



Alzheimer's Disease Making Headlines

Research Update

There has been a spate of announcements about promising drug therapies, "new" genes and environmental factors affecting Alzheimer's disease (AD) in the news lately. These are likely to increase as the media becomes more sensitized to the looming disaster that Alzheimer's presents to the world.

We thought it would be useful to bring you up to date on our research agenda. Cure Alzheimer's Fund's research is active in basic genetic research and early stages of drug development, and addresses several key environmental factors.

1. Genetics Our core effort is the Alzheimer's Genome Project™ initiative. Using "whole genome association," the latest gene-testing technology and most advanced statistical techniques, on over 1400 AD families, our objective is to identify all the genes that affect risk for AD. Instead of hunting for novel AD genes one at a time, we are endeavoring to identify as many as possible simultaneously to provide an understanding of which genes among all are the most important in conferring either risk for or protection against AD. Genes identified by other labs will also be tested in our whole genome scan—no viable candidate from any source will be excluded. We'll look at the resulting set of AD genes as a whole, not piecemeal. The biological pathways elucidated by these genes should then provide clear targets for effective research into the pathological underpinnings of the disease and for novel therapies aimed at treating or preventing AD.

2. Drug Development

While not developing drugs *per se* from the basics of genetics, Cure Alzheimer's Fund supports researchers who are exploring promising mechanisms for effective pharmacological intervention as well as looking at the effect that existing, repositioned drugs may have on the disease. An example of the former is the research into "Abeta oligomers" being done collaboratively by several members of our Research Consortium and other invited researchers. This truly "breakthrough research" is making great progress in understanding how clusters of the Abeta 42 molecule interfere with key neuronal synapses in the brain—which more researchers are coming to think signals the real beginning of the disease. Cure Alzheimer's Fund is supporting a second and expanded year of this research; for details see www.curealzfund.org.



*Cure Alzheimer's
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Climbing Mountains to Cure Alzheimer's

shape my life in ways I never imagined. They are memories I hope never to forget. Alzheimer's has robbed my mother and millions of others of their precious memories. That is why I have dedicated my journey back to Everest to raise money for research to find a cure for this devastating disease."

Arnette, 50, began his journey in June when he began his climb to the top of Denali in Alaska, hoping to reach the summit with his team in early July. He will continue on to Shishapangma in Nepal in October, Orizaba in Mexico in January 2008 and Everest in April 2008. In between, he will be climbing in Colorado. His preparations and progress will be included in dispatches from his climbs chronicled by e-mail and on his website, www.alanarnette.com.

An accomplished climber, Arnette began climbing at age of 38. He has scaled Denali, Ama Dablam (Nepal), Cho Oyu (Tibet), Mont Blanc (France) and countless others. He has attempted Everest twice, in 2002 and 2003, before health, weather and his own judgment made him turn back both times at 27,200 feet. ■



"Cure Alzheimer's Fund thanks Alan for his support of our research and his efforts to raise awareness of this devastating disease," said Tim Armour, president of Cure Alzheimer's Fund. "We are honored to be part of Alan's journey to the top of the world and wish him safe and successful travels."

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A second example in this category is Cure Alzheimer's Fund's support for research on an ACAT inhibitor, a drug originally developed for anti-cholesterol use, but which may prove effective in lowering Abeta 42 counts in the brain as well.

A third example of work in the area of drug development is with vaccines. See Dr. David Holtzman's overview of the AD vaccine story in our Quarterly Report Fall 2006, online at www.curealzfund.org in the Press Room under the "Quarterly Report Archive."

3. Environment Two key findings by Cure Alzheimer's Fund researchers speak to the AD environmental issues in the news. One is the value of physical

exercise. One of the earliest papers on this topic was done by Sam Sisodia, Ph.D., who provided us with an overview in our Quarterly Report Spring 2007, archived on our website in the Press Room under the "Quarterly Report Archive."

The second environmental issue is the impact of stroke and traumatic brain injury (TBI) on AD. Researchers have long thought that there is an association between the effect of stroke or TBI and AD, but have been unable to identify the linking mechanism. A recent paper by a group of researchers at Massachusetts General Hospital, including Rudy Tanzi, Ph.D., shows a clear link between a particular enzyme and the debilitating effects of stroke and TBI. That particular

enzyme is also a key factor in the AD story. For more details, please visit our website at www.curealzfund.org, click on the "Press Room" link at the top and look under "Latest News Coverage" for a review of this paper in *Medical News Today* (6/10/07).

