

UCSD's Dr. Leon Thal To Receive Potamkin Prize, One Of Neurosciences' Highest Honors

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The Potamkin Prize, one of the nation's highest honors in neurosciences, will be awarded this year to Leon Thal, M.D., University of California, San Diego (UCSD) School of Medicine and Roger Nitsch, M.D., Neuro Science Center, Zurich, Switzerland. The two will share the \$100,000 prize awarded at the annual meeting of the American Academy of Neurology April 27, 2004 in San Francisco.

"The Potamkin Prize has come to symbolize internationally the premier neuroscience prize for outstanding excellence in clinical or basic research on Alzheimer's disease and the related dementias," said Roger N. Rosenberg, M.D., former president of the American Academy of Neurology and chair of the Potamkin Prize Committee from 1988 to 1999. He added that it is considered by many to be the Nobel Prize in the field of Alzheimer's research.

Thal was selected in recognition of his "outstanding achievements in research of Alzheimer's and related neurodegenerative diseases," according to the American Academy of Neurology.

Chair of the UCSD Department of Neurosciences, Thal directs the Alzheimer's Disease Research Center at UCSD and leads a national consortium of more than 80 centers called the Alzheimer's Disease Cooperative Study, funded with a grant from the National Institute on Aging to test promising drugs for Alzheimer's disease.

One of the world's leading investigators in the development of new therapies for Alzheimer's, Thal is one of only a handful of scientists whose efforts have significantly contributed to the understanding of the cause, prevention and treatment of Alzheimer's disease. With his entire career devoted to the study of aging and dementia, he began aggressively pursuing the cholinergic hypothesis of Alzheimer's disease in the 1970s. After investigations in the laboratory using rat and other models, he translated these studies to humans and subsequently performed clinical trials using choline, lecithin and other precursors of acetylcholine. In 1981, he published his finding that choline chloride failed to improve cognition in Alzheimer's disease. This lack of initial success challenged him to explore alternative and novel ways to treat the cholinergic deficit of Alzheimer's disease using other compounds and routes of administration. The importance of this work is evident by its 1983 publication in the *New England Journal of Medicine*, where Thal provided some of the first evidence that memory could be enhanced in Alzheimer's patients with cholinesterase inhibition.

In the late 1980s, after nearly two decades of intense research activity, his efforts were rewarded with the approval of the first drug (a cholinesterase inhibitor) for the treatment of Alzheimer's disease. In collaboration with Dr. Ken Davis, he organized a landmark clinical trial for evaluating tacrine as a potential treatment. This double-blind, placebo controlled multi-center study was described in a second paper published in the *New England Journal of Medicine* and paved the way for approval of the compound in the United States. This work established his leadership in the testing and development of drugs for Alzheimer's disease.

In his capacity as the principal investigator of the Alzheimer's Disease Cooperative Study (ADCS), Thal has established major, large scale clinical drug trials, as well as validation tests for methods to evaluate the course of Alzheimer's disease.

On the basis of a single study published in the *New England Journal of Medicine* by members of the ADCS, vitamin E has now entered clinical practice for the care of patients with Alzheimer's disease. In another ADCS investigation, estrogen replacement therapy was shown to not be useful for the treatment of mild to moderate Alzheimer's disease in women, despite its previous clinical popularity. The ADCS has also spearheaded the development of concepts such as mild cognitive impairment and has fostered the development of new study designs and instruments useful for clinical trials.

In addition to his extraordinary efforts in clinical research, Thal has done work involving the enhancement of neuronal function and regeneration. He has shown that grafting nerve growth factor cells improved memory in the rat and that grafting ACH producing cells has a similar effect.

In addition to his many published research papers and administrative activities, Thal serves on the editorial board of seven major journals including *Neurobiology of Aging* and *J of Molecular Neuroscience*. He is a frequent reviewer and consultant for the National Institutes of Health (NIH), the National Science Foundation and the Veterans Administration. He serves as a permanent advisor on the FDA anti-dementia assessment team and currently serves on the National Advisory Council on Aging of the National Institute on Aging.

Thal was recently invited to meet with the Chinese government in Beijing along with four others experts in Alzheimer's disease to help the Chinese government develop research and treatment programs for this new century. He has trained dozens of scientists who have gone on to be active researchers in Alzheimer's disease and dementia.

Previous UCSD faculty to receive the Potamkin Prize were Robert D. Terry, M.D., in 1988, the first year the prize was awarded; George G. Glenner, M.D. in 1989 and Robert Katzman, M.D. in 1992.

For more information on the Potamkin Prize, see the following websites: http://www.aan.com/press/media/kits/potamkin_family.pdf http://www.neurofoundation.org/press/potamkin_prize.pdf

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