

MIND Matters



UCI HOSTS COLLABORATIVE ALZHEIMER'S-THEMED CONCERT

On Tuesday, March 11, Claire Trevor School of the Arts' Department of Music and UCI MIND collaborated to present a poignant musical event that shined a light on Alzheimer's disease and paid tribute to those affected by it. The concert, titled "Finding Light: Alzheimer's Stories," took place at the Irvine Barclay Theatre, featuring a three-part choral composition by Robert S. Cohen. The evening began with an insightful panel discussion, bringing together the composer,

conductor, UCI MIND Director Joshua Grill, PhD, and a couple who shared their personal journey. This prelude set the tone for the emotional performance to follow.

Assistant Professor and Associate Chair of the Department of Music, Irene Messoloras, DMA, masterfully conducted the UCI Chamber Singers and Concert Choir. The program opened with the Chamber Singers performing seven selected pieces, each

continued on page 3

MESSAGE FROM THE DIRECTOR

Visit mind.uci.edu/blog 

Dear Friends of **UCI MIND**,

Please enjoy this issue of MIND Matters. We include a description and photos from our collaborative event with the UCI Claire Trevor School of the Arts Department of Music, "Finding Light: Alzheimer's Stories." Then, be sure to watch some of this amazing performance here: [Concert Choir](#). This event in some ways exemplifies the mission of UCI MIND. Though our investigators spend nearly all of their time in the lab or clinic conducting state-of-the-art research, we never lose sight of the human elements of disease and this powerful collaboration through art is a testament to this mission.

The remainder of the issue highlights our investigators and particularly our early career scientists. Science is a

noble but arduous career choice. It is critical to invest in the next generation of investigators to see us to our goals in research. Philanthropy is key to this element of our mission. That is why we are so grateful for community leaders like Jonathan and Kim Varenchik, as well as Ann and Charlie Quilter. Ann and Charlie will be honored as recipients of the UCI MIND Award at this year's *December to Remember Gala*, December 6.




Joshua D. Grill, PhD
Director, UCI MIND

FACULTY MEMBERS

Anatomy & Neurobiology

Aileen Anderson, PhD
Tallie Baram, MD, PhD
Christine Gall, PhD, Chair
Alan Goldin, MD, PhD
Kei Igarashi, PhD
Gary Lynch, PhD
Steven Schreiber, MD
John Weiss, MD, PhD
Xiangmin Xu, PhD

Biological Chemistry

Wei Li, PhD

Biomedical Engineering

Gregory Brewer, PhD

Chemistry

James Nowick, PhD
Xiaoyu Shi, PhD

Clinical Pharmacy Practice

Atena Zahedi, PhD

Developmental & Cell Biology

Grant MacGregor, DPhil
Edwin Monuki, MD, PhD
Ali Mortazavi, PhD
Diane O'Dowd, PhD
Xiaoyu Shi, PhD

Environmental & Occupational Health

Masashi Kitazawa, PhD
Karen Lincoln, PhD, MSW, MA, FGSA

Epidemiology

Maria Corrada, ScD
Karen Edwards, PhD,
Daniel Gillen, PhD
Sunmin Lee, ScD

Health, Society, & Behavior

Leigh Turner, PhD

Medicine

Masashi Kitazawa, PhD
Steven Tam, MD

Microbiology & Molecular Genetics

Emiliana Borrelli, PhD
Alan Goldin, MD, PhD

Molecular Biology & Biochemistry

Charles Glabe, PhD
Andrea Tenner, PhD

Neurobiology & Behavior

Mathew Blurton-Jones, PhD
Jorge Busciglio, 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

Neurological Surgery

Jefferson Chen, MD

Neurology

Tallie Baram, MD, PhD
Maria Corrada, ScD
David Cribbs, PhD
Ali Ezzati, MD
Mark Fisher, MD
Lisa Flanagan, PhD
Crystal M. Glover, PhD
Claire Henchcliffe, MD, DPhil, Chair
Brian Hitt, MD, PhD
Claudia Kawas, MD
Albert La Spada, MD, PhD
Ira Lott, MD
Mark Mapstone, PhD
Tahseen Mozaffar, MD
S. Ahmad Sajjadi, MD, PhD
Steven Schreiber, MD
Gaby Thai, MD
John Weiss, MD, PhD
Michael Yassa, PhD

