.4 million during 2009 from $7.4 million in 2008. Gross margins on net sales increased to 67% of net sales for 2009 compared to 62% of net sales for 2008.

The increase in net sales was the result of increased gamma detection device sales of $1.8 million, increased gamma detection device extended service contract revenue of $92,000 and increased gamma detection device non-warranty service revenue of $91,000. The increase in gamma detection device sales was primarily due to increased unit prices of our control units and detector probes. The increase in net sales compared to the prior year can also be partially attributed to sales of our new high energy probes and wireless laparoscopic probes. The price at which we sell our gamma detection products to EES is based on a percentage of the global ASP received by EES on sales of Neoprobe products to end customers, subject to a minimum floor price. In January 2009, Neoprobe began receiving an increased percentage of ASP for certain products under the terms of our amended distribution agreement with EES. The increase in gross margins was primarily due to the increased percentage of ASP received by Neoprobe from EES coupled with increased end-customer ASP for gamma detection devices.

Research and Development Expenses. Research and development expenses increased $681,000, or 16%, to $5.0 million during 2009 from $4.3 million in 2008. Research and development expenses in 2009 included approximately $3.9 million in drug and therapy product development costs and $1.1 million in gamma detection device development costs. This compares to expenses of $3.3 million and $948,000 in these segment categories in 2008. The changes in each category were primarily due to (i) increased costs related to the Phase 3 clinical trials of Lymphoseek offset by decreased non-clinical testing, validation and process development activities related to Lymphoseek, and (ii) decreased development costs of our neoprobe GDS control unit and wireless laparoscopic probe, offset by increased development costs of our new high energy detection probe and other products in 2009, respectively.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased $275,000, or 9%, to $3.2 million during 2009 from $3.0 million in 2008. The net increase was due primarily to increases in compensation and utilities costs offset by decreases in investor relations fees.

Other Income (Expense). Other expense, net increased $33.8 million to $35.9 million during 2009 from $2.1 million during the same period in 2008. During 2009, we recorded a $16.2 million non-cash loss on extinguishment of debt related to changes in the terms of our convertible debt, convertible preferred stock and the related warrants to purchase our common stock. Also during 2009, we recorded a $18.1 million increase in derivative liabilities resulting from the accounting treatment for the convertible debt agreements we executed in December 2007 and April 2008, the convertible preferred stock we issued in December 2008, and the related warrants to purchase our common stock, which contained certain provisions that resulted in their being treated as derivative liabilities under new accounting guidance effective January 1, 2009. During 2008, we recorded a $451,000 increase in derivative liabilities. Interest expense, primarily related to the convertible debt agreements we completed in December 2007 and April 2008, decreased $212,000 to $1.5 million during 2009 from $1.7 million for the same period in 2008. Of this interest expense, $428,000 and $706,000 in 2009 and 2008, respectively, was non-cash in nature related to the amortization of debt issuance costs and discounts resulting from the warrants and conversion features of the convertible debt. An additional $917,000 of interest expense in 2009 was non-cash in nature due to the payment or accrued payment of interest on our convertible debt with shares of our common stock.

Discontinued Operations. During the third quarter of 2009, we made the decision to discontinue operations of the blood flow measurement device segment of our business as the segment was no longer considered a strategic initiative to the Company. This determination was based in large part on positive events in our other development initiatives. As a result, we recorded an impairment loss related to discontinued operations of $1.7 million for the year ended December 31, 2009. Total revenues from discontinued operations were $129,000 and $297,000 in 2009 and 2008, respectively. The net loss from discontinued operations was $176,000 and $534,000 for 2009 and 2008, respectively.

Liquidity and Capital Resources

Cash balances, including short term available-for-sale securities in 2008, increased to $5.6 million at December 31, 2009 from $4.1 million at December 31, 2008. The net increase was primarily due to cash received for the issuance of common stock related to the exercise of warrants, partially offset by cash used to fund our operations, mainly for research and development activities. The current ratio increased to 3.6:1 at December 31, 2009 from 3.1:1 at December 31, 2008.

Operating Activities. Cash used in operations decreased $1.5 million to $1.5 million during 2009 compared to $3.0 million during 2008.

Accounts receivable decreased to $1.3 million at December 31, 2009 from $1.6 million at December 31, 2008. The decrease was primarily a result of normal fluctuations in timing of purchases and payments by EES. We expect overall receivable levels will continue to fluctuate during 2010 depending on the timing of purchases and payments by EES.

Inventory levels increased to $1.1 million at December 31, 2009 compared to $544,000 at December 31, 2008. The first commercial-grade lot of the active pharmaceutical ingredient used in Lymphoseek was produced during 2009. Gamma detection device materials inventory increased in preparation for detector probe production. Gamma detection finished device inventory also increased due to the timing of production and sales to EES. We expect inventory levels to increase during 2010 as our Lymphoseek materials are converted to finished drug inventory.

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Investing Activities. Investing activities provided $327,000 during 2009 compared to $627,000 used during 2008. We purchased $690,000 of available-for-sale securities during 2008. Available-for-sale securities of $494,000 and $196,000 matured during 2009 and 2008, respectively. Capital expenditures of $96,000 and $116,000 during 2009 and 2008, respectively, were primarily for computers, production and laboratory equipment, and software. We expect our overall capital expenditures for 2010 to increase slightly compared to 2009 as we prepare for the commercial production of Lymphoseek. Payments for patent and trademark costs were $71,000 and $17,000 during 2009 and 2008, respectively.

Financing Activities. Financing activities provided $3.2 million during 2009 compared to $5.7 million provided during 2008. The $3.2 million provided by financing activities in 2009 consisted primarily of proceeds from the issuance of common stock of $3.6 million, offset by payments of stock offering costs of $244,000 and payments of notes payable of $138,000. The $5.7 million provided by financing activities in 2008 consisted primarily of proceeds from the issuance of preferred stock of $3.0 million, proceeds from the issuance of new notes payable of $3.0 million, and proceeds from the issuance of common stock of $232,000, offset by payments of stock offering costs of $181,000, payments of debt issuance costs of $200,000 and payments of notes payable of $158,000.

In December 2006, we entered into a common stock purchase agreement with Fusion Capital, an Illinois limited liability company, to sell $6.0 million of our common stock to Fusion Capital over a 24-month period which ended on November 21, 2008. Through November 21, 2008, we sold to Fusion Capital under the agreement 7,568,671 shares for proceeds of $1.9 million. In December 2008, we entered into an amendment to the agreement which gave us a right to sell an additional $6.0 million of our common stock to Fusion Capital before March 1, 2011, along with the $4.1 million of the unsold balance of the $6.0 million we originally had the right to sell to Fusion Capital under the original agreement. In March 2010, we sold to Fusion Capital under the amended agreement 540,541 shares for proceeds of $1.0 million. Subsequent to this sale, the remaining aggregate amount of our common stock we can sell to Fusion Capital is $9.1 million, and we have reserved a total of 10,113,459 shares of our common stock in respect to potential sales of common stock we may make to Fusion Capital in the future under the amended agreement.

In December 2006, we issued to Fusion Capital 720,000 shares of our common stock as a commitment fee upon execution of the original agreement. As sales of our common stock were made under the original agreement, we issued an additional 234,000 shares of our common stock to Fusion Capital as an additional commitment fee. In connection with entering into the amendment, we issued an additional 360,000 shares in consideration for Fusion Capital’s entering into the amendment. Also, as an additional commitment fee, we agreed to issue to Fusion Capital an additional 486,000 shares of our common stock pro rata as we sell the first $4.1 million of our common stock to Fusion Capital under the amended agreement. In March 2010, we issued an additional 120,000 shares of our common stock to Fusion Capital as an additional commitment fee related to the 540,541 shares of stock that we sold to Fusion Capital for $1.0 million.

In July 2007, David C. Bupp, our President and CEO, and certain members of his family (the Bupp Investors) purchased a $1.0 million convertible note (the Bupp Note) and warrants. The note bears interest at 10% per annum, had an original term of one year and is repayable in whole or in part with no penalty. The note is convertible into shares of our common stock at a price of $0.31 per share, a 25% premium to the average closing market price of our common stock for the 5 days preceding the closing of the transaction. As part of this transaction, we issued the Bupp Investors Series V Warrants to purchase 500,000 shares of our common stock at an exercise price of $0.31 per share, expiring in July 2012.

In December 2007, we entered into a Securities Purchase Agreement (SPA) with Platinum Montaur Life Sciences, LLC (Montaur), pursuant to which we issued Montaur a 10% Series A Convertible Senior Secured Promissory Note in the principal amount of $7,000,000, due December 26, 2011 (the Series A Note) and a five-year Series W Warrant to purchase 6,000,000 shares of our common stock, $.001 par value per share, at an exercise price of $0.32 per share. Montaur may convert $3.5 million of the Series A Note into shares of our common stock at the conversion price of $0.26 per share. The SPA also provided for two further tranches of financing, a second tranche of $3 million in exchange for a 10% Series B Convertible Senior Secured Promissory Note along with a five-year Series X Warrant to purchase shares of our common stock, and a third tranche of $3 million in exchange for 3,000 shares of our 8% Series A Cumulative Convertible Preferred Stock and a five-year Series Y Warrant to purchase shares of our common stock. Closings of the second and third tranches were subject to the satisfaction by the Company of certain milestones related to the progress of the Phase 3 clinical trials of our Lymphoseek radiopharmaceutical product.

In April 2008, following receipt by the Company of clearance from FDA to commence a Phase 3 clinical trial for Lymphoseek in patients with breast cancer or melanoma, we amended the SPA related to the second tranche and issued Montaur a 10% Series B Convertible Senior Secured Promissory Note in the principal amount of $3,000,000, also due December 26, 2011 (the Series B Note, and hereinafter referred to collectively with the Series A Note as the Montaur Notes), and a five-year Series X Warrant to purchase 8,333,333 shares of our common stock at an exercise price of $0.46 per share. Montaur may convert the Series B Note into shares of our common stock at the conversion price of $0.36 per share. Provided we have satisfied certain conditions stated therein, we may elect to make payments of interest due under the Montaur Notes in registered shares of our common stock. If we choose to make interest payments in shares of common stock, the number of shares of common stock to be applied against any such interest payment will be determined by reference to the quotient of (a) the applicable interest payment divided by (b) 90% of the average daily volume weighted average price of our common stock on the OTCBB (or national securities exchange, if applicable) as reported by Bloomberg Financial L.P. for the five days upon which our common stock is traded on the OTCBB immediately preceding the date of the interest payment.

In December 2008, after we obtained 135 vital blue dye lymph nodes from patients who had completed surgery and the injection of the drug in a Phase 3 clinical trial of Lymphoseek in patients with breast cancer or melanoma, we issued Montaur 3,000 shares of our 8% Series A Cumulative Convertible Preferred Stock (the Preferred Stock) and a five-year Series Y Warrant (hereinafter referred to collectively with the Series W Warrant and Series X Warrant as the Montaur Warrants) to purchase 6,000,000 shares of our common stock, at an exercise price of $0.575 per share, also for an aggregate purchase price of $3,000,000. Montaur may convert each share of the Preferred Stock into a number of shares of our common stock equal to the quotient of (a) the Liquidation Preference Amount of the shares of Preferred Stock by (b) the Conversion Price. The “Liquidation Preference Amount” for the Preferred Stock is $1,000 and the “Conversion Price” of the Preferred Stock was set at $0.50 on the date of issuance, thereby making the shares of Preferred Stock convertible into an aggregate 6,000,000 shares of our common stock, subject to adjustment as described in the Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series A 8% Cumulative Convertible Preferred Stock. We may elect to pay dividends due to Montaur on the shares of Preferred Stock in registered shares of our common stock. The number of shares of common stock to be applied against any such dividend payment will be determined by reference to the quotient of (a) the applicable dividend payment by (b) 90% of the average daily volume weighted average price of our common stock on the OTCBB (or national securities exchange, if applicable) as reported by Bloomberg Financial L.P. for the five days upon which our common stock is traded on the OTCBB immediately preceding the date of the dividend payment.

