

MIND Matters

SPECIAL FEATURE

UCI MIND Welcomes the New ORE Core Leader: **CRYSTAL M. GLOVER, PHD**



In January 2025, Dr. Crystal M. Glover joined UCI MIND as the UCI Alzheimer's Disease Research Center's (ADRC) Outreach, Recruitment, and Engagement Core Leader. She takes over from Dr. Joshua Grill, who will continue his role as the Director of UCI MIND and co-Director of the UCI ADRC. Dr. Glover will lead the outreach efforts for UCI MIND towards the goal of reaching and engaging with a broad swath of Southern California residents regarding optimal outcomes in aging, the role of research, and related opportunities for study participation. Dr. Glover's primary faculty appointment is in the UCI School of Medicine as an Associate Professor of Neurology.

Dr. Glover is a world-renowned applied social psychologist and mixed methodologist focused on structural and psychosocial determinants of health as they relate to aging and dementia and decision-making associated with complex, nuanced, and sensitive topics in older age. Her research has led to designing, developing, and implementing engagement approaches, educational materials, and intervention strategies. She is a recognized

leader and sought-after advisor, serving on the External Advisory Board for three NIA-funded ADRCs. Most recently, she was appointed the inaugural Editor-in-Chief of Alzheimer's & Dementia: Behavior & Socioeconomics of Aging, the newest member of the Alzheimer's Association's family of scientific journals.

Dr. Glover received her Bachelor of Science from Louisiana State University and Master of Science and Doctorate from Howard University in Washington, D.C. After completing a postdoctoral research fellowship in the Geisel School of Medicine at Dartmouth College in New Hampshire, she joined the Department of Preventive Medicine at Rush Medical College in Chicago as a competitively awarded BMO Harris Bank Health Disparities Research Fellow. In 2016, she was recruited into the Rush Alzheimer's Disease Center as faculty, later assuming the Outreach, Recruitment, and Engagement Core Leader role.

She will continue her critical and innovative efforts at UCI to examine and facilitate healthy aging for all communities.

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Dear Friends of **UCI MIND**,

For many, the new year is a time for fresh starts and resolutions. As we enter 2025, we at UCI MIND are taking the opportunity to reaffirm our commitment to the mission to conduct research to discover solutions for Alzheimer's disease and related disorders.

UCI MIND investigators are unwavering in our commitment to this mission. The remainder of this newsletter, as with all of our newsletters, describes the manifold elements of the work of UCI MIND—from conducting fundamental basic science, to running vital clinical trials, to sharing

our knowledge with you the community we serve and care about so deeply.

Our growing team is devoted to our participants, the integrity of our work, and our mission to make discoveries that help millions of Americans living with diseases of the brain.




Joshua D. Grill, PhD
Director, UCI MIND

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DEMYSTIFYING AMYLOID PET

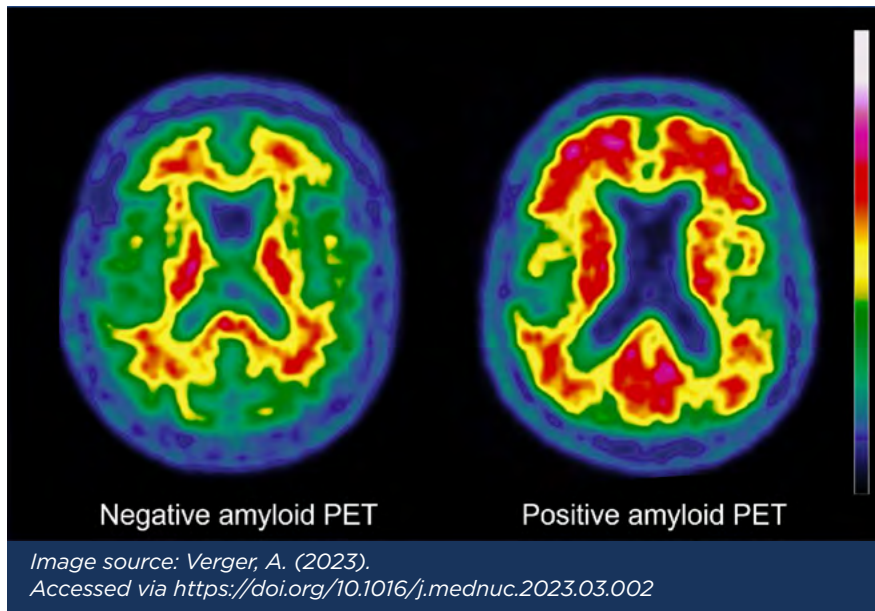
For decades, clinicians relied solely on the clinical presentation of symptoms to help understand the likely causes of dementia. Families had to wait for confirmation of diagnosis until after their loved-one passed away, if they received a brain autopsy.

