



# Brain Aging

## Bulletin

Institute for Brain Aging & Dementia  
University of California, Irvine

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*Water aerobic exercisers in a senior community*

### Simple Guidelines to Lower your Risk of Alzheimer's

By: Erica Smith

For Dr. Kate Nichol, a researcher at the Institute for Brain Aging and Dementia (IBAD), Alzheimer's research is not only her job, it's personal: her father was diagnosed with Alzheimer's Disease (AD) at age 50. "Although sometimes he doesn't remember my name, I know he recognizes me and loves me because when I walk in the room, he breaks into a big grin and greets me the way he always treated family."

When asked whether she fears developing AD, she points out his risk factors and actions she has taken to promote healthy aging, "My dad had multiple head injuries that increased his likelihood of developing dementia, but on the other hand, I do not have the ApoE4 allele, and I exercise regularly, eat healthy foods, and stay active socially and mentally, so I'm in a low-risk group."

Along with other researchers at the IBAD at the University of California,

Irvine, Kate has access to the latest research articles and lectures from world experts in the field of brain aging. Yet surrounded by laboratory equipment and stacks of scientific articles, the simple preventative measures she mentioned are currently the most effective ways to avoid, delay, or slow the progression of AD. Until researchers find a vaccine or cure for AD, everyone has ready access to the best treatment available – living a healthy lifestyle.

#### WHAT IS A RISK FACTOR?

Doctors can identify many risk factors for Alzheimer's Disease by determining which conditions often coexist with the disease. For instance, the largest risk factor for AD is age: the older a person gets, the higher their likelihood of developing AD. Fewer than 5% of people aged 65-75 have AD, but the risk increases with age to almost 50% incidence after age 85. However, risk factors do not guarantee whether a specific person

*"Simple Guidelines" Cont. on Page 4*



Learn tips for Healthy Brain Aging on page 4

## What's New at the Institute



*Andrea Wasserman  
Administrator*

A long-time staff member, and the former lab manager for the Institute, **Andrea Wasserman** has taken on an important leadership role as the new Program Administrator. She brings new energy as we continue to pursue exciting research opportunities and expand the program.

Additionally, our former Associate Director and Program Administrator of the Institute, **Ruth Mulnard, R.N., D.N.Sc., FAAN**, was recently appointed to a faculty position in the new UCI Program for Nursing Science. She was also recently invited to be part of the distinguished Fellows of the American Academy of Nursing (FAAN). We are thrilled about her new appointment and achievements, and are pleased to have her continue with the Institute as the Director for Clinical Trials (see page 9 for clinical trial opportunities).



*Ruth Mulnard, R.N.,  
D.N.Sc., FAAN*



*Peter Knaup  
Patient Care Coordinator*     *Tommy Saing  
Tissue Repository Staff*     *Bobby Dahlin  
Tissue Repository Staff*

Some of you may have already had the opportunity to meet and welcome our newest staff members.

In the front office of the Gottschalk Medical Plaza we are pleased to have Peter Knaup join us as a patient care coordinator, helping families in our assessment center and helping to coordinate the Successful Aging Program.

In the Tissue Repository, we have Tommy Saing and Bobby Dahlin, who work directly with families at the time of brain autopsy, and who are a critical part of our Brain Donation Program, which operates 24 hours a day, 7 days a week. Families participating in the Brain Donation Program can call the 24-hour pager, and either Tommy or Bobby can assist during the critical time of need to help make the experience as problem-free as possible.

