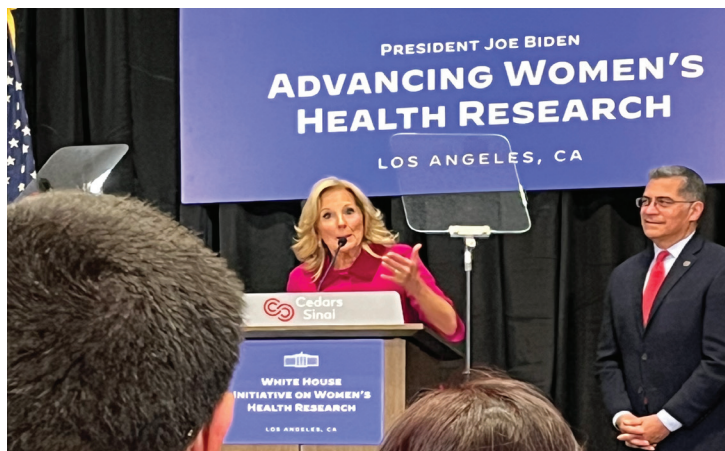


MIND Matters

SPECIAL FEATURE

ADVANCING WOMEN'S HEALTH RESEARCH



First Lady Dr. Jill Biden and Health and Human Services Secretary Xavier Becerra.

On December 8, 2023, at the invitation of Ms. Maria Shriver, UCI MIND Director, Joshua Grill, PhD, and UCI MIND faculty and associate professor of Neurobiology and Behavior in the School of Biological Sciences, Elizabeth Chrastil, PhD, attended an event at Cedars-Sinai Hospital in Los Angeles featuring First Lady Jill Biden, EdD, and Secretary of Health and Human Services Xavier Becerra. The event was part of a campaign to call attention to the president's initiative on women's health research, which launched in November with an event at the White House. This unique initiative calls attention to the need for research that emphasizes the role of sex and gender in health. In addition, the initiative, which is led by the Office of the First Lady and the White House Gender Policy Council, will soon offer recommendations to



From left to right: Mrs. Anne Grill, former California First Lady Maria Shriver, Dr. Joshua Grill, Dr. Sarah A. Kremen (Cedars-Sinai), and Dr. Elizabeth Chrastil.

advance women's health research. These recommendations are anticipated to engage the scientific, private, and philanthropic sectors.

Ms. Shriver, the former first lady of California, was lauded by Dr. Biden and Secretary Becerra for her role in spurring the launch of the initiative. Ms. Shriver has been a champion for women's health, brain health, and in particular women's brain health. She chaired the California Governor's Task Force on Alzheimer's Prevention and Preparedness in 2020 and, in 2016, she partnered with Dr. Grill to launch the UCI MIND Women's Alzheimer's Movement (WAM) Women's Research Initiative. This initiative has funded \$700,000 in novel research projects focused on the role of sex in Alzheimer's disease to date, including an innovative project by Dr. Chrastil investigating whether navigational skills are differentially affected in men and women with age and disease.

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Dear Friends of UCI MIND,

Happy New Year! We hope that 2024 is off to a positive start for you. As we embark upon a new year, UCI MIND and the field of Alzheimer's disease and related dementias (ADRD) research are abuzz with excitement about progress made and opportunities to further advance our field.

At the end of 2023, we held our annual signature fundraising event, the December to Remember Gala. We honored Lauren Miller Rogen and Seth Rogen, the founders of Hilarity for Charity (HFC) and our partners in a program to mentor and inspire medical students at UCI to choose careers in research and care of older people living with brain diseases. The Gala was a huge success (p 3) and took on the theme of supporting the next generation of researchers. Indeed, alongside research and community outreach (p 5), UCI MIND includes a number of prominent educational resources and programs, established through NIH training grants and philanthropic support from organizations like HFC and local supporters here in Orange County like Joan and Don Beall, Dr. Lorna Carlin, the Brethren Community Foundation, and others.

In this issue of MIND Matters, we introduce you to several of the trainees supported by these programs (p 6-7). We hope you will enjoy learning a bit more about them and their work. We also are welcoming a new staff member, celebrating another who is taking on a key new role and bidding a fond farewell to a long-time team member (p 4-5).




