



## **New Study Shows AFECTAIR® Significantly Improved Delivery of Nitric Oxide Under Simulated Neonatal Ventilatory Conditions**

*AFECTAIR In-Vitro Performance Data Presented at 2011 Hot Topics in Neonatology Annual Meeting*

**WARRINGTON, PA – December 6, 2011 — Discovery Laboratories, Inc. (Nasdaq: DSCO)** today released new data showing that use of AFECTAIR® resulted in as much as a 70 percent reduction in the amount of nitric oxide required to deliver the desired dose of the therapeutic gas when compared with current standard of care (SoC) ( $p < 0.001$ ). Nitric oxide is a costly medical gas frequently used for the treatment of pulmonary hypertension in newborn infants. AFECTAIR, the company's newest product candidate, has been developed by Discovery Labs to simplify the delivery of inhaled therapies for critical care patients requiring ventilatory support. The new AFECTAIR data were presented at the 2011 *Hot Topics in Neonatology* Congress, an internationally recognized medical meeting dedicated to advancing the practice of neonatology.

"We are very pleased with the results of this study as it demonstrates that AFECTAIR has the potential to effectively deliver a medical gas directly to a critical care patient, while reducing the amount of medical gas needed to achieve a target dose," said Dr. Russell G. Clayton, Sr. Vice President, Research & Development. "Certain medical therapies, such as nitric oxide, can be significant cost drivers in the hospital and these data suggest that AFECTAIR may significantly reduce these costs through more efficient delivery of a given therapy."

Results from the study suggest that AFECTAIR may be an effective alternative to the SoC among ventilatory circuit devices used for the delivery of inhaled nitric oxide. The investigators also commented that the results of this study support further investigation of AFECTAIR in the delivery of other costly medical gases using various methods of ventilation.

"These data reinforce our decision to introduce AFECTAIR, a product that exemplifies our commitment to advancing a new standard for respiratory critical care," said W. Thomas Amick, Discovery Labs Chairman and Chief Executive Officer, "AFECTAIR is an example of our company's innovative spirit and ability to identify potentially significant market opportunities as they emerge through our research and development efforts."

AFECTAIR is a series of proprietary ventilator circuit/patient interface connectors and related componentry. AFECTAIR simplifies the delivery of any inhaled therapies to critical care patients requiring ventilatory support. According to national health statistics and market assessment data, it is estimated that more than 1.3 million patients annually, in the United States and European Union, receive aerosolized medications while requiring ventilator support. Discovery Labs is implementing a regulatory plan that potentially will allow for the introduction of AFECTAIR in the United States and the European Union in 2012.

### **About the Study**

This *in-vitro* study was supported by Discovery Labs and designed to compare the performance of AFECTAIR, a proprietary ventilator circuit patient interface connector, with a current SoC ventilator system in the delivery of nitric oxide under simulated neonatal ventilator conditions. The simulated breathing pattern was maintained within narrow ranges and the delivery of oxygen was not different between the study conditions. The investigators observed a 50 to 70 percent decrease in nitric oxide utilization requirements to achieve desired inhaled nitric oxide dose with AFECTAIR, compared with SoC ( $p < 0.001$ ). Study investigators concluded that AFECTAIR significantly decreased the nitric oxide utilization requirements to achieve the desired inhaled nitric

oxide concentration and that results of the study support further investigation of AFECTAIR in the delivery of other medical gases and with other ventilation methods.

### **About Discovery Labs**

Discovery Laboratories, Inc. is a specialty biotechnology company with one focus – to create life-saving products for critical care patients with respiratory disease and improve the standard of care for pulmonary medicine. 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, lyophilized and aerosolized formulations. Discovery Labs is also developing its proprietary drug delivery technologies to enable efficient, targeted upper-respiratory or alveolar delivery of aerosolized KL<sub>4</sub> surfactant and other inhaled therapies. Discovery Labs believes that its proprietary technologies make it possible, for the first time, to develop a significant pipeline of 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' research and development activities and commercial plans, 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.*

### **Contact Information:**

Investor Relations:

John G. Cooper, President and Chief Financial Officer  
215-488-9300

Media Relations:

Michael Parks, President – Pitch360 Inc.  
484-356-7105