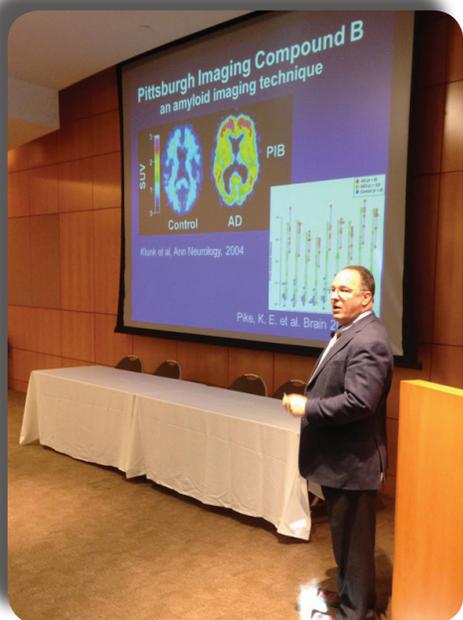


# Alzheimer's Disease Caregiver Workshop

By: Glen Xiong



Director of the ADC, Charles DeCarli, MD giving an overview of clinical trials.

In recognition of Alzheimer's Awareness Month, the UC Davis Alzheimer's Disease Center (ADC) held its first annual Caregiver Workshop on November 9, 2013 at the UC Davis MIND Institute. Over 130 caregivers and family members attended the four hour workshop.

Dr. Charles DeCarli, Director of the ADC, reviewed updates on Alzheimer's disease diagnosis and treatment. He also gave an overview of upcoming research and clinical trials at the center.

Dr. Glen Xiong, Geriatric Psychiatrist and long-term care

specialist, reviewed challenges facing caregivers in managing day-to-day emotional and psychological symptoms related to dementia progression. He explained the benefits and risks of psychiatric medications, advising rational use and discontinuation of medications as appropriate for the individual person.

Dr. Carolee Tran, a caregiver and a psychologist, provided an overview of mindfulness techniques for managing caregiver stress. She emphasized the importance of taking time for caregiver needs while providing care for the person with dementia. She also led the audience in two mindfulness exercises that gave the audience an opportunity to practice these techniques.

Finally, Dr. Ladson Hinton, who leads the ADC Education Core, moderated a Q&A session with the presenters and Esther Lara, MSW. The panel answered questions ranging from participating in research studies to managing sleep issues and "sundowning."

The workshop is part of the Alzheimer's Disease Center's Community Engagement Series sponsored by Sunrise Senior Living, Primrose, Norwood Pines, Alzheimer's Aid Society and Northstar Senior Living.



Caregiver and Psychologist, Carolee Tran, PhD answering questions from the crowd.

## In This Issue:

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# Brain circuitry loss may be a very early sign decline in healthy elderly people



*“Our results suggest that fornix variables are measurable brain factors that precede the earliest clinically relevant deterioration of cognitive function among cognitively normal elderly individuals”*

-Dr. Evan Fletcher

The study's lead author and a project scientist with the UC Davis Alzheimer's Disease Center

The degeneration of a small, wishbone-shaped structure deep inside the brain may provide the earliest clues to future cognitive decline, long before healthy older people exhibit clinical symptoms of memory loss or dementia, a study by researchers with the UC Davis Alzheimer's Disease Center has found.

The longitudinal study found that the only discernible brain differences between normal people who later developed cognitive impairment and those who did not were changes in their fornix, an organ that carries messages to and from the hippocampus, and that has long been known to play a role in memory.

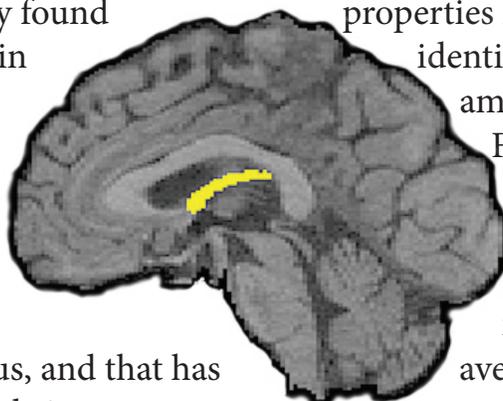
The research is published online in JAMA Neurology.

