

## Cure Alzheimer's FUND

Targeting breakthrough research

# MassGeneral Honors Cure Alzheimer's Fund with the "Philanthropic Innovation and Investment" Award

Massachusetts General Hospital and the MassGeneral Institute for Neurodegenerative Disease (MIND) have honored Cure Alzheimer's Fund for its leadership, entrepreneurial philanthropy and investment in research projects that have the highest probability of slowing, stopping or reversing Alzheimer's disease.

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The first annual **Award for Philanthropic Innovation and Investment** was presented to the Fund in early March. This new award seeks to recognize those who have made substantial commitments to visionary work that has the potential to radically change scientific thinking and drug discovery for neurodegenerative diseases.

"When a researcher has a radically new idea to accelerate research, we need to find ways to support that creativity," says Anne Young, Chief of Neurology. "MIND is built on the idea of using collaborative methods to unlock the mysteries of Alzheimer's, Parkinson's, ALS and Huntington's. The work is difficult and cutting edge, so we need committed investors to help us reach our goals. Cure Alzheimer's has completely understood this challenge and has created a new way of pushing forward the research more rapidly to reach a cure.

Cure Alzheimer's is funding the Alzheimer's Genome Project™ Initiative, which is being carried out in MIND's Genetic Aging Research Unit. This project, led by Dr. Rudy Tanzi, aims to identify the full set of Alzheimer's genes by the summer of 2008.

"Cure Alzheimer's approach to philanthropy is exactly what is needed to move research forward quickly in an era of declining research dollars from the federal government," says Dr. Tanzi. "Their ability to raise funds quickly, identify promising projects and most importantly, take calculated risks by investing in novel ideas has been an incredible advantage to the research community. They have transformed their personal experiences with Alzheimer's disease into action that will benefit millions when a cure is found."

"We are extremely proud of this prestigious award from our friends at MassGeneral," says Jeff Morby, co-founder and chairman of Cure Alzheimer's Fund. "Our partnership has made great strides in Alzheimer's research, and we look forward to expanding our work with MassGeneral and continuing on this path of progress. Our Fund is committed to funding the best research, focused on one objective: to find a cure for Alzheimer's.



Left to right: Rudy Tanzi, Anne Young, Jeff Morby, Henry McCance, Tim Armour

# Can Exercise help prevent Alzheimer's disease?

Alzheimer's disease (AD) is the most prevalent dementing disorder of the elderly and affects over 5 million Americans. It is estimated that the numbers of individuals in the U.S. with AD will rise to between 18-20 million by the year 2050. These are staggering figures, and this epidemic will most certainly bankrupt our health care and social service agencies, not to mention the devastating emotional and financial burden being placed on family members and healthcare workers. Sadly, there are neither treatments nor cures for this insidious disease, and present medicines are only palliative; that is, they only treat the symptoms. Disease modification therapies are clearly the focus of large pharma, biotech, and many academics, but there has been little, if any effort on developing strategies for prevention.

Over the past two to three years, a principal focus of our laboratory at the University of Chicago has been to validate, and understand a large number of recent "prospective" epidemiological studies (those that do not suffer from recall bias and other confounding factors associated with "retrospective" studies) suggesting that environmental enrichment, including education, intellectually challenging leisure activities and exercise, diminishes the risk of Alzheimer's disease.

Specifically, studies have revealed a possible protective role of exercise, particularly if it starts early and is maintained. In one study, over 1700 people aged 65 and older, none showing

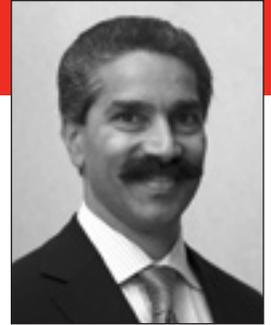
any signs of dementia at the start, were examined over a six-year period. These studies revealed that older people who had increased physical activities when they were middle aged had significantly decreased risk of dementia and Alzheimer's. The authors believe that exercise may improve brain function by boosting blood flow to areas of the brain used for memory. In another study, over 3000 men and women age 65 years or older who participated in the Cardiovascular Health Cognition Study from 1992 to 2000 and who did not have dementia at the onset of the study were assessed 5.4 years later. The most significant finding was that dementia occurred less frequently in those participating in more activities relative to those who participated in fewer activities.