On July 24, 2009, we entered into a Securities Amendment and Exchange Agreement with Montaur, pursuant to which Montaur agreed to the amendment and restatement of the terms of the Montaur Notes, the Preferred Stock, and the Montaur Warrants. The Series A Note was amended to grant Montaur conversion rights with respect to the $3.5 million portion of the Series A Note that was previously not convertible. The newly convertible portion of the Series A Note is convertible at $0.9722 per share. The amendments also eliminated certain price reset features of the

Montaur Notes, the Preferred Stock and the Montaur Warrants that had created significant non-cash derivative liabilities on the Company's balance sheet. In conjunction with this transaction, we issued Montaur a Series AA Warrant to purchase 2.4 million shares of our common stock at an exercise price of $0.97 per share, expiring in July 2014. The change in terms of the Montaur Notes, the Preferred Stock and the Montaur Warrants was treated as an extinguishment of debt for accounting purposes. The Company recorded an additional $5.6 million in mark-to-market adjustments related to the increase in the Company's common stock from June 30 to July 24, 2009. As a result of the extinguishment treatment associated with the elimination of the price reset features, the Company also recorded $16.2 million in non-cash loss on the extinguishment and reclassified $27.0 million in derivative liabilities to additional paid-in capital. Following the extinguishment, the Company's balance sheet reflects the face value of the $10 million due to Montaur pursuant to the Montaur Notes. In connection with this transaction, Montaur exercised 2,844,319 Series Y Warrants in exchange for issuance of 2,844,319 shares of our common stock, resulting in gross proceeds of $1,635,483 received in July 2009. Montaur also exercised their remaining 3,155,681 Series Y Warrants in exchange for issuance of 3,155,681 shares of our common stock, resulting in additional gross proceeds of $1,814,517 received in September 2009.

In connection with the Montaur SPA, the term of the $1.0 million Bupp Note was extended to December 27, 2011, one day following the maturity date of the Montaur Notes. In consideration for the Bupp Investors' agreement to extend the term of the Bupp Note pursuant to an Amendment to the Bupp Purchase Agreement, dated December 26, 2007, we agreed to provide security for the obligations evidenced by the Amended 10% Convertible Note in the principal amount of $1,000,000, due December 31, 2011, executed by Neoprobe in favor of the Bupp Investors (the Amended Bupp Note), under the terms of a Security Agreement, dated December 26, 2007, by and between Neoprobe and the Bupp Investors (the Bupp Security Agreement). This security interest is subordinate to the security interest of Montaur. As further consideration for extending the term of the Bupp Note, we issued the Bupp Investors Series V Warrants to purchase 500,000 shares of our common stock at an exercise price of $0.32 per share, expiring in December 2012. The Amended Bupp Note had an outstanding principal amount of $1.0 million on December 31, 2009, and an outstanding principal amount of $1.0 million as of March 26, 2010. During 2009, we paid none of the outstanding principal and paid or accrued $100,000 in interest due under the Amended Bupp Note.

Our future liquidity and capital requirements will depend on a number of factors, including our ability to expand market acceptance of our current products, our ability to complete the commercialization of new products, our ability to monetize our investment in non-core technologies, our ability to obtain milestone or development funds from potential development and distribution partners, regulatory actions by FDA and international regulatory bodies, and intellectual property protection. Our most significant near-term development priority is to complete the second Phase 3 clinical trial of Lymphoseek. We believe our current funds and available capital resources will be adequate to complete our Lymphoseek development efforts and sustain our operations at planned levels for the foreseeable future. We are in the process of determining the total development cost necessary to commercialize RIGScan CR but believe that it will require total additional commitments of between $3 million to $5 million to restart manufacturing and other activities necessary to prepare for the Phase 3 clinical trial contemplated in the recent EMEA scientific advice response. We plan to use part of the proceeds from Montaur's recent warrant exercises to initiate the first steps of restarting manufacturing of RIGScan CR; however, we still intend to involve a partner in the longer-term development of RIGScan CR. We may also be able to raise additional funds through a stock purchase agreement with Fusion Capital to supplement our capital needs. However, the extent to which we rely on Fusion Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. Specifically, Fusion Capital does not have the right or the obligation to purchase any shares of our common stock on any business day that the market price of our common stock is less than $0.20 per share. We cannot assure you that we will be successful in raising additional capital through Fusion Capital or any other sources at terms acceptable to the Company, or at all. We also cannot assure you that we will be able to successfully obtain regulatory approval for and commercialize new products, that we will achieve significant product revenues from our current or potential new products or that we will achieve or sustain profitability in the future.

Recent Accounting Developments

In September 2006, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 157, Fair Value Measurements, which was primarily codified in FASB Accounting Standards CodificationTM (ASC) Topic 820, Fair Value Measurements and Disclosures. This statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosures about fair value measurements. This statement did not require any new fair value measurements. This statement was initially effective for Neoprobe beginning January 1, 2008 for nonfinancial assets and nonfinancial liabilities recognized or disclosed at fair value on at least an annual basis. In February 2008, the FASB decided to allow entities to electively defer the effective date of this statement until January 1, 2009 for nonfinancial assets and nonfinancial liabilities that are not recognized or disclosed at fair value on at least an annual basis. We began applying the fair value measurement and disclosure provisions of this statement to nonfinancial assets and liabilities effective January 1, 2009. The application of such was not material to our consolidated results of operations or financial condition.

In December 2007, the FASB issued SFAS No. 141(R) (revised 2007), Business Combinations, which was primarily codified in FASB ASC Topic 805, Business Combinations. This statement requires that the acquisition method (formerly called the purchase method) of accounting be used for all business combinations and for an acquirer to be identified for each business combination. This statement defines the acquirer as the entity that obtains control of one or more businesses in the business combination, establishes the acquisition date as the date that the acquirer achieves control and requires the acquirer to recognize the assets and liabilities assumed and any noncontrolling interest at their fair values as of the acquisition date. This statement also requires, among other things, that the acquisition-related costs be recognized separately from the acquisition. This statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008, and was adopted by Neoprobe beginning January 1, 2009. There have been no acquisitions since the adoption of this statement. The effect the adoption of this statement will have on us will depend on the nature and size of acquisitions we complete in the future, if any.

Also in December 2007, the FASB issued SFAS No. 160, Noncontrolling Interests in Consolidated Financial Statements – an Amendment of ARB No. 51, which was primarily codified in FASB ASC Topic 810, Consolidation. This statement establishes accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. This statement is effective for fiscal years and interim periods within those fiscal years beginning on or after December 15, 2008, and was adopted by Neoprobe beginning January 1, 2009. This statement is being applied prospectively as of the beginning of the fiscal year in which it was adopted, except for the presentation and disclosure requirements. The presentation and disclosure requirements are being applied retrospectively for all periods presented. The adoption of this statement did not have a material effect on our consolidated results of operations or financial condition.

In December 2007, the FASB ratified the consensus reached by the Emerging Issues Task Force (EITF) on EITF Issue No. 07-1, Accounting for Collaborative Arrangements, which was primarily codified in FASB ASC Topic 808, Collaborative Arrangements. This guidance defines a collaborative arrangement as well as the accounting for transactions between participants in a collaborative arrangement and between the participants in the arrangement and third parties. This guidance requires that both types of transactions be reported in each participant's respective income statement. We adopted the new provisions of FASB ASC 808 beginning January 1, 2009. The adoption did not impact our consolidated results of operations or financial condition.

In March 2008, the FASB issued SFAS No. 161, Disclosures about Derivative Instruments and Hedging Activities – an Amendment of FASB Statement No. 133, which was primarily codified in FASB ASC Topic 815, Derivatives and Hedging. This statement provides an understanding of how and why an entity uses derivative instruments, how derivative instruments and related hedged items are accounted for, and their effect on an entity's financial position,

financial performance, and cash flows. We adopted this statement beginning January 1, 2009. The adoption did not have a material impact on our derivative disclosures.

In June 2008, the FASB ratified the consensus reached by the EITF on EITF Issue No. 07-5, Determining Whether an Instrument (or Embedded Feature) is Indexed to an Entity's Own Stock, which was primarily codified in FASB ASC Topic 815, Derivatives and Hedging. This guidance clarifies the determination of whether equity-linked instruments (or embedded features), such as our convertible notes or warrants to purchase our common stock, are considered indexed to our own stock, which would qualify as a scope exception. We adopted the new provisions of FASB ASC 815 beginning January 1, 2009. The adoption had a material impact on our consolidated financial statements. See Note 9 to the consolidated financial statements.

Also in June 2008, the FASB issued FSP EITF 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions are Participating Securities, which was primarily codified in FASB ASC Topic 260, Earnings Per Share. This guidance provides that unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents, whether paid or unpaid, are participating securities and are required to be included in the computation of earnings per share pursuant to the two-class method. The two-class method of computing earnings per share includes an earnings allocation formula that determines earnings per share for common stock and any participating securities according to dividends declared, whether paid or unpaid, and participation rights in undistributed earnings. All prior period earnings per share data presented are required to be adjusted retrospectively to conform to this statement. We adopted this guidance beginning January 1, 2009. The adoption did not impact our earnings (loss) per share for the years ended December 31, 2009 and 2008.

In May 2009, the FASB issued SFAS No. 165, Subsequent Events, which was primarily codified in FASB ASC Topic 855, Subsequent Events. This statement establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before the financial statements are issued or are available to be issued. We adopted this statement beginning April 1, 2009. The adoption of this statement did not impact our consolidated results of operations or financial position since it requires additional disclosures only. See Note 18 to the consolidated financial statements.

In June 2009, the FASB issued SFAS No. 168, The FASB Accounting Standards Codification and the Hierarchy of Generally Accepted Accounting Principles — a replacement of FASB Statement No. 162, which was primarily codified in FASB ASC Topic 105, Generally Accepted Accounting Principles. This statement establishes the FASB Accounting Standards Codification as the source of authoritative accounting principles recognized by the FASB to be applied by nongovernmental entities in the preparation of financial statements in conformity with generally accepted accounting principles in the United States (U.S. GAAP). All guidance contained in the FASB ASC carries an equal level of authority. This statement did not change current U.S. GAAP, but is intended to simplify user access to all authoritative U.S. GAAP by providing all the authoritative literature related to a particular topic in one place. The FASB ASC superseded all then-existing non-SEC accounting and reporting standards. All other non-grandfathered non-SEC accounting literature not included in the FASB ASC became non-authoritative. This statement is effective for financial statements issued for interim and annual periods ending after September 15, 2009. The implementation of this statement did not impact our consolidated financial statements.

In August 2009, the FASB issued Accounting Standards Update (ASU) 2009-5, Measuring Liabilities at Fair Value. ASU 2009-5 amends FASB ASC Topic 820, Fair Value Measurements and Disclosures. ASU 2009-5 provides guidance on how to measure the fair value of liabilities when observable market information is not available. If a quoted price in an active market for an identical liability is available it should be used to value the liability. In circumstances when a quoted price in an active market for an identical liability is not available, ASU 2009-5 requires that the fair value of the liability be measured using one or more of the following techniques: (1) a valuation technique that uses (a) the quoted price of the identical liability when traded as an asset, or (b) quoted prices for similar liabilities or similar liabilities when traded as assets; or (2) another valuation technique that is consistent with the principles of FASB ASC Topic 820, such as an income approach or a market approach. ASU 2009-5 clarifies that when using the quoted price of an identical liability when traded as an asset, an entity should adjust for factors that are not applicable to the fair value of the asset price of the liability, but should not adjust the asset price for the effect of a restriction preventing the sale of the asset. If a quoted price for an identical liability when traded as an asset in an active market is available, the asset price is considered to be a Level 1 fair value measurement for the liability, provided that not adjustments to the quoted price of the asset is required. ASU 2009-5 is effective for the first reporting period (including interim periods) beginning after issuance. We adopted the provisions of ASU 2009-5 beginning October 1, 2009. The adoption did not have a material effect on our consolidated results of operations or financial condition.

