

Brain Aging Bulletin

University of California, Irvine

J U N E 1 9 9 9



CONTENTS

Research News

Vitamin E
Gillespie Building
Clinical Trials Update

Hallucinations 3

Did You Know? 5

Internet Resources 5

Donors 6

Early Stage Program 7

Calendar 8

Brain Aging is the newsletter of the Institute for Brain Aging & Dementia, a non-profit Institute dedicated to improving the lives of those afflicted by Alzheimer's disease through research and education.

A Home for New Discoveries

September 26th, 1998 marked a special day in the continuing growth of neuroscience research on the UCI campus: The opening of the 65,000 square foot, William J. Gillespie Neuroscience Research Facility situated adjacent to the College of Medicine. The \$24 million building represents the first planned interdisciplinary center for the neurosciences. Experts in neurovirology, brain

plasticity, growth hormones and imaging will co-exist in an open space environment to stimulate collaborative, cutting-edge research.

"This is a great day for our research program in Alzheimer's disease and Brain Aging," remarked Dr. Carl Cotman, Director for the Institute for Brain Aging and Dementia. "Not only will our researchers have access to

"A Home for..." continued on page 2



The new William J. Gillespie Neuroscience Research Facility

Vitamin E: Putting on the Brakes

According to a recent study published in the New England Journal of Medicine, vitamin E appears to slow the progress of Alzheimer's disease by several months in people with advanced symptoms of dementia. Dr. Carl Cotman, head of the Institute for Brain Aging and Dementia at the University of California, Irvine, who suggested that the study include vitamin E, exulted: "This is the greatest thrill of my career. This is the first thing that really

seems to put the brakes on Alzheimer's. And it's inexpensive, easily available, and safe for the most part."

The two-year study of 341 patients with moderately severe Alzheimer's found that both vitamin E and selegiline, a prescription drug for Parkinson's disease, appear to protect brain cells from the effects of oxygen.

"Vitamin E" continued on page 2

Brain Aging

UCI Institute for Brain Aging & Dementia

From the Director



Carl W. Cotman, Ph.D.

Director, Alzheimer's Disease Research Center of California, Institute for Brain Aging & Dementia, at the University of California, Irvine

I believe that we are in the midst of a paradigm shift in the diagnosis and treatment of Alzheimer's disease. Over the past 10 + years most research had focused on identifying the basic causes of the disease. These included neurotransmitter deficits that disrupt signaling between neurons, definition of the mechanisms generating plaques and tangles and the discovery of genetic risk factors that can increase or decrease the probability of contracting the disease. Recently, we have found that the FDA approved the first intervention to improve function, e.g., Aricept, and as discussed in this bulletin the discovery that vitamin E can slow progression. Thus, research can now shift increasingly toward using information about what goes wrong to develop therapeutics to make things go right.

"A Home for..." continued from page 1

state-of-the-art equipment and facilities, we will have the opportunity to interact on a daily basis with some of UCI's strongest intellectual resources. The campus administration has a long history of standing behind the growth of the neuroscience programs. Recently we ranked again with Harvard and Stanford among research programs internationally recognized for their excellence within this broad, complex discipline. The Chancellor's commitment to allocate precious infrastructure dollars to this facility boldly underscores the status of our program."

The Gillespie Building consists of integral components necessary to the conduct of top-flight research. A state-of-the-art tissue repository, a biocomputing facility, and a microscopy and imaging room are just a few of the high tech features to be shared by the building occupants. "Research is about discovery, uncovering information layer by layer, and applying sound theories to hypotheses. It is a time-consuming effort. If we can speed up the process of discovery, create links where none existed before, and push the limits of our knowledge through

creative discourse, then advances in biomedical care will follow at a much quicker rate. After all, as biomedical researchers we have dedicated our lives to improving the conditions of others," added Dr. Cotman. "We are poised at the brink of a revolution in how science is done. Once again UCI is taking the lead in this area."

Funding for the building was provided through grants from the National Institutes of Health, the State of California, the UC system, and private funds. Greatest thanks go to the leadership and visionary contributions of private donor William J. Gillespie.



"Vitamin E" continued from page 1

The research disclosed that large doses of the vitamin (patients were given 1000 i.u. of vitamin E twice daily) kept severe patients out of nursing homes or delayed other milestones up to seven months. Dr. Cotman also cautioned, however, that there can be mild side effects. Cotman himself takes 800 i.u. of the vitamins daily compared with the

recommended dosage of 30 i.u.