Today, because of biomedical advancements, there are several tests available to help clinicians determine if a person's memory and thinking problems are due to Alzheimer's disease (AD). Tests of cerebrospinal fluid taken through lumbar puncture, Positron Emission Tomography (PET) brain imaging, and now blood tests are all used to support the diagnosis of AD. Each can, in direct or indirect ways, detect the proteins that most scientists agree are hallmark signs of AD. It is important to know that these tests are only available clinically for people experiencing symptoms and are not yet appropriate for those who want to understand their future risk of developing dementia due to AD. They also are tools for expert clinicians to use in arriving at a diagnosis, not a replacement for that evaluation.

In AD research, biomarker tests are used frequently and increasingly to understand if someone might be appropriate to participate in a prevention trial, or to help researchers understand the earliest stages of AD and related dementias. PET imaging is a particularly valuable tool as it gives scientists a direct view of where AD pathology is present in the brain.

The procedure itself is straightforward and routine at UCI MIND. Several hundred people have undergone PET imaging here as part of their research participation. When a person undergoes a PET scan as part of research, the study staff walk the participant to the imaging suite and a trained PET technician injects a small amount of a radiolabeled fluid into the arm. After a short wait, during which the fluid travels to the brain, the participant is placed into a machine fitted

with a special camera. "The injection was explained thoroughly prior to receiving it," says Steve O'Leary, an advocate for UCI MIND and a study participant. "The staff at the scan facility were very helpful and answered all of my questions."



While the participant lays quietly for about 30 minutes, the camera takes 3D pictures of the brain and the images are created to show where the labeled fluid sticks to amyloid plaques, or in the case of tau PET, where neurofibrillary tangles may be present.

PET scans are routine and safe but carry some risks including a

possibility of injection site irritation, allergic reaction, nausea, dizziness, headache and increased blood pressure. The radiolabeled fluid uses a small amount of radioactivity to generate the pictures, which is a little more than twice the amount you would receive in 1 year from background radiation (e.g. sun, soil, water) and substantially below the levels associated with more serious risks.

After the procedure, the PET technician sends the pictures to a radiologist who quantifies the number and size of the amyloid plaques or tau tangles by comparing the uptake of fluid in one area of the brain to another region not typically affected by AD. This reading determines whether a person may have an "elevated" scan, suggesting that amyloid may be building up in the brain.

Several studies at UCI MIND use PET imaging and more will be initiated in 2025. These powerful tools are accelerating learning about the brain in age and disease and will be key to our continued progress. ■

EXPLORING DELUSIONS with DAVID SULTZER, MD



UCI MIND hosts a monthly podcast called *Spotlight on Care*. Co-hosts, Virginia Naeve and Steve O'Leary, both past caregivers, invite experts and fellow caregivers on the show to discuss the issues most frequently encountered in dementia care. In February, we released our 47th episode with guest, David Sultzer, MD, a board-certified geriatric psychiatrist and professor in the department of Psychiatry and Human Behavior in the School of Medicine at UC Irvine and the leader of the UCI ADRC Clinical Core. Dr. Sultzer is a leading expert in behavioral symptoms associated with dementia. In this episode, Dr. Sultzer explained the complex and often distressing experience of delusions in people living with dementia. An excerpt of the interview is adapted for print below.

We encourage you to listen to the full interview on delusions with Dr. Sultzer by visiting, <https://spotlightoncare.org>

Virginia Naeve: What is the definition of delusions?

Dr. Sultzer: They're defined as false beliefs. We all have eccentric thoughts now and again that others might not agree with but delusions go deeper than that. They're beliefs that are persistent, that continue on for a period of time and are really refractory to information to the contrary. They're false beliefs that are really difficult to change and the challenge is often that they can lead to things like agitation. When you have a false belief and people are explaining to you over and over why you're wrong, it tends to get people stirred up, and sometimes people will act on those false beliefs.

VN: There are quite a few different types of delusions. Can you tell us some of the more common ones?