Joshua D. Grill, PhD
Director, UCI MIND

FACULTY MEMBERS

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Christine Gall, PhD, Chair
Alan Goldin, MD, PhD
Kei Igarashi, PhD
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SPECIAL FEATURE

2023 DECEMBER TO REMEMBER GALA

The 2023 December to Remember Gala raised more than \$300,000 for ADRD research at UCI MIND. The theme of this year's gala was "Rising Stars," in celebration of the



Harriet Harris speaks about the "Living Large Legacy"

next generation of clinicians and scientists at UCI MIND. Two hundred guests, along with UCI leadership, celebrated in the thematically decorated grand ballroom at the

Westin South Coast Plaza. Zack Krone emceed the elegant and star-studded event, sharing his humor and charm while inspiring laughter and generosity.

In the evening's program, guests had the opportunity to hear Harriet Harris speak about her late husband Bill's fight against dementia.

Harriet serves on the leadership council at UCI MIND and has recently established the "Living Large Legacy" to support vital, innovative research for Alzheimer's disease.

After her moving speech, and in keeping with the theme of rising stars, the guests were treated to a performance by the Voices of Hope Children's Choir.

Honored with this year's annual UCI MIND Award were Lauren Miller Rogen and Seth Rogen. Seth is an Emmy



Attendees bidding on various auction items.



Dr. Frank LaFerla (right) with UCI MIND award honorees, Seth Rogen and Lauren Miller Rogen.

Award®-nominated actor, writer, producer, director, entrepreneur, and philanthropist. Lauren is a screenwriter, director, producer and philanthropist who was profoundly affected by Alzheimer's when her mother was diagnosed at 55 years old. Seth and Lauren co-founded HFC, a national nonprofit organization providing respite and other resources for families coping with dementia. HFC and Dr. Lorna Carlin have partnered with UCI MIND and UCI School of Medicine

since 2020 to support the Research and Mentorship Program (RAMP), a mentored summer research program for UCI medical students with UCI MIND faculty. At the gala, Seth and Lauren met and spoke with more than 15 UCI MIND "rising star"

attendees. They were also honored with a tribute video featuring RAMP trainees. The sonorous voices of Armonia Music Group (AMG) closed the spectacular and successful evening.



Voices of Hope Children's Choir

Seth Rogen and Lauren Miller Rogen with UCI MIND Rising Stars



THE IMPORTANCE OF GETTING AN EARLY DIAGNOSIS



Successful aging is an attainable goal when the focus is on optimizing wellness by engaging in proactive health behaviors, meaningful and prosocial activities, and positive emotional experiences. Although the natural aging process involves changes in people's thinking or cognitive abilities (e.g., slowness in thinking, distractibility, word-finding difficulties, etc.), developing dementia is not a "normal" part of aging. In coping with age-related changes, it is important to embrace positive attitudes and develop resilience. Unfortunately, the risk of developing a neurodegenerative disorder such as Alzheimer's disease or other diseases that cause dementia does increase with older adulthood. Therefore, it is also important to notice and not dismiss changes that occur above and beyond those expected as part of normal aging.

Resources are available that list and describe key symptoms or warning signs that can be helpful in deciding when it's time to visit a doctor to get an evaluation. These symptoms can range from declines in memory and thinking skills to changes in behavior, mood, and personality depending on the specific condition(s) (e.g., Alzheimer's disease, cerebrovascular disease, Lewy body disease, frontotemporal disorders). Fortunately, medical providers can help in identifying potentially concerning changes by evaluating symptoms, reviewing medical history, and conducting a comprehensive physical examination.

The first step toward getting an early diagnosis is to recognize and promptly bring any concerns for changes in cognition, behavior, or mood to medical providers. This can allow for a comprehensive medical evaluation to rule out any potentially treatable or reversible causes of cognitive decline (e.g., infections, vitamin deficiencies, metabolic and/or endocrine dysfunction, medication side effects, depression).

In addition, a brief screening of cognitive abilities could also reveal potential cognitive deficits in a measurable way. If medical or psychiatric conditions are not likely the primary causes, and yet a person continues to experience declines in cognitive abilities, then a referral for a comprehensive neuropsychological evaluation may be a next step. This type of evaluation will be helpful in identifying, characterizing, and ultimately diagnosing impairments in cognitive abilities. Importantly, it can also help to identify potential strategies to address difficulties in daily life.

The earlier one engages in this process and receives a diagnosis, the sooner they can (1) seek potentially available treatments and opportunities to engage in clinical trials for novel medications or interventions, (2) access and connect with available resources (e.g., education, classes on cognitive skills, counseling, support groups, etc.), and (3) have more time to plan for the future (e.g., advance directives, end-of-life choices). In conclusion, an early diagnosis can allow a person and their family, to receive information that will help them make informed decisions and set realistic expectations to plan for the future, as well as establish a network of social support, which will be key to optimizing wellness and quality of life if the disease progresses.

