



## **Discovery Labs' Proprietary Aerosol Drug Delivery Technology Showcased at the *International Society for Aerosols in Medicine* Annual Meeting**

**Warrington, PA – June 22, 2011** — **Discovery Laboratories, Inc. (Nasdaq: DSCO)** today announced that scientific data relating to the Company's proprietary aerosolization technology platform was presented at the 2011 *International Society for Aerosols in Medicine* (ISAM) Annual Meeting. The annual ISAM congress brings together experts in the biotechnology and medical technology industries along with academic thought leaders dedicated to all aspects of aerosol research in medicine.

The presented non-clinical study was titled, 'Combined Delivery of CPAP and Aerosols to Premature Infants via a Novel Ventilator Circuit Adapter' and was authored by Dr. Mazela, *et al.* The objective of this study was to test a series of proprietary patient adaptors designed to effectively interface with conventional ventilation technologies to optimize delivery of aerosolized medications for patients requiring positive pressure ventilator support. The investigators concluded that the novel patient interface significantly reduced gas dilution when administered during CPAP respiratory support without increasing flow resistance, potentially improving aerosolized drug delivery to patients receiving positive pressure ventilator support.

Dr. Thomas F. Miller, Chief Operating Officer of Discovery Labs, commented, "We are excited that these important data were accepted for presentation at ISAM, as this meeting is the most important international venue for new aerosolization technologies. While remaining focused on our Surfaxin<sup>®</sup> Complete Response submission target for the third quarter 2011, we have meaningfully advanced our aerosolization technology to support our Aerosurf<sup>®</sup> program. Dr. Mazela's study highlights the novelty of our proprietary patient interface technology, a key component of our vision for efficient aerosolized drug delivery for patients requiring positive pressure ventilation support. We are actively exploring the commercial utility and potential of this important new technology for broad pediatric and adult critical care applications."

This press release and the presentation referred to herein include information that may be of interest to healthcare practitioners. However, the clinical relevance of this information has not been fully established. Discovery Labs' proprietary patient interface is an investigational device and is not cleared by the FDA or any other world health regulatory authority for use in humans.

### **About The International Society for Aerosols in Medicine**

The *International Society for Aerosols in Medicine* (ISAM) was founded in 1970. The objectives of ISAM are to stimulate and further the interdisciplinary cooperation and exchange of information in all aspects of aerosol research in medicine including health effects of inhaled aerosols and pulmonary drug delivery. ISAM sponsors international conferences, publications, study groups and special research projects. To introduce new therapies into practice ISAM has organized educational seminars, and provided advice on basic and advanced levels to staff and international organizations such as WHO and ATS. ISAM is a non-profit organization.

## **About Discovery Labs' KL<sub>4</sub> Surfactant and Aerosol Delivery Technology**

Discovery Labs' novel KL<sub>4</sub> surfactant is a synthetic, peptide-containing surfactant that is structurally similar to pulmonary surfactant, a substance produced naturally in the lung and essential for survival and normal respiratory function. Discovery Labs aerosol technology platform includes the development of a proprietary capillary aerosolization generation (CAG) technology and a series of novel patient interfaces. The CAG has the potential to enable targeted upper respiratory or alveolar delivery of therapies for pulmonary applications and has been initially designed to produce high-quality, low-velocity aerosolized KL<sub>4</sub> surfactant for intra-pulmonary delivery. The proprietary patient interface technology has the potential to increase delivery of aerosolized medicines to the patient and reduce drug wastage.

Surfaxin is Discovery Labs' lead product and represents the first synthetic, peptide-containing surfactant that, if approved, will provide healthcare practitioners with an alternative therapy to the currently-approved, animal-derived surfactants that are standard of care today. The safety and efficacy of Surfaxin for the prevention of RDS has previously been demonstrated in a comprehensive Phase 3 clinical program. Discovery Labs anticipates filing a Complete Response to the FDA in the third quarter of 2011 and could potentially gain marketing approval in the United States as early as the first quarter of 2012.

Aerosurf is Discovery Labs' initial aerosolized KL<sub>4</sub> surfactant, and holds the promise to significantly expand the use of surfactant therapy in premature infants by potentially providing neonatologists with a means of administering KL<sub>4</sub> surfactant to infants without the risks currently associated with administration of currently-approved surfactants, which require invasive endotracheal intubation and mechanical ventilation.

## **About Discovery Labs**

Discovery Laboratories, Inc. is a specialty biotechnology company developing surfactant therapies for respiratory diseases. Surfactants are produced naturally in the lungs and are essential for breathing. Discovery Labs' novel proprietary KL<sub>4</sub> surfactant technology produces a synthetic, peptide-containing surfactant that is structurally similar to pulmonary surfactant and is being developed in liquid, aerosol or lyophilized formulations. Discovery Labs is also developing its proprietary capillary aerosolization technology and novel patient interfaces, to enable efficient, targeted upper respiratory or alveolar delivery of aerosolized KL<sub>4</sub> surfactant. Discovery Labs believes that its proprietary technology makes it possible, for the first time, to develop a significant pipeline of surfactant products to address a variety of respiratory diseases for which there frequently are few or no approved therapies. For more information, please visit our website at [www.Discoverylabs.com](http://www.Discoverylabs.com).

## ***Forward-Looking Statements***

*To the extent that statements in this press release are not strictly historical, all such statements are forward-looking, and are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from the statements made. Examples of such risks and uncertainties, including those related to Discovery Labs' ongoing comprehensive non-clinical program, development and manufacturing activities and related regulatory efforts intended to gain FDA approval for Surfaxin for the prevention of respiratory distress syndrome in premature infants and other pre-clinical and clinical research and development programs, including the potential development of aerosolized KL<sub>4</sub> surfactant and the proprietary patient interface technology, are described in Discovery Labs' filings with the Securities and Exchange Commission, including the most recent reports on Forms 10-K, 10-Q and 8-K, and any amendments thereto. Except as otherwise required by law, Discovery Labs undertakes no obligation to update or revise any forward-looking statements.*

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