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In January 2010, the FASB issued ASU 2010-2, Accounting and Reporting for Decreases in Ownership of a Subsidiary – a Scope Clarification. ASU 2010-2 amends FASB ASC Topic 810, Consolidation. ASU 2010-2 clarifies that the scope of the decrease in ownership provisions applies to: (1) a subsidiary or group of assets that is a business or nonprofit activity; (2) a subsidiary that is a business or nonprofit activity that is transferred to an equity method investee or joint venture; and (3) an exchange of a group of assets that constitutes a business or nonprofit activity for a noncontrolling interest in an entity, including an equity method investee or joint venture. If a decrease in ownership occurs in a subsidiary that is not a business or nonprofit activity, entities first need to consider whether the substance of the transaction is addressed in other U.S. GAAP, and apply that guidance as applicable. If no other guidance exists, an entity should apply FASB ASC Topic 810-10. ASU 2010-2 also expands existing disclosure requirements for transactions within the scope of FASB ASC Topic 810-10, and adds several new ones that address fair value measurements and related techniques, the nature of any continuing involvement after the transaction, and whether related parties are involved. ASU 2010-2 is effective beginning in the period that an entity adopts FASB ASC Topic 810-10. If an entity has previously adopted FASB ASC Topic 810-10, the amendments are effective beginning in the first interim or annual reporting period ending on or after December 15, 2009, and must be applied retrospectively to the date FASB ASC Topic 810-10 was adopted. We adopted the provisions of ASU 2010-2 beginning October 1, 2009. The effect the adoption of ASU 2010-2 will have on us will depend on the nature and size of future decreases in ownership of a subsidiary, if any.

Also in January 2010, the FASB issued ASU 2010-6, Improving Disclosures about Fair Value Measurements. ASU 2010-6 amends FASB ASC Topic 820, Fair Value Measurements and Disclosures. ASU 2010-6 requires new disclosures as follows: (1) Transfers in and out of Levels 1 and 2 and (2) Activity in Level 3 fair value measurements. An entity should disclose separately the amounts of significant transfers in and out of Level 1 and Level 2 fair value measurements and describe the reasons for the transfers. In the reconciliation of fair value measurements using significant unobservable inputs (Level 3), an entity should present separately information about purchases, sales, issuances, and settlements (that is, on a gross basis rather than as one net number). ASU 2010-6 also clarifies existing disclosures as follows: (1) Level of disaggregation and (2) Disclosures about inputs and valuation techniques. An entity should provide fair value measurement disclosures for each class of assets and liabilities. A class is often a subset of assets or liabilities within a line item in the statement of financial position. An entity needs to use judgment in determining the appropriate classes of assets and liabilities. An entity should provide disclosures about the valuation techniques and inputs used to measure fair value for both recurring and nonrecurring fair value measurements. Those disclosures are required for fair value measurements that fall in either Level 2 or Level 3. ASU 2010-6 also includes conforming amendments to the guidance on employers' disclosures about postretirement benefit plan assets (Subtopic 715-20) which include a change in terminology from major categories of assets to classes of assets and a cross-reference to the guidance in Subtopic 820-10 on how to determine appropriate classes to present fair value disclosures. ASU 2010-6 is effective for interim and annual reporting periods beginning after December 15, 2009, except for the separate disclosures about purchases, sales, issuances, and settlements in the roll forward of activity in Level 3 fair value measurements. Those disclosures are effective for fiscal years beginning after December 15, 2010, and for interim periods within those fiscal years. As the new provisions of ASU 2010-6 provide only disclosure requirements, the adoption of this standard will not have an impact on our consolidated financial position, results of operations or cash flows, but will result in increased disclosures beginning in the first quarter of 2010.

Critical Accounting Policies

We consider the following accounting policies to be critical to our results of operations and financial condition.

Revenue Recognition Related to Net Sales. We currently generate revenue primarily from sales of our gamma detection products. Our standard shipping terms are FOB shipping point, and title and risk of loss passes to the customer upon delivery to a common carrier. We generally recognize sales revenue related to sales of our products when the products are shipped and the earnings process has been completed. However, in cases where product is

shipped but the earnings process is not yet completed, revenue is deferred until it has been determined that the earnings process has been completed. Our customers have no right to return products purchased in the ordinary course of business.

The prices we charge our primary customer, EES, related to sales of products are subject to retroactive annual adjustment based on a fixed percentage of the actual sales prices achieved by EES on sales to end customers made during each fiscal year. To the extent that we can reasonably estimate the end-customer prices received by EES, we record sales to EES based upon these estimates. If we are unable to reasonably estimate end customer sales prices related to certain products sold to EES, we record revenue related to these product sales at the minimum (i.e., floor) price provided for under our distribution agreement with EES.

We also generate revenue from the service and repair of out-of-warranty products. Fees charged for service and repair on products not covered by an extended service agreement are recognized on completion of the service process when the serviced or repaired product has been returned to the customer. Fees charged for service or repair of products covered by an extended warranty agreement are deferred and recognized as revenue ratably over the life of the extended service agreement.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We base these estimates and assumptions upon historical experience and existing, known circumstances. Actual results could differ from those estimates. Specifically, management may make significant estimates in the following areas:

- Stock-Based Compensation. Stock-based payments to employees and directors, including grants of stock options, are recognized in the statement of operations based on their estimated fair values. The fair value of each option award is estimated on the date of grant using the Black-Scholes option pricing model to value share-based payments. Compensation cost arising from stock-based awards is recognized as expense using the straight-line method over the vesting period.

- Inventory Valuation. We value our inventory at the lower of cost (first-in, first-out method) or market. Our valuation reflects our estimates of excess, slow moving and obsolete inventory as well as inventory with a carrying value in excess of its net realizable value. Write-offs are recorded when product is removed from saleable inventory. We review inventory on hand at least quarterly and record provisions for excess and obsolete inventory based on several factors, including current assessment of future product demand, anticipated release of new products into the market, historical experience and product expiration. Our industry is characterized by rapid product development and frequent new product introductions. Uncertain timing of product approvals, variability in product launch strategies, regulations regarding use and shelf life, product recalls and variation in product utilization all impact the estimates related to excess and obsolete inventory.

- Impairment or Disposal of Long-Lived Assets. Long-lived assets and certain identifiable intangibles are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future net undiscounted cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell.

- Product Warranty. We warrant our products against defects in design, materials, and workmanship generally for a period of one year from the date of sale to the end customer. Our accrual for warranty expenses is adjusted periodically to reflect actual experience. EES also reimburses us for a portion of warranty expense incurred based on end customer sales they make during a given fiscal year.

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- Fair Value of Derivative Instruments. Derivative instruments embedded in contracts, to the extent not already a free-standing contract, are bifurcated from the debt instrument and accounted for separately. All derivatives are recorded on the consolidated balance sheet at fair value in accordance with current accounting guidelines for such complex financial instruments. Fair value of warrant liabilities is determined based on a Black-Scholes option pricing model calculation. Fair value of conversion and put option liabilities is determined based on a probability-weighted Black-Scholes option pricing model calculation. Unrealized gains and losses on the derivatives are classified in other expenses as a change in derivative liabilities in the statements of operations. We do not use derivative instruments for hedging of market risks or for trading or speculative purposes.

Other Items Affecting Financial Condition

At December 31, 2009, we had deferred tax assets in the U.S. related to net operating tax loss carryforwards and tax credit carryforwards of approximately $29.1 million and $5.1 million, respectively, available to offset or reduce future income tax liabilities, if any, through 2028. However, due to the uncertainty of realizing taxable income in the future, utilization of our tax loss and tax credit carryforwards may be limited. In addition, we believe the ultimate utilization of these tax loss and tax credit carryforwards may be further limited as a result of cumulative ownership changes as defined by Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, which have occurred at various points in our history. As a result, the related deferred tax assets have been fully reserved in our financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable to smaller reporting companies.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements, and the related notes, together with the report of BDO Seidman, LLP dated March 29, 2010, are set forth at pages F-1 through F-36 attached hereto.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A(T). Controls and Procedures

Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized, and reported within the specified time periods. As a part of these controls, our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act.

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, and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and that receipts and expenditures of the company are being made only in accordance with authorization of management and directors of the company; and

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2009. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Based on our evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this report, our disclosure controls and procedures are adequately designed and are effective.

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures will prevent all errors and all improper conduct. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute assurance that the objectives of the control systems are met. Further, a design of a control system must reflect the fact that there are resource constraints, and the benefit of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of improper conduct, if any, have been detected. These inherent limitations include the realities that judgments and decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more persons, or by management override of the control. Further, the design of any system of controls is also based in part upon assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations of a cost-effective control system, misstatements due to error or fraud may occur and may not be detected.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide reasonable assurance to management and the Board of Directors regarding the preparation and fair presentation of published financial statements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

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Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2009. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework. Based on our assessment we believe that, as of December 31, 2009, our internal control over financial reporting is effective based on those criteria.

This Annual Report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our independent registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit us to provide only management's report in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

During the quarter ended December 31, 2009, there were no changes in our internal control over financial reporting that 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

Directors

Each listed director's respective experience and qualifications described below led the Compensation, Nominating and Governance (CNG) Committee or our Board of Directors to conclude that such director is qualified to serve as a member of our Board of Directors.

Directors whose terms continue until the 2010 Annual Meeting:

Reuven Avital, age 58, has served as a director of our Company since January 2002. Mr. Avital is a partner and general manager of Ma'Aragim Enterprises Ltd., an investment company in Israel, and he is a board member of a number of privately-held Israeli companies, two of them in the medical device field. Mr. Avital was a board member of Cardiosonix, Ltd. from April 2001 through December 31, 2001, when we acquired the company. Previously, Mr. Avital served in the Israeli government in a variety of middle and senior management positions. He is also chairman or a board member of several not-for-profit organizations, mainly involved in education for the under-privileged and international peace-building. Mr. Avital has B.A. degrees in The History of the Middle East and International Relations from the Hebrew University of Jerusalem, and a M.P.A. from the Kennedy School of Government at Harvard University.

David C. Bupp, age 60, has served as President and a director of our Company since August 1992 and as Chief Executive Officer since February 1998. From August 1992 to May 1993, Mr. Bupp served as our Treasurer. In addition to the foregoing positions, from December 1991 to August 1992, he was Acting President, Executive Vice President, Chief Operating Officer and Treasurer, and from December 1989 to December 1991, he was Vice President, Finance and Chief Financial Officer. From 1982 to December 1989, Mr. Bupp was Senior Vice President, Regional Manager for AmeriTrust Company National Association, a nationally chartered bank holding company, where he was in charge of commercial and retail banking operations throughout Central Ohio. Mr. Bupp has a B.A. degree in Economics from Ohio Wesleyan University. Mr. Bupp also completed a course of study at Stonier Graduate School of Banking at Rutgers University.

Directors whose terms continue until the 2011 Annual Meeting:

Carl J. Aschinger, Jr., age 71, has served as a director of our Company since June 2004 and as Chairman of the Board since July 2007. Mr. Aschinger is the Chairman of CSC Worldwide (formerly Columbus Show Case Co.), a privately-held company that manufactures showcases for the retail industry. Mr. Aschinger also serves on the Board of Directors and as Chairman of the Audit Committee of Pinnacle Data Systems, a publicly-traded company that provides software and hardware solutions to original equipment manufacturers. Mr. Aschinger is a former director of Liqui-Box Corporation and Huntington National Bank as well as other privately-held ventures and has served on boards or advisory committees of several not-for-profit organizations.

Owen E. Johnson, M.D., age 69, has served as a director of our Company since July 2007. Prior to his retirement in December 2006, Dr. Johnson served as Vice President and Senior Medical Director of UnitedHealthcare of Ohio, Inc. (UHC), a subsidiary of UnitedHealth Group, where he was involved in a number of roles and activities including new technology assessment and reimbursement establishment. During 2007, Dr. Johnson rejoined UnitedHealth Networks, a subsidiary of UnitedHealth Group, as Medical Director for their cardiac line of service. Dr. Johnson has also served on the Board and on numerous Committees of UHC as well as other related organizations. Prior to joining UHC, Dr. Johnson held several hospital appointments with Riverside Methodist Hospital in Columbus, Ohio. Dr.

Johnson has also been active in numerous professional, fraternal and community organizations in the Columbus, Ohio area.

