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**Aeolus Pharmaceuticals, Inc. Announces Publication of  
Results of AEOL 10150 Studies in *Annals of Neurology*.**

*In three separate studies, genetic-animal model of ALS dosed with AEOL 10150 at symptom onset evidenced extension of survival up to 3.0 times compared with untreated controls, and further evidenced a “marked slowing in the rate of disease progression”; study authors conclude that “the catalytic antioxidant AEOL 10150 provides a pronounced therapeutic benefit with onset administration and is, therefore, a promising agent for the treatment of ALS.” Crow et al, Ann Neurol 2005; 58:258-265. Clinical evaluation of AEOL 10150 in patients diagnosed with ALS continues to progress.*

RESEARCH TRIANGLE PARK, N.C., August 4, 2005 /PRNewswire/ -- Aeolus Pharmaceuticals, Inc. (OTC Bulletin Board: AOLS.OB), the developer of a new class of catalytic antioxidant compounds for diseases and disorders of the central nervous system, respiratory system, autoimmune system, and oncology, today announced that results from three separate studies using AEOL 10150 in a well recognized model of amyotrophic lateral sclerosis (ALS or Lou Gehrig’s disease) have been published in the August 2005 edition of the “Annals of Neurology” (John P. Crow, PhD, Noel Y. Calingasan, PhD, Junyu Chen, MA, PhD, Julie Lynch Hill, CVT, M. Flint Beal, MD, *Ann Neurol* 2005;58:258-265).

Three separate studies were conducted using AEOL 10150 in a scientifically recognized and accepted model of ALS (i.e., mice that over-express the human copper zinc superoxide dismutase-1 mutant G93A and that subsequently develop a delayed and progressive motor neuron disease clinically and histopathologically similar to human ALS – “G93A mice”). As noted in the peer-reviewed article, “[m]ost current studies of therapeutics in [G93A] mice to date have involved administration of agents long before onset of symptoms, which cannot currently be accomplished in human ALS patients. We examined the effects of [AEOL 10150] given at symptom onset[.]” Symptom onset in the G93A mice was defined as “the first day of altered hind-limb gait, which typically occurs at 90 days of age.” As further noted by the study authors, “[c]urrently, there are no presymptomatic predictors of ALS. Thus, any attempts to treat ALS can begin only after the onset of symptoms and differential diagnosis; therefore, therapy must be aimed at slowing disease progression.”

In study one, G93A mice were dosed with 5mg/kg AEOL 10150 via intraperitoneal (IP) administration on day one of symptom onset, followed by a daily maintenance dose of 2.5mg/kg/day IP. In study two, the same dosing regimen of AEOL 10150 was used, plus creatine (2% in diet) and rofecoxib (0.005% in diet) (diets containing creatine and rofecoxib were begun at 87 days of age for all mice in study two). In study three, the same dosing regimen

as study one was followed, but subcutaneous administration of AEOL 10150 was utilized. The ratio of survival interval (age of symptom onset compared with age of death) for AEOL 10150-treated versus non-treated control animals for the three studies, respectively, were as follows: 3.0; 2.9; and 2.4. In a fourth study involving the diet described above alone (i.e., without AEOL 10150), the ratio of survival interval was 1.4.

With respect to overall motor activity of the G93A mice, the authors noted that there was a “marked slowing in the rate of disease progression, as well as the absence of specific deficits in the AEOL 10150-treated mice.” As elucidated by the study authors, “untreated control mice almost always experienced development of complete paralysis of one or both hind limbs within 10 to 14 days of symptom onset. By contrast, complete hind-limb paralysis was virtually absent in AEOL 10150-treated mice, despite the fact that they lived up to three times longer after symptom onset. [AEOL 10150]-treated mice retained their ability to walk, run, cage-climb, groom, eat, and drink throughout the period of extended survival. Rather than a steady decline in motor function over time (such as with control mice), [AEOL 10150]-treated mice typically maintained global function and retained the use of hind limbs until a rapid decline at end-stage disease.” The article notes that the only US FDA-approved treatment for ALS is “riluzole, which extends survival of ALS patients by 2 to 3 months, but does not alter the rate of disease progression or preserve muscle strength.”

Histopathology analysis performed on spinal cord tissue from AEOL 10150-treated G93A mice and untreated G93A mice comparatively evidenced that in the AEOL 10150-treated mice, there was a statistically significant increase in motor neuron survival. Immunohistochemistry analysis on the spinal cord tissue from these animals evidenced a decrease in gliosis (a marker for neuronal injury) in the AEOL 10150-treated mice, as well as a decrease in markers of oxidative injury. Based on the results of these analyses, the study authors further concluded that the “neuroprotective effect was related, at least in part, to the novel antioxidant properties of [AEOL 10150].”

In terms of prior studies with other proposed therapeutic agents where extended life span in mice has failed to translate to human ALS patients, the study authors note that the “loss of predictability of the mouse model in these cases could be related, at least in part, to attempts to extrapolate presymptomatic findings in mice to symptomatic treatment in humans.” Thus, unlike prior studies that dose an agent prior to symptom onset, in the current studies, dosing was more aligned with the manner in which dosing would begin in human ALS patients.

Richard P. Burgoon, Jr., Chief Executive Officer of Aeolus stated that, “these published studies in a highly regarded peer-reviewed journal provide us with tremendous confidence as to the clinical prospects for AEOL 10150 in humans. In general, free radical tissue damage caused by oxidative stress, such as that evidenced in ALS, is substantially the same across animal species and we expect and are hopeful that the efficacy results described in the ‘Annals of Neurology’ article will also be evidenced in human efficacy studies of AEOL 10150.”

Based on the animal data and human dose modeling, the predicted efficacious dose of AEOL 10150 in humans is about 12 mg of AEOL 10150 per day. Aeolus is in the process of analyzing the data from its Phase I single dose escalating study of AEOL 10150 in patients diagnosed with ALS. At doses up to 75 mg, there have been no serious adverse events or laboratory abnormalities. The Company believes that there is a wide therapeutic window for AEOL 10150,

based on the current safety data and linear dose pharmacokinetics in animals and humans. The Company is in the process of coordinating initiation of its multiple dose safety study of AEOL 10150 in patients diagnosed with ALS, which is expected to both begin and be completed in the fourth calendar quarter of this year.

*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 small molecule catalytic antioxidant that has shown the ability to scavenge a broad range of reactive oxygen species. 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 Aeolus Pipeline Initiative, begun in the third calendar quarter of this year, is an internal development initiative focused on advancing, in addition to AEOL 10150, several of the most promising catalytic antioxidant compounds from Aeolus' proprietary library of 200 compounds. The initial therapeutic focus areas for the Aeolus Pipeline Initiative are: Parkinson's disease; Autoimmune disorders (arthritis and ulcerative colitis); Chronic Obstructive Lung Disease; Biodefense/Radioprotection; Tumor Suppression/Bone Marrow Transplantation; and Stroke. These therapeutic focus areas were selected based upon preliminary data developed using Aeolus catalytic antioxidant compounds.

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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 June 30, 2005. 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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