Researchers hope that the use of vitamin E will reduce the staggering costs of lifetime care for each Alzheimer's patient by delaying the cost of the disease. Currently, the cost of lifetime care averages \$200,000 in Orange County, including nursing-home expenses that average \$30,000 to \$40,000 per year.



Is it Really a Hallucination?

Cordula Dick-Muehlke, Ph.D.

Sometimes it is difficult to distinguish between hallucinations stemming from dementia and symptoms related to early traumatic experiences. Distinctions are critical. Misdiagnosed symptoms may result in inappropriate therapies and prolonged frustration for both patient and caregiver. An experienced health care professional can make all the difference. The case history below illustrates why.

On several occasions, a 70-year old woman with severe dementia due to Alzheimer's disease began repeatedly shouting that someone was about to kill her while attending adult day care. She would become agitated, appear terrified, and clench her fists while uttering fragmented statements like, "Very scary, she's going to come... Is she there?... Oh God, please take me." At times, she appeared to be responding to an imaginary person and would mimic the threatening behavior she believed was being directed at her but could not verbally describe to staff members. For example, during one incident, she tried to explain the look of terror in her face, shouting, "He...he..." and, when she could not complete her sentence, grabbed a staff member's clothing at the neckline. She exhibited startle responses and screamed in fear when a male staff member would enter the room. These incidents rose to the level of panic attacks, with characteristic symptoms of sweating, trembling and shaking,

shortness of breath, and unsteadiness. When staff members attempted to alleviate her anxiety through reality orientation (e.g., "No one is going to hurt you"), she became even more insistent that she was in immediate danger. Her symptoms were also resistant to Ativan, an anti-anxiety medication prescribed by her physician.

It is not uncommon for a facility to transfer an individual with difficult-to-manage symptoms to an inpatient geropsychiatric unit for "further evaluation" or to discharge a combative patient as a danger to others before thoroughly investigating the cause of the symptoms or exhausting available pharmacological and nonpharmacological management strategies. In this case, the woman appeared to be having visual hallucinations (i.e., seeing imagined figures threaten her), although staff members were also concerned that she might be a victim of elder abuse. Upon interviewing the family, staff members learned that neither of these apparent

Persons with dementia typically express a desire for safety and security in response to increasing confusion.

explanations accounted for the woman's symptoms. It was discovered that this woman had been severely abused as a child by both of her parents, who were alcoholic. She repeatedly saw her parents involved in fist fights and was herself the victim of verbal and physical abuse.

As this woman's dementia worsened, she became unable to differentiate childhood memories of abuse from present reality and started exhibiting symptoms of post-traumatic stress disorder (PTSD). She began reliving

her trauma with the husband and daughter who now represented her abusive father and mother as well as with adult day care staff members. Her agitation, anger, and intense fear were not responses to imagined situations (i.e., hallucinations) but to events from her past that were as real and terrifying now as they had been in her childhood. In PTSD, the individual has repeated and intrusive recollections of the trauma, acts or feels like the trauma is recurring, experiences intense psychological distress, avoids reminders of the



trauma, and exhibits symptoms of increased arousal (e.g., hypervigilance). Although many older persons have experienced traumatic events at some point--through abuse, war, or accidents--the occurrence of PTSD in dementia is only beginning to receive attention in the literature (McCartney & Severson, 1997).

Once the cause of this woman's symptoms had been identified, the approach to care was shifted away from reality orientation to reassurance and comfort. Persons with dementia typically express a desire for safety and security in response to increasing confusion. In this case, re-emerging traumatic experiences

"Hallucinations" continued on page 4

“Hallucinations” continued from page 3

compounded the need to feel protected. Robbed of the cognitive abilities she once used to insulate herself from past traumas, this woman reverted to the abused child seeking protection and love. Consequently, staff members stopped trying to convince her that no one intended to hurt her and started responding to her underlying fears with reassurances (e.g., “You are safe here”). She began allowing staff members to hold her in a comforting manner or would cuddle a stuffed animal to soothe herself. These behavioral approaches in combination with a change in medications to Zoloft and Risperdal significantly reduced this woman’s distress and allowed her to enjoy the activities and opportunities for socialization available to her at adult day care.