Fred B. Miller, age 70, has served as a director of our Company since January 2002. Mr. Miller serves as Chairman of the Audit Committee. Mr. Miller is the President and Chief Operating Officer of Seicon, Limited, a privately held company that specializes in developing, applying and licensing technology to reduce seismic and mechanically induced vibration. Mr. Miller also serves on the board of one other privately-held company. Until his retirement in 1995, Mr. Miller had been with Price Waterhouse LLP since 1962. Mr. Miller is a Certified Public Accountant, a member of the American Institute of Certified Public Accountants (AICPA), a past member of the Council of the AICPA and a member and past president of the Ohio Society of Certified Public Accountants. He also has served on the boards or advisory committees of several universities and not-for-profit organizations. Mr. Miller has a B.S. degree in Accounting from The Ohio State University.

Directors whose terms continue until the 2012 Annual Meeting:

Kirby I. Bland, M.D., age 68, has served as a director of our Company since May 2004. Dr. Bland currently serves as Professor and Chairman and Fay Fletcher Kerner Professor and Chairman, Department of Surgery of the University of Alabama at Birmingham (UAB) School of Medicine since 1999 and 2002, respectively, Deputy Director of the UAB Comprehensive Cancer Center since 2000 and Senior Scientist, Division of Human Gene Therapy, UAB School of Medicine since 2001. Prior to his appointments at UAB, Dr. Bland was J. Murry Breadsley Professor and Chairman, Professor of Medical Science, Department of Surgery and Director, Brown University Integrated Program in Surgery at Brown University School of Medicine from 1993 to 1999. Prior to his appointments at Brown University, Dr. Bland was Professor and Associate Chairman, Department of Surgery, University of Florida College of Medicine from 1983 to 1993 and Associate Director of Clinical Research at the University of Florida Cancer Center from 1991 to 1993. Dr. Bland held a number of medical staff positions at the University of Louisville, School of Medicine from 1977 to 1983 and at M. D. Anderson Hospital and Tumor Institute from 1976 to 1977. Dr. Bland is a member of the Board of Governors of the American College of Surgeons (ACS), a member of the ACS' Advisory Committee, Oncology Group (ACOSOG), a member of the ACS' American Joint Committee on Cancer Task Force and serves as Chairman of the ACS' Breast Disease Site Committee, COC. Dr. Bland is a past President of the Society of Surgical Oncology. Dr. Bland received his B.S. in Chemistry/Biology from Auburn University and a M.D. degree from the University of Alabama, Medical College of Alabama.

Gordon A. Troup, age 56, has served as a director of our Company since July 2008. Mr. Troup served as President of the Nuclear Pharmacy Services business at Cardinal Health, Inc. (Cardinal Health), a multinational medical products and services company, from January 2003 until his retirement in December 2007. Mr. Troup joined Cardinal Health in 1990 and was appointed Group President of Pharmaceutical Distribution and Specialty Distribution Services in 1999. Prior to joining Cardinal Health, Mr. Troup was employed for 10 years by American Hospital Supply Corporation and 3 years by Zellerbach Paper, a Mead Company. Mr. Troup has a B.S. degree in Business Management from San Diego State University. Mr. Troup is a member of several national healthcare trade organizations and is active in a number of not-for-profit organizations.

J. Frank Whitley, Jr., age 67, has served as a director of our Company since May 1994. Mr. Whitley was Director of Mergers, Acquisitions and Licensing at The Dow Chemical Company (Dow), a multinational chemical company, from June 1993 until his retirement in June 1997. After joining Dow in 1965, Mr. Whitley served in a variety of marketing, financial, and business management functions. Mr. Whitley is also involved with several not-for-profit health care organizations, serving as a member of their Boards of Trustees and/or Committees of the Board. Mr. Whitley has a B.S. degree in Mathematics from Lamar State College of Technology.

Executive Officers

In addition to Mr. Bupp, the following individuals are executive officers of our Company and serve in the position(s) indicated below:

Name	Age	Position
Anthony K. Blair	49	Vice President, Manufacturing Operations
Rodger A. Brown	59	Vice President, Regulatory Affairs and Quality Assurance
Frederick O. Cope, Ph.D.	63	Vice President, Pharmaceutical Research and Clinical Development
Brent L. Larson	46	Vice President, Finance; Chief Financial Officer; Treasurer and Secretary
Douglas L. Rash	66	Vice President, Marketing

Anthony K. Blair has served as Vice President, Manufacturing Operations of our Company since July 2004. Prior to joining our Company, he served as Vice President, Manufacturing Operations of Enpath Medical, Lead Technologies Division, formerly known as Biomec Cardiovascular, Inc. from 2002 to June 2004. From 1998 through 2001, Mr. Blair led the manufacturing efforts at Astro Instrumentation, a medical device contract manufacturer. From 1989 to 1998 at Ciba Corning Diagnostics (now Bayer), Mr. Blair held managerial positions including Operations Manager, Materials Manager, Purchasing Manager and Production Supervisor. From 1985 to 1989, Mr. Blair was employed by Bailey Controls and held various positions in purchasing and industrial engineering. Mr. Blair started his career at Fisher Body, a division of General Motors, in production supervision. Mr. Blair has a B.B.A. degree in management and labor relations from Cleveland State University.

Rodger A. Brown has served as Vice President, Regulatory Affairs and Quality Assurance of our Company since November 2000. From July 1998 through November 2000, Mr. Brown served as our Director, Regulatory Affairs and Quality Assurance. Prior to joining our Company, Mr. Brown served as Director of Regulatory Affairs and Quality Assurance for Biocore Medical Technologies, Inc. from April 1997 to April 1998. From 1981 through 1996, Mr. Brown served as Director, Regulatory Affairs/Quality Assurance for E for M Corporation, a subsidiary of Marquette Electronics, Inc.

Frederick O. Cope, Ph.D., F.A.C.N., C.N.S. has served as Vice President, Pharmaceutical Research and Clinical Development of our Company since February 2009. Prior to accepting this position with the Company, Dr. Cope served as the Assistant Director for Research and Head of Program Research Development for The Ohio State University Comprehensive Cancer Center, The James Cancer Hospital and The Richard J. Solove Research Institute, from April 2001 to February 2009. Dr. Cope is also active in a number of professional and scientific organizations such as serving as an Ad Hoc Member of the FDA Scientific Advisory Panel and a member of Emory University's Scientific Advisory Board. Dr. Cope received his BSc from the Delaware Valley College of Science and Agriculture, his MS from Millersville University of Pennsylvania and his Ph.D. from the University of Connecticut.

Brent L. Larson has served as Vice President, Finance, Chief Financial Officer and Treasurer of our Company since February 1999 and as Secretary since 2003. Prior to that, he served as our Vice President, Finance from July 1998 to January 1999 and as Controller from July 1996 to June 1998. Before joining our Company, Mr. Larson was employed by Price Waterhouse LLP. Mr. Larson has a B.B.A. degree in accounting from Iowa State University of Science and Technology and is a Certified Public Accountant.

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Douglas L. Rash has served as Vice President, Marketing of our Company since January 2005. Prior to that, Mr. Rash was Neoprobe's Director, Marketing and Product Management from March to December 2004. Before joining our Company, Mr. Rash served as Vice President and General Manager of MTRE North America, Inc. from 2000 to 2003. From 1994 to 2000, Mr. Rash served as Vice President and General Manager (Medical Division) of Cincinnati Sub-Zero, Inc. From 1993 to 1994, Mr. Rash was Executive Vice President of Everest & Jennings International, Ltd. During his nine-year career at Gaymar Industries, Inc. from 1984 to 1993, Mr. Rash held positions as Vice President and General Manager (Clinicare Division) and Vice President, Marketing and Sales (Acute Care Division). From 1976 to 1984, Mr. Rash held management positions at various divisions of British Oxygen Corp. Mr. Rash has a B.S. degree in Business Administration with a minor in Chemistry from Wisconsin State University.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our officers and directors, and greater than 10% stockholders, to file reports of ownership and changes in ownership of our securities with the Securities and Exchange Commission. Copies of the reports are required by SEC regulation to be furnished to us. Based on our review of these reports and written representations from reporting persons, we believe that all reporting persons complied with all filing requirements during the fiscal year ended December 31, 2009, except for Gordon Troup, who had one late Form 4 filing related to Company stock that he purchased on the open market in May 2009.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics that applies to our directors, officers and all employees. The code of business conduct and ethics is posted on our website at www.neoprobe.com. The code of business conduct and ethics may be also obtained free of charge by writing to Neoprobe Corporation, Attn: Chief Financial Officer, 425 Metro Place North, Suite 300, Dublin, Ohio 43017.

Audit Committee

The Audit Committee of the Board of Directors selects our independent public accountants with whom the Audit Committee reviews the scope of audit and non-audit assignments and related fees, the accounting principles that we use in financial reporting, and the internal controls over financial reporting identified by the independent accountants as a basis for designing their audit procedures. The members of our Audit Committee are: Fred B. Miller (Chairman), Reuven Avital, Gordon A. Troup, and J. Frank Whitley, Jr., each of whom is "independent" under the Nasdaq rules referenced below in Part III, Item 13 of this Form 10-K. The Board of Directors has determined that Fred B. Miller meets the requirements of an "audit committee financial expert" as set forth in Section 407(d)(5) of Regulation S-K promulgated by the SEC. The Audit Committee held five meetings in fiscal 2009.

Item 11. Executive Compensation

Summary Compensation Table

The following table sets forth certain information concerning the annual and long-term compensation of our Chief Executive Officer and our other two highest paid executive officers during the last fiscal year (the Named Executives) for the last two fiscal years.

Name and Principal Position	Year	Salary	(a) Bonus	(b) Option Awards	(c) Restricted Stock Awards	(d) All Other Compensation	Total Compensation
David C. Bupp	2009	$ 335,000	$ 45,000	$ —	$ 565,308	$ 8,621	$ 953,929
President and	2008	325,000	40,000	57,953	107,717	9,439	540,109
Chief Executive Officer							
Frederick O. Cope, Ph.D.	2009	$ 175,000	$ 25,000	$ 78,520	$ 147,328	$ 4,360	$ 430,208
Vice President,	2008	—	—	—	—	—	—
Pharmaceutical Research and Clinical Development							
Brent L. Larson	2009	$ 184,000	$ 15,313	$ 65,247	$ 82,426	$ 4,934	$ 351,920
Vice President, Finance and	2008	177,000	15,000	14,488	17,953	5,442	229,883
Chief Financial Officer							

(a) Bonuses, if any, have been disclosed for the year in which they were earned (i.e., the year to which the service relates).

(b) Amount represents the aggregate grant date fair value in accordance with FASB ASC Topic 718. Assumptions made in the valuation of stock option awards are disclosed in Note 1(o) of the Notes to the Consolidated Financial Statements in this Form 10-K.

(c) Amount represents the aggregate grant date fair value in accordance with FASB ASC Topic 718. Assumptions made in the valuation of restricted stock awards are disclosed in Note 1(o) of the Notes to the Consolidated Financial Statements in this Form 10-K.

(d) Amount represents life insurance premiums and club dues paid during the fiscal year for the benefit of the Named Executives and matching contributions under the Neoprobe Corporation 401(k) Plan (the Plan). Eligible employees may make voluntary contributions and we may, but are not obligated to, make matching contributions based on 40 percent of the employee's contribution, up to 5 percent of the employee's salary. Employee contributions are invested in mutual funds administered by an independent plan administrator. Company contributions, if any, are made in the form of shares of common stock. The Plan qualifies under section 401 of the Internal Revenue Code, which provides that employee and company contributions and income earned on contributions are not taxable to the employee until withdrawn from the Plan, and that we may deduct our contributions when made.

Compensation of Mr. Bupp

Employment Agreement. David C. Bupp is employed under a 36-month employment agreement effective January 1, 2010. The employment agreement provides for an annual base salary of $355,000.

The Board of Directors and/or the CNG Committee will, on an annual basis, review the performance of our Company and of Mr. Bupp and may pay a bonus to Mr. Bupp as it deems appropriate, in its discretion. Such review and bonus will be consistent with any bonus plan adopted by the CNG Committee that covers the executive officers of the Company generally. For the calendar year ending December 31, 2010, the CNG Committee has determined that the maximum bonus payment to Mr. Bupp will be $125,000. Additionally, as a result of the positive outcome of the Company's March 2010 meeting with FDA, the CNG Committee has determined that Mr. Bupp will receive a cash bonus in the amount of $45,000 subject to: (1) the Company's receipt from FDA of the official minutes of the March 2010 meeting at which FDA reviewed the Company's Phase 3 clinical data from the NEO3-05 trial for Lymphoseek; and (2) the CNG Committee's determination that the findings of FDA contained in the official minutes of the March 2010 meeting are consistent with the positive outcome of the meeting reported by Mr. Bupp.