Alzheimer's disease is in the news, and Cure Alzheimer's Fund continues to be part of it. We will continue to work on the big stories, true "breakthrough research" that will make a difference in all our lives. Stay tuned. ■

Cure Alzheimer's FUND

Welcomes Two Prominent Scientists



Caleb Finch, Ph.D.

Caleb Finch, Ph.D. joins Scientific Advisory Board

Dr. Finch is a professor of gerontology and biological sciences with adjunct appointments in the Department of Psychology, the Department of Physiology and the Department of Neurology at the University of Southern California. Dr. Finch's major research interest is the study of genomic controls of mammalian development and aging.

He received his undergraduate degree in 1961 from Yale, where he majored in biophysics. He continued his work in cell biology and received his Ph.D. from Rockefeller University in 1969. Dr. Finch has received many of the major awards in biomedical gerontology, including the Robert W. Kleemeier Award of the Gerontological Society of America in 1985, the Sandoz Premier Prize by the International Geriatric Association in 1995, the Irving Wright Award of AFAR and the Research Award of AGE in 1999. He has directed the National Institute on Aging-funded Alzheimer's Disease Research Center since 1984. He is a member of 10 editorial boards.

Dr. Finch has written more than 450 articles. In 1990, he published a major intellectual synthesis of aging, *Longevity, Senescence, and the Genome*. In 1995, Dr. Finch and Robert Rucklefs published *Aging: A Natural History* (Scientific American Library Series) for the general public; translated into five languages. He co-authored with Thomas Kirkwood, *Chance, Development, and Aging* (Oxford: 2000). His latest book, *The Biology of Human Longevity: Inflammation, Nutrition, and Aging in the Evolution of Lifespans*, was published in July 2007.



Sam Gandy, Ph.D.

Sam Gandy, Ph.D. joins Research Consortium

Sam Gandy, M.D., Ph.D., is Sinai Professor of Alzheimer's Disease Research, Professor of Neurology and Psychiatry, and Associate Director of the Mount Sinai Alzheimer's Disease Research Center, at Mount Sinai School of Medicine in New York City, and Chair, National Medical and Scientific Advisory Council of the Alzheimer's Association.

Dr. Gandy is an international expert in the metabolism of the sticky substance called amyloid that clogs the brain in patients with Alzheimer's. In 1989, Gandy and his team discovered the first drugs that could lower formation of amyloid. Dr. Gandy has written more than 150 original papers, chapters and reviews on this topic. Dr. Gandy has received continuous NIH funding for his research on amyloid metabolism since 1986. In work that is being prepared for publication and that forms the basis for his nomination to the Cure Alzheimer's Fund Research Consortium, Dr. Gandy and his colleague, Dr. Michelle Ehrlich (Professor of Neurology, Pediatrics, and Genetics at Mount Sinai School of Medicine) have created a highly novel transgenic mouse that accumulates A β oligomers in the brain and develops memory problems but never develops amyloid "plaques" during its entire lifetime.

Dr. Gandy received his M.D. and Ph.D. at the Medical University of South Carolina. He did his postgraduate work at the Columbia University College of Physicians & Surgeons and Cornell University Medical College. Dr. Gandy completed his post doctorate at The Rockefeller University, where he was appointed assistant professor in the laboratory of Paul Greengard, 2000 Laureate of the Nobel Prize in Physiology or Medicine. Gandy was appointed associate professor of neurology and neurosciences at Cornell University Medical College in 1992. In 1997, he moved to New York University where he served as professor of psychiatry and cell biology until his appointment as Paul C. Brucker, M.D., Professor of Neuroscience at Jefferson Medical College and Director of the Farber Institute for Neurosciences in 2001. In July, 2007, he assumed his current post as Sinai Professor of Alzheimer's Disease Research at the Mount Sinai School of Medicine. ■

Memorial Gifts

A memorial gift is a wonderful way to commemorate a loved one and to help support Alzheimer's disease research. Many people choose to make a lasting donation in memory of a friend or loved one in lieu of flowers. If you have lost a loved one and would like to have memorial donations sent to Cure Alzheimer's Fund, here are a few simple steps to make it happen:

1. Please make checks payable to Cure Alzheimer's Fund, or donate online through our website: www.curealzfund.org
2. Include with the donation:
 - Name of the individual in whose memory the donation is being made;
 - The name and address of where you would like the acknowledgments to be sent (i.e., name of spouse or family member of individual in whose memory the donation is being made);
 - Donor's information (name and address).