Hippocampal atrophy occurs in the later stages of cognitive decline and is one of the most studied changes associated with the Alzheimer's disease process. However, changes to the fornix and other regions of the brain structurally connected to the hippocampus have not been as closely examined. The study found that

degeneration of the fornix in relation to cognition was detectable even earlier than changes in the hippocampus.

“Although hippocampal measures have been studied much more deeply in relation to cognitive decline, our direct comparison between fornix and hippocampus measures suggests that fornix properties have a superior ability to identify incipient cognitive decline among healthy individuals,” Fletcher said.

The study was conducted over five years in a group of 102 diverse, cognitively normal people with an average age of 73 who were recruited through community outreach at the Alzheimer's Disease Center. The researchers conducted magnetic resonance imaging (MRI) studies of the participants' brains that described their volumes and integrity. A different type of MRI was used to determine the integrity of the myelin, the fatty coating that sheaths and protects the axons. The axons are analogous to the copper wiring of the brain's circuitry and the myelin is like the wiring's plastic



insulation.

Either one of those things being lost will “degrade the signal transmission” in the brain, Fletcher said.

The researchers also conducted psychological tests and cognitive evaluations of the study participants to gauge their level of cognitive functioning. The participants returned for updated MRIs and cognitive testing at approximately one-year intervals. At the outset, none of the study participants exhibited symptoms of cognitive decline. Over time about 20 percent began to show symptoms that led to diagnoses with either mild cognitive impairment (MCI) and, in a minority of cases, Alzheimer’s disease.

“We found that if you looked at various brain factors there was one — and only one — that seemed to be predictive of whether a person would have cognitive decline, and that was the degradation of the fornix,” Fletcher said.

The study measured two relevant fornix characteristics predicting future cognitive impairment — low fornix white matter volume and reduced axonal integrity. Each of these was stronger than any other brain factor in models predicting cognitive loss, Fletcher said.

He said that routine MRI examination of the fornix could conceivably be used clinically in the future as a predictor of abnormal cognitive decline.

“Our findings suggest that if your fornix volume or integrity is within a certain range you’re at an increased risk of cognitive impairment down the road. But developing the use of the fornix as a predictor in a clinical setting will take some time, in the same way that it took time for evaluation of cholesterol levels to be used to predict future heart disease,” he said.

Fletcher also said that the finding may mark a paradigm shift toward evaluation of the brain’s white matter, rather than its gray matter, as among the very earliest indicators of developing cognitive loss. There is currently a strong research focus on understanding brain processes that lead eventually to Alzheimer’s disease. He said the current finding could fill in one piece of the picture and motivate new directions in research to understand why and how fornix and other white matter change is such an important harbinger of cognitive impairment.

“The key importance of this finding is that it suggests that white matter tract measures may prove to be promising candidate biomarkers for predicting incipient cognitive decline among cognitively normal individuals in a clinical setting, possibly more so than gray matter measures,” he said.

Other study authors are Mekala Raman, Philip Huebner, Dan Mungas, Owen Carmichael and Charles DeCarli of UC Davis and Amy Liu of UC Davis and the Novartis Institutes for BioMedical Research.

The study was funded by grants from the National Institute on Aging (P30 AG10129; U01 AG024904; R01 AG010220 and 2R01 AG021028).

The UC Davis Alzheimer’s Disease Center is one of only 27 research centers designated by the National Institutes of Health’s National Institute on Aging. The center’s goal is to translate research advances into improved diagnosis and treatment for patients while focusing on the long-term goal of finding a way to prevent or cure Alzheimer’s disease. Also funded by the state of California, the center allows researchers to study the effects of the disease on a uniquely diverse population. For more information, visit [alzheimer.ucdavis.edu](http://alzheimer.ucdavis.edu).