If a change in control occurs with respect to our Company and the employment of Mr. Bupp is concurrently or subsequently terminated:

- by the Company without cause (cause is defined as any willful breach of a material duty by Mr. Bupp in the course of his employment or willful and continued neglect of his duty as an employee);

- by the expiration of the term of Mr. Bupp's employment agreement; or

- by the resignation of Mr. Bupp because his title, authority, responsibilities, salary, bonus opportunities or benefits have materially diminished, a material adverse change in his working conditions has occurred, his services are no longer required in light of the Company's business plan, or we breach the agreement;

then, Mr. Bupp will be paid a severance payment of $887,500 (less amounts paid as Mr. Bupp's salary and benefits that continue for the remaining term of the agreement if his employment is terminated without cause).

For purposes of Mr. Bupp's employment agreement, a change in control includes:

- the acquisition, directly or indirectly, by a person (other than our Company, an employee benefit plan established by the Board of Directors, or a participant in a transaction approved by the Board of Directors for the principal purpose of raising additional capital) of beneficial ownership of 30% or more of our securities with voting power in the next meeting of holders of voting securities to elect the directors;

- a majority of the Directors elected at any meeting of the holders of our voting securities are persons who were not nominated by our then current Board of Directors or an authorized committee thereof;

- our stockholders approve a merger or consolidation of our Company with another person, other than a merger or consolidation in which the holders of our voting securities outstanding immediately before such merger or consolidation continue to hold voting securities in the surviving or resulting corporation (in the same relative proportions to each other as existed before such event) comprising 80% or more of the voting power for all purposes of the surviving or resulting corporation; or

- our stockholders approve a transfer of substantially all of our assets to another person other than a transfer to a transferee, 80% or more of the voting power of which is owned or controlled by us or by the holders of our voting securities outstanding immediately before such transfer in the same relative proportions to each other as existed before such event.

Mr. Bupp will be paid a severance amount of $532,500 if his employment is terminated at the end of his employment agreement or without cause. If Mr. Bupp is terminated without cause, his benefits will continue for the longer of 36 months or the full term of the agreement.

Compensation of Other Named Executives

Our Executive Officers are employed under employment agreements of varying terms as outlined below. In addition, the CNG Committee will, on an annual basis, review the performance of our Company and may pay bonuses to our executives as it deems appropriate, in its discretion. Such review and bonus will be consistent with any bonus plan adopted by the CNG Committee that covers Mr. Bupp as well as the executive officers of the Company generally.

Frederick O. Cope, Ph.D.

Employment Agreement. Frederick Cope is employed under an employment agreement effective February 15, 2010 through December 31, 2010. The employment agreement provides for an annual base salary of $211,000.

The CNG Committee will, on an annual basis, review the performance of our Company and of Dr. Cope and may pay a bonus to Dr. Cope as it deems appropriate, in its discretion. Such review and bonus will be consistent with any bonus plan adopted by the CNG Committee that covers the executive officers of the Company generally. For the calendar year ending December 31, 2010, the CNG Committee has determined that the maximum bonus payment to Dr. Cope will be $52,750. Additionally, as a result of the positive outcome of the Company's March 2010 meeting with FDA, the CNG Committee has determined that Dr. Cope will receive a cash bonus in the amount of $25,000 subject to: (1) the Company's receipt from FDA of the official minutes of the March 2010 meeting at which FDA reviewed the Company's Phase 3 clinical data from the NEO3-05 trial for Lymphoseek; and (2) the CNG Committee's determination that the findings of FDA contained in the official minutes of the March 2010 meeting are consistent with the positive outcome of the meeting reported by Mr. Bupp.

If a change in control occurs with respect to our Company and the employment of Dr. Cope is concurrently or subsequently terminated:

- by the Company without cause (cause is defined as any willful breach of a material duty by Dr. Cope in the course of his employment or willful and continued neglect of his duty as an employee);
- by the expiration of the term of Dr. Cope's employment agreement; or
- by the resignation of Dr. Cope because his title, authority, responsibilities, salary, bonus opportunities or benefits have materially diminished, a material adverse change in his working conditions has occurred, his services are no longer required in light of the Company's business plan, or we breach the agreement;

then, Dr. Cope will be paid a severance payment of $422,000 and will continue his benefits for the longer of 12 months or the remaining term of his employment agreement.

For purposes of Dr. Cope's employment agreement, a change in control includes:

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- the acquisition, directly or indirectly, by a person (other than our Company, an employee benefit plan established by the Board of Directors, or a participant in a transaction approved by the Board of Directors for the principal purpose of raising additional capital) of beneficial ownership of 30% or more of our securities with voting power in the next meeting of holders of voting securities to elect the directors;

- a majority of the directors elected at any meeting of the holders of our voting securities are persons who were not nominated by our then current Board of Directors or an authorized committee thereof;

- our stockholders approve a merger or consolidation of our Company with another person, other than a merger or consolidation in which the holders of our voting securities outstanding immediately before such merger or consolidation continue to hold voting securities in the surviving or resulting corporation (in the same relative proportions to each other as existed before such event) comprising 80% or more of the voting power for all purposes of the surviving or resulting corporation; or

- our stockholders approve a transfer of substantially all of the assets of our Company to another person other than a transfer to a transferee, 80% or more of the voting power of which is owned or controlled by us or by the holders of our voting securities outstanding immediately before such transfer in the same relative proportions to each other as existed before such event.

Dr. Cope will be paid a severance amount of $211,000 if his employment is terminated at the end of his employment agreement or without cause. If Dr. Cope is terminated without cause, his benefits will continue for the longer of 12 months or the full term of the agreement.

Brent L. Larson

Employment Agreement. Brent Larson is employed under a 24-month employment agreement effective January 1, 2009. The employment agreement provides for an annual base salary of $184,000. Effective January 1, 2010, Mr. Larson's annual base salary was increased to $195,000.

The CNG Committee will, on an annual basis, review the performance of our Company and of Mr. Larson and may pay a bonus to Mr. Larson as it deems appropriate, in its discretion. Such review and bonus will be consistent with any bonus plan adopted by the CNG Committee that covers the executive officers of the Company generally. For the calendar year ending December 31, 2010, the CNG Committee has determined that the maximum bonus payment to Mr. Larson will be $40,000. Additionally, as a result of the positive outcome of the Company's March 2010 meeting with FDA, the CNG Committee has determined that Mr. Larson will receive a cash bonus in the amount of $17,500 subject to: (1) the Company's receipt from FDA of the official minutes of the March 2010 meeting at which FDA reviewed the Company's Phase 3 clinical data from the NEO3-05 trial for Lymphoseek; and (2) the CNG Committee's determination that the findings of FDA contained in the official minutes of the March 2010 meeting are consistent with the positive outcome of the meeting reported by Mr. Bupp.

The terms of Mr. Larson's employment agreement are substantially identical to Dr. Cope's employment agreement, except that:

- If a change in control occurs with respect to our Company and the employment of Mr. Larson is concurrently or subsequently terminated, then Mr. Larson will be paid a severance payment of $360,000; and

- Mr. Larson will be paid a severance amount of $184,000 if his employment is terminated at the end of his employment agreement or without cause.

The CNG Committee will, on an annual basis, review the performance of our Company and of Mr. Larson and may pay a bonus to Mr. Larson as it deems appropriate, in its discretion. Such review and bonus will be consistent with any bonus plan adopted by the CNG Committee that covers the executive officers of the Company generally.

Outstanding Equity Awards at Fiscal Year End

The following table presents certain information concerning outstanding equity awards held by the Named Executives as of December 31, 2009.

	Option Awards					Stock Awards		
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Unexercisable	Option Exercise Price	Option Expiration Date	Note	Number of Unearned Shares	Market Value of Unearned Shares (s)	Note
David C. Bupp	180,000	—	$ 0.41	1/3/2011	(a)	300,000	$ 366,000	(n)
	180,000	—	$ 0.42	1/7/2012	(b)	400,000	$ 488,000	(o)
	100,000	—	$ 0.14	1/15/2013	(c)	300,000	$ 366,000	(q)
	70,000	—	$ 0.13	2/15/2013	(d)			
	125,000	—	$ 0.30	1/7/2014	(e)			
	150,000	—	$ 0.49	7/28/2014	(f)			
	200,000	—	$ 0.39	12/10/2014	(g)			
	200,000	—	$ 0.26	12/27/2015	(h)			
	300,000	—	$ 0.27	12/15/2016	(i)			
	66,667	133,333	$ 0.362	1/3/2018	(j)			
Frederick O. Cope, Ph.D.	—	50,000	$ 0.65	2/16/2019	(l)	100,000	$ 122,000	(p)
	—	75,000	$ 1.10	10/30/2019	(m)	75,000	$ 91,500	(r)
Brent L. Larson	60,000	—	$ 0.41	1/3/2011	(a)	50,000	$ 61,000	(n)
	50,000	—	$ 0.42	1/7/2012	(b)	75,000	$ 91,500	(r)
	40,000	—	$ 0.14	1/15/2013	(c)			
	30,000	—	$ 0.13	2/15/2013	(d)			
	70,000	—	$ 0.30	1/7/2014	(e)			
	50,000	—	$ 0.49	7/28/2014	(f)			
	50,000	—	$ 0.39	12/10/2014	(g)			
	40,000	—	$ 0.26	12/27/2015	(h)			
	50,000	—	$ 0.27	12/15/2016	(i)			
	16,667	33,333	$ 0.362	1/3/2018	(j)			
	—	25,000	$ 0 59	1/5/2009	(k)			
	—	75,000	$ 1.10	10/30/2009	(m)			

(a) Options were granted 1/3/2001 and vested as to one-third on each of the first three anniversaries of the date of grant.
(b) Options were granted 1/7/2002 and vested as to one-third on each of the first three anniversaries of the date of grant.
(c) Options were granted 1/15/2003 and vested as to one-third on each of the first three anniversaries of the date of grant.
(d) Options were granted 2/15/2003 and vested as to one-third on each of the first three anniversaries of the date of grant.
(e) Options were granted 1/7/2004 and vested as to one-third on each of the first three anniversaries of the date of grant.

(f) Options were granted 7/28/2004 and vested as to one-third on each of the first three anniversaries of the date of grant.

(g) Options were granted 12/10/2004 and vested as to one-third on each of the first three anniversaries of the date of grant.

(h) Options were granted 12/27/2005 and vested as to one-third immediately and on each of the first two anniversaries of the date of grant.

(i) Options were granted 12/15/2006 and vested as to one-third on each of the first three anniversaries of the date of grant.

(j) Options were granted 1/3/2008 and vest as to one-third on each of the first three anniversaries of the date of grant.

(k) Options were granted 1/5/2009 and vest as to one-third on each of the first three anniversaries of the date of grant.

(l) Options were granted 2/16/2009 and vest as to one-third on each of the first three anniversaries of the date of grant.

(m) Options were granted 10/30/2009 and vest as to one-third on each of the first three anniversaries of the date of grant.

(n) Restricted shares granted January 3, 2008. Pursuant to the terms of Restricted Stock Agreements between the Company and each grantee, the restricted shares will vest upon the approval of a New Drug Application (NDA) for Lymphoseek by the United States Food and Drug Administration (FDA). If the employment of a grantee with the Company is terminated before all of the restricted shares have vested, then pursuant to the terms of the Restricted Stock Agreements all restricted shares that have not vested at the effective date of such grantee's termination shall immediately be forfeited by the grantee. Pursuant to its authority under Section 3.2 of the Restricted Stock Agreements the Company's Compensation, Nominating and Governance Committee eliminated the forfeiture provision in Section 3.2(b) of the Restricted Stock Agreements effective January 1, 2009, which provision effected the forfeiture of the shares if the vesting event did not occur before June 30, 2010.

