UCI MIND Institute for Memory Impairments and Neurological Disorders

FALL 2025

MIND Matters

UCI MIND RECEIVES LARGEST GIFT IN ITS HISTORY FROM THE QUILTER FAMILY

There are inspiring new beginnings on the horizon for UCI MIND—milestones made possible through the extraordinary generosity and steadfast commitment of Ann and Charlie Quilter and their family. We are proud to share that on October 4, 2025, Chancellor Howard Gilman announced at the close of the Brilliant Futures Campaign event that the Quilter Family had made a historic $50M donation to UCI MIND.

Ann Quilter has been part of the UCI MIND family for more than a decade. Her connection to our mission began in a deeply personal way, shaped by her mother's experience with Alzheimer's disease and her father's struggle with Lewy body dementia. Since then, she has become not only an ongoing participant in our longitudinal aging study, but one of our most dedicated champions—someone whose belief in our work has never wavered.

A pivotal moment for UCI MIND arrived in the fall of 2024, following the successful sale of Quilter Sound Company (QSC). Ann reached out with a monumental decision: she and Charlie would make a $5 million unrestricted gift to fuel our research and advance our mission. At the time, we could not have imagined that this extraordinary act of generosity would mark the beginning of an even deeper partnership with the entire Quilter family.

continued on page 3

IN THIS ISSUE

MESSAGE FROM THE DIRECTOR

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Dear Friends of **UCI MIND**,

It has been an exciting season for UCI MIND. As you saw in our cover article, the Quilter Family has made the largest gift in our organization's history. This gift is allowing us to reimagine the future of UCI MIND and we could not be more grateful. Our investigators remain highly productive, securing large research grants (p 4). And we continue to bring cutting edge and valuable information back to our community in a variety of ways, including through yet another successful local research conference (p 5) in partnership with Alzheimer's Orange County and the Alzheimer's Association, and through our innovative Spotlight on Care podcast (p 7), which reached a major milestone.

The future is bright at UCI MIND, for many reasons. This includes the remarkable support we receive from our community, but also because of the young minds that continue to join the fight against Alzheimer's disease and related dementias (p 6). As we enter the holiday season, we give thanks for our community and we keep central to our mission the people on a journey with the diseases that cause dementia.

Joshua D. Grill, PhD
Professor and Director, UCI MIND

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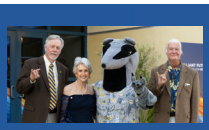

UCI MIND Receives Largest Gift in its History from the Quilter Family

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What began as a simple call of gratitude soon opened the door to remarkable new possibilities. The Quilter brothers—Patrick, Chris, and Matt (and his wife Patty)—joined Ann and Charlie in a shared commitment to UCI MIND's vision. Their collective support has directly reshaped the future of UCI MIND.

After Ann and Charlie's initial gift, Chris Quilter chose to match it. A follow-up conversation with Chris led to a meaningful discussion with Patrick—one that inspired a bold challenge gift. That challenge has already energized our community, and unlocked a $40 million gift from Patrick, bringing the total gifts from the Quilter family to $50 million.

This stunning development is now a long-term campaign to continue to accelerate and amplify the work of UCI MIND.

Charlie and Ann Quilter at UCI MIND

We are profoundly grateful to the entire Quilter family. Their support extends far beyond financial contributions—it reflects a shared vision, a true partnership, and a legacy of hope for the millions of families affected by Alzheimer's disease and other causes of dementia.

And this is only the beginning.

The Quilter family at a celebration of the family held at Nirvana in Laguna Beach

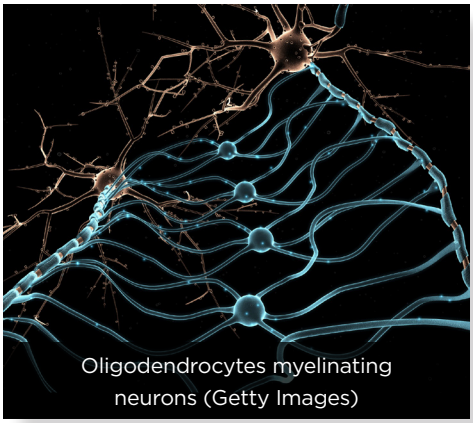
Left to right: Patrick and Chris Quilter signing their gift agreements with Joshua Grill, PhD, and Brian Hervey

UCI MIND FACULTY AWARDED CRITICAL NEW RESEARCH GRANTS

Two new grants highlight the innovative fundamental research being done to explore the development and progression of Alzheimer's disease.

