What is an ORU? An ORU is a unique and competitive distinction on UCI’s campus, reserved for interdisciplinary research programs tackling critical topics through collaborative efforts.

To facilitate new research initiatives across the UC system, ORUs rarely receive support past three five-year cycles. But, because Alzheimer’s disease and related dementias (ADRD) are escalating healthcare crises and because of UCI MIND’s track record of research discoveries and community impact, the University has sustained support for this one-of-a-kind Institute, now beginning its 25th year.

As eloquently penned by Founding Director Carl Cotman, PhD in the original ORU application: “Discovering how some individuals live the last years of life unhindered by debilitating cognitive impairment has the potential to extend to others the same privilege. Other medical advances have added years to life; the goal of our program is to put life into years.” This vision remains at the heart of UCI MIND’s mission.
Dear Friends of UCI MIND,

Happy New Year from the faculty, staff, and trainees of UCI MIND. 2020 promises to be an exciting and important year in the mission to rid the world of Alzheimer’s disease and other dementias. This is the 25th year that UCI MIND has held the prestigious distinction of an Organized Research Unit on the UCI campus (p. 1, 3). In many ways, our organization ideally fulfills this campus structure, which is meant to bring together experts from various corners of the campus to work together to enhance a research mission. We hope you will join us as we celebrate our anniversary throughout 2020. Numerous events are planned, and the year of celebration will culminate with our annual A December to Remember Gala on December 5th.

The 2019 Gala was our most successful ever, thanks to the leadership and commitment of our honorees, Harriet Harris and Betty’s Foundation, as well as numerous generous event sponsors (p. 4). Philanthropy remains vital to our mission, allowing us to bring more investigators into our work and permitting innovative research that might otherwise not be possible (p. 6-7). Leaders like Harriet Harris and Keith Swayne (p. 5) have brought UCI MIND to new heights in this arena.

Lastly, every year we say goodbye to patients, caregivers, and champions of our cause. Already in 2020, we have lost a remarkable partner, Frieda Caplan. A tiny piece of Frieda’s story is told on page 7 and our Blog. We are grateful to Frieda and thousands of others who have donated their time to helping advance our understanding of Alzheimer’s disease and related dementias.

Joshua D. Grill, PhD
Director, UCI MIND

For the latest news, stories, and resources, visit www.mind.uci.edu/blog

MESSAGE FROM THE DIRECTOR

Faculty members

**Anatomy & Neurobiology**
Aileen Anderson, PhD
Tallie Baram, MD, PhD
Christine Gall, PhD, Chair
Kei Igarashi, PhD
Gary Lynch, PhD
Steven Schreiber, MD
John Weiss, MD, PhD
Xiangmin Xu, PhD

**Chemistry**
James Nowick, PhD

**Developmental & Cell Biology**
Ali Mortazavi, PhD
Diane O’Dowd, PhD

**Epidemiology**
Maria Corrada, ScD
Karen Edwards, PhD, Chair
Daniel Gillen, PhD

**Medicine**
Masashi Kitazawa, PhD
Steven Tam, MD

**Molecular Biology & Biochemistry**
Charles Glabe, PhD
Andrea Tenner, PhD

**Neurobiology & Behavior**
Mathew Blarton-Jones, PhD
Jorge Busciglio, PhD
Carl Cotman, PhD
Christine Gall, PhD
Kim Green, PhD
Joshua Grill, PhD
Claudia Kawas, MD
Frank LaFerla, PhD, Dean
Michael Leon, PhD
Craig Stark, PhD
Vivek Swarup, PhD
Leslie Thompson, PhD
Marcelo Wood, PhD, Chair
Michael Yassa, PhD

**Neurology**
Tallie Baram, MD, PhD
Maria Corrada, ScD
Carl Cotman, PhD
David Cribbs, PhD
Malcolm Dick, PhD

**Neurology** (continued)
Mark Fisher, PhD
Lisa Flanagan, PhD
Claudia Kawas, MD
Ira Lott, MD
Mark Mapstone, PhD
Tahseen Mozaffar, MD, Int. Chair
S. Ahmad Sajjadi, MD, PhD
Steven Schreiber, MD
Gaby Thai, MD
John Weiss, MD, PhD
Michael Yassa, PhD

**Pathology & Laboratory Medicine**
Elizabeth Head, PhD
Ronald Kim, MD
Edwin Monuki, MD, PhD, Chair
Mari Perez-Rosendahl, MD

**Pediatrics**
Tallie Baram, MD, PhD
Virginia Kimonis, MD
Ira Lott, MD
Andre Obenaus, PhD

**Physical Medicine & Rehabilitation**
Aileen Anderson, PhD
Brian Cummings, PhD

**Physiology & Biophysics**
Kevin Beier, PhD

**Psychiatry & Human Behavior**
Ruth Benca, MD, PhD, Chair
Joshua Grill, PhD
Gary Lynch, PhD
Bryce Mander, PhD
Joan Steffan, PhD
David Sultzer, MD
Leslie Thompson, PhD
Michael Yassa, PhD

**Psychological Science**
Daniel Nation, PhD

**Radiation Oncology**
Charles Limoli, PhD

**Statistics**
Daniel Gillen, PhD, Chair
Bin Nan, PhD
In 1995, over 25,000 people were afflicted with ADRD in Orange County, and the cost to the U.S. healthcare system was $80 billion a year. Each of these numbers has more than tripled over the lifespan of UCI MIND, a frustrating reality that fuels our determination to do more, faster.

