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**Protection of Normal Tissue from Radiation-Induced Injury Using AEOL 10150
Presented at the Annual Meeting of the American Society for Therapeutic
Radiology and Oncology**

Potential to Initiate Early-Mid 2006 Efficacy Evaluation of AEOL 10150 as Potential Therapeutic for both Amyotrophic Lateral Sclerosis and/or as a Radiation Therapy Adjunct-Agent.

SAN DIEGO, CA., October 18, 2005 /PRNewswire/ -- Aeolus Pharmaceuticals, Inc. (OTC Bulletin Board: AOLS.OB), a developer of a potential new class of disease-modifying compounds that have evidenced efficacy in pre-clinical models of neurodegenerative and other neurological disorders, as well as radiation oncology, today announced that data developed under the Aeolus Pipeline Initiative using a National Institutes of Health SBIR Grant, and in conjunction with the laboratory of Zeljko Vujaskovic, MD, PhD, Department of Radiation Oncology, Duke University Medical Center, was presented during a symposium at the Annual Meeting of the American Society for Therapeutic Radiology and Oncology on October 17, 2005 in Denver, Co.

The study, entitled, "Long Term Administration of a Small Molecular Weight Catalytic Metalloporphyrin Antioxidant AEOL 10150 Protects Lungs from Radiation-Induced Injury," provided data derived from subcutaneous administration of AEOL 10150 in an animal model of radiation-induced pulmonary injury. The objective of this study was to determine whether long-term administration of AEOL 10150 increases the tolerance of the lung to ionizing radiation by reducing the severity of radiation-induced pulmonary injury.

The data showed that the chronic subcutaneous administration of AEOL 10150 provided a significant protective effect from radiation-induced lung injury, as assessed by breathing frequency, histopathology, and immunohistochemistry. These findings support the concept that AEOL 10150 may be useful as a radioprotective adjunct-agent based on its ability to scavenge free radicals and inhibit inflammation. The data further demonstrated that the chronic administration of AEOL 10150 after exposure to ionizing irradiation might be an effective strategy to prevent/treat radiation induced tissue injury.

"We are very excited about Dr. Vujaskovic's studies and the potential drug-development opportunities that are provided by the data," noted Richard P. Burgoon, Jr., Chief Executive Officer to Aeolus. Mr. Burgoon further noted, "We believe that these data, in conjunction with other data that have been developed by Aeolus, suggest that AEOL 10150 does not interfere with radiation therapy; does not protect the tumor itself; but does protect normal lung tissue surrounding the tumor. The doses and route of administration of AEOL 10150 that provided the

benefits detailed in the study are within the ranges and administration route currently being tested in our Phase 1 evaluation of AEOL 10150 in patients diagnosed with amyotrophic lateral sclerosis, thus potentially providing Aeolus with the opportunity to initiate efficacy evaluation of AEOL 10150 in ALS and/or as an adjunct to radiation therapy, in the first half of 2006. These new data can potentially increase our product development opportunities for AEOL 10150, while decreasing the risks associated with development of a compound for a single disease indication.”

ABOUT RADIATION THERAPY.

Radiation therapy to treat tumors of the chest (lungs, breast, lymphoma, thymoma) and prostate, uses high-energy x-rays. These are either beamed from a machine (external beam radiation) or emitted by radioactive seeds implanted in the prostate (internal radiation), to kill cancer cells. During “external radiation therapy,” the region around the target area receives varying doses of radiation, although the primary target is the tumor, or, in the case of prostate cancer, the prostate gland itself. With specific respect to prostate cancer, “internal radiation therapy” makes use of tiny radioactive seeds, or implants, placed directly into or next to the prostate gland to kill cancerous cells. This is also known as interstitial implantation or brachytherapy.

LIMITATIONS ON RADIATION THERAPY AND THE NEED FOR ADJUNCTS.

There has been a long-recognized need to utilize higher doses of radiation therapy without damaging normal tissue surrounding the affected regions, which is associated with serious clinical morbidity associated with decreased quality of life. Radiation-induced injury to the non-cancerous, or normal, tissue, surrounding the tumor is the major factor limiting effective treatment of these diseases. For example, in prostate cancer, side effects of internal and external radiation therapy include diarrhea, frequent and painful urination, rectal irritation or bleeding, urinary incontinence and impotence. In the chest area, side effects can include difficulty in breathing, shortness of breath, limitations on activities, and scarring of surface tissue. Consequently, less radiation therapy is often used in these settings despite improvements in radiotherapy targeting of the tumor.

An ideal adjunct to radiation therapy would not interfere with the radiation therapy itself, would not protect the cancerous tissue from the radiation therapy, but would protect the normal tissue.

Based on the data provided for Dr. Vujaskovic’s study as well as additional data developed by Aeolus using AEOL 10150, coupled with the fact that AEOL 10150 continues to appear to be safe and well tolerated in the current Phase 1 study of the compound, the Company believes that it may be positioned to initiate efficacy evaluation studies of AEOL 10150 as an adjunct to radiation therapy of the prostate or chest in early to mid 2006, with the current therapeutic preference being prostate cancer.

ABOUT DR. VUJASKOVIC’S STUDY.

Female Fisher 344 rats received single dose irradiation of 28 Gy (radiation therapy, “RT”) to the right hemithorax. Animals were randomly divided into four groups: (1) RT + control vehicle (“PBS”), (2) RT + 1mg/kg/day AEOL 10150, (3) RT + 10mg/kg/day AEOL 10150, and (4) RT + 30mg/kg/day AEOL 10150. AEOL 10150 was administered for 10 weeks after RT with an osmotic pump implanted subcutaneously. Animals were followed up for 20 weeks after RT. Pulmonary function was assessed by monitoring changes in breathing rates. Histopathology was used to measure lung tissue damage and immunohistochemistry was performed to assess inflammation, including macrophage infiltration and activity.

The average breathing rates in the RT groups with AEOL 10150 (10 and 30 mg/kg/day) treatments were significantly lower than that in the group receiving RT + PBS and RT + 1mg AEOL 10150 ($p < 0.05$). The breathing rates increased beginning at 8 weeks and reached a peak at 18 weeks after RT in animals treated with PBS and 1mg/kg/day AEOL 10150. Lung histology at 20 weeks revealed a significant decrease in structural damage in animals receiving 10 and 30 mg/kg/day AEOL 10150 after RT in comparison to RT + PBS group ($p = 0.01$). Immunohistochemistry demonstrated a significant reduction in macrophage presence and activity in animals receiving AEOL 10150 (10 and 30 mg/kg/day, $p = 0.0006$ and 0.016 respectively) after lung irradiation compared to RT + PBS.

In addition to financial support from Aeolus, the research was also supported by a Phase II Small Business Innovation Grant awarded to Aeolus and Dr. Vujaskovic (NIH/NCI R01-CA98452 and 1R-CA96245).

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. On September 7, 2005, the Company released a summary of the results from its Phase I single dose study of AEOL 10150 in patients diagnosed with amyotrophic lateral sclerosis, also known as ALS or Lou Gehrig's disease. AEOL 10150 is a 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.

ABOUT THE AEOLUS PIPELINE INITIATIVE.

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. On September 20, 2005, Aeolus announced preliminary data with respect to the Parkinson's disease portion of the Pipeline Initiative.

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.