Vivek Swarup, PhD, Associate Professor of Neurobiology and Behavior has been awarded an Alzheimer's Association Research Grant, a funding mechanism that supports research for early career scientists. The 2-year, $200,000 grant will fund work to study oligodendrocyte dysfunction in Alzheimer's disease (AD). Oligodendrocytes (OL) are cells in the brain that support neurons by producing the myelin sheath, a protective layer that surrounds neuronal axons. Evidence suggests in Alzheimer's, normal OL function may be altered and may even contribute to a buildup of amyloid plaques. The Swarup Lab will use multi-omic approaches to study whether a key OL regulator (a regulator is a messenger molecule that can signal to a cell to take an action) plays a role in AD progression and whether manipulating it, can slow or stop the disease.

Vivek Swarup, PhD



Oligodendrocytes myelinating neurons (Getty Images)

The National Institutes of Health awarded **Kevin Beier, PhD**, and **Elizabeth Head, PhD**, a 4-year, 3 million-dollar grant to study whether a brain region thought to play a role in episodic memory and navigation, the retrosplenial cortex (RSC), is implicated in the earliest stages of AD. Dr. Beier, Associate Professor of Physiology and Biophysics and Dr. Head, Professor of Pathology and Laboratory Medicine, will examine activity in the RSC and test whether inhibiting hyperactivation in this region can prevent Alzheimer's pathology and the ensuing cognitive impairment.

Kevin Beier, PhD

The grant also features the collaborative efforts of several cores of the UCI Alzheimer's Disease Research Center (ADRC). The team will utilize three different mouse models from MODEL AD and access data from the Clinical Core and human tissue samples from the Neuropathology Core of the ADRC. **Liz Chrastil, PhD**, a UCI MIND faculty member and funded Women Alzheimer's Movement (WAM) Women's Initiative researcher, will serve as a co-investigator on the project. Dr. Beier is an alumni of the ADRC Research and Education Component (REC), led by Dr. Head.

Elizabeth Head, PhD

"This study will provide support for a critical role that RSC hyperexcitability plays in AD progression, and a mechanistic framework for how changes in intrinsic excitability and synaptic function contribute to the development of AD," says Dr. Head. "We hope that novel insights will be gained that may lead to future targets to promote healthy brain aging."

EVENT SPOTLIGHT

ANNUAL RESEARCH CONFERENCE EXPLORES THE INTERSECTION OF GENETICS AND ENVIRONMENT IN DEMENTIA RISK

-Valerie Tung

On Friday, October 24, 2025, UCI MIND, in collaboration with Alzheimer's Orange County and the Alzheimer's Association Orange County Chapter, hosted the 36th Annual Southern California Alzheimer's Disease Research Conference at the Irvine Marriott. This year's conference brought together more than than 320 researchers, clinicians, students, caregivers, and community members. The conference theme, *Nature, Nurture & Neurodegeneration: Decoding Risk for Dementia*, focused on how genetic, medical, environmental, and psychosocial factors interact across the lifespan to influence risk for Alzheimer's disease and related dementias (ADRD). Opening remarks from Jim McAleer (Alzheimer's Orange County), Deborah Levy (Alzheimer's Association), and Joshua Grill, PhD emphasized the importance of collaboration, community partnerships, and equitable access to research.

Sudha Seshadri, MD, DM, discusses the role of medical risk factors for Alzheimer's disease

Throughout the day, leading national experts presented new insights into risk from multiple perspectives. Kenneth Kosik, MD, from the University of California, Santa Barbara introduced the audience to how both genes and environment interact to shape dementia risk. Sudha Seshadri, MD, DM, from the University of Texas, San Antonio explored the role medical conditions, such as heart health and diabetes, in cognitive decline.