To this end, we continue to grow our interdisciplinary team and prioritize training students so that more researchers from diverse backgrounds are collaborating to answer important scientific questions. Since its inception, UCI MIND has more than doubled its faculty researchers, now representing 16 academic departments at UCI (p. 2). The Institute has formally trained over 300 graduate students and postdoctoral scholars in ADRD. As our team has grown, so has our research productivity and success in securing more grant funding.

While our capacity and knowledge has expanded over the past 25 years, there is still much work to be done to achieve our mission of a world without ADRD. With the support of our University and partnership with our local community, the future is bright for UCI MIND.

As an ORU in 2020 and beyond, the Institute will pioneer improved disease models, develop new treatment targets, and conduct the most promising clinical trials.

Leadership:

1995-2009
Carl Cotman, PhD

2009-2014
Frank LaFerla, PhD

2014-2016
Andrea Tenner, PhD

2016-2018
Frank LaFerla, PhD/ Joshua Grill, PhD

2018-present
Joshua Grill, PhD

Since 1995:

$150+ million in NIH grant funding

1,000+ brains donated by research participants

1,500+ publications of research discoveries

300+ new scientists trained by UCI MIND faculty
UCI MIND raised a record net total of $473,000 for Alzheimer’s research at its 10th Annual A December to Remember Gala presented by the Brethren Community Foundation. Top sponsors who helped reach this record include Julia and George Argyros, Bill and Harriet Harris, Joe Gonzalez, in honor of Barbara Gonzalez, and Chris and Kathy Taylor.

We are grateful that the work of UCI MIND and this signature fundraising event are increasingly recognized and supported by the local Orange County community, where over 80,000 people are living with Alzheimer’s disease. Community support is vital to the cutting-edge research performed at UCI MIND in the race to find a cure.

The UCI MIND Award honoree was Harriet Harris, President of Harris Taylor Management, Inc. “Harriet has had a transformative impact on UCI MIND because of her dedication and commitment to supporting the critical work of the Institute. She helped make the 2019 event the best-attended gala, resulting in a sold-out venue, and it also raised the most funding for UCI MIND’s research,” said UCI MIND Director, Dr. Joshua Grill.

UCI MIND also honored Betty’s Foundation for the Elimination of Alzheimer’s Disease with the Community Leadership Award. Betty’s Foundation is a family-operated nonprofit established by the Woesner family to honor their grandmother Betty, who passed away after a 16-year battle with Alzheimer’s. Betty’s Foundation has brought a new generation of supporters to the fight against Alzheimer’s through innovative programming, such as their Remember the Music Festival.

The evening culminated with a live performance by singer-songwriter Ashley Campbell, whose late father, musician Glenn Campbell, suffered from Alzheimer’s disease. Ashley’s personal story, commitment to raising funds for Alzheimer’s research, and incredible talent were a moving highlight for guests of the Gala.

To date, UCI MIND’s Annual A December to Remember Gala has raised more than $2 million to fund Alzheimer’s research.

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UCI MIND Honoree, Harriet Harris with Director, Dr. Joshua Grill

Community Leadership Honorees, Karah, Clint, & Holly Woesner

Musical Guest, Ashley Campbell
Why I support UCI MIND

It is humbling to be recognized as the 2019 Orange County Philanthropist of the Year, particularly when I think about the many individuals who are working to make a difference in the world. The OC National Philanthropy Day event brought together Orange County philanthropists and non-profit organizations to celebrate our shared vision of improving our community. This is what drives me. I wish to use my voice to connect people and organizations to achieve more and help others. I have strived to do this over the last five years with my involvement with UCI MIND.

Alzheimer’s disease is devastating and its impact on the afflicted and the family is overwhelming. The cost to society is immense and the outlook is for the situation to become dramatically worse over the next few decades.

My wife, Judy, succumbed to Alzheimer’s in 2014, and I have committed myself to doing what I can to help find a cure and treatment. For me, UCI MIND offered that opportunity to support efforts that will have an impact.

I wish to say thank you to UCI MIND, Orange County Community Foundation and the other organizations who nominated me for this award.

Keith Swayne
2019 Orange County Philanthropist of the Year

Thank you to our donors
In 2017, Maria Shriver’s Women’s Alzheimer’s Movement (WAM), which is committed to helping researchers discover why two out of every three people with Alzheimer’s disease are women, and UCI MIND announced a funding initiative to encourage top UCI scientists from multi-disciplinary areas to study sex and gender disparities in Alzheimer’s disease.

