

BOARD MEETING DATE: June 6, 2014

AGENDA NO. 17

PROPOSAL: Annual Meeting of the Brain & Lung Tumor and Air Pollution Foundation

SYNOPSIS: This item is to conduct the annual meeting of the Brain & Lung Tumor and Air Pollution Foundation. The Foundation staff will present an annual report detailing the research supported by the Foundation over the past year, the Foundation's plans for the future, and a financial report.

COMMITTEE: No Committee Review

RECOMMENDED ACTIONS:

Receive and file the annual report and ratify the Foundation disbursements described in the annual report.

Barry R. Wallerstein, D.Env.
Executive Officer

KRW:vmr

2014 Annual Report

1. Background

In February 2003 the Board established the Brain Tumor and Air Pollution Foundation. In March 2004 the Foundation amended its Articles of Incorporation to change its name to Brain & Lung Tumor and Air Pollution Foundation (Foundation) and to specify that its purpose is related to the effects of air pollution on brain tumors and lung cancer. The mission of the Foundation is to support research studies on the association between air pollution and brain and lung tumors, as well as research for the development of novel therapeutics for such tumors. To carry out its purpose, the Foundation has funded research projects investigating the links between air pollution and brain and lung

tumors. The dollar amount of the funding provided to date is \$5,722,568. The current projects are described below.

2. Directors and Officers

The Directors of the Foundation are:

Michael D. Antonovich, Chairman
Dennis Yates, Vice Chairman
Josie Gonzales
Dr. Clark Parker

The Foundation's staff is:

Barry Wallerstein, Chief Executive Officer
Denise Whitcher, Secretary
Michael O'Kelly, Treasurer

3. Report on the Foundation's Activities

Previous Research Projects

Previous projects funded by the Foundation have found alterations in brain molecular biochemistry in laboratory animals after exposure to particulate air pollutants. Several alterations in gene expression were found that were similar to those found in human brain tumors. A paper reporting on these results was accepted for publication in 2013. The citation follows.

Gene expression changes in rat brain after short and long exposures to particulate matter in Los Angeles basin air: Comparison with human brain tumors.

Julia Y. Ljubimova, Michael T. Kleinman, Natalya M. Karabalin, Satoshi Inoue, Bindu Konda, Pallavi Gangalum, Janet L. Markman, Alexander V. Ljubimov, and Keith L. Black.

Experimental and Toxicologic Pathology 65(7-8): 1063-1071, 2013.

[<http://www.sciencedirect.com/science/article/pii/S0940299313000547>]

Current Research Projects

In 2013 the Foundation Board accepted \$1,000,000 from the SCAQMD's Health Effects Research Fund, and approved funding for the following project.

Chronic Exposure of Mice to Ambient Particles to Study Cancer-Related Stem Cell Activation in the Brain

Principal Investigator: Keith Black, M.D., Cedars Sinai Medical Center

Approved Funding: \$1,000,000

This project was approved by the Foundation Board in September 2013 as a follow up to previous laboratory studies conducted by Cedars Sinai. In the current study, laboratory animals are exposed to ambient particulate matter, including ultrafine particles, for a period of one year for additional investigation of potential stem cell activation into cancer precursor cells. The elucidation of such molecular pathways involved in survival, proliferation, and differentiation of cancer stem cells may be fundamental information to help develop therapies for brain tumors and to develop potential preventive measures. The research is being done in collaboration with the UC Irvine School of Medicine. The project is scheduled to be completed by the end of 2015.

4. Financial Report

As of February 28, 2014, the Foundation had a cash balance of \$1,060,733. Following is an accounting of the Foundation’s operations since its inception (7/23/03):

Revenue from Operations	
Contributions	\$ 5,722,568
Interest Income	\$ 39,284
<i>Total Revenue from Operations</i>	\$ 5,761,852
Operating Expenses	
Grants Awarded	
-Cedars Sinai	\$ 4,309,250
-USC	\$ 377,967
Corporation Filing Costs	\$ 1,360
Bank charges	\$ 542
Professional fees-audit	\$ 12,000
<i>Total Operating Expenses</i>	\$ 4,701,119
Cash Balance	\$ <u>1,060,733</u>

5. Plans for Upcoming Year

The Foundation will continue monitoring the progress of existing research projects. The Foundation will evaluate new projects and provide funding to the extent that additional funds become available.