## Fostering a National Dialogue on Alzheimer's Disease and Healthy Brain Aging: The MetLife Project

By Ruth A. Mulnard, RN, DNSc, FAAN

Our Alzheimer's Center at UCI was proud to be a part of a collaborative project with three other federally-funded Alzheimer's Centers to create and produce two professional videos that are meant to serve as a call to action for the community. The videos clearly convey the message to become engaged in research which can move the diagnosis, treatment, and ultimately, prevention of late life cognitive disorders forward. This project was generously supported by the Metropolitan Life Foundation as a grant to the Alzheimer's Center at the University of Pennsylvania. Working beside the University of Pennsylvania (Drs. John Trojanowski and Jason Karlawish) were leaders from three other centers at Washington University (Drs. John Morris and Tom Meuser), the Mayo Clinic (Drs. Ron Petersen and Glenn Smith), and the University of California Irvine (Drs. Carl Cotman and Ruth Mulnard).

These leaders from each of the four Centers were challenged to dialogue with their respective communities on what we know and what we do not know about the causes

and treatment of Alzheimer's disease, and what individuals can do to minimize the risk of dementia and maximize healthy brain aging. Each Center convened a focus group of volunteers to generate these discussions. Specifically, the goal was to get the word out that the road to discovering what truly will insure a lifetime of brain health will go only as far as Americans are willing to take it, through their participation in research. As a result of this fruitful collaboration across the four Centers, two meaningful and valuable community educational videos were produced and distributed to all 29 Alzheimer's Centers across the nation. The two videos were appropriately named: "Shining a Light on Alzheimer's Disease," and "Healthy Brain Aging." These educational modules are aimed to build public awareness of key issues concerning Alzheimer's disease and mild cognitive impairment, as well as the issue of healthy brain aging. For free copies of these videos, please contact the ADEAR (Alzheimer's Disease Education and Referral) Center at the National Institute on Aging at <http://www.nia.nih.gov/alzheimers>.



# From Drugstore to Bench to Human Research: The Nicotinamide Story

By Ruth Mulnard, R.N., D.N.Sc., FAAN



**N**icotinamide (also known as Niacinamide, the biologically active form of vitamin B3) is a safe and readily available supplement which has been commercially available in drug stores and vitamin shops for many years. While many individuals have taken vitamin B3 as a general nutritional supplement, this generally safe and well tolerated supplement has actually been studied in clinical trials over the past forty years with beneficial effects in treating complications of diabetes. Nicotinamide (NA) is one of a class of compounds called histone deacetylase inhibitors (HDAC) which have been shown to be neuroprotective (protect the central nervous system) in experimental models of Huntington's disease (HD), Parkinson's disease, spinal and bulbar muscular atrophy, amyotrophic lateral sclerosis (ALS) and experimental autoimmune encephalomyelitis. Importantly, clinical trials are underway to evaluate the efficacy of HDAC inhibitors in patients with HD and ALS.

Surprisingly, despite clear evidence

that HDAC inhibitors are neuroprotective, prior to last year, there had been no studies to date using HDAC inhibitors in animal models of Alzheimer's disease (AD). Dr. Steven Schreiber, Professor and Chair of the Department of Neurology, in collaboration with Dr. Frank LaFerla (co-director of the Institute for Brain Aging and Dementia) studied the efficacy of HDAC inhibitors in preventing cognitive decline and AD pathology in the triple transgenic mouse model of AD (3xTg-AD mice). This is the unique mouse model pioneered by Dr. LaFerla's laboratory here at UCI. In their studies, transgenic mice receiving NA (vitamin B3 or niacinamide) for 3 months showed significant improvements in cognitive tasks that reflected activation of two key brain areas – the hippocampus and the amygdala. This improvement in cognition was associated with a considerable decrease in tau (one of the abnormally processed proteins commonly found in the brains of individuals with AD). Yet, there was little if any change in the amyloid beta

protein in the brains of these mice.

As NA is clearly effective in AD transgenic mice, and is a safe and readily available oral supplement, there was compelling rationale to move to clinical trials of NA in patients with AD. Dr. Schreiber was successful in getting the National Alzheimer's Association to fund a pilot clinical trial which is now underway here at UCI. The study is being done in collaboration with Dr. Mulnard who directs the clinical trial program for the Institute for Brain Aging and Dementia. This is a randomized, double-blind, placebo-controlled Phase II trial, with goals of examining tolerance, safety and early efficacy. We are now recruiting men and women 50 years of age or older who have mild to moderate AD who are interested in this study.