# A Research Participant's Perspective: An interview with Maud Green

By: Rita Hargrave, MD and Gwen Gates, BS



**Human subject** participation in research studies is critical to advancing new therapies and finding a cure for chronic disease. Without the time and dedication of human subjects, we would not be able to make

advances in Alzheimer disease prevention and treatment. To develop research that has the potential to benefit the entire population, it is also important that research participants reflect the diversity of our population. While African-Americans and Latinos have lower rates of participation in clinical research compared with white non-Hispanics, many are choosing to get involved. In this interview with Maud Green, an African American study participant at the UC Davis Alzheimer's Disease Center (UCD ADC), she shares her story of research participation, including how she and her husband got involved in research and why it's important to her.

*"I was interested primarily because my husband has mild Alzheimer's and was diagnosed back in 1988. It has been my challenge to work with him and with some of the people in the community, whom I know, and would like to see get involved in the project... I find many African Americans do not participate in research... Yet, when results from research, medications, or whatever comes out, it may not be relevant to our community, because not enough of us are involved."*

The UC Davis ADC is committed to engaging more African American and other underserved minorities in research community. Case workers like Gwen Gates are ADC ambassadors, bridging the world of research and every day patients and caregivers who are facing the challenges of living with the illness.

*"In 2005, I was working along with the minority outreach coordinator of the Alzheimer's Association to provide a health fair at the St. Paul Episcopal Methodist Church in Berkeley, CA. Gwen Gates was one of our guest speakers. It was from her presentation that I learned about the UC Davis Alzheimer's Disease Center and the various research studies being conducted there. I expressed in interest in getting involved, was later contacted for screening and was selected to participate."*

Some participants plunge into research fearlessly but other folks tote a bundle of spoken and unspoken worries with them to the first interview.

*"One of the things that I feel that all of the researchers are fully credentialed, that they are 'people's-people', they can talk on the level of the layman, while they can also speak from the professional research and medical prospective. So, they make you feel comfortable when you are in an interview with them. There is no fear of saying the wrong thing, asking the wrong question, or giving the wrong answer."*

*An Interview with Mrs. Green continued on p. 5*

*“They also make it convenient for you by having a driver pick you up from your home, take you for your appointment, and return you back to your home in a timely manner. If you need to stop for lunch or anything, they are willing to do that as well. And while it might be something that is important for some people, they also give you a stipend, depending on what portion of the study you are participating in.”*

Many participants who get involved stay involved for years and reach out to close friends and family.

*“People like the staff of the UC Davis Alzheimer’s Disease center, motivate me to keep coming. And as I see more and more individuals in the community needing to come for the services, I have to reach out to them and say... ‘Think about it’”.*

The ADC research program transforms lives. Many participants are inspired to share their experiences and devise compelling ways to reach out to their family and friends.

*“I would say that I’m involved in a project that I think may be of benefit to you and your family. I’d say, ‘Here’s Gwen’s name and number. Give her a call.’ Or, I might say, ‘I will call Gwen and give her your name and number, if you don’t mind’. This is how I operate with family and friends. I don’t make a big deal out of it, but I do say, here’s her number, call her, or I will give her your number and she can contact you.”*

*“...if we continue with the education process within our communities, we can one by one, get more people to know more about what’s going on, how they or their family/friends can benefit, and to want to get involved in participating.”*

*“Another way to continue the education process, is by encouraging our churches to be involved through their health cabinets, or through various senior centers... most of the people that are involved in knowing about Alzheimer’s Disease are either the spouses of the AD patients or the offsprings of the patient whom are caring for them or taking them to the day care centers, etc. From this, they would learn about the resources and other benefits available. This is a disease that can affect the entire family and it’s important to be educated and to get involved.”*

