



Memory and Aging

A NEWSLETTER ABOUT BRAIN HEALTH AND HEALTHY AGING

WINTER 2017

**DIRECTOR'S COLUMN**

It's our 25th anniversary!

THIS YEAR WE CELEBRATE 25 YEARS

of growth in our clinical and research programs, and we could not have done it without you. We have evaluated more than

10,000 patients in Sacramento and the East Bay. Nearly 7,500 of you have participated in research. Each year hundreds have attended our lectures and other community programs. Showing tremendous commitment, more than 850 of you have given the ultimate gift of an autopsy to help us understand how aging, Alzheimer's and vascular disease affect the brain.

Today our understanding of the causes of Alzheimer's and dementia has grown tremendously and we have much more research to launch, as well as tools and collaborations to help us explore brain aging and dementia. We are particularly excited about advances in diagnostic imaging, novel medications and genetic research that likely will change how we think about and treat people with dementia. Thousands of you already have participated in the Aging Brain Program Project, Spanish-English Neuropsychological Test Development Project or the Community Diversity Program, among others.

On the horizon are additional exciting initiatives, including a \$13 million grant from the National Institute on Aging to Dan Mungas and colleagues at Kaiser Permanente – Northern California, to study patients who in their youth and middle age received extensive testing that can be used to assess lifetime risk for cognitive decline. Importantly, the diverse group is made up of Caucasians, African-Americans, Asian-Americans and Latinos, enabling researchers to parse unique and potentially treatable dementia risk factors in these groups.

For 25 years you have contributed time and energy to help us grow and thrive. You have participated in the Walk to End Alzheimer's, donating countless thousands of hours and dollars to support our programs. You have participated in clinical trials, advancing our knowledge of the causes of Alzheimer's disease and dementias. You have given generously to the Alzheimer's Disease Center in many, many ways that help us understand a disease that affects more than 5 million Americans. This is the anniversary of our partnership and our ongoing commitment to you. **Happy anniversary!**

Charles DeCarli, director
UC Davis Alzheimer's Disease Center

UC Davis joins brain health registry

UC Davis Alzheimer's Disease Center has joined the Brain Health Registry, an online research database designed to accelerate drug discovery for treatment and preventions for Alzheimer's and other dementias.

One of the most significant obstacles to finding medications and cures is the cost and time required to recruit clinical trials participants. Collection of information on the medical histories and brain health of large numbers of volunteers aims to streamline identification of clinical trials participants.

Volunteers must be 18 or older and need not have a brain disease or disorder to participate. Participants will respond to questions about their medical histories, current health and lifestyles and take online brain tests that assess their thinking and memory. Volunteers are encouraged to return to the registry website every six months to retake tests and answer follow-up questions. When more people participate, more data is generated, which gives researchers the ability to test more theories, identify and refer more valid candidates to clinical trials and test new therapeutic approaches.

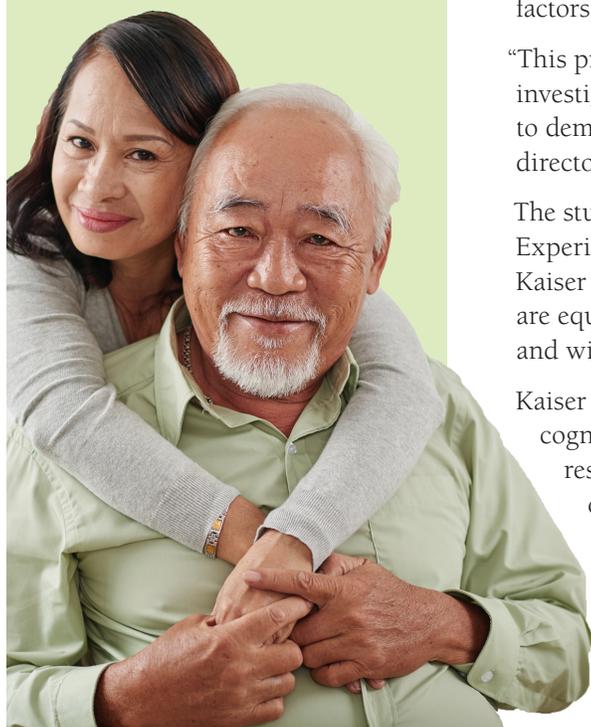
The registry recently received funding from the Larry L. Hillblom Foundation, a California non-profit, public-benefit corporation that funds research in the areas of diabetes mellitus and diseases associated with aging. As part of the funding, the Brain Health Registry has begun a coordinated effort to recruit and follow online a large cohort of older adults in California, including Sacramento.