This case clearly illustrates the importance of understanding an individual’s past history when difficult-to-manage behaviors occur. It would have been easy to assume that this woman was one of the many dementia patients who experience

An experienced health care professional can make all the difference.

hallucinations. Life-enhancing care, however, involves looking beyond obvious explanations and understanding the interaction between cognitive deficits and an individual’s life experiences. Although dementia has characteristic symptoms, it is a disorder that affects its victims individually. Therefore, as this case demonstrates, professionals should tailor care to the individual rather than rely on generic approaches.

Clinical Trials Update

Recently Completed Trials

We have recently completed the enrollment of subjects into several important clinical trials. Specifically, more than fifty subjects at UCI have completed various studies of the compound, **metrifonate**, a drug manufactured by Bayer Pharmaceuticals that acts to produce more available acetylcholine, the primary neurotransmitter that is deficient in Alzheimer’s disease. Bayer’s data on this drug are currently under review by the FDA, for permission to market the drug for the treatment of Alzheimer’s disease. We will keep you posted on Bayer’s success with the FDA.

We have also recently completed enrollment of a trial to test **estrogen** replacement therapy (Premarin) in hysterectomized women who have mild to moderate stages of the disease, for its ability to improve cognition and delay progression of the disease. We will have results from this nationwide study in the next couple of months.

Currently Enrolling Trials

Melatonin Trial: We have been enrolling subjects in a new study that is recruiting subjects with sleep disturbances as part of their Alzheimer’s disease. The study will test the ability of **Melatonin** to improve sleep patterns in these patients over a thirteen-week period of time.

Mild Cognitive Impairment (MCI) Trial: We are currently recruiting for a three year dementia prevention trial targeted at persons with mild cognitive impairment (isolated memory problem, but not

yet Alzheimer’s disease), in which **Aricept and Vitamin E** will be used to try to prevent the occurrence of dementia in these subjects.

For Control Subjects Only: MCI Instrument Protocol: In conjunction with the “Mild Cognitive Impairment (MCI)” trial, we will be testing some of the paper and pencil tests from that trial on normal control subjects. This trial will give us normative data on these measures for comparison with the data from the patients with Mild Cognitive Impairment.

Olanzapine Trial for Treatment of Psychosis Symptoms: Successful treatment of the psychosis symptoms (e.g., hallucinations, delusions) that may be associated with Alzheimer’s disease is the next problem under research. In collaboration with Eli Lilly and Company, we will be testing the ability of **Olanzapine** to treat these psychosis symptoms. Olanzapine is currently FDA-approved for the treatment of schizophrenia, but not yet available for the treatment of AD.

For Men Only: Testosterone Trial : A new preparation of **Testosterone** gel, available in a patch form, will be tested for its ability to improve cognition (mental processing) in male patients with Alzheimer’s disease. Simultaneously, we will be testing the ability of the compound to improve memory and cognition in normal male control subjects who do not have Alzheimer’s disease.

For more information on clinical trials at our center, please contact Catherine McAdams-Ortiz, RN, MSN, GNP or Jamie Reiter, Ph.D. at (949) 824-2382.



Attention Registered Tissue Donors:

24 Hour Pager Number Changed

In an effort to better serve our patients and their families, we have changed the company which is responsible for our paging service. Unfortunately, we could not maintain our old pager number with the new company. Thus we have a new 24-hour emergency pager number that should be called immediately to inform us of a tissue donation. **Our new pager number is (714) 506-4004.** All registered tissue donors should receive new "blue" donor cards to replace the old cards by mail in the next few weeks. Please be sure that relatives, nursing staff, or friends who currently hold a donor card get a new one as soon as possible. If you need additional cards or did not receive your new cards by mail, please call the Tissue Repository at the Institute for Brain Aging & Dementia at (949)824-5032.

Did You Know?

The Institute for Brain Aging and Dementia is currently recruiting **healthy adults** to participate in its **Successful Aging Program**. Your participation will help researchers to compare the effects of normal aging with those caused by neurodegenerative diseases such as Alzheimer's disease.

If you have any questions or are interested in participating, please contact **Jamie Reiter, Ph.D.** at (949) 824-2382.