*“Yes, there have been problems in the past with studies such as what took place with the Tuskegee Study, but that is in the past. Let’s move forward, learn as much as we can, attend conferences, ask questions, define yourself by the here and now, and not by the past.”*

We thank Maud Green for sharing her inspiring story of research participation with us.  
For more information on clinical trials please contact Maria Levallois at (916) 734-5245



## Alzheimer's Disease Center Co-Sponsors 6th Annual Spanish Mini-Medical School

UC Davis Health System held its sixth annual Spanish Mini-Medical School on September 7, at the UC Davis MIND Institute. The event was sponsored by the health system's Alzheimer's Disease Center, Center for Reducing Health Disparities and Clinical and Translational Science Center.

Unique in the nation, the one-day school provides Spanish-speaking middle-aged and older adults, along with caregivers, the opportunity to learn about critical health issues in their native language and to discuss these topics with Spanish-speaking health-care professionals from UC Davis and the community.

"With the projected growth in the number of Latino seniors in California, it is vital that we develop innovative outreach programs that help to address health disparities," said Ladson Hinton, professor of psychiatry and behavioral sciences and director of the Latino Aging Research Resource Center (LARRC). "The Spanish Mini-Medical School provides vital health information in an innovative format to middle-aged and older adults so that they are better able to get the health care that they need."

This year, presenters included:

-David Copenhaver, assistant professor and director, UC Davis Cancer Pain Program. Copenhaver will address the topic "What is Pain? A Quick Check In."

-Sergio Aguilar-Gaxiola, clinical professor of internal medicine and director, UC Davis Center for Reducing Health Disparities will address "Opportunities for Latinos to Obtain Health Insurance under the Affordable Care Act."

-Lorena Garcia, assistant professor in the Department of Public Health Sciences and a researcher affiliated with the LARRC, will discuss "Obesity and Diabetes: Latinos in the United States."

Attendance at the Spanish Mini-Medical School was free and opened to the public, although space is limited. The event was co-sponsored Sunrise Senior Living, Primrose and Norwood Pines Alzheimer's Care Center.

# UC Davis Alzheimer's Disease Research Center



## El Centro de la Enfermedad de Alzheimer Copatrocina Sexta Mini-Escuela de Medicina

El Sistema de Salud de UC Davis celebró su sexta Mini-Escuela de Medicina en Español el día 7 de septiembre en el Instituto MIND de UC Davis. El evento es patrocinado por el Centro de la Enfermedad de Alzheimer, el Centro para la Reducción de Disparidades en Salud y el Centro de Ciencia Clínica y Traslacional del Sistema de Salud.

Esta Escuela de un día es única en el país, y les ofrece a los adultos de mediana edad y adultos mayores hispanohablantes, y a sus cuidadores, la oportunidad de aprender más acerca de cuestiones críticas para la salud en su lengua madre, y discutir estos temas con profesionales de la salud hispanohablantes de UC Davis y de la comunidad.

“Con el aumento proyectado de la cantidad de latinos mayores en California, es esencial que desarrollemos programas de difusión innovadores que nos ayuden a superar las disparidades en salud”, dijo Ladson Hinton, profesor de psiquiatría y ciencias del comportamiento, y director del Centro para el Envejecimiento Saludable. “La Mini-Escuela de Medicina en Español brinda información vital de salud en un formato innovador para los adultos de mediana edad y adultos mayores para que puedan satisfacer su necesidad de contar con una mejor atención médica”.

Este año, los oradores:

-David Copenhaver, profesor adjunto y director, Programa de Dolor Causado por el Cáncer de UC Davis. Copenhaver hablará de “¿Qué es el dolor? Un chequeo rápido”.

