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NEOPROBE RELEASES ANNUAL LETTER TO SHAREHOLDERS

DUBLIN, OHIO – April 8, 2009 --Neoprobe Corporation (OTCBB: NEOP), a diversified developer of innovative oncology and cardiovascular surgical and diagnostic products, today released the text of its annual Letter to Stockholders from Neoprobe Chairman, Carl J. Aschinger, Jr., and President and CEO, David C. Bupp.

The letter highlights Neoprobe's business and financial activities in 2008 and early 2009 and outlines planned business initiatives for the remainder of 2009. The text of the stockholder letter follows.

Dear Neoprobe Stockholder,

We are pleased to report that 2008 was a period of clinical and commercial advancements for Neoprobe Corporation and our products. The beginning of 2009 has seen a continuation of the progress achieved last year with the launch of new medical device products and the successful completion of target enrollment of the Phase 3 clinical evaluation of **Lymphoseek**[®] in patients with breast cancer or melanoma. Our preliminary evaluation of the initial results of the Phase 3 study would indicate that the primary endpoint of study has been achieved. In addition, no drug related safety events have been reported in the trial. Our company's achievements in 2008 and to date in 2009 make us very optimistic about Neoprobe's future as a diversified medical products company. We continue to execute a strategic business model that is built around a growing medical device platform while we develop a portfolio of recurring revenue drug and biologic products either in or poised to commence Phase 3 evaluations, including **Lymphoseek** and **RIGScan**[®] CR.

During 2008, we enhanced our internal staffing and advisory resources from a commercial and development perspective. Gordon A. Troup joined Neoprobe in July of last year as a member of our Board of Directors. Gordon brings a background of medical products marketing and sales, including seventeen years of leadership positions with Cardinal Health, Inc. to our Board of Directors. In addition, we augmented our internal staff with personnel with backgrounds in drug manufacturing and regulatory affairs and clinical management. In February 2009, we announced that Dr. Frederick O. Cope was joining the Neoprobe team as Vice President, Pharmaceutical Research and Clinical Development. Dr. Cope brings a wealth of experience in clinical management and medical product development to Neoprobe, including six years of overseeing the oncology collaborative research programs at The Ohio State University medical research facilities. The employees of Neoprobe and our research collaborators are dedicated to developing and providing innovative products that meet the medical needs of healthcare providers and the patients they help to diagnose and treat.

Our 2008 loss from operations increased from 2007 as we invested in the research and development initiatives associated with our drug and biologic products. In 2008, the gross margin contribution from our medical device business improved to 62%. The operating margin generated by our medical device business supported our drug development initiatives in addition to covering our public company corporate overhead costs. Our net loss for the year was \$5.2 million and included \$1.9 million in non-cash expenses. We ended 2008 with \$4.1 million in cash and investment securities to support our 2009 operations and initiatives.

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The core of our medical device business, the Neoprobe gamma radiation detection systems, continued to perform well in 2008. The Neoprobe devices continue to be recognized as the premium gamma detection system and the market leader among gamma detection devices. In 2008, gamma detection device revenues increased by \$816,000 or 12% versus the then record 2007 revenues. The gross margin on the gamma detection products improved to 63%. The revenue and margin growth of the gamma detection products continued to be led by our wireless probes based on Bluetooth® technology. Growth was further stimulated with the introduction of an updated control console for the Neoprobe gamma detection system and the introduction of a wireless version of a laparoscopic probe for the gamma detection systems. The new console (the **neoprobe® GDS**) replaces the **neo2000®** Gamma Detection System console in the United States and Europe. All of our gamma detection probes are compatible with the **neo2000** and **neoprobe GDS** consoles produced in the last five years.

Following the successful commercial introduction of the first wireless probes in 2007, Neoprobe and our marketing partner, Ethicon Endo-Surgery, Inc. (a Johnson & Johnson company), extended our marketing agreement through December 2013. The development of the new control console and the wireless laparoscopic probe were the first product development initiatives under the amended agreement. Also, we recently announced the introduction of a high energy detection probe that could be used by physicians in conjunction with PET imaging targeting agents. The new probe received a very favorable introduction at the 2009 Society of Surgical Oncology meeting. The new Ethicon marketing agreement allows Neoprobe to receive an increased portion of the revenue derived from the sale of the gamma detection device products. The enhanced financial terms commenced in January 2009 and Neoprobe's portion of the revenue derived from the gamma detection device products may improve by 15-20% assuming product selling prices remain consistent with current selling prices. We continue to look at initiatives that will provide complementary products to our gamma detection device portfolio and that will enhance the margin contribution of the product portfolio.