Visit BrainHealthRegistry.org/davis and speed the path to cures for brain diseases and disorders.

Ethnic disparities in brain health and dementia

“This study is like time travel, allowing us to look at risk and protective factors for cognitive decline throughout one’s life.”

Rachel Whitmer



Routine physical exams conducted from the 1960s through the 1980s are being revisited to evaluate the risks and protective factors in early and midlife that could affect brain health and dementia diagnoses among a large, ethnically diverse group of seniors.

The Kaiser Permanente Northern California Division of Research partnered with the UC Davis Alzheimer’s Disease Center for the study, which is funded with a five-year, \$13 million grant from the National Institute on Aging.

“This study is like time travel, allowing us to look at risk and protective factors for cognitive decline throughout one’s life,” said Rachel Whitmer, principal investigator of the study and research scientist with the Kaiser Permanente Northern California Division of Research. “We’ll be able to analyze how factors such as midlife vascular health, psychosocial conditions and early-life growth indicators have influenced brain health and dementia risk among current members of Kaiser Permanente.”

In particular, researchers are exploring how conditions earlier in life may play roles in racial and ethnic differences in dementia rates and risk factors for cognitive decline, an area that has not been well studied.

“The bulk of what is known about early-life risk factors for dementia and brain pathology is from studies of highly educated whites,” said Dan Mungas, professor of neurology and researcher with the UC Davis Alzheimer’s Disease Center. “This study will fill a much needed gap in understanding dementia and brain aging in a group that is representative of the aging U.S. population.”

The study data will be pulled from multiphasic exams used by Kaiser Permanente beginning in the early 1950s to diagnose certain chronic illnesses early in their course. In the 1960s, the tests were administered in an automated, efficient routine and analyzed by computer, allowing doctors to spot trends in health risks. Whitmer has used the multiphasic data, paired with data from electronic health records, to identify midlife dementia risk factors such as smoking, hypertension, depression, cholesterol and obesity.

“This project offers a unique opportunity to expand the center’s research to investigate the risk and factors associated with brain aging and transitions to dementia in a larger, even more diverse population,” said Charles DeCarli, director of the Alzheimer’s Disease Center and the co-principal investigator.

The study, called KHANDLE (Kaiser Healthy Aging and Diverse Life Experience), is enrolling a total of 1,800 white, black, Asian and Latino Kaiser Permanente members who had first been evaluated decades ago. They are equally divided among the four ethnicities, and all will be over age 65 and will not have a current diagnosis of dementia.

Kaiser Permanente and UC Davis researchers are conducting medical and cognitive evaluations, and UC Davis researchers are providing magnetic resonance imaging (MRI) and positron emission tomography (PET) scans of the study participants.

Whitmer noted that the funding could lead to a long-term study similar in scope to the now nearly 60-year-old Framingham Heart Study in Massachusetts, which has redefined what is known about early-life risk factors for dementia and heart disease.

Can being around horses help people with dementia?



Researchers at the UC Davis Alzheimer's Disease Center, in collaboration with the School of Veterinary Medicine's Center for Equine Health and a non-profit organization called Connected Horse, are studying whether people with dementia can benefit from interaction with horses.

