Discovery Labs Announces Recent AFECTAIR® Publications

Warrington, PA — May 1, 2013— Discovery Laboratories, Inc. (NASDAQ: DSCO), a specialty biotechnology company dedicated to advancing a new standard in respiratory critical care, today announced the release of two peer-reviewed publications related to AFECTAIR®, the Company’s proprietary aerosol-conducting airway connector designed with the goal of simplifying and improving aerosolized medication delivery to infants requiring mechanical ventilation in the neonatal and pediatric intensive care units.

“Discovery Labs has had a long-standing commitment to presenting our scientific findings through the peer review process, thereby providing the scientific rigor and transparency expected by healthcare professionals today,” said Dr. Russell G. Clayton, Senior Vice President, Research & Development, of Discovery Labs. “Our goal is to better inform healthcare professionals about our products and the patients who might benefit from our novel technologies.”

The two publications are as follows:

**Aerosolized albuterol sulfate delivery under neonatal ventilatory conditions – in vitro evaluation of a novel ventilator circuit patient interface connector -** *Journal of Aerosol Medicine and Pulmonary Delivery. March 2013, Volume 26, Number 0, 2013, Pages 1-8*

The goal of this *in vitro* study, previously presented at the 2012 Hot Topics in Neonatology Annual Meeting, was to characterize the delivery of aerosolized albuterol sulfate, a medication commonly delivered in aerosolized form, under simulated neonatal ventilatory conditions using AFECTAIR. Authors of the study found that use of AFECTAIR resulted in an increased delivery of albuterol sulfate at the patient interface compared with the method currently used to introduce aerosolized medication into the ventilator circuit. In addition, the aerosol characteristics at the patient interface were more consistent with the aerosol characteristics produced by the nebulizer when the aerosolized medication was delivered through AFECTAIR compared with the currently used method. Authors concluded that AFECTAIR may be a useful, new approach for the delivery of aerosolized medications to neonates requiring positive pressure ventilatory support.

**Safety Assessment of a Novel Neonatal Ventilator Circuit Patient Interface Connector for the Delivery of Aerosolized Medication to Mechanically Ventilated Infants –** *Respiratory Therapy. February-March 2013, Vol. 8, No. 1, Pages 29-33*
As part of a safety assessment of AFECTAIR, studies were conducted to determine the dead space volume (volume of gas that remains in device, undelivered to the patient), the resistance to gas flows through AFECTAIR relative to a standard configuration, as well as the interaction between the ventilator circuit gas and the aerosol carrier gas using the two configurations. Authors concluded that, when used correctly, AFECTAIR has a comparable safety profile to standard wye connectors and aerosol delivery configurations. Authors also stated that further studies are needed to determine the impact of AFECTAIR on the delivery of aerosolized medications to mechanically ventilated infants.

Use of AFECTAIR may result in an increase in the delivery of aerosolized medication to patients receiving mechanical ventilation. When delivering aerosolized medication through AFECTAIR to patients receiving mechanical ventilation, a qualified healthcare personnel should closely monitor the response to the aerosolized medication.

About Journal of Aerosol Medicine and Pulmonary Drug Delivery
The Journal of Aerosol Medicine and Pulmonary Drug Delivery is the only authoritative journal delivering innovative articles on the health effects of inhaled aerosols and delivery of drugs through the pulmonary system. The Journal is a forum for leading experts, addressing novel topics such as aerosolized chemotherapy, aerosolized vaccines, methods to determine toxicities, and delivery of aerosolized drugs in the intubated patient.

About Respiratory Therapy
Respiratory Therapy, the Journal of Pulmonary Technique, brings a new concept in presenting information to respiratory therapy managers and supervisors, respiratory therapists, nurses, researchers and students with the goal of presenting a wide variety of papers in a clear, effective and familiar clinical format. Respiratory Therapy's international clinical focus ensures readers receive, with every issue, the latest and best information about all aspects of respiratory therapy as actively practiced in a wide variety of clinical venues and modalities.

About Discovery Labs
Discovery Laboratories, Inc. is a specialty biotechnology company with one focus – to advance a new standard in respiratory critical care. Discovery Labs’ novel proprietary KL4 surfactant technology produces a synthetic, peptide-containing surfactant that is structurally similar to pulmonary surfactant and is being developed in liquid, lyophilized, and aerosolized dosage forms. Discovery Labs is also developing its proprietary drug delivery technologies to enable efficient delivery of aerosolized KL4 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.
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 potential benefits of Discovery Labs’ products and products under development, 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. Any forward-looking statement in this release speaks only as of the date on which it is made. Discovery Labs assumes no obligation to update or revise any forward-looking statements.

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