Jennifer Yokoyama, PhD, University of California, San Francisco highlighted emerging genetic pathways beyond APOE, while Jennifer Weuve, MPH, ScD, Boston University, shared evidence linking air pollution and brain aging. UCI MIND's own Vivek Swarup, PhD, explained how epigenetics can switch genes "on" or "off" based on lived experience, and Yakeel Quiroz, PhD, Boston University, discussed how families with rare genetic mutations are helping researchers understand dementia. Jennifer Gatchel MD, PhD, Harvard University & Massachusetts General Hospital, closed out the speaker series by exploring relationships between psychiatric conditions and dementia, highlighting the importance of mental health in overall brain health.

One of the most powerful moments of the conference was the closing Family Panel where individuals shared their firsthand experiences navigating loved ones' diagnoses, treatments, and caregiving challenges.

Their inspiring personal journeys were foundational to the event, reminding attendees that the ultimate goal of scientific discoveries is better care for individuals and families affected by ADRD.

Left to right: Joshua Grill, PhD with panelists Angel Leal, Susan Minegar, and David Van Ramshorst

TRAINEE SPOTLIGHT

RAMP TRAINEE EXPLORES UNDERSTUDIED PROTEIN IN THE BRAIN

Flor Garza is a 2nd year medical student (MS2) in the UC Irvine School of Medicine and a Research and Mentorship Program (RAMP) trainee. RAMP is a research training initiative for medical students funded by the National Institutes of Health (NIH), Lauren Miller Rogen and Seth Rogen's Hilarity for Charity (HFC), and by Lorna Carlin, MD, a longtime supporter of UCI MIND. We interviewed Flor about her research project with Edwin Monuki, MD, PhD, Professor and Chair in the Department of Pathology and Laboratory Medicine.

Megan Witbracht, PhD: What are your career pursuits and how do you hope to carry your research forward as a physician?

Flor Garza: As someone who has decided to pursue a medical degree, I like to look for ways to incorporate research opportunities into my training. Though I'm still in my second year, my main interests are in treating disorders of the nervous system. They are among the most mysterious and poorly understood. I know that throughout my career we will find new evidence for neurologic disease treatment and prevention, and I hope to contribute to that body of work starting now.

MW: Why did you choose to study the choroid plexus with Dr. Monuki?

FG: I decided to spend my summer in Dr. Monuki's lab for two reasons. I was thrilled by the opportunity to work directly with brain tissue and extract data from different pathological cases. Importantly however, I also found the lab to be a good cultural fit, perhaps because we share an undergraduate alma mater! Having support from Brett Johnson, a senior researcher in the lab, consistently inspired my interest in the subject.

MW: What is your interest in dementia research?

FG: My interest in dementia research is rooted in a belief that aging does not have to be a deleterious process. In an aging society, we need to normalize the late decades of life as a physically and mentally active time. We know it is possible to reach 80, 90, and 100 years with stable cognition, and everyone deserves that chance. Dementia has both social and biological risk factors and, in my summer research, I wanted to focus on the latter. A deeper understanding of the biology could allow us to intervene early with therapeutics and alleviate the suffering of predisposed individuals and their families.

Flor is examining brain tissue under a specialized microscope

MW: Can you describe your current project?

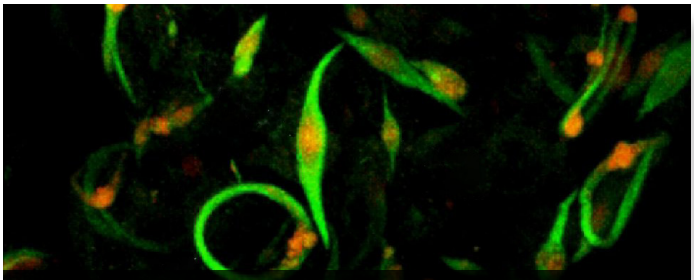
FG: There are many types of dementia, each with distinct causes or risk factors. Classically, we understand the accumulation of various disordered and dysfunctional protein aggregates as a risk factor that affect cognition. There are protein aggregates that accumulate in the choroid plexus called Biondi bodies that we know very little about. Recent literature suggests Biondi bodies could be made of a protein called TMEM106B. We thus set out to see if our cases show presence of TMEM106B and if so, are certain diseases more prone to TMEM106B?

MW: What are the potential clinical or therapeutic implications of your research?