DrS: We think of them as falling into two categories. One is paranoia or theft, or people doing bad things. People with dementia are sometimes confused and concerned and don't trust people because they have unfortunately lost the cognitive machinery to know what's safe. We all forget where things are. It's the human condition to blame others for that, rather than take responsibility and we all have to acknowledge that. And yet, when someone is cognitively impaired, it's just much more difficult, and there's an easy opportunity to believe that someone is actually stealing

from them, which is distressing. The other category is misidentification. Believing their house isn't their home is a pretty common example, and it's challenging. I mean, how do you respond to a spouse of many years who says your home of many years is not your home, and "I want to go home" and is pretty upset about it. It's really challenging.

VN: How long do they last?

DrS: Sometimes they're relatively fleeting. Sometimes they'll go on for a period of time, minutes to hours and will wane, but then individuals will, not uncommonly, have the same kinds of delusions come back the next day. That's where it becomes a challenge. It's not just a one-time thing. They tend to recur, even if they go away in the short run.

Steve O'Leary: What's causing delusions to happen?

DrS: It's a good question, Steve, because it's not clear. We know, for example, that there's a neurobiology to delusions. We've identified a cortical signature of what's going on in those who are more susceptible to have delusions versus those who are not. To get into how long and why they last, nobody really knows. It's a mix of when folks are cognitively impaired, they don't remember, so they lack the ability to bring their own personal reality into their sense of the world. There's also the insight piece that is very important. We all have unusual thoughts and feelings over the course of a day, and can kind of sort them into categories of realistic or unrealistic. People with moderate to advanced Alzheimer's disease lack the capacity to consider - realistically, "is that true?" It is difficult for them to do that sorting.

VN: Do delusions tend to start in the beginning of the disease, midway through, or more toward the end?

DrS: Every person is different. Roughly 30-40% of people with Alzheimer's disease will have delusions for a period of time in their illness. It tends to peak in the mid phase when people are moderately cognitively impaired. There are fewer delusions in later stages of dementia, partly because, sadly, there's not the cognitive capacity to organize a complicated delusional thought. At that stage, it's just difficult to develop an alternative interpretation of things. ■



THE WOMEN'S INITIATIVE - 2024 AWARDEES

The risk for women of developing Alzheimer's disease in their lifetime is twice that of men. UCI MIND has partnered with Maria Shriver's Women's Alzheimer's Movement (WAM) at Cleveland Clinic since 2018 to support research to understand the apparent sex disparity in Alzheimer's disease. The UCI MIND WAM Women's Initiative announced its 8th and 9th funded researchers at the end of 2024, Drs. María Corrada and Karen Lincoln.



María Corrada, ScD, is Professor of Neurology in the School of Medicine and Professor of Epidemiology and Biostatistics in the Joe C. Wen School of Public Health. She will investigate "Estrogen Replacement Therapy and the Association with Neuropathological

Changes." Dr. Corrada is an epidemiologist who has worked as the co-principal investigator for the 90+ Study. Her work has focused on characterizing neurodegenerative diseases and identifying protective factors in the oldest old.



Karen Lincoln, PhD, MSW, MA, FGSA is Professor of Environmental and Occupational Health in the Joe C. Wen School of Public Health and Director of the Center for Environmental Health Disparities. She will investigate "Sex Differences in the Influence of

Psychosocial Stress, Inflammatory Pathways, and Pain on Dementia Risk in Black Americans." Dr. Lincoln is a health disparities researcher who studies the factors associated with poor brain health in Black and African American communities.

Drs. Corrada and Lincoln will each receive \$100,000 for their respective projects to help us move closer to answering the question of why Alzheimer's disease is more common in women.

NEW STAFF



ISABEL SOTO: Isabel joined the UCI MIND clinical research team on November 1st, 2024, and will serve as a psychometrist for the Longitudinal Cohort of the ADRC and for several of our clinical trials. Isabel graduated from UC Irvine with bachelor's degrees in psychology and sociology. Since graduating in 2020, Isabel has gained experience working with older adults with cognitive impairment in memory care units and adult day care facilities. She is a bilingual Spanish/English speaker and will support UCI MIND efforts to engage monolingual Spanish speakers in Alzheimer's research. Her experience working with frail and functionally impaired older adults reflects her genuine desire and enthusiasm to contribute to UCI MIND's mission.



CHRISTINA WHITTLE: Christina Whittle joined the UCI MIND clinical research team on December 2nd, 2024, and will coordinate several of our new neuroimaging studies and assist with activities for the Longitudinal Cohort study. As a graduate of Santa Clara University with degrees in Biochemistry and Gerontology, Christina joined the 90+ research team in the early 2000's. Christina will now bring her decades-long experience and wealth of knowledge to the growing Longitudinal Cohort study.