(o) Restricted shares granted January 1, 2009. Pursuant to the terms of the Restricted Stock Agreement between the Company and Mr. Bupp, the restricted shares will vest upon the approval of a NDA for Lymphoseek by the FDA or the approval of marketing authorization for Lymphoseek by the European Medicines Agency (EMEA). All of the restricted shares vest upon the occurrence of a Termination Without Cause or in the event of an End of Term Termination or in the event of a Change of Control as defined in Mr. Bupp's employment agreement. If the employment of Mr. Bupp with the Company is terminated for reasons other than a Termination Without Cause, an End of Term Termination, or a Change of Control before all of the restricted shares have vested, then pursuant to the terms of the Restricted Stock Agreement all restricted shares that have not vested at the effective date of Mr. Bupp's termination shall immediately be forfeited by Mr. Bupp.

(p) Restricted shares granted February 16, 2009. Pursuant to the terms of the Restricted Stock Agreement between the Company and Dr. Cope, 50% of the restricted shares will vest upon the approval of a NDA for Lymphoseek by FDA or the approval of marketing authorization for Lymphoseek by the EMEA and 50% of the restricted shares will vest upon the commencement of patient enrollment in a Phase 3 clinical trial in humans of RIGScan CR. All of the restricted shares vest upon the occurrence of a Change of Control as defined in Dr. Cope's employment agreement. If the employment of Dr. Cope with the Company is terminated for reasons other than a Change of Control before all of the restricted shares have vested, then pursuant to the terms of the Restricted Stock Agreement all restricted shares that have not vested at the effective date of Dr. Cope's termination shall immediately be forfeited by Dr. Cope.

(q) Restricted shares granted December 1, 2009. Pursuant to the terms of the Restricted Stock Agreement between the Company and Mr. Bupp, the restricted shares will vest upon the approval of a NDA for Lymphoseek by the FDA or the approval of marketing authorization for Lymphoseek by the EMEA. All of the restricted shares vest upon the occurrence of a Termination Without Cause or in the event of an End of Term Termination or in the event of a Change of Control as defined in the Restricted Stock Agreement. If the employment of Mr. Bupp with the Company is terminated for reasons other than a Termination Without Cause, an End of Term Termination, or a Change of Control before all of the restricted shares have vested, then pursuant to the terms of the Restricted Stock Agreement all restricted shares that have not vested at the effective date of Mr. Bupp's termination shall immediately be forfeited by Mr. Bupp.

(r) Restricted shares granted December 1, 2009. Pursuant to the terms of Restricted Stock Agreements between the Company and each grantee, the restricted shares will vest upon the approval of a NDA for Lymphoseek by the FDA or the approval of marketing authorization for Lymphoseek by the EMEA. All of the restricted shares vest upon the occurrence of a Change of Control as defined in the Restricted Stock Agreement. If the employment of a grantee with the Company is terminated for reasons other than a Change of Control before all of the restricted shares have vested, then pursuant to the terms of the Restricted Stock Agreements all restricted shares that have not vested at the effective date of such grantee's termination shall immediately be forfeited by the grantee.

(s) Estimated by reference to the closing market price of the Company's common stock on December 31, 2009, pursuant to Instruction 3 to Item 402(p)(2) of Regulation S-K. The closing price of the Company's common stock on December 31, 2009, was $1.22.

Compensation of Non-Employee Directors

Each non-employee director received an annual cash retainer of $20,000 and earned an additional $2,000 per board meeting attended in person or $500 per telephonic board meeting during the fiscal year ended December 31, 2009. The Chairmen of the Company's Board of Directors and Audit Committee each received an additional annual retainer of $10,000 for their services in those capacities during 2009. Members of committees of the Company's Board of Directors earned an additional $500 to $1,000, depending on the type of meeting, per committee meeting attended in person or telephonically. We also reimbursed non-employee directors for travel expenses for meetings attended during 2009.

Each non-employee director also received 10,000 options to purchase common stock and 30,000 shares of restricted stock as a part of the Company's annual stock incentive grants, in accordance with the provisions of the Neoprobe Corporation Second Amended and Restated 2002 Stock Incentive Plan. The options granted to purchase common stock vest on the first anniversary of the date of grant and have an exercise price of $0.59, the closing price of the Company's common stock as reported on the OTC Bulletin Board regulated quotation service on January 5, 2009, the date of grant. The restricted stock granted will vest upon the approval of a New Drug Application for Lymphoseek by the United States Food and Drug Administration or the approval of marketing authorization for Lymphoseek by the European Medicines Agency. The aggregate number of equity awards outstanding at March 15, 2010 for each Director is set forth in the footnotes to the beneficial ownership table provided in Part III, Item 12 of this Form 10-K. Directors who are also officers or employees of Neoprobe do not receive any compensation for their services as

directors.

The following table sets forth certain information concerning the compensation of non-employee Directors for the fiscal year ended December 31, 2009.

Name	(a) Fees Earned or Paid in Cash	(b),(c) Option Awards	(d),(e) Restricted Stock Awards	Total Compensation
Carl J. Aschinger, Jr.	$ 42,000	$ 4,294	$ 32,970	$ 79,264
Reuven Avital	28,500	4,294	32,970	65,764
Kirby I. Bland, M.D.	27,500	4,294	32,970	64,764
Owen E. Johnson, M.D.	28,000	4,294	32,970	65,264
Fred B. Miller	43,500	4,294	32,970	80,764
Gordon A. Troup	33,500	4,294	32,970	70,764
J. Frank Whitley, Jr.	29,000	4,294	32,970	66,264

(a) Amount represents fees earned during the fiscal year ended December 31, 2009 (i.e., the year to which the service relates). Quarterly retainers and meeting attendance fees are paid during the quarter following the quarter in which they are earned.

(b) Amount represents the aggregate grant date fair value in accordance with FASB ASC Topic 718. Assumptions made in the valuation of stock option awards are disclosed in Note 1(o) of the Notes to the Consolidated Financial Statements in this Form 10-K.

(c) At December 31, 2009, the non-employee directors held an aggregate of 1,065,000 options to purchase shares of common stock of the Company.

(d) Amount represents the aggregate grant date fair value in accordance with FASB ASC Topic 718. Assumptions made in the valuation of restricted stock awards are disclosed in Note 1(o) of the Notes to the Consolidated Financial Statements in this Form 10-K.

(e) At December 31, 2009, the non-employee directors held an aggregate of 210,000 shares of unvested restricted stock.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Equity Compensation Plan Information

The following table sets forth additional information as of December 31, 2009, concerning shares of our common stock that may be issued upon the exercise of options and other rights under our existing equity compensation plans and arrangements, divided between plans approved by our stockholders and plans or arrangements not submitted to our stockholders for approval. The information includes the number of shares covered by, and the weighted average exercise price of, outstanding options and other rights and the number of shares remaining available for future grants excluding the shares to be issued upon exercise of outstanding options, warrants, and other rights.

	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants	(b) Weighted-Average Exercise Price of Outstanding Options, Warrants	(c) Number of Securities Remaining Available for Issuance Under Equity Compensation Plans (Excluding

	and Rights	and Rights	Securities Reflected in Column (a))
Equity compensation plans approved by security holders	5,689,500	$ 0.44	464,500
Equity compensation plans not approved by security holders	-	-	-
Total	5,689,500	$ 0.44	464,500

Security Ownership of Principal Stockholders, Directors, Nominees and Executive Officers and Related Stockholder Matters

The following table sets forth, as of March 15, 2010, certain information with respect to the beneficial ownership of shares of our common stock by: (i) each person known to us to be the beneficial owner of more than 5% of our outstanding shares of common stock, (ii) each director or nominee for director of our Company, (iii) each of the Named Executives (see "Executive Compensation – Summary Compensation Table"), and (iv) our directors and executive officers as a group.

Beneficial Owner	Number of Shares Beneficially Owned (*)		Percent of Class (**)
Carl J. Aschinger, Jr.	367,300	(a)	(m)
Reuven Avital	455,556	(b)	(m)
Kirby I. Bland, M.D.	205,000	(c)	(m)
David C. Bupp	7,015,706	(d)	8.0%
Frederick O. Cope, Ph.D.	19,173	(e)	(m)
Owen E. Johnson, M.D.	75,000	(f)	(m)
Brent L. Larson	697,987	(g)	(m)
Fred B. Miller	386,000	(h)	(m)
Gordon A. Troup	50,000	(i)	(m)
J. Frank Whitley, Jr.	286,500	(j)	(m)
All directors and officers as a group (13 persons)	10,407,379	(k)(n)	11.5%
Platinum Montaur Life Sciences, LLC	7,563,546	(l)	9.2%

(*) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission which generally attribute beneficial ownership of securities to persons who possess sole or shared voting power and/or investment power with respect to those securities. Unless otherwise indicated, voting and investment power are exercised solely by the person named above or shared with members of such person's household.

(**) Percent of class is calculated on the basis of the number of shares outstanding on March 15, 2010, plus the number of shares the person has the right to acquire within 60 days of March 15, 2010.

(a) This amount includes 150,000 shares issuable upon exercise of options which are exercisable within 60 days and 200 shares held in a trust account for which Mr. Aschinger is the custodian, but does not include 30,000 shares of unvested restricted stock.

(b) This amount consists of 139,256 shares of our common stock owned by Mittai Investments Ltd. (Mittai), an investment fund under the management and control of Mr. Avital, and 195,000 shares issuable upon exercise of options which are exercisable within 60 days but does not include 13,000 shares of unvested restricted stock. The shares held by Mittai were obtained through a distribution of 2,785,123 shares previously held by Ma'Aragim Enterprise Ltd. (Ma'Aragim), another investment fund under the management and control of Mr. Avital. On February 28, 2005, Ma'Aragim distributed its shares to the partners in the fund. Mr. Avital is not an affiliate of the other fund to which the remaining 2,645,867 shares were distributed. Of the 2,785,123 shares previously held by Ma'Aragim, 2,286,712 were acquired in exchange for surrendering its shares in Cardiosonix Ltd. on December 31, 2001, in connection with our acquisition of Cardiosonix, and 498,411 were acquired by Ma'Aragim based on the satisfaction of certain developmental milestones on December 30, 2002, associated with our acquisition of Cardiosonix.

(c) This amount includes 180,000 shares issuable upon exercise of options which are exercisable within 60 days but does not include 30,000 shares of unvested restricted stock.

(d)

This amount includes 1,638,333 shares issuable upon exercise of options which are exercisable within 60 days, 770,000 warrants which are exercisable within 60 days, a promissory note convertible into 3,225,806 shares of our common stock, 213,746 shares that are held by Mr. Bupp's wife for which he disclaims beneficial ownership and 125,792 shares in Mr. Bupp's account in the 401(k) Plan, but it does not include 1,000,000 shares of unvested restricted stock and 66,667 shares issuable upon exercise of options which are not exercisable within 60 days.

(e) This amount includes 16,667 shares issuable upon exercise of options which are exercisable within 60 days and 2,506 shares in Dr. Cope's account in the 401(k) Plan, but it does not include 175,000 shares of unvested restricted stock and 108,333 shares issuable upon exercise of options which are not exercisable within 60 days.

(f) This amount includes 40,000 shares issuable upon exercise of options which are exercisable within 60 days but does not include 30,000 shares issuable upon exercise of options which are not exercisable within 60 days.

(g) This amount includes 481,667 shares issuable upon exercise of options which are exercisable within 60 days and 92,928 shares in Mr. Larson's account in the 401(k) Plan, but it does not include 125,000 shares of unvested restricted stock and 108,333 shares issuable upon exercise of options which are not exercisable within 60 days.

(h) This amount includes 255,000 shares issuable upon exercise of options which are exercisable within 60 days and 81,000 shares held by Mr. Miller's wife for which he disclaims beneficial ownership, but does not include 30,000 shares of unvested restricted stock.

(i) This amount includes 20,000 shares issuable upon exercise of options which are exercisable within 60 days, but does not include 30,000 shares of unvested restricted stock.

(j) This amount includes 225,000 shares issuable upon exercise of options which are exercisable within 60 days, but does not include 30,000 shares of unvested restricted stock.