Consistent with our guidance for 2008, Neoprobe made only modest investment in its blood flow measurement devices. In 2008, the blood flow measurement devices generated approximately \$300,000 in revenue with most of the revenue being derived from the placement of devices outside the United States. The **Quantix®** blood flow measurement system has not fulfilled the commercial promise we expected when we acquired the technology. While we continue to believe that the technology has clinical merit, it may not be a long-term fit with Neoprobe's expanded oncology focus. We intend to continue to offer the **Quantix** products with the modest investment of corporate resources.

In 2008, research and development expenses totaled \$4.5 million, an increase of 57% compared to the prior year. The primary reason for the increase was the development activities associated with the **Lymphoseek** commercialization program. In 2008, we initiated the first Phase 3 clinical evaluation of **Lymphoseek** in patients with breast cancer or melanoma. Other development activities for **Lymphoseek** included the completion of drug manufacturing and drug testing validation protocols associated with **Lymphoseek** and initiatives associated with the initiation of clinical development of the product in Europe.

As a result of the initiation of the Phase 3 testing of **Lymphoseek** and positive partial results from the Phase 3 study, we received an additional \$6.0 million, \$5.7 million net of placement costs, through the Platinum-Montaur Life Sciences LLC (Montaur) financing that was closed in December 2007. The completion of the Montaur funding provides us with sufficient funds to complete the **Lymphoseek** development and to advance our initial development efforts for our device and oncology product initiatives.

During 2008 and to date in 2009, a number of commercial and research milestones were achieved for our drug, biologic and medical device product initiatives:

- Achievement of target enrollment in a Phase 3 (NEO3-05) clinical evaluation of **Lymphoseek** in patients with breast cancer or melanoma

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- Assessment of preliminary data that the NEO3-05 clinical study achieved its primary efficacy end-point
- Completion of a successful regulatory pathway evaluation for **Lymphoseek** in the European Union under the formalized scientific advice process
- Receipt of third lot of cGMP-produced final drug product of **Lymphoseek** that is being used in the Phase 3 clinical studies
- Introduction of enhanced and new product components for our gamma detection device systems that were developed in cooperation with Ethicon
- Completion of a positive regulatory assessment of **RIGScan** CR for treatment of colorectal cancer in the European Union under the scientific advice process

In late 2007, with the successful completion of a multi-center Phase 2 clinical assessment of **Lymphoseek**, Neoprobe began discussions with FDA regarding the design of Phase 3 clinical evaluations of the drug. While we were awaiting the review of a draft Phase 3 trial design from FDA, the positive results of the multi-center Phase 2 clinical study were presented at the 2008 meeting of the Society of Surgical Oncology. The primary objective of the Phase 2 study for **Lymphoseek** was achieved with a 99% accuracy rate by identifying pathology confirmed lymphatic tissue. However, our discussions with FDA indicated that they wanted to see comparative data for **Lymphoseek** in the identification of lymph nodes with the widely used vital blue dye products. Based upon data from the Phase 2 study and an extensive literature search, a Phase 3 protocol was developed for **Lymphoseek** to be evaluated in a mixed population of patients diagnosed with either breast cancer or melanoma. In the Phase 2 study, an overall concordance rate of 94% was achieved for the lymph node being identified with both **Lymphoseek** and the vital blue dyes.

A replication of at least a 94% concordance rate was established as the primary efficacy end-point of the Phase 3 study to be conducted in patients with either breast cancer or melanoma. The FDA provided a favorable assessment of the protocol and Neoprobe initiated enrollment in the study in June 2008. Through the remainder of 2008 and early 2009, we added clinical sites and in March 2009, we announced the achievement of the targeted enrollment goal for the study. Most importantly, we announced the assessment that based upon a review of the preliminary data from the study that the Phase 3 study had successfully achieved its primary clinical objective. We are in the process of completing a full evaluation of the study and expect to be in a position to begin reporting of the full results of the study in the second quarter.

While the concept of sentinel node staging of cancer patients with radiolabeled colloids and vital blue dye products has become widely adopted for breast cancer and melanoma patients, no such products have been approved as sentinel node targeting agents. Both FDA and the centralized European regulatory body (the EMEA) have advised Neoprobe that in order to receive a sentinel node product indication for **Lymphoseek** the drug would need to be validated in a tumor type where a **Lymphoseek** directed sentinel node biopsy and a regional nodal dissection could be performed in the same patient. Under the scientific advice process, Neoprobe reviewed a Phase 3 clinical study design with the EMEA. The Phase 3 trial would be conducted in patients with head and neck squamous cell carcinoma. In third quarter of last year, we received the EMEA's agreement to the trial design. With the EMEA concurrence that was received in September, we approached FDA with the design of a Phase 3 trial that we have internally designated Sentinel. The Sentinel trial will be conducted at cancer centers in the United States, Europe and Israel and we expect that it will involve approximately 120 patients. We are awaiting clearance from the first investigational sites to commence patient enrollment in the Sentinel trial.