The study aims to determine if equine-guided engagement workshops improve the quality of life of people undergoing early-stage dementia and mild cognitive impairment and their care partners by measuring indicators such as changes in depression, anxiety, perceived social support, sleep and other behaviors.

The study was created by Connected Horse Co-Founders, Nancy Schier Anzelmo, of Alzheimer's Care Associates in Rocklin, who also serves on the faculty of the Department of Gerontology at Sacramento State University, and Paula Hertel of Senior Living Consult. Schier Anzelmo and Hertel ran a pilot study in collaboration with Stanford University researchers that found that participants showed improvements on several of the measures after three sessions with the horses.

Sarah Tomaszewski Farias, UC Davis professor of neurology and the study's principal investigator, said the Alzheimer's Disease Center is helping recruit adults affected with dementia and their caregivers for the study

and will rigorously evaluate potential benefits of the program.

Last fall, seven couples participated in a workshop held at the Center for Equine Health over three, five-hour sessions. Specially trained facilitators led the participants in several awareness and mindfulness activities in which each person had an opportunity to interact with horses. They groomed the horses, cleaned their hooves, observed them in a herd and led them in an arena. Facilitators supported the participants and discussed the impact of the interactions after each activity.

For instance, said Hertel, after a participant noticed that a horse moved away and turned back her ears when she was brushed in a sensitive area, the participant got a softer brush and tried brushing a different area. The horse responded by moving closer to the participant, dropped her head and began to close her eyes. Afterward, the participant shared how he became more aware of what the horse liked and did not like.

Although data from the workshops at UC Davis have not been analyzed, program facilitators reported that participants seemed to benefit. One participant, for example, said that the sessions made his partner smile and laugh, which she had not done in a long while.

Hertel said they hope ultimately to develop and offer comprehensive facilitation training to those who want to offer workshops to people affected by dementia, especially in locations where other community-based support services are scarce, and to collaborate with others to offer evidence-based programs nationwide so that equine-guided work becomes a more widely accepted support tool.

Organizers are now recruiting people with early-stage dementia or mild cognitive impairment and their caregivers for a second workshop at the Center for Equine Health at UC Davis, to begin in April.

For more information about this research or to enroll in the study, call 916-708-4904.

A family affair: Two generations participate in Alzheimer's Disease Center Brain Donation Program



Andrea Gourdine knows how devastating Alzheimer's disease can be – her mother, the first in her family to have the disease, was diagnosed in 2005. Gourdine recalls noticing signs of trouble while visiting her mother's home, like unpaid bills and piles of old magazines and newspapers on the floor, even though her mother seemed to be in perfect health.

“She hid her dementia well, and at first we didn't even recognize what was happening,” Gourdine said. “We tried everything to help her, but nothing worked. Then my sister heard about the UC Davis Alzheimer's Disease Center longitudinal research program, which has a brain donation component, and we were able to get her enrolled. My mother said she'd participate if it would benefit others.”

