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**NEWS**

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Oct. 1, 2003 – FOR IMMEDIATE RELEASE

## **POSSIBLE BRAIN CANCER-AIR POLLUTION LINK TO BE STUDIED**

### **By Internationally Renowned Neurosurgeon and AQMD Foundation**

LOS ANGELES, CA (Oct. 1, 2003 – The Brain Tumor and Air Pollution Foundation today announced the beginning of a research project led by an internationally renowned neurosurgeon at Cedars-Sinai Medical Center to explore a possible link between brain cancer and air pollution.

The study will be led by Keith Black, M.D., director of the Cedars-Sinai Maxine Dunitz Neurosurgical Institute and Division of Neurosurgery in Los Angeles. The Brain Tumor foundation recently awarded \$559,250 to the research project, with funding from the South Coast Air Quality Management District (AQMD).

The Cedars-Sinai investigation will examine biochemical and pathological changes in brain tissue of laboratory animals exposed to selected toxic air pollutants. These changes will be compared to those in human brain tumor tissue to determine whether air pollution causes changes in tissue associated with the formation of brain cancer.

Factors that led to the study include:

1. Research documenting that certain toxic air pollutants are known to cause cancer in humans;
2. An American Lung Association study that linked particulate pollution to lung cancer; and
3. At least one investigation that found a dramatic increase of brain cancer rates in a metropolitan area, with a possible link to air pollution.

At today's news conference, Dr. Black described the appearance of an increasing incidence in brain tumors in children and young people and noted that some estimates suggest brain cancers and other tumors of children's nervous systems rose by more than 25 percent between 1973 and 1996.

"Brain cancer is the most common cause of cancer death in young people," Black said.

"Among the potentially toxic products of concern are the ultrafine particles that come from diesel engines – particles that would likely be plentiful along freeways, in congested metropolitan areas, and in the immediate vicinity of diesel-burning vehicles," Black said.

Ultrafine particles, including diesel soot and other combustion products, are those less than 0.1 micron in diameter (one micron is one millionth of one meter, or about 1/70<sup>th</sup> the diameter of a human hair). Such particles are able to lodge deep in human lungs and even enter the bloodstream due to their minute size.

"I believe the work we are initiating today will provide answers to important questions about brain cancer risk factors facing our children and future generations," Black concluded.

Los Angeles County Supervisor Michael D. Antonovich, also a member of the AQMD Governing Board as well as chairman of the Brain Tumor and Air Pollution Foundation, joined Dr. Black at today's news conference.

"This study is consistent with AQMD's mission because our agency is dedicated to protecting public health," Antonovich said.

"The state of California has established diesel particulate as a toxic and cancer-causing air pollutant.

"Now, we hope to determine whether brain tumors may be related to air pollution," Antonovich concluded.

In January, AQMD Governing Board Chairman William A. Burke proposed the creation of a Brain Tumor and Air Pollution Foundation. The following month, AQMD's Board approved the establishment of the foundation. It has been chartered as a California non-profit public benefit corporation.

AQMD's Board committed 10 percent of the agency's air pollution penalty revenues from fiscal year 2002-03 -- about \$722,500 -- to fund the foundation for one year. Of that amount, \$559,250 will underwrite the research project led by Black.

The foundation hopes to use the remaining funds to support an additional epidemiology study of brain cancer and air pollution, comparing past trends of both phenomena.

The foundation's Board of Directors include Supervisor Antonovich; Orange County Supervisor and AQMD Board Member James Silva; Hal Bernson, a former AQMD Board Member and former Los Angeles City Councilmember; and Robert Davidson, president and CEO of Los Angeles-based Surface Protection Industries.

Black is the leading expert on the blood-brain barrier and the delivery of chemotherapeutic drugs directly into tumors, holding patents for his method for selective opening of abnormal brain tissue capillaries. The blood-brain barrier refers to the boundary between blood vessels and brain tissue.

AQMD is the air pollution control agency for Orange County and major portions of Los Angeles, San Bernardino and Riverside counties.

Cedars-Sinai Medical Center is one of the largest nonprofit academic medical centers in the Western United States. For the fifth straight two-year period, it has been named Southern California's gold standard in health care in an independent survey. Cedars-Sinai is internationally renowned for its diagnostic and treatment capabilities and its broad spectrum of programs and services, as well as breakthrough in biomedical research and superlative medical education. Named one of the 100 "Most Wired" hospitals in health care, the Medical Center ranks among the top 10 non-university hospitals in the nation for its research activities.

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