It was Truly a December to Remember

The 2024 December to Remember Gala, raised more than \$400,000 for Alzheimer's disease and related dementias (ADRD) research at UCI MIND.

The 14th Annual gala was celebrated by over 250 guests, along with UCI leadership, including Vice Chancellors, Deans, and Trustees. This year, UCI MIND honored two organizations for their partnership and significant support of those effected by the disease: Alzheimer's Orange County and the Somang Society.

Again held in the festive Balboa Bay Resort in Newport Beach, the evening began with a cocktail reception among the stunning floral arrangements and delightful holiday décor. Attendees were treated to a mix of classic musical treats from UCI's student jazz quartet. The enigmatic Zack Krone again served as the night's emcee. UCI MIND Director, Dr. Joshua Grill, spoke about the new and exciting advances in the fight against Alzheimer's and related dementias, but underlined that substantial work remains to achieve the ultimate goal of a world without dementia.

Dr. Grill presented the UCI MIND Award to Alzheimer's Orange County and the Somang Society. These honorees provide support to the tens of thousands of families living with dementia in Orange County. Alzheimer's Orange County has dedicated itself to providing critical resources and programs that empower families and enhance the quality of life for those living with disease. This includes helping make families aware of research and partnering with UCI MIND on our annual Southern California Alzheimer's Disease Research Conference, which was held for the 35th time in 2024. Somang Society has been a beacon of hope for Asian American communities, particularly Korean American communities, in Southern California. Their efforts have supported those affected by dementia and have emphasized dignity at the end of life's journey. Somang Society has helped UCI MIND grow into a national leader in research to understand Alzheimer's disease in Asian American and Pacific Islander communities.

The evening featured musical entertainment by the inspiring voices of the Armonia Music Group, as well as personal messages of need and hope from Leadership Council members Jonathan and Kimberly Varenchik and the producers and co-hosts of UCI MIND's *Spotlight on Care* Podcast, Virginia Naeve and Steve O'Leary.





Institute for Memory Impairments
and Neurological Disorders
2643 Biological Sciences III
Irvine, CA 92697-4545

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CONTACT US

General Information

mind.uci.edu
ucimind@uci.edu

Giving Opportunities

949.824.8885
mtano@uci.edu

Education & Outreach

949.824.9896
mwitbrac@uci.edu

Research Participation

949.824.0008
research@mind.uci.edu

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TOGETHER, WE CAN START ON A NEW PATH TO TREATING ALZHEIMER'S DISEASE.

A research study for a potential new treatment for Alzheimer's disease is looking for qualified people to enroll.

The **START (Synaptic Therapy Alzheimer's Research Trial)** Study is testing an investigational treatment to see if it can safely slow memory loss from Alzheimer's disease (AD). It lasts about two years and you will be asked to make about 24 visits to the study site to see doctors who will closely monitor your health. By participating, you or your loved one could be an important part of finding new treatments for people with AD.

TO QUALIFY FOR THE STUDY, YOU OR YOUR LOVED ONE MUST:

- ✔ Be between 50 and 85 years old.
- ✔ Have a diagnosis of mild AD dementia, OR a diagnosis of mild cognitive impairment (MCI) due to AD, OR memory concerns noticed by another person.
- ✔ Have a study partner who can come with you to some visits and take part in some testing.

There are more requirements to qualify for the START Study. The screening process includes testing. Someone on the study team can discuss the testing with you.

Study Sponsors and leadership: The START Study is funded by the National Institute on Aging (NIA) of the National Institutes of Health (NIH) and sponsored by Cognition Therapeutics. The study is being conducted by the NIH-funded Alzheimer's Clinical Trial Consortium (ACTC), a network of leading academic Alzheimer's research centers. The study is led by Alzheimer's disease research experts and academic leadership at the ACTC, Yale School of Medicine, and Cognition Therapeutics.

START

To learn more about the START Study, visit START-Study.org or call 1-833-START-33.

STUDY SITE INFORMATION

UCI MIND
(949) 824-0008
research@mind.uci.edu



UCI MINDcast

Explore our video and podcast library: A resource for people interested in learning more about Alzheimer's disease research at UCI MIND (mind.uci.edu/mindcast/)

Spotlight on Care

caregiver stories



The Journey Through Grief with
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Accelerating Discovery



Item Memory and
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caregiver stories



Delusions in Patients with Alzheimer's Disease
David Sultzer, MD

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