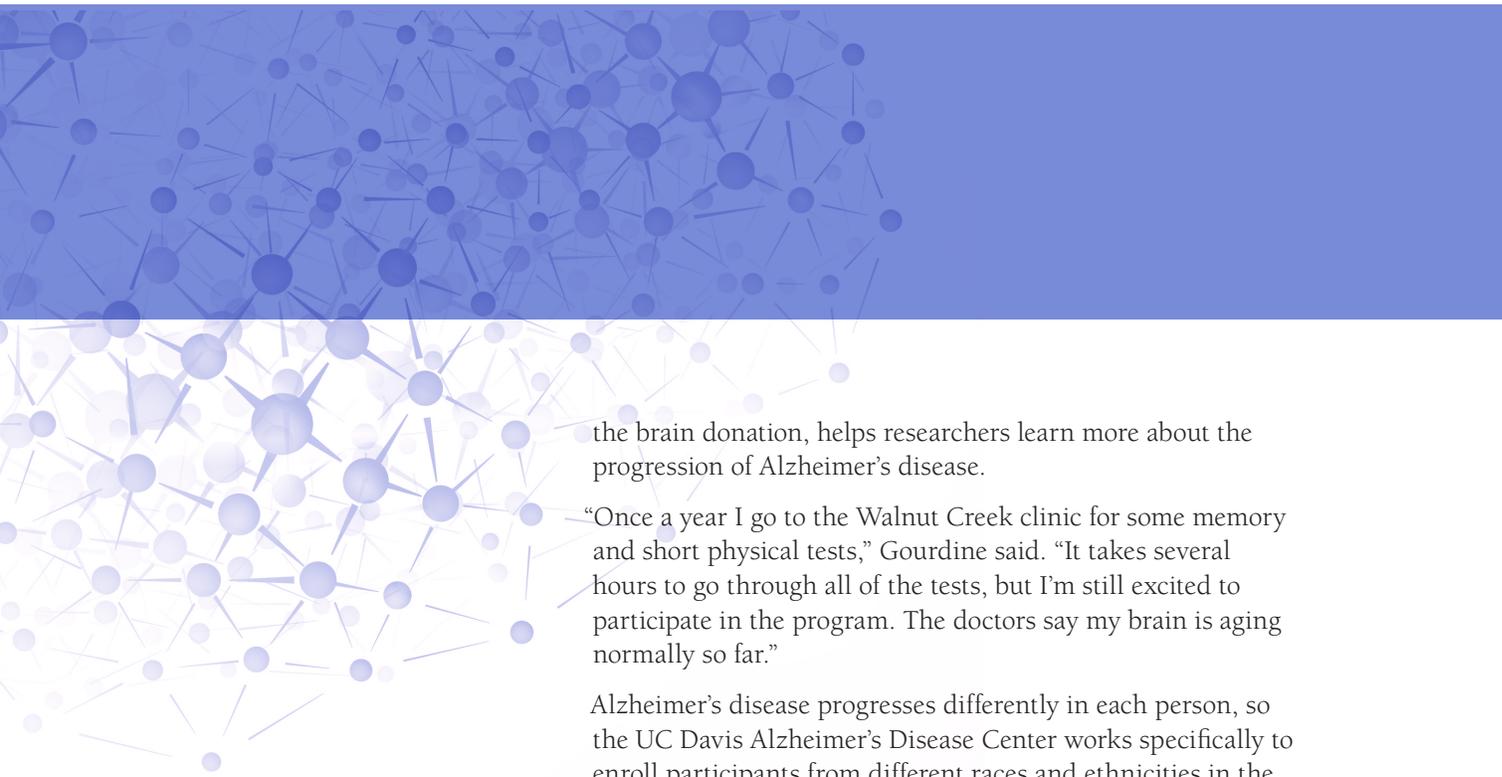
After her mother was in the program for a few years, Gourdine and her partner decided to sign up, too.

“My mother passed away in 2013 from Alzheimer's, and I wanted to know if the same thing could happen to me,” said Gourdine, a 72-year-old resident of Walnut Creek, Calif. “There are things I want to do, and this lets me plan ahead.”

More than 5 million Americans are living with Alzheimer's disease, according to the Alzheimer's Association, a voluntary health organization that works to advance Alzheimer's care, support and research. This number is expected to increase as the baby boom generation reaches age 65 and older. By 2050 as many as 16 million people may have Alzheimer's disease, according to Alzheimer's Association figures.

The statistics point to the need for continued research on the disease. The UC Davis Alzheimer's Disease Center's longitudinal research program is designed to help scientists understand and develop preventative therapies, and potentially cure Alzheimer's disease and related dementias for future generations.

Through the program, participants have annual diagnostic evaluations, a cognitive assessment, brain imaging and other studies, which are conducted at the Sacramento and Walnut Creek clinics of the UC Davis Alzheimer's Disease Center. This data collection, combined with



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Andrea Gourdine

the brain donation, helps researchers learn more about the progression of Alzheimer’s disease.