Our strategy has been to test the role of environmental enrichment and exercise on the pathological and genetic alterations in transgenic mice that harbor mutant genes that cause early-onset, familial forms of AD. These transgenic mice develop amyloid deposits throughout the brain, very similar to the pathological lesions seen in patients with AD. At the age of 1 month old, about 15 weeks before they normally show amyloid plaques, we placed groups of the animals in either standard mouse cages or in an enriched environment that consists of a large cage with running wheels, colorful play toys and inanimate objects. After 5 months, we sacrificed both sets of mice and examined their brains. Animals kept in the enriched environment showed a marked reduction in amyloid

deposition and the decrease appeared to be related to exercise; animals that were most active, as determined by their time on the running wheels, had the least amyloid burden. Of course, other aspects of the enrichment, such as increased visual stimuli and social interactions, could still account for the reductions. These studies were published in *Cell*.

Although evidence from mouse models and humans strongly support an important role for exercise in prevention of Alzheimer's pathology and cognitive alterations, the mechanism(s) underlying these phenomenon remain to be clarified. Nonetheless, significant progress has been made in this regard.

As the population ages, finding ways to stave off the debilitating brain degeneration of Alzheimer's disease becomes ever more critical. Our results using mouse models of the condition now provide further support for the idea that "use it or lose it" applies as much to the mind as to the body. We predict that the outcomes of current investigations into the mechanism(s) associated with exercise-mediated alterations in amyloid deposition and behavior will offer new opportunities for developing preventative medicines that will postpone the onset of AD.



*Dr. Sam Sisodia ,  
Professor of Neuroscience,  
University of Chicago  
and Member of Cure  
Alzheimer's Fund  
Research Consortium.*

## Cure Alzheimer's Fund, the Alzheimer's Association, and the Lou Ruvo Brain Institute Announce Joint Prize

In the first ever collaborative prize of its kind, Cure Alzheimer's Fund, the Alzheimer's Association and the Lou Ruvo Brain Institute have come together to award a prize to young researchers who demonstrate the best progress towards a cure. The

prize, named for the late and esteemed Alzheimer's researchers Dr. George Glenner and Dr. Leon Thal will be awarded in 2008. The details of the prize will be available soon on our website: [www.curealzfund.org](http://www.curealzfund.org).

# One person can make a difference

Jessica Lavorgna, age 11, from Tewksbury, NJ is raising money for Cure Alzheimer's Fund for her 6th grade class project. Each student was asked to develop a project that somehow changes or improves our world. While some of Jessica's classmates wrote letters to soldiers in Iraq or volunteered time at a local hospital, Jessica chose to raise money in memory of her grandmother.

"For my project I chose to change the world by raising money for people who have Alzheimer's. Alzheimer's is a disease where you sort of live in the past; you have a great long-term memory but a bad short-term memory. You can't remember your grandkids or friends you recently made at the golf course. I would know, my grandma didn't remember my sister or me. It was sad to know all the times we spent together were washed out of her memory. My grandma died of Alzheimer's. The last couple of months of her life were hard. Whenever I went to see her she wouldn't remember me. I would be just another face walking around the hospital. That's why I want to raise money for research on the cure of Alzheimer's. There is a special

fund that was created to help cure Alzheimer's. The name of the fund is called **Cure Alzheimer's Fund**. All the money that I raise will be donated to that fund and will be used to research the cure for Alzheimer's."

Jessica's maternal grandmother, Olga, passed away in August of last year at age 82. "Jessica was very close to her grandmother so this project is dear to her heart," says Jessica's mother, Cathy Lavorgna. To raise money for her cause, Jessica sold flannel pajama bottoms and is donating her proceeds to Cure Alzheimer's Fund.

Jessica chose Cure Alzheimer's Fund because she liked the Research Roadmap and a plan to develop a cure. In addition to having first hand experience with the disease, she has concerns about the effect Alzheimer's will have in the future:

"Alzheimer's has already affected over 4 million elderly in the US. If no cure is found by 2040 over 14 million people will be affected. . . .Alzheimer's is a big problem in the US if we can't cure it. That's why the Cure Alzheimer's Fund is so important."