(k) This amount includes 3,943,334 shares issuable upon exercise of options which are exercisable within 60 days, 770,000 warrants which are exercisable within 60 days, a promissory note convertible into 3,225,806 shares of our common stock, 294,946 shares that are held by spouses of our Directors and Officers or in trusts for which they are custodian but for which they disclaim beneficial ownership, and 273,896 shares held in the 401(k) Plan on behalf of certain officers, but it does not include 1,680,000 shares of unvested restricted stock and 526,666 shares issuable upon the exercise of options which are not exercisable within 60 days. The Company itself is the trustee of the Neoprobe 401(k) Plan and may, as such, share investment power over common stock held in such plan. The trustee disclaims any beneficial ownership of shares held by the 401(k) Plan. The 401(k) Plan holds an aggregate total of 624,627 shares of common stock.

(l) Based on information filed on Schedule 13G with the Securities and Exchange Commission on August 18, 2009 and information supplied subsequently by holder. The number of shares beneficially owned by Platinum-Montaur Life Sciences, LLC (Montaur), 152 W. 57th Street, 54th Floor, New York, NY 10019, does not include 17,061,538 shares of common stock issuable upon conversion of a 10% Series A Convertible Senior Secured Promissory Note issued to Montaur on December 26, 2007, as amended (the Series A Note), 8,333,333 shares of common stock issuable upon conversion of a 10% Series B Convertible Senior Secured Promissory Note issued to Montaur on April 16, 2008 (the Series B Note), 6,000,000 shares of common stock issuable upon conversion of 3,000 shares Series A 8% Cumulative Convertible Preferred Stock issued to Montaur on December 5, 2008 (the Preferred Stock), 6,000,000 shares of common stock issuable upon exercise of a Series W Warrant issued to Montaur on December 26, 2007, as amended (the Series W Warrant), 8,333,333 shares of common stock issuable upon exercise of a Series X Warrant issued to Montaur on April 16, 2008 (the Series X Warrant), and 2,400,000 shares of common stock issuable upon exercise of a Series AA Warrant issued to Montaur on July 24, 2009 (the Series AA Warrant). The Certificates of Designation of the Preferred Stock, the Series A Note, the Series B Note, the Series W Warrant, the Series X Warrant and the Series AA Warrant each provide that the holder of shares of the Preferred Stock, the Series A Note, the Series B Note, the Series W Warrant, the Series X Warrant and the Series AA Warrant, respectively, may not convert any of the preferred stock or notes or exercise any of the warrants to the extent that such conversion or exercise would result in the holder and its affiliates together beneficially owning more than 4.99% or 9.99% of the outstanding shares of Common Stock, except on 61 days' prior written notice to Neoprobe that the holder waives such limitation. Effective September 23, 2009, the 4.99% limitation, however, does not apply to shares of Common Stock issued as a dividend on the Preferred Stock or shares of Common Stock issued as interest on the Series A Note or the Series B Note.

(m) Less than one percent.

(n) The address of all directors and executive officers is c/o Neoprobe Corporation, 425 Metro Place North, Suite 300, Dublin, Ohio 43017-1367.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Director Independence

Our Board of Directors has adopted the definition of "independence" as described under the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley) Section 301, Rule 10A-3 under the Securities Exchange Act of 1934 (the Exchange Act) and Nasdaq Rules 4200 and 4350. Our Board of Directors has determined that Messrs. Aschinger, Avital, Miller, Troup and Whitley, and Drs. Bland and Johnson meet the independence requirements.

See Liquidity and Capital Resources in Part II, Item 7 of this Form 10-K for information about our related party transactions.

Item 14. Principal Accountant Fees and Services

Audit Fees. The aggregate fees billed and expected to be billed for professional services rendered by BDO Seidman, LLP for the audit of the Company's annual consolidated financial statements for the 2009 fiscal year, the reviews of the financial statements included in the Company's Quarterly Reports on Form 10-Q for the 2009 fiscal year, consents related to the Company's registration statements filed during the 2009 fiscal year, and consulting services related to the Company's modification of certain debt and equity instruments during the 2009 fiscal year were $183,400 (including direct engagement expenses). The aggregate fees billed for professional services rendered by BDO Seidman, LLP for the audit of the Company's annual consolidated financial statements for the 2008 fiscal year, the reviews of the financial statements included in the Company's Quarterly Reports on Form 10-Q for the 2008 fiscal year, and consents related to the Company's registration statements filed during the 2008 fiscal year were $177,540 (including direct engagement expenses).

Audit-Related Fees. No fees were billed by BDO Seidman, LLP for audit-related services for the 2009 or 2008 fiscal years.

Tax Fees. No fees were billed by BDO Seidman, LLP for tax-related services for the 2009 or 2008 fiscal years.

All Other Fees. No fees were billed by BDO Seidman, LLP for services other than the audit, audit-related and tax services for the 2009 or 2008 fiscal years.

Pre-Approval Policy. The Audit Committee is required to pre-approve all auditing services and permitted non-audit services (including the fees and terms thereof) to be performed for the Company by its independent auditor or other registered public accounting firm, subject to the de minimis exceptions for permitted non-audit services described in Section 10A(i)(1)(B) of the Securities Exchange Act of 1934 that are approved by the Audit Committee prior to completion of the audit.

PART IV

Item 15. Exhibits, Financial Statement Schedules

Exhibit Number	Exhibit Description
3.1	Amended and Restated Certificate of Incorporation of Neoprobe Corporation as corrected February 18, 1994 and amended June 27, 1994, June 3, 1996, March 17, 1999, May 9, 2000, June 13, 2003, July 27, 2004, June 22, 2005 and November 20, 2006 (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form SB-2 filed December 7, 2006).
3.2	Amended and Restated By-Laws dated July 21, 1993, as amended July 18, 1995, May 30, 1996 and July 26, 2007 (filed as Exhibit 3.2 to the Company's Current Report on Form 8-K dated August 3, 2007, and incorporated herein by reference).
4.1	Neoprobe Corporation Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series A 8% Cumulative Convertible Preferred Stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed January 2, 2008).
4.2	Neoprobe Corporation First Amended and Restated Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series A 8% Cumulative Convertible Preferred Stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed May 6, 2009).
4.3	Neoprobe Corporation Second Amended and Restated Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series A 8% Cumulative Convertible Preferred Stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed July 29, 2009).
10.1	Amended and Restated Stock Option and Restricted Stock Purchase Plan dated March 3, 1994 (incorporated by reference to Exhibit 10.2.26 to the Company's December 31, 1993 Form 10–K).
10.2	1996 Stock Incentive Plan dated January 18, 1996 as amended March 13, 1997 (incorporated by reference to Exhibit 10.2.37 to the Company's December 31, 1997 Form 10–K).
10.3	Neoprobe Corporation Second Amended and Restated 2002 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 27, 2008).
10.4	Form of Stock Option Agreement under the Neoprobe Corporation Amended and Restated 2002 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 21, 2006).
10.5	Form of Restricted Stock Award and Agreement under the Neoprobe Corporation Amended and Restated 2002 Stock Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed January 9, 2008).
10.6	

Form of Employment Agreement between the Company and certain named executive officers (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 23, 2008). This Agreement is one of three substantially identical employment agreements and is accompanied by a schedule which identifies material details in which each agreement differs from the form filed herewith.

10.7 Schedule identifying material differences between the employment agreements incorporated by reference as Exhibit 10.6 to this Registration Statement on Form S-1 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed December 23, 2008).

10.8 Employment Agreement, commencing February 15, 2009, by and between the Company and Frederick O. Cope, Ph.D. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed February 17, 2009).

10.9 Employment Agreement dated January 1, 2010, by and between the Company and David C. Bupp (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 6, 2010).

10.10 Employment Agreement, commencing February 15, 2010, by and between the Company and Frederick O. Cope, Ph.D. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed February 26, 2010).

10.11 Technology Transfer Agreement dated July 29, 1992 between the Company and The Dow Chemical Corporation (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.10 to the Company's Form S-1 filed October 15, 1992).

10.12 Cooperative Research and Development Agreement between the Company and the National Cancer Institute (incorporated by reference to Exhibit 10.3.31 to the Company's September 30, 1995 Form 10–QSB).

10.13 License dated May 1, 1996 between the Company and The Dow Chemical Company (incorporated by reference to Exhibit 10.3.45 to the Company's June 30, 1996 Form 10–QSB).

10.14 License Agreement dated May 1, 1996 between the Company and The Dow Chemical Company (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.3.46 to the Company's June 30, 1996 Form 10–QSB).

10.15 License Agreement dated January 30, 2002 between the Company and the Regents of the University of California, San Diego, as amended on May 27, 2003 and February 1, 2006 (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.11 to the Company's Annual Report on Form 10-KSB filed March 31, 2006).

10.16 Evaluation License Agreement dated March 31, 2005 between the Company and the Regents of the University of California, San Diego (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-KSB filed March 31, 2006).

10.17 Distribution Agreement between the Company and Ethicon Endo-Surgery, Inc. dated October 1, 1999 (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-KSB filed March 16, 2007).

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10.18 First Amendment to Distribution Agreement, dated December 14, 2007, by and between the Company and Ethicon Endo-Surgery, Inc. (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 20, 2007).

10.19 Product Supply Agreement between the Company and TriVirix International, Inc., dated February 5, 2004 (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.17 to the Company's December 31, 2004 Form 10-KSB).

10.20 Supply and Distribution Agreement, dated November 15, 2007, by and between the Company and Cardinal Health 414, LLC (portions of this Exhibit have been omitted pursuant to a request for confidential treatment and have been filed separately with the Commission) (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed November 21, 2007).

10.21 Warrant to Purchase Common Stock of Neoprobe Corporation dated March 8, 2004 between the Company and David C. Bupp (incorporated by reference to Exhibit 10.28 to the Company's December 31, 2003 Form 10-KSB).

10.22 Registration Rights Agreement dated April 2, 2003 between the Company, David C. Bupp and Donald E. Garlikov (incorporated by reference to Exhibit 99(i) to the Company's Current Report on Form 8-K filed April 2, 2003).

10.23 Common Stock Purchase Agreement between the Company and Fusion Capital Fund II, LLC dated December 1, 2006 (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed December 4, 2006).

10.24 First Amendment to Common Stock Purchase Agreement between the Company and Fusion Capital Fund II, LLC, dated December 24, 2008 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 31, 2008).

10.25 Registration Rights Agreement dated December 1, 2006, between the Company and Fusion Capital Fund II, LLC (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed December 4, 2006).

10.26 10% Convertible Note Purchase Agreement, dated July 3, 2007, between the Company and David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 9, 2007).

10.27 Amendment to Convertible Note Purchase Agreement, dated December 26, 2007, between the Company and David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.28 Neoprobe Corporation 10% Convertible Promissory Note Due July 8, 2007, executed in favor of David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form

8-K filed July 9, 2007).

10.29 Amended Neoprobe Corporation 10% Convertible Promissory Note Due December 31, 2011, executed in favor of David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.11 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.30 Security Agreement, dated December 26, 2007, by and between the Company and David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.12 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.31 Series V Warrant to Purchase Common Stock of Neoprobe Corporation issued to David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed July 9, 2007).

10.32 Additional Series V Warrant to Purchase Common Stock of Neoprobe Corporation issued to David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.13 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.33 Registration Rights Agreement, dated July 3, 2007, by and among Neoprobe Corporation and David C. Bupp, Cynthia B. Gochoco and Walter H. Bupp, as joint tenants with right of survivorship (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed July 9, 2007).

10.34 Securities Purchase Agreement, dated as of December 26, 2007, by and between the Company and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.35 Amendment and Waiver for Securities Purchase Agreement, dated April 16, 2008, between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 18, 2008).

10.36 Agreement Modifying the Interest and Dividend Payment Dates of the Neoprobe Corporation Series A and B Promissory Notes and Series A Preferred Stock, and Exercise and Conversion Price Adjustment Provisions of the Neoprobe Corporation Series X and Y Warrants and Series A Preferred Stock, dated March 31, 2009, by and between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 6, 2009).

10.37 Securities Amendment and Exchange Agreement, dated July 24, 2009, by and between the Company and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 29, 2009).