The goal of the Initiative, funded through philanthropy, is to fund at least one grant each year to quickly make UCI MIND a national hub for this critical area of research. At a press event on campus in January, Shriver and UCI MIND announced the next phase in their partnership:

“Inaugural Recipients Achieve Additional $2 Million in Funding

The recipients of the inaugural $100,000 grant challenge, Mathew Blurton-Jones, PhD and Sunil Gandhi, PhD from the UCI School of Biological Sciences, announced that their initial findings that immune cells of the brain, “microglia,” act differently in males versus females, has now earned an additional $1.9 million multi-year grant from the National Institutes of Health.

Initiative Attracts Large New Donation

The Initiative also announced a new $250,000 donation from the Living Legacy Foundation, presented by Alisha Ballard, Vice President and Executive Director of the Foundation. The generous gift will allow UCI MIND and WAM to fund more than one grant competition this year and sustain the Initiative into the future.

Year Two Recipient Announced

WAM and UCI MIND announced their second $100,000 grant recipient, Anshu Agrawal, PhD from the UCI School of Medicine. Dr. Agrawal will examine how sex affects inflammation and immunity, a critical element of the research agenda to solve Alzheimer’s disease.

“While we are still at the beginning stages of understanding how being a woman affects the risk and impact of Alzheimer’s disease, we are very pleased to have taken these many steps forward in partnering with UCI MIND and with the researchers and the philanthropists who are committed to finding answers,” Shriver said.
A potential vaccine for Alzheimer’s disease?

Alzheimer’s disease (AD) is characterized by the accumulation of two hallmark pathologies within the brain – amyloid plaques and neurofibrillary tangles. Together these pathologies lead to the loss of neurons and neuronal connections, driving the progressive cognitive impairments observed in AD patients. Amyloid plaques form through the accumulation of sticky protein fragments known as beta-amyloid (Aβ). Tangles form when a protein known as tau aggregates within neurons, leading to the destruction of vital transport systems within the cell. Given the importance of these two pathologies in AD, many studies have sought to develop ways to target and reduce either Aβ or tau. Yet Unfortunately, phase 3 clinical trials of these approaches have thus far failed to delay disease progression in humans. Strong evidence indicates that these two pathologies interact with one another to drive downstream neurodegeneration. Therefore, a combined therapy that targets both Aβ and tau might be needed to effectively treat AD.

To this end, our team at UCI MIND and the Institute for Molecular Medicine generated a novel combined anti-tau/anti-Aβ vaccine. In collaboration with Mathew Blurton-Jones’ lab, we tested the therapeutic efficacy of the vaccine, administered in combination with a specialized immune-stimulating therapy, in mice with AD. The results, recently published in Alzheimer’s Research and Therapy, suggest that the new vaccination approach could induce strong immune responses against both of the hallmark pathologies of AD. Taken together, these findings warrant further development of this vaccine technology for eventual testing in human AD.

In memory of Dr. Frieda Rapoport Caplan

Dr. Frieda Rapoport Caplan, founder of Frieda’s Specialty Produce and a tremendous advocate for Alzheimer’s disease (AD) research, passed away at the age of 96 on January 18, 2020. Frieda was a pioneer in many powerful ways. A leader in the U.S. wholesale produce business since 1962, Frieda was the first woman to own and run her own firm. Her specialty was introducing unusual produce to the U.S. market. She brought more than 200 fruits and vegetables from around the world to America. She marketed each new product with instructions on how to prepare and overcame many obstacles through her bold, creative, and gritty style of communicating. She changed the way we eat.

Frieda’s connection with UCI MIND began when she visited with a group of female business leaders. She learned that research advances in treatment and care for AD rely on the willingness of people to participate in studies. Frieda asked, “Where can I sign up?” She wanted to make a difference and became a spokesperson, encouraging others to do the same. As a pioneer in this area, as well, Frieda found a way to be a part of helping end AD, including donating her own brain to further research at UCI MIND. UCI MIND joins thousands of others in celebrating the rich life and amazing contributions of our friend, Frieda.
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Research Participation
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Contact us on social media!

Upcoming Events

Sleep and the Aging Brain
Ruth Benca, MD, PhD, Director of UCI Sleep Center
Senator Pat Bates Senior Day OC
Friday, March 13, 2020 | 8:00 am - 12:00 pm
Norman P. Murray Senior Center
24932 Veterans Way, Mission Viejo, CA 92692
RSVP: seniordayoc.com | 949.598.5850

ASK THE DOC Panel
Joshua Grill, PhD, Director of UCI MIND
David Sultzer, MD, Geriatric Psychiatrist
Daniel Nation, PhD, Neuropsychologist
Elizabeth Head, PhD, Neuroscientist
Tuesday, March 31, 2020 | 4:00 pm - 6:00 pm
UCI Beall Applied Innovation @ the Cove
5270 California Ave #100, Irvine, CA 92617
RSVP: www.mind.uci.edu/ATD | 949.824.9475

31st Annual SoCal Alzheimer’s Research Conference
Thursday, September 10, 2020
Irvine Marriott Hotel

11th Annual A December to Remember Gala
Saturday, December 5, 2020
Balboa Bay Resort

2020 Facebook LIVE Q&A Series
Guest experts from UCI MIND
First Friday of every month | 11:00 - 11:30 am PST

Learn more about our upcoming events at www.mind.uci.edu/calendar