Use of approved treatments for AD is allowed with stabilized dosing. Eligible participants will be randomized to take the NA preparation or placebo twice daily for 24 weeks, with seven visits to the clinic required over the study period. We are hoping to find that NA ameliorates the cognitive decline and decreases the level of tau protein in patients diagnosed with AD. The results of this study could serve as the basis of a future large-scale multi-center study of NA for the treatment of mild to moderate AD.



**For interest in participation, please call our Clinical Trials recruitment line at (949) 824-5733.**

*“Simple Guidelines” Cont. from Page 1*

will develop the disease or remain healthy. However, research does show that most people in low-risk groups tend to develop AD later in life or not at all compared to people in high risk groups.

### **Diabetes is a Risk Factor for Alzheimer’s**

Diabetes increases risk of AD by up to 63%. This correlation has alarming consequences for the two-thirds of the American population that is overweight, half of whom are overweight enough to be considered obese. Excess weight adds strain to the cardiovascular system, secretes hormones and inflammatory signals that put the body into chronic stress mode, and is the major cause of adult onset diabetes. The diabetes-AD connection is another good reason to maintain a healthy weight and has also revealed tantalizing research avenues into the mechanisms of AD.

Diabetes is basically a disorder of insulin signaling. Insulin tells the body and brain cells to take in sugars

from the blood to fuel cellular processes, thus regulating metabolism. This means that temporary increases in blood sugar paired with bursts of insulin can increase muscle and brain performance. But if insulin levels remain high over long periods of time, the cells stop responding to insulin, a state called insulin resistance and a big step towards

developing Type 2 Diabetes. Cells that do not respond properly to insulin do not receive the glucose they need to function. Neurons in particular are especially at risk because they use insulin not only for metabolism but also as an important modulator of memory formation.

Furthermore, insulin resembles many important health- and memory-promoting signals in the brain, called neurotrophins. It binds to similar receptors, uses the same signals inside the cell, and has many of the same effects as neurotrophins to help repair cell damage, increase memory strength, and prevent cell death. Dr. Carl Cotman at IBAD has suggested that developing insulin resistance may also induce “neurotrophin

**“Participation in physical exercise can reduce risk of developing AD and can delay cognitive decline in people who already have the disease”**

# **Healthy Brain Aging**

**These simple strategies may sound like advice from your mother, but research shows that each of them is effective in reducing your risk of developing Alzheimer’s and can help slow its progression.**

### **Eat your fruits and vegetables**

*Your brain uses antioxidants and vitamins to repair damage.*

### **Wear your seatbelt**

*Head injuries increase the risk of dementia and accelerate signs of brain aging.*

### **Watch your weight**

*Excess weight and diabetes put strain on the whole body, speeding brain aging and increasing risk of dementia.*

### **Be active every day**

*Physical exercise improves your cardiovascular health and causes your brain to produce helpful signals like BDNF.*

### **Keep learning and reading**

*Mental exercise challenges your brain to form new connections and strengthen existing ones.*

### **Stay involved socially**

*Social support and interaction enrich your life and challenge your brain to function on multiple levels.*

resistance” in the brain. A current study at the Institute is identifying how the molecular changes in neuronal insulin resistance can leave neurons vulnerable to damage from Alzheimer’s disease.

For the average healthy person, this research emphasizes the importance of limiting sweets and getting regular exercise to stay healthy. For people with prediabetes or diabetes, the risk of developing dementia is much higher, so they should take care to manage their blood glucose and insulin levels and

maintain a healthy weight with diet and especially with exercise.