Internet Resources

Alzheimer's Association

<http://www.alz.org>

Alzheimer.com

<http://www.alzheimers.com/site>

Alzheimer Research Forum

<http://www.alzforum.org>

ADEAR

<http://www.alzheimers.org>

Family Caregiver Alliance Website

<http://www.caregiver.org>

Institute For Brain Aging & Dementia

<http://www.alz.uci.edu>

Lake Solitude Media

<http://www.hicom.net/~lakesolitude/index.html>

Online Alzheimer's Disease Bookstore

<http://members.aol.com/healthbook/alzheimers>

Join UCI at Memory Walk 1999

The 5th annual Alzheimer's Association-sponsored Memory Walk occurred on October 3, 1998. The walk, which included nearly 5000 participants, originated at the beautiful Irvine Spectrum. Approximately \$323,000 in total funds have been collected to date. "The money raised is critical to the continuing operation of the free services to patients, caregivers, and family members that the Alzheimer's Association provides. I am so grateful to the community for their continued support. This year, our participant and donation count jumped by nearly 50% over last year's event," said Kim Robinson, Associate Director of the Orange County Alzheimer's Association. "We are thankful to UCI for their generous support. Team Leaders Elizabeth Eastin & Lori Lewis, once again did a great job in motivating patients, their families, UCI staff and Leisure World residents to join in the fight. This year 378 people joined the UCI Team and helped raise nearly \$10,000 for

the cause," continued Kim. For the third year UCI won the award for "Largest Not-For-Profit Team" and "Most Ghost Walkers." "My heartfelt thanks are extended to all who made this day another bench-



1998 UCI Memory Walk Team

mark in the event's history." **The 1999 Memory Walk will take place on Saturday, October 2.** The UCI Team will once again offer a free Institute for Brain Aging T-shirt to all walkers who sign up with the team before the registration deadline. Please call 949-824-2382 for more information or to be added to the Memory Walk mailing list.

Donors

Bayer Pharmaceuticals
W. M. & Jeanne Blair
The Community Foundation of
the Jewish Federation of O.C.
Burt & Beverly Davidson
Eisai Inc.
Jean Mae Griffin
Corbin Hewitt
Milton & Evelyn Jacobson
W.M. & B. Jeanne
Mark C. Johnson
Novartis
Jack & Mickey Roberts
Senior Care Resources
SoCal Home Care, Inc.
Thomas & Joyce Tucker
The Woman's Club of Orange

MEMORIALS

In Memory of Ford Babcock

Randy & Debbie Foster
Dwight & Billie Foster

In Memory of Pauline Bakalar

Ruth B. Kriegel

In Memory of Angelo Bando

United Singles Club

In Memory of Jeane Bartow

Phila Hurlbert
Mr. & Mrs. Bruce Billington

In Memory of Dan Bay

Helen L. Bay
Jane S. Debie
Celia M. Galer
Joy Lyiuwaan
Mr. & Mrs. Jergan Knuth
Mr. & Mrs. Gerald Weave
Roy & Louise Wentz

In Memory of Helene Brown

Computer Dynamics, Inc.
Tina Raff Cremer
Phillip & Leah C. Pickman
Heric Silva
John & Maran Zyhailo

In Memory of Olga Catale

William & Betty Caldwell

In Memory of Joseph Chevalier

Dorothy & Harry Schulner

In Memory of Gina Costa

Charo Chicken- Huntingdon
Beach
Corona Del Mar- Chamber of
Commerce

In Memory of William W. Drewry, Jr.

Mary Louise Drewry
R.W. & Marian Fay Rockwell

In Memory of Al Eckerling

Burton & Esther Hartman
Lester & Rosalie Schweit

In Memory of Stanley Ellis

John & Robin Ellis

In Memory of John R. Feehan

Dorothy A. Feehan
Joseph K. Haines
Hobert & Hazel Hankla
Ethel B. Kolbe
Claudia Martorana
Kkathleen F. Malinski
Caroline Smith
Evelyn Smith
Michael G. Stenko

In Memory of Dorothy Flitcroft

William & Tammy Jackson

In Memory of Robert Goodwin

Robert & Rose Mary Peterson

In Memory of Dorothy Houghton

John & Ann McClintock
Hermine S. Fischer

In Memory of Opal Jenks

Rudolph & Gladys Jacks

In Memory of Irene Jean Knox

Herbert A. Thelen

In Memory of Donna B. Lemmon

Amy Arthur
Brita Lemmon
Carol Lemmon
Deborah Stevens
John L. Stevens
Emil & Shirley Berger

In Memory of Jean Levy

Robert & Judy George

In Memory of Roy Matsuda

Carl & Marian Simonian

In Memory of Glenna Moore

Mr. & Mrs. John Baldwin
Richard & Gloria Barrera
Donna R. Beale
Rose M. Beamon
James & Susan; Behling
Bill & Mary Frances Bell
Linda L. Burbach-Hohensee
Krista H. Burns

