

**FOR IMMEDIATE RELEASE**

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## **The Alzheimer's Association Awards Grants to Bay Area Researchers**

*Studies focus on the Alzheimer's link to Down syndrome and risk factors of the "oldest old"*

The Alzheimer's Association is proud to announce the following research grants newly awarded to outstanding investigators in Northern California. These proposals were ranked highest by their peers in an extremely competitive international field and address vital issues in dementia science. The Alzheimer's Association research grants program supports core goals of our mission. Thanks to our generous donors, the Association has become the largest private, nonprofit funder of Alzheimer research. Since awarding its first grants in 1982, the Association has committed over \$250 million to more than 1,700 best-of-field grant proposals.

**William Mobley, M.D., Ph.D., professor of the Department of Neurology and Neurological Sciences at Stanford University**

**Degeneration of Hippocampal Circuits in Down Syndrome: A Role for APP?**

**\$239,901 over three years**

Alzheimer's disease and Down syndrome both involve damage to brain cells that promote hippocampal health. These cells include basal forebrain cholinergic neurons (BFCNs), which have long, thin structures called axons that help transmit chemical messages into the hippocampus. Damage to BFCN axons may lead to memory loss and cognitive decline. In preliminary studies, Dr. Mobley found that Alzheimer's and Down syndrome strongly affected BFCN axons. Specifically, the researchers noticed that certain axons lost the ability to transport nerve growth factor, a protein that promotes nerve cell growth and protects cells from damage. Further research found that this axonal abnormality was associated with increased levels of amyloid precursor protein (APP). APP is the parent molecule of beta-amyloid, a key suspect in Alzheimer's.

For this grant, Dr. Mobley and colleagues will conduct a more extensive study of the role of hippocampal cells in Alzheimer development. The researchers hope to confirm their earlier results with BFCNs. But they will also look for other cell groups that experience Alzheimer-related axonal damage. In addition, they hope to confirm that abnormal APP regulation is linked to this damage and to the subsequent loss of function in the hippocampus. Results of Dr. Mobley's study could lead to new therapies for both Alzheimer's disease and Down syndrome.

**Kristine Yaffe, M.D., professor in the Departments of Psychiatry, Neurology and Epidemiology and associate chair of Research for the Department of Psychiatry at the University of California, San Francisco**

**Predictors of Mild Cognitive Impairment/Dementia Among the Oldest Old Women,**

**\$240,000 over three years**

Although risk factors have been extensively studied in the general population, little is known about the risk factors affecting neurodegeneration in the "oldest old," (defined as individuals age 85 years or older) who are the fastest growing segment of the U.S. population. Dr. Yaffe and



colleagues are studying the risk factors—in addition to age—that influence the risk of MCI and dementia in women who are in the ninth and tenth decades of life. They will use data from an epidemiologic study that has been ongoing for 20 years. The researchers will determine how many of the participants in the study have MCI or dementia and measure which of these participants have specific potential risk factors, such as lack of social support, lack of physical activity, smoking, diabetes, cardiovascular disease, depression and other factors.

Using the results of this study, Dr. Yaffe and colleagues plan to develop a model that can be used to predict which persons are more likely to develop MCI or dementia based on their risk-factor profile. Because some risk factors can be eliminated or modified, this study may help healthcare providers to identify ways to reduce an individual's risk, even if that individual is already very old.

### **ABOUT THE ALZHEIMER'S ASSOCIATION**

The Alzheimer's Association is the leading voluntary health organization in Alzheimer care, support and research. Our mission is to eliminate Alzheimer's disease through the advancement of research; to provide and enhance care and support for all affected; and to reduce the risk of dementia through the promotion of brain health. Our vision is a world without Alzheimer's. With nine offices supporting 58 counties, the Alzheimer's Association, Northern California and Northern Nevada Chapter provides critical services and programs to thousands of Alzheimer's affected-families. For support and information, contact us 24 hours a day, seven days a week at 1-800-272-3900, or visit [www.alz.org/norcal](http://www.alz.org/norcal).