## REDUCING YOUR RISK

Among the many ways to reduce your risk of dementia, physical exercise is key (see box on healthy brain aging for more information). Participation in physical exercise can reduce risk of developing AD and can delay cognitive decline in people who already have the disease. Moderate, regular exercise has been shown to improve cardiovascular fitness, stabilize metabolism, reduce inflammatory signals, increase

## Biology of Alzheimer’s Disease

Most people recognize AD as the memory disorder that progresses with age. From a biological point of view, there are many brain processes gone awry. Here are some of the most striking changes in Alzheimer’s:

**Synapse Loss:** Synapses are the connections across which neurons “talk,” and they are strengthened with learning and practice. Brains with Alzheimer’s have fewer synapses.

**Decreased neuronal metabolism:** Cortical neurons use less glucose, the essential fuel for brain cells to work.

**Amyloid Plaques accumulate:** Proteins that function normally in some people begin to mis-fold and clump together into the “plaques” characteristic of AD.

**Neurofibrillary Tangles form:** Normal structural proteins called tau are modified into toxic forms, leading to dysregulation of levels of normal tau.

the production of new neurons, and increase levels of neurotrophins such as Brain-Derived Neurotrophic Factor (BDNF). BDNF in turn improves mood, learning and memory. New findings at the Institute even show that regular exercise helped mouse models of AD reduce the number of Alzheimer’s plaques in the brain!

You don’t need to be in marathon shape to derive health benefits from exercise. Even small amounts of exercise — walking at a moderate pace for half an hour just three times a week

— has been shown to decrease blood pressure. Walking more often or for longer, or exercising more intensely, will return greater health benefits. Sadly, many people fear that they have already missed all opportunities for a healthy lifestyle, or that a disease diagnosis means an end to caring for oneself. In reality, every meal is an opportunity to fuel the brain and body to meet the challenges of living. Every walk or workout can actually help improve the functioning of body and mind. IBAD research shows that the brain in particular benefits from regular physical exercise throughout life, showing that it is never too late to take care of your mind and body!

## Join the Successful Aging Program

If you are a healthy adult age 65 or older, free of cognitive impairment, and interested in joining our Successful Aging Program, we could use your help.

For more information, please call (949) 824-2382

Help us find answers.



*Chair Aerobics class at Regents Point*



# RESEARCH OPPORTUNITIES:

*Help Us Find the Answers...*

*Research studies can be meaningful and valuable in the understanding of diseases from prevention to treatment. For more information, please call the study coordinators listed below.*



## **Cognitive neuroscience of aging research: EEG and fMRI studies**

Volunteers are needed for studies that investigate brain activity and memory. In this project, you will have your brain activity monitored either through the recording of electrical activity (EEG) or through an imaging method called functional magnetic resonance imaging (fMRI) while performing simple tasks. Studies involve either one or two visits to the laboratory, each taking between 1- 2½ hours. You will be reimbursed for travel expenses and receive compensation for your participation.

In order to take part you must be:

- Be between 63-77 or 85-99 years of age
- Be right-handed
- Be a fluent English speaker
- Be in good general health

If you would like to take part, or receive further information about the study, please phone or email us at Phone: 949-824-8861 or eMail: [fnim@uci.edu](mailto:fnim@uci.edu)

## **Are you a caregiver or a non-caregiver female over 65?**

The Emotion and Health research laboratory at the University of California, Irvine is conducting a study to examine caregiver's physiological and psychological reactions to stress. The study has two components: a laboratory session and a nightly phone interview. During the laboratory session, you will be asked to fill out some psychological questionnaires and complete some problem-solving activities. In addition, a trained nurse will take saliva and blood samples to measure the release of certain hormones and aspects of the immune system. The second component of the study will involve eight consecutive nightly phone interviews, each lasting approximately fifteen minutes. The investigators in this project are interested in recruiting two groups of participants: caregivers of spouses with dementia and non-caregivers.