-Sergio Aguilar-Gaxiola, profesor clínico de medicina interna y director, Centro para la Reducción de Disparidades en Salud de UC Davis, hablará de “Oportunidades para los Latinos para Acceder a un Seguro de Salud conforme a la Ley de Atención Médica Accesible (ACA, por sus siglas en inglés.)”.

-Lorena García, profesora adjunta del Departamento de Ciencias de la Salud Pública, hablará de “Obesidad y Diabetes: Latinos en los Estados Unidos.”

La asistencia a la Mini-Escuela de Medicina para Latinos es sin cargo y abierta al público en general, pero las vacantes son limitadas. El evento es patrocinado por Sunrise Senior Living, Primrose y el Centro de Cuidados Norwood Pines para pacientes con Alzheimer.

# 2014: Dawn of a New Era for Therapies to Prevent Alzheimer's Disease?

By: Dr. John Olichney

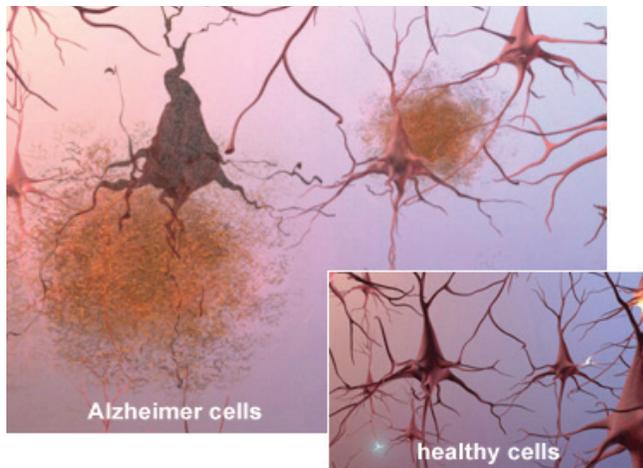


Image provided by Alzheimer's Association

As we described in the last issue of this Newsletter, anti-amyloid therapies continue to advance and we may be near a breakthrough, particularly if the Expedition-3 trial of solanezumab delivers on its promise to slow down mild Alzheimer's disease (AD). This would be an important "proof of concept" and be the first effective therapy to target the underlying biology and neuropathology of AD. To date, all the FDA-approved treatments (e.g. donepezil, memantine) have only provided symptomatic relief for AD patients, by boosting the effects of neurotransmitters such as acetylcholine and glutamate. However, these benefits are eventually overwhelmed by the progression of additional amyloid-containing senile plaques and neurofibrillary tangles in most patients.

Now, in early 2014, the AD clinical trials field will embark into new territory with the launch of the Anti-Amyloid Treatment in Asymptomatic Alzheimer's study (also known as the "A4 study"). This study will be the first of its kind, and will test if solanezumab, the

monoclonal antibody which has shown promise in the mild dementia stage of AD, will be able to prevent the onset of cognitive impairments in normal elderly persons with elevated amyloid seen on Positron Emission Tomography (PET) scan. This study will require monthly intravenous (IV) infusions for slightly over 3 years, and aims to enroll 1,000 persons between 65-85 years old across the country. The study will be coordinated by the Alzheimer's Disease Cooperative Study and is supported by the National Institute on Aging (NIA), Eli Lilly and Company, and multiple philanthropic organizations.

Both Expedition-3 and the A4 study could have large impacts on the public health, and how we approach treating AD. Will earlier treatment always be better, or will this be true only for those elderly individuals at highest risk for dementia, or those who already have memory loss? How should we, as a society, make the best use of this expensive therapy, if proven effective? Clearly, the field will continue to pursue the most biologically effective and cost-effective treatments. Other directions include reducing amyloid production with BACE inhibitors (which can be taken by mouth), and reducing the spread of neurofibrillary tangles with anti-Tau therapies. Stay tuned to these pages for further developments.