10.38 Neoprobe Corporation 10% Series A Convertible Senior Secured Promissory Note in the principal amount of $7,000,000, due December 26, 2011 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.39 Second Amendment to 10% Series A Senior Secured Convertible Promissory Note, dated April 16, 2008, between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed April 18, 2008).

10.40 Amended and Restated Neoprobe Corporation 10% Series A Convertible Senior Secured Promissory Note in the principal amount of $7,000,000, due December 26, 2011 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed July 29, 2009).

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10.41 Neoprobe Corporation 10% Series B Convertible Senior Secured Promissory Note in the principal amount of $3,000,000, due December 26, 2011 (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed April 18, 2008).

10.42 Amended and Restated Neoprobe Corporation 10% Series B Convertible Senior Secured Promissory Note in the principal amount of $3,000,000, due December 26, 2011 (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed July 29, 2009).

10.43 Series W Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.44 Amended and Restated Series W Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed July 29, 2009).

10.45 Series X Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed April 18, 2008).

10.46 Amended and Restated Series X Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed July 29, 2009).

10.47 Series Y Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed December 9, 2008).

10.48 Amended and Restated Series Y Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed July 29, 2009).

10.49 Series AA Warrant to Purchase Shares of Common Stock of Neoprobe Corporation issued to Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed July 29, 2009).

10.50 Registration Rights Agreement, dated December 26, 2007, between the Company and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed January 2, 2008).

10.51 Second Amendment to Registration Rights Agreement, dated April 16, 2008, between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed April 18, 2008).

10.52 Third Amendment to Registration Rights Agreement, dated July 10, 2008, between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.55 to pre-effective amendment No. 2 to the Company's Registration Statement on Form S-1, filed July 24, 2008, Registration file No. 333-150650).

10.53	Fourth Amendment to Registration Rights Agreement, dated December 5, 2008, between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 9, 2008).

10.54	Fifth Amendment to Registration Rights Agreement, dated December 21, 2009, between Neoprobe Corporation and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 22, 2009).
10.55	Security Agreement, dated December 26, 2007, between the Company and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K filed January 2, 2008).
10.56	Patent, Trademark, and Copyright Security Agreement, dated December 25, 2007, by and among Neoprobe Corporation, Cardiosonix Ltd., Cira Biosciences, Inc. and Platinum-Montaur Life Sciences, LLC (incorporated by reference to Exhibit 10.9 to the Company's Current Report on Form 8-K filed January 2, 2008).
21.1	Subsidiaries of the registrant.*
23.1	Consent of BDO Seidman, LLP.*
24.1	Power of Attorney.*
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
32.1	Certification of Chief Executive Officer of Periodic Financial Reports pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.*
32.2	Certification of Chief Financial Officer of Periodic Financial Reports pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.*

* Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: March 31, 2010

NEOPROBE CORPORATION
(the Company)

By: /s/ David C. Bupp
David C. Bupp, President and
Chief Executive Officer

Signature	Title	Date
/s/David C. Bupp David C. Bupp	Director, President and Chief Executive Officer (principal executive officer)	March 31, 2010
/s/ Brent L. Larson* Brent L. Larson	Vice President, Finance and Chief Financial Officer (principal financial officer)	March 31, 2010
/s/ Carl J. Aschinger, Jr.* Carl J. Aschinger, Jr.	Chairman, Director	March 31, 2010
/s/ Reuven Avital* Reuven Avital	Director	March 31, 2010
/s/ Kirby I. Bland* Kirby I. Bland	Director	March 31, 2010
/s/ Owen E. Johnson* Owen E. Johnson	Director	March 31, 2010
/s/ Fred B. Miller* Fred B. Miller	Director	March 31, 2010
/s/ Gordon A. Troup*	Director	March 31, 2010

Gordon A. Troup

/s/ J. Frank Whitley, Jr.* J. Frank Whitley, Jr.	Director	March 31, 2010

*By: /s/ David C. Bupp
David C. Bupp, Attorney-in-fact

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

NEOPROBE CORPORATION

FORM 10-K ANNUAL REPORT

FOR THE FISCAL YEARS ENDED:

DECEMBER 31, 2009 AND 2008

FINANCIAL STATEMENTS

NEOPROBE CORPORATION and SUBSIDIARY

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

Board of Directors
Neoprobe Corporation
Dublin, Ohio

We have audited the accompanying consolidated balance sheets of Neoprobe Corporation as of December 31, 2009 and 2008 and the related consolidated statements of operations, stockholders' deficit, and cash flows for the years then ended. 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 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also 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, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Neoprobe Corporation at December 31, 2009 and 2008 and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for warrants and embedded conversion options effective January 1, 2009 due to the adoption of EITF Issue No. 07-5, Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock (codified in FASB ASC Topic 815, Derivatives and Hedging).

/s/ BDO Seidman, LLP

Chicago, Illinois
March 29, 2010

Neoprobe Corporation and Subsidiaries
Consolidated Balance Sheets

December 31, 2009 and 2008

ASSETS	2009	2008
Current assets:		
Cash	$ 5,639,842	$ 3,565,837
Available-for-sale securities	—	495,383
Accounts receivable, net	1,331,908	1,626,065
Inventory	1,143,697	544,126
Prepaid expenses and other	474,243	573,573
Assets associated with discontinued operations	27,475	435,740
Total current assets	8,617,165	7,240,724
Property and equipment	1,990,603	1,940,748
Less accumulated depreciation and amortization	1,693,290	1,593,501
	297,313	347,247
Patents and trademarks	524,224	459,431
Less accumulated amortization	445,650	433,358
	78,574	26,073
Other assets	24,707	594,449
Other assets associated with discontinued operations	—	1,410,957
Total assets	$ 9,017,759	$ 9,619,450

Continued

Neoprobe Corporation and Subsidiaries
Consolidated Balance Sheets, continued

LIABILITIES AND STOCKHOLDERS' DEFICIT	2009	2008
Current liabilities:		
Accounts payable	$ 763,966	$ 725,820
Accrued liabilities and other	1,048,304	900,796
Capital lease obligations, current portion	11,265	9,084
Deferred revenue, current portion	560,369	526,619
Notes payable to finance companies	—	137,857
Liabilities associated with discontinued operations	18,743	22,280
Total current liabilities	2,402,647	2,322,456
Capital lease obligations	19,912	11,095
Deferred revenue	534,119	490,165
Note payable to CEO, net of discounts of $54,093 and $76,294, respectively	945,907	923,706
Notes payable to investors, net of discounts of $0 and $5,001,149, respectively	10,000,000	4,998,851
Derivative liabilities	1,951,664	853,831
Other liabilities	33,362	45,071
Total liabilities	15,887,611	9,645,175
Commitments and contingencies		
Preferred stock; $.001 par value; 5,000,000 shares authorized; 3,000 Series A shares, par value $1,000, issued and outstanding at December 31, 2009 and 2008	3,000,000	3,000,000
Stockholders' deficit:		
Common stock; $.001 par value; 150,000,000 shares authorized; 80,936,711 and 70,862,641 shares issued and outstanding at December 31, 2009 and 2008, respectively	80,937	70,863
Additional paid-in capital	182,747,897	145,742,044
Accumulated deficit	(192,698,686)	(148,840,015)
Unrealized gain on available-for-sale securities	—	1,383
Total stockholders' deficit	(9,869,852)	(3,025,725)
Total liabilities and stockholders' deficit	$ 9,017,759	$ 9,619,450

See accompanying notes to consolidated financial statements.

Neoprobe Corporation and Subsidiaries
Consolidated Statements of Operations

	Years Ended December 31, 2009	2008
Revenues:		
Net sales	$ 9,418,032	$ 7,417,751
License and other revenue	100,000	171,750
Total revenues	9,518,032	7,589,501
Cost of goods sold	3,134,740	2,845,498
Gross profit	6,383,292	4,744,003
Operating expenses:		
Research and development	4,967,861	4,286,474
Selling, general and administrative	3,240,337	2,965,342
Total operating expenses	8,208,198	7,251,816
Loss from operations	(1,824,906)	(2,507,813)
Other income (expense):		
Interest income	18,749	60,808
Interest expense	(1,533,047)	(1,744,825)
Change in derivative liabilities	(18,132,274)	(451,381)
Loss on extinguishment of debt	(16,240,592)	—
Other	(3,422)	11,308
Total other expense, net	(35,890,586)	(2,124,090)
Loss from continuing operations	(37,715,492)	(4,631,903)
Discontinued operations:		
Impairment loss	(1,713,822)	—
Loss from operations	(176,406)	(534,323)
Net loss	(39,605,720)	(5,166,226)
Preferred stock dividends	(240,000)	—
Loss attributable to common stockholders	$ (39,845,720)	$ (5,166,226)
Loss per common share (basic and diluted):		
Continuing operations	$ (0.51)	$ (0.07)
Discontinued operations	$ (0.03)	$ (0.01)
Loss attributable to common stockholders	$ (0.54)	$ (0.08)
Weighted average shares outstanding:		
Basic	73,771,871	68,594,172

Diluted	73,771,871	68,594,172

See accompanying notes to consolidated financial statements.

Neoprobe Corporation and Subsidiaries
Consolidated Statements of Stockholders' Deficit

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total
Balance, December 31, 2007	67,240,030	$ 67,240	$ 136,765,697	$ (140,776,531)	$ —	$ (3,943,594)
Issued restricted stock to employees	480,000	480	(30)	—	—	450
Issued stock to investor advisory service firms	117,500	118	78,433	—	—	78,551
Issued stock to 401(k) plan at $0.26	114,921	115	29,916	—	—	30,031
Issued stock upon exercise of warrants	2,365,190	2,365	167,441	—	—	169,806
Issued stock upon exercise of options	185,000	185	61,715	—	—	61,900
Issued stock as a commitment fee in connection with a stock purchase agreement	360,000	360	215,640	—	—	216,000
Paid preferred stock issuance costs	—	—	(180,000)	—	—	(180,000)
Paid common stock issuance costs	—	—	(900)	—	—	(900)
Issued warrants to purchase common stock	—	—	2,473,087	(1,130,629)	—	1,342,458
Effect of beneficial conversion feature of convertible promissory note	—	—	1,443,845	—	—	1,443,845
Effect of beneficial conversion feature of convertible preferred stock	—	—	1,550,629	(1,550,629)	—	—
Effect of put option feature of convertible preferred stock	—	—	—	(216,000)	—	(216,000)
Reclassified derivative liabilities	—	—	2,924,994	—	—	2,924,994
Stock compensation expense	—	—	211,577	—	—	211,577
Comprehensive loss:						
Net loss	—	—	—	(5,166,226)	—	(5,166,226)
Unrealized gain on available-for- sale	—	—	—	—	1,383	1,383

securities						
Total comprehensive loss	—	—	—	—	—	(5,164,843)
Balance, December 31, 2008	70,862,641	70,863	145,742,044	(148,840,015)	1,383	(3,025,725)
Effect of adopting new provisions of FASB ASC Topic 815	—	—	(8,948,089)	(4,012,951)	—	(12,961,040)
Issued restricted stock to employees and directors	1,260,000	1,260	—	—	—	1,260
Cancelled restricted stock	(9,000)	(9)	9	—	—	—
Issued stock to 401(k) plan at $0.41	80,883	81	33,392	—	—	33,473
Issued stock upon exercise of warrants	6,948,507	6,949	6,534,985	—	—	6,541,934
Issued stock upon exercise of options	400,441	400	124,216	—	—	124,616
Issued stock in payment of interest on convertible debt and dividends on convertible preferred stock	1,393,239	1,393	1,029,940	—	—	1,031,333
Paid preferred stock issuance costs	—	—	(6,323)	—	—	(6,323)
Paid common stock issuance costs	—	—	(207,000)	—	—	(207,000)
Effect of change in terms of notes payable, preferred stock and warrants	—	—	37,999,312	—	—	37,999,312
Stock compensation expense	—	—	445,411	—	—	445,411
Preferred stock dividends	—	—	—	(240,000)	—	(240,000)
Comprehensive loss:						
Net loss	—	—	—	(39,605,720)	—	(39,605,720)
Unrealized loss on available-for-sale securities	—	—	—	—	(1,383)	(1,383)
Total comprehensive loss	—					