To be eligible to participate you must be:

- A caregiver for a spouse with MCI or dementia
- Over the age of 65

If you are interested in participating in this study, please contact the Emotion and Health research laboratory. They can be reached at (949) 824-3991.

## **Research study: Older adult relationships and safety survey**

The UCI Program in Geriatrics is conducting a study that will develop a new survey to help understand how older Americans are treated by those they hold in a position of trust. The study will be conducted as a home visit, and will consist of an interview and a questionnaire. If you participate, you will be paid \$30.00. The specific criteria used to determine eligibility are:

- At least age 65 or older
- Older adults with memory problems are especially welcome to participate with a family member if needed
- English-speaking non-Hispanic Whites
- English or Spanish-speaking Mexicans or Mexican Americans
- Live in a community, rather than in an institution

If you think you may be interested in becoming a participant in this study, please contact a research assistant: Maria Corona at 714-456-8195

## **fMRI study measuring brain structure and memory performance in normal older adults and MCI**

In our lab, we are studying the relationship between changes in brain structures as they relate to memory performance. One way that we can look at changes in these brain structures is to observe changes in memory that occur in normal aging as well as those changes associated with disorders of aging, such as mild cognitive impairment and Alzheimer's Disease. We use fMRI (functional magnetic resonance imaging) to observe changes in activity in the brain while individuals perform memory tasks. By comparing the changes in activity to memory performance, we can observe which areas of the brain are involved in different kinds of memory operations.

- Who: Successful aging program participants  
Mild cognitive impairment diagnosis  
Questionable cognitive impairment
- Time: 2 visits, each 1-2 hours each
- Risk: Minimal, but we will conduct a thorough screening for MRI compatibility

Compensation for the first session is \$15 per hour. Compensation for the second session is \$25 per hour. Both sessions are located on the UCI main campus. If you are interested in participating or have any questions, please call the Stark Lab at (949) 824-4230 and ask for Shauna Stark.

# CLINICAL TRIALS

## STUDIES SEEKING PARTICIPANTS

FOR MORE INFORMATION, PLEASE CONTACT US AT  
(949) 824-5733 OR VISIT OUR WEBSITE AT:  
[www.alz.uci.edu/clinicaltrials](http://www.alz.uci.edu/clinicaltrials)

### Home Based Assessment (HBA)

A randomized, non-treatment study designed to find out more about information collection methods for Alzheimer's disease prevention studies.

**This study is recruiting participants who:**

- Do not have a diagnosis of dementia
- Are age 75 or older
- Are independently-living adults
- Have minimal computer skills or a willingness to learn
- Are willing to take multi-vitamins twice a day as provided by the study
- This is a 4-year study. There are 18 visits, at least two of which will occur on the UC Irvine campus; the other 16 visits will occur at your home. Visits are every three months

### RAGE Inhibitor (RI)

A randomized, placebo-controlled, 21-month study with 18 months of study medication.

RAGE is known to be involved in amyloid plaque formation, and studies have suggested that it is intimately involved in the pathogenesis of AD.

**This study is recruiting participants who:**

- Have a diagnosis of probable AD
- Are 50 years of age or older
- Have a study partner – friend or relative who can accompany the participant to all clinic visits and answer questions about him/her
- There are 11 total visits to the UC Irvine campus. Visits are every 2-6 weeks

### Nicotinamide (NA)

A double-blind, placebo-controlled 7-month study to find out more about Nicotinamide and its effects on Alzheimer's disease progression.

Nicotinamide (NA) is a class of drugs known as a HDAC inhibitor, a dietary supplement that is being studied to determine whether chronic use is safe and effective in improving brain function in subjects with mild to moderate Alzheimer's disease (AD).