*If you are interested in supporting Jessica's fundraising for Cure Alzheimer's Fund and would like to purchase a pair of her plaid pajama bottoms (great for sleeping or lounging), please contact Katie Cutler at [kcutter@curealzfund.org](mailto:kcutter@curealzfund.org) or 877-CURE-ALZ. They are \$30 a pair and available in medium and large.*

For the project, Jessica advertised her pants with flyers she hung around her town and school. She hoped to sell 100 pairs of pants and has already surpassed her goal by 100%. Her sales are over 220 netting a contribution of over \$1200 to Cure Alzheimer's and still growing.

When asked about the success of her project, Jessica and her mom both cite the importance of how one person can make a difference. Her mother summed it up, "one person can do one positive thing and it has a snowball effect and grows and grows, who knows how far it will go."

## "PROGRESS TOWARDS A CURE" PRESENTATIONS IN FLORIDA

Dr. Rudy Tanzi recently presented "Progress Towards a Cure for Alzheimer's Disease" to packed audiences in Jupiter Island and Mountain Lake, FL. His presentation covered what is known about the disease, where current research is, and the most promising paths towards drug discovery and eventually a cure.

*A very special thanks to our wonderful hosts in Jupiter Island, Peter and Missy Crisp.*



*Dr. Rudy Tanzi talking to a group in Mt. Lake, FL*



*L to R: Henry McCance, co-founder Cure Alz. Fund, John Ziegler, Jr. member of the Board of Directors, Martin Memorial Hospital, Dr. Rudy Tanzi, Chair Research Consortium, Cure Alz. Fund, Phyllis Rappaport, co-founder Cure Alz. Fund, Howard M. Robbins, MD, Chief Medical Officer at Martin Memorial Hospital in Stuart, FL.*

## MetLife Foundation Award given to Cure Alzheimer's Researcher

Dr. David Holtzman, a member of Cure Alzheimer's Fund Research Consortium, received the prestigious *MetLife Foundation Award for Medical Research in Alzheimer's Disease*. The MetLife Foundation has supported Alzheimer's disease research and outreach activities for more than 20 years. Dr. Holtzman was honored for his pioneering work in molecular biology examining the early stages of Alzheimer's disease.



Dr. David Holtzman

In addition to his role at Cure Alzheimer's Fund, Dr. Holtzman is the Andrew B. and Gretchen P. Jones Professor of Neurology and Molecular Biology & Pharmacology at Washington University School of Medicine in St. Louis, and Head of the Department of Neurology. He is associate director of the Alzheimer's Disease Research Center at Washington University. Dr. Holtzman has also been honored with the Potamkin Prize from the American Academy of Neurology, the MERIT award from the National Institute on Aging, and the Zenith Award from the Alzheimer's Association.

Currently Cure Alzheimer's Fund is supporting his research project titled *The Role of Synaptic Activity and Neurotransmitter Modulation in the Dynamic Regulation of Interstitial Fluid Abeta and Oligomer Formation*.

### Financial Report

President Tim Armour reports our progress as follows. Dollars are in cash received and are 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, will be online May 15th at [www.curealzfund.org](http://www.curealzfund.org).

#### How much have we raised?

Total funds raised from inception to March 30, 2007:	\$ 5,064,000	100%
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#### How are we putting that money to work?

Total distributed for Research from inception to March 30, 2007	\$ 2,550,000	50%
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Total operating expenses from inception to March 30, 2007	\$ 620,000*	12%
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\*Provided by the Founders; not paid for by other donors

Reserve before additional research in 2007	\$ 1,894,000	38%
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<b>Projected Research Budget for 2007</b>	<b>\$ 6,000,000</b>	
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## Dr. Rudolph Tanzi Honored as Top Researcher by the Alzheimer's Association

### 2007 Ronald and Nancy Reagan Award Recipient

In recognition of his groundbreaking genetic research and outstanding leadership and commitment to finding a cure for Alzheimer's disease, Dr. Rudolph Tanzi received the 2007 Ronald and Nancy Reagan Award at the Alzheimer's Association's National Gala in Washington DC on March 27, 2007.

"I am honored and extremely proud to receive this prestigious award," said Dr. Tanzi, who serves as chairman of Cure Alzheimer's Fund Research Consortium and is the director of the Genetics and Aging Research Unit of MassGeneral Institute of Neurodegenerative Diseases. "President Reagan and the First Lady brought Alzheimer's and the devastation of the disease into the forefront of public perception. Their commitment to research to find a cure paved the path for all researchers, including me. To receive this award in their honor is a real tribute."

