Aeolus Pharmaceuticals' AEOL 10150 Protects Lungs Against Mustard Gas Exposure in Animal Studies

Data Presented at 4th Annual NIH CounterACT Network Research Symposium in San Francisco Supports Compound's Potential as a Countermeasure for Mustard Gas Exposure

MISSION VIEJO, Calif.-- Aeolus Pharmaceuticals, Inc. (OTCBB: AOLS) reported that researchers from National Jewish Health and Lovelace Respiratory Research Institute have completed a second study confirming that AEOL 10150 protects lungs from whole mustard gas exposure in rats. Data were presented at the 4th Annual CounterACT Countermeasures Against Chemical Threats Network Research Symposium in San Francisco. There are currently no effective treatments for mustard gas exposure and AEOL 10150 is a major focus of a sponsored research grant awarded by the NIH Counteract program to National Jewish Health to identify an effective treatment. Sulfur mustards have been used in warfare since WWI and still pose a significant threat to civilian and military personnel. Mustard gas exposure can cause significant blistering of the skin as well as respiratory injury and fibrosis.

"AEOL 10150 continues to demonstrate significant protective effects in rescuing the lung against the deleterious effects of sulfur mustard vapor," stated Brian Day, PhD, Professor and Vice Chair of Research the Department of Medicine at National Jewish Health and Investigator for the CounterACT Center of Excellence in Denver. "These data affirm our earlier studies where AEOL 10150 protected the lung against sulfur mustard and the half-mustard, 2-chloroethyl ethylsulfide."

Protects Lungs When Administered After Exposure

The primary objective of this study was to determine whether administration of AEOL 10150, after exposure, reduces the severity of acute lung injury induced by mustard gas. AEOL 10150 was given to rats one hour after sulfur mustard vapor exposure and repeated every 6 hours. Twenty-four hours after exposure, lung edema was assessed by changes in the bronchoalveolar lavage (BAL) protein levels. AEOL 10150 significantly reduced (p<0.05) mustard gas-induced lung edema as measured by bronchoalveolar lavage protein levels. In addition, AEOL 10150 decreased SM-induced increases in macrophages (p<0.05) and epithelial cells in BAL fluid (P<0.05). In all three measurements AEOL 10150
provided approximately 100 percent protection - with levels approximating that of the control animals in the study. These results indicate that AEOL 10150 can attenuate lung injury from mustard gas exposure and may provide an effective countermeasure against mustard gas-induced lung injury.

"This study confirms AEOL 10150's potential as an effective countermeasure for mustard gas exposure. The compound has now shown statistically significant efficacy in two whole mustard studies and several studies using CEES (or half mustard)," stated John L. McManus, President and Chief Executive Officer of Aeolus Pharmaceuticals, Inc. "Given the complete protection shown in this study, a new study has been initiated to look at the compound's ability to protect against even higher levels of mustard gas. We hope to report those results before the end of the third quarter."

CounterAct Center of Excellence

The NIH awarded a five-year, $7.8 million grant to National Jewish Health and the University of Colorado Anschutz Medical Campus, both in Denver, Colorado. "This Center of Excellence was developed to focus on sulfur mustard toxicity in the lung and skin and the long-term goal is to develop an effective treatment for mustard gas induced injury in lung and skin," stated Carl White, MD, Professor of Pediatrics at National Jewish Health. Members of the Center are establishing optimal compounds, route and mode of delivery and research projects are ongoing to determine countermeasures that will help establish specific interventions needed to treat mustard gas-induced injury.

Potential for AEOL 10150 as a Countermeasure Against Chemical Threats

AEOL 10150 has shown significant protective effects against radiation chlorine gas and mustard gas in animal models. Additionally, based on its mechanism, it is believed that the compound may potentially protect against exposure to phosgene and cyanide. A compound with the potential to protect against multiple threats would be of significant benefit in both the military and civilian efforts to protect citizens against potential threats. The United States Food and Drug Administration (FDA) has a special "Animal Rule" under which compounds may be approved for use against chemical and nuclear threats on the strength of animal efficacy studies, which allows the potential for an accelerated approval path versus conventional pharmaceutical applications.

About Aeolus Pharmaceuticals

Aeolus is developing a variety of therapeutic agents based on its proprietary small molecule catalytic antioxidants, with AEOL 10150 being the first to enter human clinical evaluation. AEOL 10150 is a patented, small molecule catalytic antioxidant that mimics and thereby amplifies the body's natural enzymatic systems for eliminating reactive oxygen species, or free radicals. Studies funded by the National Institutes for Health are currently underway evaluating AEOL 10150 as a treatment for exposure to mustard gas, chlorine gas and radiation.
The statements in this press release that are not purely statements of historical fact are forward-looking statements. Such statements include, but are not limited to, those relating to Aeolus' product candidates, as well as its proprietary technologies and research programs. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause Aeolus' actual results to be materially different from historical results or from any results expressed or implied by such forward-looking statements. Important factors that could cause results to differ include risks associated with uncertainties of progress and timing of clinical trials, scientific research and product development activities, difficulties or delays in development, testing, obtaining regulatory approval, the need to obtain funding for pre-clinical and clinical trials and operations, the scope and validity of intellectual property protection for Aeolus' product candidates, proprietary technologies and their uses, and competition from other biopharmaceutical companies. Certain of these factors and others are more fully described in Aeolus' filings with the Securities and Exchange Commission, including, but not limited to, Aeolus' Annual Report on Form 10-K for the year ended September 30, 2009. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

Source: Aeolus Pharmaceuticals, Inc.