“Once a year I go to the Walnut Creek clinic for some memory and short physical tests,” Gourdine said. “It takes several hours to go through all of the tests, but I’m still excited to participate in the program. The doctors say my brain is aging normally so far.”

Alzheimer’s disease progresses differently in each person, so the UC Davis Alzheimer’s Disease Center works specifically to enroll participants from different races and ethnicities in the program, said John Olichney, the center’s clinical core director.

“It’s really important for everyone to participate in this type of program, especially minorities,” said Gourdine, who is African American. “We need all hands on deck to find a cure. You can do no better service for your family.”

To learn more about the brain donation program, visit the UC Davis Alzheimer’s Disease Center website, ucdmc.ucdavis.edu/alzheimers/brain_donation.html.

Help us grow our study!

We are currently inviting new people to participate in our study of normal aging and memory loss. If you know someone who is:

- 65 years or older
- Speaks English or Spanish
- Would like to participate in our study of normal aging and memory loss by coming to the center for annual evaluations which include memory testing, MRI, blood draw and an exam with study doctor

Please have them call:

- In Sacramento, Rebekha Alfaro, 916-734-5243
- In Walnut Creek, Gwen Gates, 925-357-6904

UC DAVIS ALZHEIMER'S DISEASE CENTER

2017 Calendar of Events

April 29 African American Caregiver and Wellness Forum

8:30 a.m. – 2:30 p.m.

Ed Roberts Campus

3075 Adeline Street, Berkeley, CA

May 25 "What's Healthy Brain Aging?"

6 – 7:30 p.m.

UC Davis MIND Institute

2825 50th St., Sacramento, CA

Nov. 4 Alzheimer's Disease Caregiver Workshop

8 a.m. – 12:30 p.m.

UC Davis MIND Institute

2825 50th St., Sacramento, CA

Nov. 9 Alzheimer's Disease Research Symposium and Poster Session

10 a.m. – 4 p.m.

UC Davis Conference Center

Davis, CA

Announcing the 2017 Community Engagement Series

This year's Community Engagement Series theme is healthy brain aging and prevention. A series of six lectures will be offered on topics such as exercise and physical activity, diet, social activity and intellectual stimulation, vitamins and dietary supplements, stress and mindfulness.

The series will be kicked off with a lecture by Dr. Charles DeCarli on "What's Healthy Brain Aging?" May 25. All lectures will be held monthly at the MIND Institute on Thursdays from 6 – 7:30 p.m. Please check our website for the Calendar of Events. Prior lectures can also be viewed on the website.

For reservations or more information, call 916-734-5728.

Vietnamese caregivers subject of new grant

OANH MEYER AND COLLEAGUES HAVE RECEIVED A GRANT from the Alzheimer's Association to develop a strategy to better assist Vietnamese-American dementia caregivers.

Meyer, an assistant professor in the UC Davis Department of Neurology, explained that while Vietnamese-Americans are the fourth largest Asian-American group, little is known about dementia and dementia caregiving in this population. She added that a significant percentage of the population tends to have limited English language and poor health, which can increase stress among caregivers, but most caregiving programs do not take into account Vietnamese families' specific cultural needs.

Through the grant, Meyer's team, along with their community partners, Asian Resources, Inc. and Asian Community Center Senior Services, is developing a program to improve general health by increasing access to health care and promoting Vietnamese cultural values, such as the inclusion of several family members. The researchers' aim is to refine the program and test its effectiveness among local Vietnamese-American caregivers to determine if the strategy can improve the wellbeing of caregivers and the care of recipients who have Alzheimer's disease.

"We hope the study offers a novel method for enhancing quality-of-life among dementia caregivers and improving care practices in this underserved community," Meyer said.

For more information on the research, please contact Dr. Meyer at olmeyer@ucdavis.edu.