David A. Colletti
Walter & Grace Cook
Tony & Nancy Cota
Patricia H. DeGraff
Diamond Vogel Paints
Raymond & Merle Dingfield
Kevin E. Doyle
Mrs. Ruth Eckman
Frank & Darlene Fanelli
Mrs. Betty Fankhauser & Family
Marita K. Frigo
Deborah J. Gannon
Thomas & Sar Gilroy
Leroy & Helen Hayes
Patrick E. Heeley
Harold & Marilyn Kelley
Leader Escrow, Inc.
John & Helen Lopez
Gerard & Rosemary Lyons
Mr. & Mrs. William Mackey & Family

Donald & Brenda McGregor
John & Janice Moore
George & Mary Moore
Sandra A. Nelson
Scott Hill & Maryann Rodeman
Charles & Cheryl Sheets
Glenn & Donna Spanton
Keith & Judy Stefanovitz
Earl & Gerry Swift
Charles R. Teal
Tony & Sheila Tennaro
M.L. & Donna Wegnes
Alice E. White
Stephen & Shelley White
Sue E. Whitney
Dale A. Wiggum
John & Catherine Wiggum

In Memory of Robert Munnell

Barry & Joan Nugent

In Memory of Betty Ocello

Ellen C. Calderella
Patricia Escalante
Connie & Lou Limperes
Marie Mazzarelle
Bernard Stelzer
Cari Williams
Dorothy Winters
Kathleen M. Winters
Richard & D' dee Winters

In Memory of Albert "Bud" Owens

Mary Rose Boldway
Betty Johnson

In Memory of Rene Peter Regla

Angeline Ardanaz
Louis A. Audet
Andrea Bonneau
Richard & Lydia Dell
William Holden
Mr. & Mrs. Jacob Kostyzak
Charles M. Maltbie, Jr.
Ray & Rose Merk
William & Loween Meyer
Robert & Marilou Morris
Mrs. Marcelle Nicholas & Family
Aimee A. Nougue
Rose Pelous
Steve Philpott
Sophie & Gabina Quinatana
Andre & Noeline Regla
Mrs. Cecile Regla
Mr. & Mrs. Peter Regla
Gerhard Vogel

In Memory of Thomas Ryan

Samuel & Norma Helman
Betty L. Merrill
Donald & Betty Reid
Janice M. Warehime
Gordon S. Fisk
Samuel & Norma L. Helman
Betty L. Merrill
Donald & Betty Reid
Janice M. Warehime
Richard M. & Joan K.
Wenneson
Bernice B. Wenzel

In Memory of Louise Reitz

Larry & Juliet Hughes
Roy & Helen Mandry

In Memory of Betty Ross

Alan & Naomi Lawrence

In Memory of Hans C. Ruyter

Jack Acosta
Virginia H. Adair
Phoenix Christine Alexander
Clement & Maria Alphonzo
Stephen Barney
Elizabeth Burns
Blanca Estela Casas
Thomas A. Cootz
Delores L. Crawford
David Dooley
Barbara Doshier
Paul Eklof

"Donors" Continued on Page 7



Early Stage Program Available

Persons in the early stages of Alzheimer’s disease often become isolated and may experience bouts of depression. No longer able to drive, they give up many favorite activities and may see friends less frequently. The symptoms of the disease – such as memory loss and word-finding difficulties – may leave the individual feeling embarrassed and hesitant to venture out. While understandable, the tendency to withdraw after receiving a diagnosis of Alzheimer’s disease may unnecessarily worsen the dementia and speed decline. Especially in the early stages – and long into the dementia – the afflicted remain able to enjoy and benefit from participating in meaningful activities.

In an effort to meet the needs of persons in the early stages of Alzheimer’s disease, the Institute for Brain Aging and Dementia collaborated with Adult Day Services of Orange County to create the Adult Activities Center. The only program of its kind in Orange County, the Adult Activities Center offers specialized activities ranging from cognitive skills classes to recreational outings for persons with mild dementia. In addition, the program provides education and support to caregivers. Family members are encouraged to enroll in “Living with Alzheimer’s Disease,” a three-week course taught periodically throughout the year by Cordula Dick-Muehlke, Ph.D. These classes provide caregivers with basic information about Alzheimer’s disease, coping with caregiver stress, managing behavioral symptoms, and accessing community resources. Caregivers are given an opportunity to talk about their emotional reactions to the diagnosis and connect with each other as well as learn essential information.