FG: The protein TMEM106B is involved in the cellular pathways that help our cells get rid of dysfunctional proteins. If its presence is more common in certain dementias, this could allow us to develop drugs that target its cellular pathway, and potentially prevent progression of certain dementias.

MW: How might your findings contribute to our understanding of neurological disorders?

FG: My summer work may have a miniscule effect on the literature of neurological disorders, but it will grow our understanding of the choroid plexus's involvement in disease. The choroid plexus is rarely studied perhaps because it is found so deep in the brain, but I look forward to the field uncovering its physiology.



Biondi body morphologies in the choroid plexus (Monuki Lab)

Virginia Naeve and Steve O'Leary pictured left to right

SPOTLIGHT ON CARE PODCAST HITS A MILESTONE

In November, Spotlight on Care, UCI MIND's innovative podcast for caregivers hosted by Virginia Naeve and Steve O'Leary, published their 54th episode and went over 25,000 downloads. Now produced with support from Kenny Li and Valerie Tung, Spotlight has been going strong since 2021. Here is a sample of some of their more recent offerings:

"Importance of Sleep" with Bryce Mander, PhD: In this episode, we explore how sleep patterns shift as we age and the downstream effects on memory and brain health, especially for caregivers. Dr. Mander offers evidence-based insights into when sleep concerns warrant clinical attention and strategies to restore healthier rest.

"The CMS GUIDE Model" with Sonia Sehgal, MD & Valerie George, PA: This conversation introduces the "GUIDE" (Guiding an Improved Dementia Experience) initiative launched by the Centers for Medicare & Medicaid Services and implemented by the UCI Health SeniorHealth Center. Learn how this long-term, dyad-focused care model supports both people living with dementia and unpaid family caregivers through proactive, integrated services.

"Caring for a Parent with Early-Onset Alzheimer's Disease" with Andrea Hughes: Andrea shares her deeply personal journey of navigating caregiving for her mother following an early-onset Alzheimer's diagnosis. She explores the unique challenges of balancing work, shifting roles, and finding community as a younger caregiver. Andrea and her mother are featured in the Independent Lens documentary Matter of Mind: My Alzheimer's on PBS, which further amplifies her story of resilience and advocacy.

"The Value of a Geriatrician" with Sonia Sehgal, MD & Valerie George, PA: In this episode, the hosts dive into the role of geriatric medicine in dementia care from screening and diagnosis to integrating cognitive, social and physical health for older adults. The discussion underscores the importance of early involvement of geriatrics and teamwork for both patients and their caregivers.

"Coping with Challenging Situations in Dementia Care" with Teepa Snow: Renowned dementia care specialist Teepa Snow joins the program for an enlightening conversation about coping with challenging situations while supporting people living with dementia. Teepa shares her compassionate, person-centered approach to understanding the why behind these challenges, and offers practical techniques for de-escalating tense situations, identifying common triggers, and maintaining dignity and connection.

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BenfoTeam

The BenfoTeam clinical research trial aims to increase the amount of thiamine (Vitamin B1) in the brain to slow cognitive decline in people with Mild Cognitive Impairment and mild Alzheimer's Disease

The trial is designed for people who are age 50-89, and experiencing significant memory concerns, or who have already been diagnosed with Mild Cognitive Impairment (MCI) or mild Alzheimer's disease (AD). This stage of the disease, MCI through mild AD, is also known as early AD.

Basic Eligibility Criteria

- Aged 50-89
- Diagnosed with early AD, including Mild Cognitive Impairment (MCI) or mild dementia (with blood test confirmation at screening)
- Stable on current FDA-approved acetylcholinesterase inhibitors (with or without memantine) for at least three months prior to screening
- Living in the community (not in a long-term care nursing facility)
- Willing to participate in the BenfoTeam study for up to 18 months

What happens during the BenfoTeam Study?

Trial participation will take up to 18 months. Potential participants will first go through the screening process to see if they are eligible to take part in the clinical trial. Half of the participants are given the study drug, benfotiamine, and half are given an inactive pill (called a placebo) to take twice daily.

Screening includes: Memory and thinking tests, blood tests, EKGs (a look at your heart rhythms), and MRI scans (a picture of your brain that shows changes related to AD).

For more information or to volunteer, please contact:

UCI MIND

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www.BenfoTeam.org

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