- Maria Corona, PhD, UCI MIND Neuropsychologist

RUOBING LI RETIREMENT



UCI MIND sends congratulations and gratitude to **Ruobing Li**, who retired in January 2024. Ruobing joined UCI MIND in 2013 as the clinical research coordinator for the longitudinal cohort of the UCI Alzheimer's

Disease Research Center (ADRC).

She worked closely with research participants and their families to schedule and coordinate study visits. Ruobing is a native Mandarin speaker who played a critical role in recruiting and retaining many of our Asian American participants. Ruobing holds a Master's degree in gerontology and has worked in academia and the medical field her entire career. In retirement, Ruobing plans to move with her husband to be closer with their son.

RESEARCH UPDATE

UCI MIND RESEARCHERS PARTNER WITH LATINO HEALTH ACCESS TO INNOVATE BRAIN HEALTH AWARENESS

Epidemiologist Christian Salazar, PhD, MPH, and neuropsychologist Maria Corona, PhD, have been awarded a 2023 Campus-Community Research Incubator grant from UC Irvine's Institute for Clinical and Translational Sciences. Their project, titled "Improving knowledge and awareness of Alzheimer's disease and related dementias among promotores in Santa Ana, California," is designed to elevate awareness of Alzheimer's and dementia in Hispanic and Latino communities in Orange County through a unique educational approach involving community health workers. The project is a collaboration with Guillermo Alvarez, BS, from Latino Health Access (LHA), a key non-profit supporting underserved Santa Ana residents.

Drs. Salazar and Corona underscore the importance of this partnership: "Our approach builds on a partnership with LHA, employing trained community



Drs. Maria Corona (left) and Christian Salazar

health workers, in Spanish, called *promotores*, to establish rapport and build trust within the Hispanic/Latino community in Santa Ana." Their initiative includes creating a culturally sensitive brain health curriculum, which the promotores will disseminate widely within the community. They highlight the intended impact:

"The project's goal is to improve access to resources and support for individuals with ADRD and their caregivers, promoting brain health and reducing ADRD risk in the Hispanic and Latino community."

STAFF SPOTLIGHT

APRIL-ANN WEI WELCOME



April Wei joined the UCI MIND clinical trials team as an assistant clinical research coordinator. She graduated from the University of Southern California with a Bachelor of Science in Health Promotion & Disease Prevention Studies and a minor in Neuroscience. April worked at UCI Health in the ambulatory clinic setting since 2015 before making the jump into the world of clinical research. She is excited and eager to be a part of the active fight against Alzheimer's dementia, especially since she has a loved one currently battling a similar debilitating disease. So far, April has been enjoying working with our amazing participants and learning from the outstanding and experienced UCI MIND team.

MALIA TANO PROMOTION



In December, **Malia Tano** transitioned from administrative specialist to the role of Associate Director of Development in UCI MIND. As an administrative specialist, Malia worked closely with numerous teams within UCI MIND and this experience equipped her with a deep understanding of UCI MIND's mission. As Associate Director of Development, Malia will work with UCI MIND's Executive Director of Development, Cherry Justice, to engage UCI MIND's network of supporters and advocates. "I am enthusiastic about the opportunity to leverage my organizational knowledge and interpersonal skills to connect with advocates and supporters, both existing and potential. I am extremely excited about the opportunity to join UCI MIND's development team," says Tano.

TRAINING THE NEXT GENERATION

UCI MIND, through funding by the NIA, community partners and philanthropists, fulfills its mission of training the next generation by supporting several important initiatives. The TITAN T-32 grant, led by Elizabeth Head, PhD and Joshua Grill, PhD and the Neurobiology of Aging and AD T-32 grant, led by Andrea Tenner, PhD and Craig Stark, PhD provide critical support and training for graduate students and postdoctoral fellows who want to study AD/DRD. The Research and Education Component (REC) is a funded element of the UCI ADRC led by Dr. Head that supports early career faculty scientists. We asked a few of our trainees to provide a synopsis of who they are and the research they are doing.



Lulu Y. Chen, PhD

**Assistant Professor, Department of Anatomy and Neurobiology
School of Medicine
REC Scholar**

My lab works to identify and understand key genes involved in selective vulnerability and resilience of synapses, or connections between brain cells, during Alzheimer's progression. In particular, genetic analyses of protein levels in blood samples from Alzheimer's patients point to one synaptic protein called Neurexin as importantly differing across Alzheimer's stages. My lab recently identified a novel role for one Neurexin gene (Neurexin-2), and is now investigating this as a potential regulatory mechanism of cognitive decline in Alzheimer's disease. Our hope is that this work will lead to the identification of new treatment targets for Alzheimer's disease.