*The UC Davis Alzheimer's Disease Center is always interested in new clinical trials and we welcome questions regarding approved clinical trials. We will also need volunteers when a new clinical trial starts.*

*Please call Maria Levallois at (916) 734-5245 if you are potentially interested in participating.*

**UCDAVIS**  
**ALZHEIMER'S DISEASE**  
**CENTER**

Recent Advances in  
Clinical Trials Research  
for Alzheimer's

Dr. John Olichney

Thursday, March 6, 2014  
UC Davis MIND Institute  
6:00 - 7:00 p.m.



Dr. Olichney is a behavioral neurologist specializing in cognitive disorders and neurodegenerative diseases such as Alzheimer's disease at the University of California, Davis (UCD). His research activities include EEG/ERP and functional MRI studies of language and memory and clinical treatment trials for Alzheimer's disease.

Dr. Olichney's presentation will highlight recent advances in clinical trials aimed at modifying the underlying biological processes in Alzheimer's disease rather than just treating its symptoms. He will discuss preventative strategies which may help with memory loss for those at high risk for Alzheimer's disease.

UC Davis MIND Institute Auditorium  
2825 50<sup>th</sup> Street  
Sacramento, CA 95817

Reservations:  
(916) 734-5728  
Facebook: UC Davis Alzheimer's Disease Center

# Announcements

## FITNESS FOR YOUR BRAIN! Alzheimer's Disease Center

The Alzheimer's Disease Center is excited to announce that it will be offering a new six-week course this coming January. The course, called Brain Fitness 101, is designed to teach participants about different ways to promote brain health. Classes will present the latest research on factors that contribute to overall brain health, followed by an interactive discussion about approaches to incorporating this information into one's own lifestyle. Topics that will be covered by the class include nutrition, physical exercise, mental exercise, stress management, and specific ways to improve memory. The course will include a total of six weekly classes, each lasting 1.5 hours. The first class will be held on January 8th and will continue to run until February 19th. What a great way to kick off the New Year!



We are currently enrolling individuals into the course and invite those who are interested in attending to give us a call. The course will be open to individuals who have concerns about changes in thinking, are already experiencing mild changes in cognition, or who are otherwise just interested in learning ways to promote brain health. If you are interested in attending, please contact Dr. Tim Davis by calling 916-734-8037 or sending an email to [timothy.davis@ucdmc.ucdavis.edu](mailto:timothy.davis@ucdmc.ucdavis.edu).

We look forward to hearing from you!

## ¡BIENESTAR PARA SU CEREBRO! Alzheimer's Disease Center

El Centro de la Enfermedad de Alzheimer se complace en anunciar que ofrecerá un nuevo curso de seis semanas este enero próximo. El curso llamado Bienestar Cerebral 101, está diseñado para enseñarle a los participantes diferentes maneras de promover la salud cerebral. Las clases presentarán las últimas investigaciones acerca de factores que contribuyen a la salud general del cerebro, seguido por un debate interactivo enfocado en incorporar a esta información en su estilo de vida individual. Los temas que serán cubiertos en la clase incluyen nutrición, ejercicio físico, ejercicio mental, manejo del estrés y modos específicos de mejorar la memoria. El curso incluirá un total de seis clases semanales, cada una de 1.5 horas. La primera clase se llevará a cabo el 8 de enero y continuará corriendo hasta el 19 de febrero. Qué gran manera de empezar el año Nuevo!



Actualmente, estamos inscribiendo a personas en el curso e invitamos a aquellos que estén interesados en asistir a darnos una llamada. El curso estará disponible para individuos que tienen inquietudes acerca de cambios en la forma de pensar, ya están experimentando cambios leves en la cognición o quienes simplemente están interesados en aprender maneras de promover la salud cerebral. Si usted está interesado en asistir, por favor llame al Dr. Timothy Davis al 916- 734-8037 o envíele correo electrónico a [timothy.davis@ucdmc.ucdavis.edu](mailto:timothy.davis@ucdmc.ucdavis.edu).

