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Aeolus Announces Publication of Additional Data Demonstrating Efficacy of AEOL 10150 in Sulfur Mustard Exposure in Journal "Toxicological Sciences"

MISSION VIEJO, CA--(Marketwired - September 19, 2016) -

- **TREATMENT WITH AEOL 10150 AFTER EXPOSURE TO SULFUR MUSTARD GAS --**
  - **IMPROVED SURVIVAL AT 48 HOURS AFTER EXPOSURE FROM 36 PERCENT TO 88 PERCENT**
  - **DECREASED AIRWAY CASTS AND RESTORED TGF-BETA AND SEVERAL OTHER MARKERS OF INFLAMMATION TO NORMAL VALUES**
  - **IMPROVED BLOOD OXYGENATION AND CLINICAL SCORES**
  - **DECREASED MARKERS OF OXIDATIVE STRESS**

Aeolus Pharmaceuticals, Inc. (OTCQB: AOLS), a biotechnology company developing compounds to protect against fibrosis, inflammation, nerve damage and infection, announced the publication of data confirming the efficacy of AEOL 10150 as a medical countermeasure against sulfur mustard gas inhalation. The data was recently published on-line in the journal Toxicological Sciences and is from studies performed by Brian Day, PhD, Vice Chair of Research at National Jewish Health in collaboration with the University of Colorado and the US Army Medical Institute for Chemical Defense and funded by the CounterACT Program, the National Institutes of Health Office of the Director, and the National Institute of Environmental Health Sciences. Aeolus is a biotechnology company with significant funding from the US government, focused on developing compounds to protect against radiological and chemical threats.

The subject of the publication is a series of studies in a rat model of the acute effects of sulfur mustard gas on survival, breathing and a number of biomarkers for inflammation and fibrosis. In the study rats were exposed to lethal levels of sulfur mustard gas, which resulted in 64 percent of the untreated animals dying from the effects of the sulfur mustard gas within 48 hours of exposure. Survival for rats treated with AEOL 10150 improved dramatically in a dose depend manner. Animals administered AEOL 10150 every four hours, beginning one hour after exposure, had a survival rate of 88 percent at 48 hours. Treatment with AEOL 10150 also:

- Increased blood oxygen saturation by more than 10 percent
- Improved clinical scores of lung health by 57 percent
- Decreased airway casts by 69 percent

- Restored levels of TNF-a, IL-6, KC/GRO (rat analog of human IL-8) and IL-1b, which are elevated significantly after exposure to sulfur mustard gas, to control levels
- Restored levels of TGF-beta1 to control levels

"I am very encouraged by these results indicating that AEOL 10150 will have a substantial impact on survival and preserve lung function in humans exposed to sulfur mustard gas," stated Dr. Brian Day, Vice Chair for Research at National Jewish Health.

"AEOL 10150 significantly improves survival by reducing inflammation and fibrosis in the lungs after exposure to a range of chemical insults and radiation exposure," stated John L. McManus, President and Chief Executive Officer of Aeolus Pharmaceuticals, Inc. "The data presented in this publication provides further support for the potential of AEOL 10150 as a medical countermeasure for sulfur mustard gas exposure, as well as mechanistic insights into how the drug protects the lungs from other insults such as radiation and in clinical applications such as Idiopathic Pulmonary Fibrosis and Radiation and chemotherapy for cancer patients."

The development of AEOL 10150 as a treatment for chemical vesicant and nerve gas exposure is funded by the National Institutes of Health's Countermeasures Against Chemical Threats ("CounterACT") program. Aeolus is also developing AEOL 10150 as a treatment for the lung syndrome of Acute Radiation Syndrome ("Lung-ARS") under a five year, cost plus contract with the Biomedical Advanced Research and Development Authority ("BARDA"), a division of the U.S. Department of Health and Human Services. The contract, worth up to $118.4 million, fully funds the development of AEOL 10150 through approval and licensure by the U.S. FDA. Aeolus believes that much of the chemistry, manufacturing and controls, toxicology and safety data generated under the BARDA contract will be applicable to support a potential approval of AEOL 10150 as a countermeasure against chemical threats, in addition to the Lung-ARS indication.

About Aeolus Pharmaceuticals

Aeolus Pharmaceuticals is developing compounds with demonstrated anti-fibrotic, anti-inflammatory, anti-infective and neuro-protective properties. Its first compound, AEOL 10150, is being developed, with funding from the U.S. Department of Health and Human Services, as a medical countermeasure against chemical and radiological weapons, as well as a treatment for pulmonary fibrosis. Aeolus' strategy is to leverage the substantial investment in toxicology, manufacturing and preclinical and clinical studies of AEOL 10150 made by U.S. government agencies, including the contract with BARDA valued, with options, at up to $118.4 million, to efficiently develop the compound for use in idiopathic pulmonary fibrosis and oncology. For more information, please visit Aeolus's corporate website at www.aolsrx.com

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, and the Company's initiation or potential initiation of a phase 1 study in oncology patients. 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 and 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; competition from other biopharmaceutical companies; and whether BARDA exercises one or more additional options under the its contract with Aeolus. 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, 2015. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

Contact:
John McManus
President and Chief Executive Officer
Aeolus Pharmaceuticals, Inc.
1-(949) 481-9820