The results from the Sentinel study will be combined with the efficacy and safety results from the successfully completed clinical studies that to date have evaluated **Lymphoseek** in approximately 300 patients in a variety of tumor types. When completed, the combined clinical trials will have evaluated the drug in over 400 patients. We believe this will provide a comprehensive package of clinical and non-clinical safety and efficacy results to support a marketing clearance for **Lymphoseek** as the first sentinel lymph node tracing agent. Initial

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development of the marketing clearance submissions packages for FDA and the EMEA is underway.

During 2008, our development activities were not confined to **Lymphoseek**. In the course of our discussions with the EMEA on **Lymphoseek**, we opened a dialogue on the **RIGS**[®] technology. Our initial approach was favorably received and we determined that a review of a development plan and clinical approach for the **RIGS** biologic product for the treatment of colorectal cancer. The product review should be presented under the scientific advice procedure that had worked well for **Lymphoseek**. In October, we received a very favorable response to the scientific advice assessment. The response included the potential for **RIGScan** CR to be considered for the conditional marketing authorization (CMA) program adopted by the EMEA in December 2007. We are now harmonizing the Phase 3 study design and product development plan with FDA.

What do we see in the coming months for Neoprobe Corporation?

- Release of complete data from the **Lymphoseek** Phase 3 study (NEO3-05) conducted in patients with breast cancer or melanoma
- Initiation of the multi-national **Lymphoseek** Phase 3 Sentinel study (NEO3-06) in patients diagnosed with head and neck squamous cell carcinoma
- Harmonize the EMEA-cleared Phase 3 clinical trial design for **RIGScan** CR with FDA and move forward with development partnership initiatives
- Maintain leadership position of our gamma detection device business by providing new and enhanced product offerings

In conclusion, we are very optimistic about the commercial prospects for Neoprobe Corporation. We face challenges with the current economic and regulatory environment, but we achieved a great deal in 2008 and we believe 2009 will be an equally productive year. Our employees are focused on improving our products toward even more effective cancer patient care, improving patient outcome. We appreciate your continued assistance and support in making Neoprobe a successful biomedical company.

Sincerely,

Carl J. Aschinger, Jr.
Chairman of the Board

David C. Bupp
President and CEO

About Neoprobe

Neoprobe is a biomedical company focused on enhancing patient care and improving patient outcome by meeting the critical intraoperative diagnostic information needs of physicians and therapeutic treatment needs of patients. Neoprobe currently markets the neo2000[®] line of gamma detection systems that are widely used by cancer surgeons and is commercializing the Quantix[®] line of blood flow measurement products developed by its subsidiary, Cardiosonix Ltd. In addition, Neoprobe holds significant interests in the development of related biomedical systems and radiopharmaceutical agents including Lymphoseek[®] and RIGScan[®] CR. Neoprobe's subsidiary, Cira Biosciences, Inc., is also advancing a patient-specific cellular therapy technology platform called ACT. Neoprobe's strategy is to deliver superior growth and shareholder return by maximizing its strong position in gamma detection technologies and diversifying into new, synergistic biomedical markets through continued investment and selective acquisitions.

www.neoprobe.com

Statements in this news release, which relate to other than strictly historical facts, such as statements about the Company's plans and strategies, expectations for future financial performance, new and existing products and technologies, anticipated clinical and regulatory pathways, and markets for the Company's products are forward-looking statements. The words "believe," "expect," "anticipate," "estimate," "project," and similar expressions identify forward-looking statements that speak only as of the date hereof. Investors are cautioned that such statements involve risks and uncertainties that could cause actual results to differ materially from historical or anticipated results due to many factors including, but not limited to, the Company's continuing operating losses, uncertainty of market acceptance of its products, reliance on third party manufacturers, accumulated deficit, future capital needs, uncertainty of capital funding, dependence on limited product line and distribution channels, competition, limited marketing and manufacturing experience, risks of development of new products, regulatory risks and other risks detailed in the Company's most recent Annual Report on Form 10-K and other Securities and Exchange Commission filings. The Company undertakes no obligation to publicly update or revise any forward-looking statements.