**This study is recruiting participants who:**

- Have a diagnosis of probable AD
- Are 50 years of age or older
- Have a study partner – friend or relative who can accompany the participant to all clinic visits and answer questions about him/her
- There are 7 total visits to the UC Irvine campus. Visits are every 2-6 weeks

## Alzheimer's Disease Research Center of California

at the UCI Institute for Brain Aging & Dementia  
1100 Gottschalk Medical Plaza  
Irvine, CA 92697-4285

For information and appointments please call: (949) 824-2382

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*Education Coordinator*

# CONFERENCE 2007: From Disease to Drama

By Tatiana Jimenez and Shirley Sirivong



*Dr. James Galvin speaks on Clinical Trials*

Located at the Irvine Hilton, the 2007 Alzheimer's Disease Research Conference, hosted by the Institute for Brain Aging and Dementia, in conjunction with the Alzheimer's Association of Orange County and the Alzheimer's Family Services Center (formally ADSOC) focused on *Challenges and Opportunities Through the Stages*. Presenters enlightened attendees with fascinating findings, the rich history of the disease, and the discoveries and advances in research made over the past 100 years.

In efforts to shake things up, this year's conference showed its artistic side by way of *Augusta's File* a play performed by the Master's Repertory Group that reenacted the discovery of Alzheimer's disease. The production was educational yet dramatic, and expertly executed. As Dr. Cordula Dick-Muehlke stated, we learned that "Dr. Alzheimer didn't just discover Alzheimer's disease, he discovered humane, dignified personal care." The play was the perfect accompaniment to Dr. Carl Cotman's historical re-cap of the discovery of Alzheimer's disease and a glimpse into the life of Dr. Alois Alzheimer. Following the play was a panel made up of local experts (Drs. Ron Kim, Arnold Starr, and Bonnie Olsen), who shared with us their perspectives on the past 100 years since the discovery of the disease and how much forward movement there has been in research and yet how far we are from knowing all of the answers.



*Drs. Kim and Olsen present on a panel discussion*

The two-days were filled with lectures from experts in the field that traveled from all over the United States to share their research findings. Dr. James Galvin from Washington University shared with the audience the importance of early detection and accurate screening. This

With almost 400 people in attendance, this year's conference was a crowd-drawing event that provided information as well as entertainment.

Located at the

could make a tremendous difference in early treatment approaches and recognizing the earliest signs of dementia. Dr. Robert Knight from USC demonstrated that in order to understand and ameliorate caregiver stress, we should keep in mind cultural and ethnic differences. These differences could lead to varied responses from stress and changed outcomes (i.e. some groups may be more prone to hypertension that could rapidly worsen from caregiver stress). Dr. Matthew Rizzo from the University of Iowa opened on the second day, with very important messages regarding driver safety and how dementia can impair and affect judgment and reaction time. His compelling lecture complimented a talk given by Camille Fitzpatrick, N.P. from UC Irvine and Patti Horsley, M.P.H., of the Older CA Traffic Safety Task Force, who shared information about the California's efforts to promote driver safety. This proved to be an important topic, even amongst early stage individuals, as shown in an Early Stage Dementia Panel, led by Dr. Cordula Dick-Muehlke.

Another well-received speaker was Dr. Paul Aisen from Georgetown University, who lead a captivating presentation about the importance of Clinical Trials, their outcomes, and the promises that lay ahead from upcoming studies. His presentation was filled with information and hope about a cure and solutions that may be just around the corner. That message of hope, was reinforced by Dr. Sherry Willis from the University of Pennsylvania, who gave some insight into ways to improve our memory and cognitive boosts.

