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Study Demonstrating Aeolus Compound's Neuroprotection in Parkinson's Disease Published in the Journal of Neuroscience

AEOL 11207, administered orally, crossed the blood-brain barrier

First demonstration of neuroprotection by an oral catalytic antioxidant in the MPTP (Parkinson's) mouse model

LAGUNA NIGUEL, CA, April 26, 2007-- Aeolus Pharmaceuticals, Inc. (OTC Bulletin Board: AOLS.OB) announced today the publication* in the April 18, 2007 issue of the Journal of Neuroscience a study by researchers at the University of Colorado and National Jewish Medical and Research Center demonstrating that the Company's first orally available catalytic antioxidant, AEOL 11207, demonstrated neuroprotection in an animal model of Parkinson's disease ("PD"). The study also showed that the compound has favorable blood-brain barrier permeability.

AEOL 11207 was tested for neuroprotection and oral bio-availability in the mouse MPTP model of Parkinson's disease. AEOL 11207 administered orally protected against MPTP-induced dopamine depletion in the striatum as well as dopaminergic neuronal loss, glutathione depletion, lipid peroxidation, and 3-nitrotyrosine formation in the ventral midbrain. Neuroprotection correlated with brain metalloporphyrin concentrations. The researchers concluded that AEOL 11207 demonstrated neuroprotection in the MPTP mouse model and that the data support further investigation of AEOL 11207 as a potential treatment for PD and other neuro-degenerative diseases.

The Potential for AEOL 11207 in Parkinson's and other Neurodegenerative Diseases

A major hurdle to the treatment of chronic neurodegenerative diseases is the development of efficacious and bioavailable therapeutic agents that permeate the blood-brain barrier. Catalytic removal of reactive species is a highly warranted, yet novel approach for the treatment of age related neurodegenerative diseases such as PD. The major therapeutic approach currently used to alleviate the symptoms of PD involves restoration of dopaminergic neurotransmission using levodopa, dopamine agonists, and inhibitors of monoamine metabolism. However, these therapeutic approaches are often associated with serious adverse effects and fail to provide long-term control of this inexorably progressive disease. Therefore, there is an urgent need for novel classes of therapeutic agents for the treatment of PD. This study provides evidence that a novel lipophilic metalloporphyrin penetrates the BBB following oral administration possesses a long

plasma and brain half-life and provides significant neuroprotection by an antioxidant mechanism in a well-established animal model of parkinsonism. This is the first demonstration of protection by an orally active metal-based catalytic antioxidant in the MPTP model.

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 has shown the ability to scavenge a broad range of reactive oxygen species, or free radicals. As a catalytic antioxidant, AEOL 10150 mimics and thereby amplifies the body's natural enzymatic systems for eliminating these damaging compounds. Because oxygen-derived free radicals are believed to have an important role in the pathogenesis of many diseases, Aeolus' catalytic antioxidants are believed to have a broad range of potential therapeutic uses. The Company intends to develop, or partner for development, AEOL 10150 for protection of healthy cells in cancer radiotherapy, and plans to develop its first oral compound, AEOL 11207, for chronic neurodegenerative diseases.

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' Quarterly Report on Form 10-Q for the quarter ended December 31, 2006. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

*Liang L-P, Huang J, Fulton R, Day BJ, Patel M. An Orally Active Metalloporphyrin Protects against 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine Neurotoxicity *in vivo*. ***J. Neurosci.*** 27(16):4326-4333, 2007
