Aeolus Pharmaceuticals Announces $12.7 Million NIH Counteract Grant Award to Continue Development of AEOL 10150 as a Treatment Against Chlorine and Sulfur Mustard Gas Exposure

MISSION VIEJO, CA -- (MARKET WIRE) -- 10/10/11 -- Aeolus Pharmaceuticals, Inc. (OTCQB: AOLS) (PINKSHEETS: AOLS), a biotechnology company that is leveraging up to $140M of government funding in developing a platform of a new class of broad-spectrum catalytic antioxidant compounds as medical countermeasures against radiation exposure to develop them in oncology indications, today announced that the National Institutes of Health (NIH) through its Countermeasures Against Chemical Threats Research Network (CounterACT) has awarded a $12.7 million, five-year contract to Carl White, MD and Brian Day, PhD at National Jewish Health (NJH) to continue the development of AEOL 10150 as a medical countermeasure (MCM) against chlorine gas exposure. Also included in the grant is support of research looking at tissue plasminogen activator (TPA) and Silabilin as MCM's against sulfur mustard gas exposure.

AEOL 10150 is also the subject of a $118 million development contract from the Biomedical Advanced Research and Development Authority (BARDA) for pulmonary injuries resulting from an acute exposure to radiation (Lung-ARS)/Delayed Effects of Radiation Exposure (DEARE).

The ultimate objective of the sulfur mustard and chlorine gas work at NJH will be to complete all work necessary to initiate pivotal efficacy studies for both indications. This would include:

- Run efficacy studies in the rat model for higher doses of sulfur mustard and chlorine gas
- Establish endpoints, optimal dosing and duration of treatment for pivotal efficacy studies
- Characterize the natural history from sulfur mustard and chlorine gas damage

"We are pleased to see NIH CounterACT's continued support of the development of AEOL 10150 as a broad spectrum medical countermeasure, as well as continued support for the
cutting-edge work that Dr. White and Dr. Day have been doing in the chemical countermeasure field at National Jewish Health," stated John L. McManus, President and Chief Executive Officer of Aeolus Pharmaceuticals, Inc. "Aeolus appreciates our partnership with National Jewish Health and the quality of research work that has made them a CounterACT Center of Excellence, and is grateful for CounterACT's continued funding of AEOL 10150."

The new studies will build on prior work that has shown AEOL 10150 to be an effective countermeasure to protect the lungs from damage due to inhalation of chlorine gas and sulfur mustard gas.

Researchers from National Jewish Health and McGill University have completed a series of preliminary studies demonstrating that AEOL 10150 protects lungs from chlorine gas exposure in mice and rats. The primary objective of these studies was to determine whether administration of AEOL 10150, after exposure, reduces the severity of acute lung injury and asthma-like symptoms induced by chlorine gas. AEOL 10150 was given to mice at a 5 mg/kg subcutaneous dose one hour after chlorine gas exposure (100 ppm for 5 minutes) and repeated every 6 hours. Twenty-four hours after exposure, lung inflammation was assessed by changes in BAL cellularity and neutrophil influx. AEOL 10150 significantly reduced (p < 0.05, n=6/group) chlorine gas-induced lung inflammation as measured by BAL fluid cellularity levels by 40% that appeared to be due to limiting neutrophil influx. AEOL 10150 also significantly attenuated (p < 0.05, n=6) the degree of asthma-like airway reactivity induced by chlorine gas exposure by 40%. These results indicate that AEOL 10150 can attenuate lung injury and asthma-like symptoms from chlorine gas exposure and may provide an effective countermeasure against chlorine gas-induced lung injury. National Jewish Health replicated the mice studies previously conducted by McGill University in rats to determine whether AEOL 10150 mitigates lung damage due to chlorine gas exposure. In the study, 10150 significantly reduced protein, IgM, white blood cell, red blood cell, macrophage and neutrophil counts in bronchoalveolar lavage fluid.

The first whole mustard study demonstrated that AEOL 10150 protects lungs from whole mustard gas exposure in rats. The data affirmed earlier studies where AEOL 10150 protected the lung against the half-mustard, CEES. The primary objective of the studies 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 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 BAL protein levels. In addition, AEOL 10150 decreased SM-induced increase in the numbers of BAL neutrophils.

Results from a second study confirmed that AEOL 10150 protects lungs from whole mustard gas exposure in rats. 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.

About AEOL 10150
AEOL 10150 is a broad-spectrum catalytic antioxidant specifically designed to neutralize reactive oxygen and nitrogen species. The neutralization of these species reduces oxidative stress, inflammation, and subsequent tissue damage-signaling cascades resulting from radiation exposure. AEOL 10150 could have a profound beneficial impact on people who have been exposed, or are about to be exposed, to high-doses of radiation in the treatment of oncology.

AEOL 10150 has already performed well in preclinical and non-clinical studies, was well-tolerated in two human clinical trials, and has demonstrated statistically significant survival efficacy in an acute radiation-induced lung injury model. The Company believes it could have a profound beneficial impact on people who have been exposed, or are about to be exposed, to high-doses of radiation, whether from cancer therapy or a nuclear event.

About Aeolus Pharmaceuticals
Aeolus Pharmaceuticals is developing a new class of catalytic antioxidant compounds that protects healthy tissue from the damaging effects of radiation. Its first compound, AEOL 10150, is being developed for oncology indications, where it is used in combination with radiation therapy. It is also being developed, with funding by the US Government, as a medical countermeasure against chemical and radiological weapons, where its initial target indications are as a protective agent against the effects of acute radiation syndrome and delayed effects of acute radiation exposure. Aeolus' strategy is to leverage the substantial investment in toxicology, manufacturing, and preclinical and clinical studies made by US Government agencies in AEOL 10150, including the contract with BARDA valued, with options, at up to $118 million, to efficiently develop the compound for use in oncology.

Forward-Looking Statements
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’ amended Annual Report on Form 10-K/A for the year ended September 30, 2010. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

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