Additionally, we had several experts from UCI, who boasted their own local accomplishments and findings. Dr. Steve Cramer's expertise on plasticity of the brain and the high incidence of mini-strokes in dementia, argues that the brain can become more symmetrical with age, lending to the idea that brain function can be shared amongst both sides of the brain when in need. Dr. Larry Cahill who studies gender and memory differences between the sexes, shared how brain responses can differ in males and females. In Dr. Ruth Mulnard's segment, the audience was



*Dr. Carl Cotman discusses the importance of driver safety with Dr. Matthew Rizzo*



“Conference 2007” Cont. from Page 8

asked to participate and give feedback on the videos, *Shining a Light on Alzheimer’s Disease and Healthy Brain Aging*, sponsored by the MetLife foundation, which showcased current nationwide research frontiers and the steps that need to be taken to find a cure, and how everyone can help make a difference. (Read more, pg. 2)

The UCI Institute for Brain Aging and Dementia is planning the 2008 AD Research Conference, so please keep visiting our website [www.alz.uci.edu](http://www.alz.uci.edu) for the most current information including the dates and topics for next year! Thank you again to all of our sponsors, speakers and attendees for joining us at the 2007 Regional Alzheimer’s Disease Research Conference!



## Physical, Social, and Mental Activities

### Investigating Cognitive Benefits

By Camille Broadwater-Hollifield, MPH

The UCI Institute for Brain Aging and Dementia is leading a multi-center statewide exercise and aging study involving 10 sites across the state of California. The study is looking at the benefits of physical, social and mental activities in preserving cognitive function. The physical and psychosocial benefits of exercise have been demonstrated in nearly all fields of health research. When people exercise, they decrease their cardiovascular risk, increase vitality and energy and tend to live with less chronic disease. There is accumulating evidence that physical exercise can protect and even enhance cognitive performance in aging populations (Colcombe, Kramer et al. 2004). Those who exercise and engage in an active lifestyle show a reduced risk for converting to AD (Friedland, Fritsch et al. 2001; Fritsch, Smyth et al. 2005; Podewils, Guallar et al. 2005; Karp, Paillard-Borg et al. 2006) and those with AD show less depression and better physical functioning if they engage in a one year exercise program (Teri, Gibbons et al. 2003).

Also, there is a growing body of evidence supporting the notion that social and mental activities may protect and maintain cognitive function and lower the risk of developing dementia (Verghese, J., et al. 2003). Social activities such as attending courses, meeting with friends, participating in groups and mental activities such as reading literature, engaging in political or cultural interests have been shown to increase cognitive function as well as maintaining a high quality of life. Furthermore, activities

involving mental, physical and social stimulation all seem to offer some protection against developing dementia, but activities that combine all three kinds of stimulation offer the greatest benefit (Karp, A., et al. 2006).

The aims of the statewide study are to determine if engagement in physical, social and mental activities leads to maintaining abilities of daily living and results in less depression. Additionally, we will examine if individuals show a slower decline in functional status, activities of daily living, and preserve a higher cognitive function as the disease progresses. We anticipate publishing results in 2009 at the conclusion of the study.

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DiPrimio*  
Michael & Cynthia Brady

*In Memory of Lois Dorsey*  
Glenna & Kenny Hudson

*In Memory of Major Leon Files*  
Mary Ann Edwards  
The Files Family  
Brent & Ellen Murdoch  
Kim & Renay Rodriguez  
Kenneth & Stephanie Vandever

*In Memory of Alta Gale*  
Marilyn Acker  
Thomas B. Parkes  
The Peck Family  
Bob Tyron  
Margaret Webber

*In Memory of Jean Henderson*  
Tom & Vicki Johnston and Family  
Virginia Johnston  
Kay Tucker and Family  
Ann & Bruce Wilkinson and  
Family

*In Memory of Ray Henry*  
Pat & Mel Feiner



Generosity is a celebration. When we give something to someone we feel connected to them, and our commitment to the path of peace and awareness deepens.