"With the advances in technology today, this is an exciting time for Alzheimer's research. We are on the cusp of making serious breakthroughs," said Tanzi. "As we become more successful at identifying the genes that contribute to risk for Alzheimer's, we'll have more research opportunities to better understand the role of those genes in causing the disease which will lead us more quickly to finding a potential cure."

Also honored at the National Gala were Sens. Hillary Rodham Clinton (D-N.Y.) and Susan Collins (R-Maine), who received the Chairman's Leadership Award, and Princess Yasmin Aga Khan, daughter of the late Rita Hayworth, who received the 2007 Sargent and Eunice Shriver Profiles in Dignity Award.

# Congressman Ed Markey Praises Cure Alzheimer's Fund for Research Efforts

## Cure Alzheimer's Fund Researcher, Dr. Rudy Tanzi, Briefs Congress on Progress of Fast Track Effort to Map Genes for Alzheimer's Disease

Dr. Rudy Tanzi presented to the Bipartisan, Bicameral Congressional Task Force on Alzheimer's disease. "There are 16 million baby boomers predicted to contract this devastating disease. While significant progress has been made, the importance of finding a cure and understanding this disease is more critical than ever," Dr. Tanzi explained on Capital Hill, March 27th.

Dr. Tanzi reported to the Task Force, "It's no surprise that as baby boomers move into the age of highest risk, our nation will have more people growing older and more people living longer, and will result in a burgeoning public health crisis". He continued, "With the innovative developments in technology, knowledge of the humane genome and the extensive data on AD-related genes, we are on the cusp of a rare 'science moment,' when intensive research could yield a real breakthrough for an Alzheimer's cure."

At the briefing Rep. Ed Markey (D-MA), co-chair of the Task Force, praised Cure Alzheimer's Fund for its support of groundbreaking Alzheimer's genome research and its role in the public-private partnership to find a cure for this devastating disease.

Rep. Markey said, "Since 2003 the NIH budget has been cut by 13% in terms of purchasing power. This cut has threatened the scientific community's ability to realize the investments made by previous generations of scientists and has slowed progress toward a cure for Alzheimer's. Especially in the absence of adequate federal funding, foundations like Cure Alzheimer's Fund are critical to continuing the pursuit for a cure."

Dr. Tanzi and Rep. Markey also addressed the policy and privacy implications of genetic testing and the importance of safeguards against genetic discrimination such as the Genetic Information Nondiscrimination Act (GINA). This law prevents employers and others from collecting genetic data on employees, and prevents insurers denying coverage or charging higher premiums based on a genetic disposition to a disease.



Also serving as chairs of the Task Force are Senator Hilary Rodham Clinton (D-NY), Senator Susan Collins (R-ME) and Representative Chris Smith (R-NJ).

In concluding the briefing Dr. Tanzi summarized, "This is an auspicious time for accelerating Alzheimer's disease research. The commitment of Cure Alzheimer's Fund and other private and public organizations has been critical to scientific progress, and their continued support will be of the utmost importance to win the battle against this devastating disease. Someday in the future, we hope to have a test for Alzheimer's. People won't wait for the disease; they'll fight first," said Dr. Tanzi. "But right now, we need to focus and make sure we have the funding from both the private and public sectors to get us there."

*Rep. Ed Markey (D-MA), Phyllis Rappaport, Jerry Rappaport, Jeff Morby and Rudy Tanzi at the Cure Alzheimer's Congressional briefing March 27, 2007.*

### **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  
Charles Glabe, Ph.D., University of California at Irvine  
David Michael Holtzman, M.D., Washington University, St. Louis  
M. Ilyas Kamboh, Ph.D., University of Pittsburgh  
Virginia M.-Y. Lee, Ph.D., MBA, University of Pennsylvania  
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Tim Armour, Wellesley Hills, MA, President, Cure Alzheimer's Fund  
\*Founder

### **Administration**

Tim Armour, President  
Katie Cutler, Director of Operations  
Catherine Cotton, Manager, Fundraising Programs  
John Epeneter, Controller  
Karen Robertson, Accountant

### **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.

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](http://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.

**NEW ADDRESS!**

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