Soyun Kim, PhD

**Associate Project Scientist, Department of Neurobiology
and Behavior
Yassa Lab
REC Scholar**

I completed my Bachelor's degree in Biochemistry and Molecular Biology at the University of British Columbia in Canada. Following that, I pursued a PhD in Neuroscience at the University of Southern California, where my focus was unraveling the intricate mechanisms governing learning behavior. As a postdoctoral scholar at the University of California, San Diego, I expanded the horizons of my research into the realm of human neuroscience, specifically delving into the study of human memory and spatial cognition.

I am currently an Associate Project Scientist at UCI, and my research program centers on exploring the connections between Alzheimer's disease pathology, brain structure and function, and cognition among older adults. I employ an array of neuroimaging tools, complemented by neuropsychological and behavioral testing, to investigate how the brain evolves through neurocognitive aging and in the presence of pathological disease. My ultimate aim for these studies is to identify brain imaging biomarkers and develop diagnostic tools that can effectively pinpoint individuals at an elevated risk of developing Alzheimer's disease.



Zahara Mary Kelly Keulen, MS

**PhD Candidate, Department of Neurobiology and Behavior
Blurton-Jones Lab
TITAN-32 Trainee**

I received my Bachelor of Science in Molecular, Cellular and Developmental Biology from UC Santa Cruz, my Master of Science in Biology with a specialization in Regenerative Medicine from Cal Poly San Luis Obispo, and I am now a PhD candidate in the Department of Neurobiology and Behavior at UCI. I study how microglia, the major immune cells of the brain, sense and react to signs of injury and neurodegeneration. To do this, I use biochemical techniques to coax human induced pluripotent stem cells into becoming human microglia and neurons, which I study in a dish (in vitro) or transplant into mice (in vivo). I also employ DREADD technology - Designer Receptors Exclusively Activated by Designer Drugs - to explore if modifying specific cellular pathways could potentially improve microglia's response to Alzheimer's disease. By studying these conditions in human cells I hope to uncover mechanisms that contribute to neurodegeneration, that may not be represented in mouse models of disease.



Katherine A. Colcord, PT, DPT

**PhD Candidate, Department of Epidemiology and Biostatistics
The 90+ Study
TITAN-32 Trainee**

I have a Doctor of Physical Therapy degree and a Bachelor of Arts in Spanish from Northern Arizona University. I am interested in aging research, specifically in the context of individuals 90 years and older. Many of my research questions arose from my work as a physical therapist, specializing in geriatric and neurological rehabilitation. I am currently investigating factors related to falls in individuals 90 years and older. I am exploring the interplay between physical and cognitive impairment in relation to falls, aiming to proactively identify individuals most at risk before a fall occurs. I am also interested in examining hospitalization and health services received during and after a hospital stay in relation to falls after hospital discharge. Looking ahead, I plan to explore the extent to which neuropathological burden is associated with physical performance, gait characteristics, and risk of falls. My goal is to contribute new insights that can be translated into tangible changes in clinical practice through the development of new fall risk screening for older adults and improvements in our understanding of the underlying mechanisms of falls in this group.



Jessica Noche, PhD

**Postdoctoral Researcher, Department of Neurobiology and Behavior
Stark Lab
TITAN-32 Trainee**

I received my Bachelor of Arts in psychology at UCI in 2014. Prior to pursuing my PhD, I worked as a Research Program Coordinator in the lab of Dr. Michael Yassa, managing MRI studies of memory in aging and in major depressive disorder in young and older adults. My thesis work at UCI in the lab of Dr. Craig Stark examined neuroimaging biomarkers of aging in a canine model for a preclinical intervention study in collaboration with Dr. Elizabeth Head. Currently, as a postdoctoral researcher in the Stark lab, my research examines the structure, function, and biochemistry of the brain using computational approaches for multimodal MRI to identify features related to memory impairment and Alzheimer's disease.



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125275 - 125285.

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UPCOMING EVENTS

CONFERENCE



**Friday,
September 6th, 2024**
Hilton Orange County Airport

GALA



**Saturday,
December 7th, 2024**
Balboa Bay Resort




UCI MINDcast

mind.uci.edu/mindcast/

Explore our video and podcast library:

A resource for people interested in learning
more about Alzheimer's disease research at
UCI MIND




Ask the Doc

Steve O' Leary and
Virginia Naeve
The Caregiver's Perspective



Ask the Doc

Karen D. Lincoln, PhD,
MSW, MA, FGSA
Discussing Health Disparities in AD



Be the Solution

The gift of brain
donation



Spotlight on Care

Michelle McDonnell, PhD
Cognitive testing