Esperamos escuchar de usted!

# Announcements

## The African American Caregiving and Wellness Forum VI The Alzheimer's Association and UC Davis Alzheimer's Disease Center

SAVE THE DATE:

Saturday, April 12, 2014

9:00 am- 2:30 pm

North Oakland Senior Center  
5714 Martin Luther King Jr. Way  
Oakland, CA 94609



This is a **FREE** event!

## SPANISH MINI-MEDICAL SCHOOL UC Davis MIND Institute in Sacramento

**The Spanish Mini Medical School is Back!**

Health professionals will be giving lectures on a variety of topics related to brain health and aging. This event is organized by the UC Davis Alzheimer's Disease Center, the Latino Aging Research Resource Center, and the Center for Reducing Health Disparities. The event will be presented in Spanish

*Saturday, September 13<sup>th</sup>, 2014*

*8:30 a.m. - 12:30 p.m.*

UC Davis MIND Institute  
2825 50<sup>th</sup> St.  
Sacramento, CA 95817

## LA MINI ESCUELA DE MEDICINA EN ESPAÑOL UC Davis MIND Institute in Sacramento

**¡La Mini Escuela de Medicina en Español Regresa!**

La Mini Escuela de Medicina en Espanol anual - La primera de su estilo en la nación - El evento será otra vez en español y presentará a profesionales de salud que darán conferencias sobre una variedad de temas relacionados a la salud del cerebro y el envejecimiento. Este evento es organizado por el UC Davis Alzheimer's Disease Center, en conjunto con el Latino Aging Research and Resource Center y el Center for Reducing Health Disparities. Este evento está abierto al público, pero el espacio es limitado.

*Sábado, Septiembre 13, 2014*

*8:30 a.m. - 12:30 p.m.*

UC Davis MIND Institute  
2825 50<sup>th</sup> St.  
Sacramento, CA 95817

UC Davis Alzheimer's Disease Center (6864)  
4860 Y Street, Suite 3900  
Sacramento, CA 95817

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**Alzheimer's Disease Center**  
<http://alzheimer.ucdavis.edu>

**Latino Aging Research  
Resource Center**  
[www.ucdmc.ucdavis.edu/latinoaging/](http://www.ucdmc.ucdavis.edu/latinoaging/)



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Look for upcoming events and  
news.**

[www.facebook.com/  
UCDavisAlzheimersDiseaseCenter/](http://www.facebook.com/UCDavisAlzheimersDiseaseCenter/)

## Join Us

*Join us for the following presentations at the MIND Institute  
2825 50th Street, Sacramento, CA*

**Recent Advances in Clinical Trials Research  
for Alzheimer's**

by Dr. John Olichney, UC Davis  
*March 6, 2014, 6 p.m.*

**Dementia: What is it? What are the Causes?**

by Dr. Dan Mungas, UC Davis  
*September 25, 2014, 6 p.m.*

**Medications in Dementia, Are they harmful or  
helpful?**

by Dr. Glen Xiong, UC Davis  
*July 24, 2014, 6 p.m.*

**Alzheimer's Disease Caregiver Workshop**

*November 15, 2014, 8:30 a.m. - 12:30 p.m.*

UNIVERSITY OF CALIFORNIA, DAVIS ALZHEIMER'S DISEASE  
CENTER is funded by the National Institute on Aging and the California  
Department of Public Health.

The UC Davis Alzheimer's Disease Center includes members of the  
following UC Davis departments: Epidemiology and Preventive Medicine,  
Neurology, Psychiatry, Internal Medicine and Pathology

UC Davis ADC - East Bay  
One Shields Avenue - TB171  
Davis, CA 95616  
Toll-Free: 1-855-420-2612  
FAX (530) 752-8937

UC Davis ADC - Sacramento  
4860 Y Street, Suite 3900  
Sacramento, CA 95817  
(916) 734-5496; FAX (916) 703-5290