When a donation in memory of someone is received, we will immediately send a letter to the family or individual of your choice, acknowledging the thoughtful gift. The amount of the tax-deductible gift is kept confidential.

Financial Report

President Tim Armour reports our progress as follows. Dollars are in cash received and rounded to the nearest \$1,000; no pledges or commitments are included. Please note that the Cure Alzheimer's Fund 2006 tax return, form 990, is now online at www.curealzfund.org.

How much have we raised?

Total funds raised from inception to June 30, 2007	\$ 6,035,000
Total funds raised Year to Date	\$ 1,535,000

How are we putting that money to work?

Total distributed for Research from inception to June 30, 2007	\$ 3,000,000
Total distributed for Research Year to Date	\$ 654,000
Total operating expenses Year to Date	\$ 287,000*

*Provided by the Founders; not paid for by other donors

Reserve before additional research in 2007	\$ 1,792,000
Projected Research Budget for 2007	\$ 6,000,000

Cure Alzheimer's FUND

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www.curealzfund.org

Mission Statement

Fund research with the highest probability of slowing, stopping or reversing Alzheimer's disease by 2016.

Research Consortium

Rudolph E. Tanzi, Ph.D., Chairman, Research Consortium, Harvard Medical School/ Massachusetts General Hospital

Sam Gandy, Ph.D., Mount Sinai School of Medicine

Charles Glabe, Ph.D., University of California at Irvine

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CHARITY DESIGNATION

Cure Alzheimer's Fund® is a "doing business as" name for the Alzheimer's Disease Research Foundation, a 501c3 public charity with federal tax ID # 52-2396428.

New Research Linking Alzheimer's to Stroke Provides New Window on CURE AND TREATMENT

From an article in
Medical News Today
about a paper
recently released
in the journal *Neuron*,
June 7, 2007

Researchers from the MassGeneral Institute for Neurodegenerative Disorders (MGH-MIND) have discovered how brain cells affected by stroke or head injury may cause generation of amyloid-beta protein, which is a key factor in the Alzheimer's disease story.

"We have discovered how a stroke can trigger a series of biochemical events that increase amyloid-beta production in the brain," says Giuseppina Tesco, MD, Ph.D., of the MGH-MIND Genetics and Aging unit, in *Medical News Today*.

This research, partially funded by Cure Alzheimer's Fund, helps make the link between stroke, brain trauma and Alzheimer's disease more transparent. It also emphasizes the importance of head injury and stroke as key environmental factors that accelerate the development of Alzheimer's disease in some patients.

"Our findings also shed new light on how the aged brain becomes more vulnerable to AD, since any insult to the brain—head injury, stroke or the mini-strokes called TIAs—can set off this process and turn up BACE activity," notes Rudolph Tanzi, Ph.D., in *Medical News Today*. Tanzi is the director of the Genetics and Aging unit, senior author of the *Neuron* paper and chairman of Cure Alzheimer's Fund's Research Consortium. BACE is an enzyme, beta-secretase, which is active in the process of creating amyloid-beta from a larger amyloid precursor protein (APP).

For the complete story in *Medical News Today*, go to the Cure Alzheimer's Fund website at www.curealzfund.org, click on the "Press Room" link at the top and look under "Latest News Coverage." ■

Please help us fund research with the highest probability of slowing, stopping or reversing Alzheimer's disease. Donations can be made through our website www.curealzfund.org or sent directly to our office.

For gifts of securities or direct wire transfers, please contact Tim Armour at **877-CURE-ALZ (287-3259)** for further information.

877-CURE-ALZ (287-3259) • www.curealzfund.org

Climbing Mountains to Cure Alzheimer's

The Road Back to Mount Everest and \$100,000 for Research

Embarking on a yearlong challenge that he hopes will end at the top of Mount Everest, mountain climber Alan Arnette not only will take on climbing, but also fund-raising for research and public awareness of Alzheimer's disease.

Arnette knows the impact of Alzheimer's firsthand; his 81-year-old mother suffers from the disease. After seeing its affects on her, he decided to devote his climb to help find a cure for Alzheimer's. His goal is to raise \$100,000 for Cure Alzheimer's Fund.

"Standing at 27,200 feet on the icy slopes of Mount Everest in 2003, I lectured myself between gasps that this was it. No more. I was too old and my body was just not fit for high altitude mountaineering," said the recently retired Arnette on his website. "Those experiences have come to

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Alan Arnette

All donations will go entirely to research at Cure Alzheimer's Fund. Alan's climbing expeditions are self-funded and all overhead costs of Cure Alzheimer's Fund are paid for by the organization's founders.