-Sharon Salzberg

In Memory of Sarah M. Hogan  
Barbara Hogan

In Memory of Lillian Kono  
Grace & Barbara Jeung  
George and Cora Yano

In Memory of Hilde Kuhn  
Louise Bettke

In Memory of Pete Leyba  
Richard & Kathleen Davis

In Memory of Lily Lopez  
Elaine & Charles Cassingham

In Memory of Nell Mailloux-Diaz  
Elaine Clark-O'Donnell  
Evelyn & Lucas Gasca  
Edward & Mutsuyo Ozaki  
Celyne Van Patten

In Memory of Joanne Crawley  
McCarthy  
Anne & Warren Bruskrud  
Jack & Judy Cornman  
Robert Crawley  
Phillip & Lori Culotta  
William & Sharon Ford  
Michael & Susan Heider  
Jim & Pauleen Hess  
Ann C. McCarthy

In Memory of Pat Moore  
Andy & Brigitta Agopian

In Memory of Everlyn Reuger  
Lenore Heaphey

In Memory of Philip Samuels  
Jeff Baillargeon

Guy Chanin  
Carolyn Dela Cruz-Jarvis  
Suzanne Ecker  
Thomas & Gayle Holbrook  
Linda Joplin  
Ryan Keenan  
Robert A. Rohmann, II  
Carol Scherman and Family  
Steve & Kior Wilde  
Dr. Harry F. Yoffee  
Greg & Brenda Ziegler

In Memory of Evelyn Simpson  
Ruth S. Perdew

In Memory of Dr. Roger Alexander  
Smith, III  
Mr. & Mrs. Robert Clinton

In Memory of Emanuel Weiss  
Stacy & Pete Hinkle  
Mr. & Mrs. Steven Klein and  
Family

In Memory of Belva Wheeler  
Harold & Kenneth Mauser  
Lois Whelan  
Sandra Woest

In Memory of Pauline White  
Robert & Maria Rellinger  
Karen Schuster

In Memory of Aiko Yamamoto  
Joan Ann Murphy  
David & Susan Backhaus and West  
Families

In Memory of Robert Zant  
Maxine M. Hundley

# Contribute

How you can help make  
a difference...

1.) Checks should be made payable to UC REGENTS and in the Memo section, please write: Alzheimer's Disease Research

2.) If the donation is being made in memory/honor of someone, please include a note with information as to where the acknowledgements should be sent.

3.) Please mail all donations to:  
*Institute for Brain Aging & Dementia*  
1113 Gillespie Neuroscience Research Facility  
Irvine, CA 92697-4540

There are many ways to support the clinical and basic science research activities at the UCI Institute for Brain Aging and Dementia. If you would like to receive more information on giving, please contact us at (949) 824-2382 or log on to: [www.alz.uci.edu/donate.html](http://www.alz.uci.edu/donate.html)





# UCI Institute for Brain Aging & Dementia

## Calendar of Upcoming Events



### 2008 Family Educational Series - UC Irvine, University Club

Co-sponsored by the UCI Institute for Brain Aging and Dementia, Alzheimer's Association, Alzheimer's Family Services Center, and the Caregiver Resource Center. All sessions meet from 4:30-6:30pm at the University Club, UCI Campus. For more information or to make reservations, call (949) 824-8135.

- **June 10, 2008 - Advances in Dementia Treatment: Current and Future Medications**
- **September 16, 2008 - Managing Everyday Challenges in Alzheimer's Disease: Behavioral Strategies and Community Resources**
- **December 9, 2008 - Reducing Your Risk for Alzheimer's Disease: Lifestyle Changes and More**

### 2008 Annual Alzheimer's Disease Research Conference October 23-24, Irvine Hilton, Irvine **SAVE THE DATE!**

The UCI Institute for Brain Aging and Dementia, Alzheimer's Association, and Alzheimer's Family Services Center, are pleased to announce the annual Alzheimer's Disease Research Conference. The conference features two-days of presentations by nationally recognized dementia experts. For more information or to register for early bird rates, call (949) 757-3703. Limited scholarships for family caregivers by request. Sponsorship and Exhibitor opportunities available.



*Information about these educational offerings as well as others offered throughout the County are available on the UCI Institute for Brain Aging and Dementia website at: <http://www.alz.uci.edu/calendar>.*

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