Participating in the Adult Activities Center can enhance the lives of both caregivers and their loved ones with dementia. Recently, caregivers who had used the Adult Activities Center for three or more months were surveyed about program benefits. As a result of participating in the Adult Activities Center, caregivers reported having more time for personal activities (89% of respondents), being less stressed (82%) and more relaxed (79%), and gaining a better understanding of dementia (82%). In addition, these caregivers found it easier to continue working (75%) and were less isolated (75%). Caregivers also reported that their loved ones were happier (86%), more interested in life (61%), and less anxious (61%) and depressed (57%) as a result of participation. Recognizing these benefits, 86% of the caregivers wished they had enrolled their loved one in the Adult Activities Center earlier.

To enroll in the Adult Activities Center programs and/or educational series contact Lynn Rodriguez, M.A., at Adult Day Services of Orange County, (949)548-9331.

“Donors” Continued from Pg. 6

Susan Gumbrecht
 Carol T. Leonard
 Ning & Carol Li
 Raymond & Lesley Losacco
 Frank Meyskens
 Hans & Hertha Nendorff
 Rosetta Plastino
 Ray & Judi Pressick
 J. Leslie Redpath
 Isaac Scherson
 Edward Wagner
 Francine O. Wai
 Hon. Shahla Sabet & Toni
 Wood, M.D.

In Memory of Patricia Sassone

Hemmo & Dorothy Alting-
 Mees
 Maurice & Sally Bachelis
 Joann Chamorro
 Patrica Higuera
 Betty Leonard
 Alan & Maggie Morphett
 John & Beverly O’Connor
 Robert & Shirley Schneller
 Robert & Helen Schulz
 Warrent & Melinda Stell

In Memory of Robert Serve

W.M.J. & Caroline Crawford

In Memory of Gerda L. Siegel

Carol Bander
 Evelyn & Harold Brown
 The Donald Cohen Family
 Barbara & Ken Molnar
 Roy Ringo
 Lester Schumow
 Pearl Sherman
 Benjamin S. Tani
 Julie Fine & Brian Wright

In Memory of Theresa C. Simpson

George & Mary Moore

In Honor of Lois Spear

Floyd & Helen Heiss

In Memory of Evelyn Swanson

Preston & Edith Stiles

In Memory of Cecil Wallis

Gordon & Darlene Powers

In Memory of Arthur Weiss

Ruth B. Kriegel

In Memory of Alice Williams

Naomi B. Stanley
 Richard & Myrtle Stickel

Alzheimer’s Disease Research

Center of California

at the

UCI Institute for Brain Aging & Dementia

1100 Gottschalk Medical Plaza

Irvine, CA 92697-4285

For appointments call: 949-824-2382

Carl W. Cotman, Ph.D.

Program Director

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

Associate Director

Cora S. Tasaki, M.D., Neurologist

F. Jacob Huff, M.D., Neurologist

Malcolm B. Dick, Ph.D., Neuropsychologist

Julene Johnson, Ph.D., Neuropsychologist

Cordula Dick-Muehlke, Ph.D., Clinical Psychologist

Elizabeth Eastin, Clinic Manager

Lori Lewis, Patient Care Coordinator

Catherine Ortiz, M.S.N., G.N.P., Clinical Trials Coordinator

Jamie Reiter, Ph.D., Psychometrist/ Control Testing

UCI Institute for Brain Aging & Dementia

C A L E N D A R ' 9 9

March 9

Early Stage Dementia
Workshop

June 1

Finding the Services
you Need Workshop

June 4

1999 AD Research
Conference

Sept 14

End Stages Workshop



"The Farm and Silo," by Tim D.

Artwork borrowed from 1999 Orange County Alzheimer's Association "Memories in the Making" Calendar

Oct 2

Memory Walk

Nov 19

Facing the Challenge
AD Association Conference

Dec 7

Spirituality & Dementia
Workshop

Dec 8

Holiday Reception

Currently Enrolling
Patients & Control
Subjects in 5
New Clinical Trials
see Pg. 4 for details

Non Profit Org.
US Postage
PAID
Santa Ana, CA
Permit No. 1106

University of California, Irvine
Institute for Brain Aging & Dementia
1113 Gillespie Neuroscience Research Facility
Irvine, CA 92697-4285