Nursing

Michael Bueno, PhD, MSN, RN, CNL
Sarah Campbell, DNP, MS, BS, AS
Jung-Ah Lee, PhD, RN, FGSA, FAAN
Adey M. Nyamathi, ANP, PhD, FAAN
Nancy Pike, PhD, FNP-BC, CPNP-AC/PC, FAHA, FAAN, Associate Dean, Research

Pathology & Laboratory Medicine

Elizabeth Head, PhD, Vice Chair
Albert La Spada, MD, PhD
Edwin Monuki, MD, PhD, Chair
Mari Perez-Rosendahl, MD
William Yong, MD

Pediatrics

Tallie Baram, MD, PhD
Virginia Kimonis, MD
Ira Lott, MD

Pharmaceutical Sciences

Emiliana Borrelli, PhD

Physical Medicine & Rehabilitation

Aileen Anderson, PhD
Brian Cummings, PhD

Physiology & Biophysics

Kevin Beier, PhD
Alan Goldin, MD, PhD

Psychiatry & Human Behavior

Lydia Ann, MD
Cameron Carter, MD, Chair
Joshua Grill, PhD
Christy Hom, PhD
Gary Lynch, PhD
Bryce Mander, PhD
Joan Steffan, PhD
David Sultzer, MD
Leslie Thompson, PhD
Michael Yassa, PhD

Radiation Oncology

Charles Limoli, PhD

Statistics

Daniel Gillen, PhD, Chair
Bin Nan, PhD

"Finding Light: Alzheimer's Stories"

continued from front page



Panel discussion with speakers from left to right: Dr. William Aulenbach, Mrs. Anne Aulenbach, Dr. Joshua Grill, conductor, Dr. Irene Messoloras, and composer, Mr. Robert S. Cohen.



From left to right: Concert goers and UCI MIND friends Mrs. Virginia and Bob Naeve and Mrs. Ann and Dr. Charlie Quilter.

exploring different aspects of Alzheimer's. A standout moment was the rendition of Dolly Parton's "Light of a Clear Blue Morning," conducted by student composer Michael Balerite and featuring a moving solo by undergraduate soprano Isabelle Knowles.

Following a brief intermission, Dr. Messoloras led the combined forces of the UCI Chamber Singers, Concert Choir, and orchestra, joined by guest soloists Erin Wood and Daniel Keeling, in the performance of "Alzheimer's Stories."

The powerful composition unfolded in three parts: A historical perspective, focusing on Auguste Deter, the famous case followed by Dr. Alois Alzheimer in the early 20th century. An exploration of the experiences of those living with the disease was brought to life by the emotive performances of Mr. Keeling and Ms. Wood and a stirring finale highlighted the caregiver's perspective and honored the lives lost to Alzheimer's, culminating in a moving crescendo.

The extraordinary event exemplifies the unique opportunities that arise when institutions like UCI foster collaborative engagement, embrace creative expression, and value the intersection of art and science. By bringing together musicians, researchers, and those affected by Alzheimer's, the concert not only raised awareness but also provided a deeply moving experience for all in attendance. ■



From left to right: Composer, Mr. Robert S. Cohen, Drs. Irene Messoloras, Joshua Grill and Dean Tiffany López (CTSA)



Baritone, Daniel Keeling sings for the audience.



CELEBRATING EMERGING SCIENTISTS: 16TH ANNUAL REMIND SYMPOSIUM

–Valerie Tung

Each year, Research and Education in Memory Impairments and Neurological Disorders (REMIND), a trainee-led group within UCI MIND, hosts the Emerging Scientists Symposium to showcase the work of early-career researchers studying neurodegenerative diseases. Hosted on campus, the event highlights groundbreaking work from undergraduates, graduate students, medical students and postdoctoral fellows, providing a platform for early career scientists to present their data and engage in meaningful discussions with experts in the field.



Dr. Hector Gonzalez

This year's event featured a keynote presentation by Hector González, PhD, professor in the Department of Neuroscience in the School of Medicine at the University of California, San Diego, whose research focuses on Latino neurocognitive aging. His talk highlighted the importance of understanding how different

populations experience neurodegenerative diseases through his work on the SOL-INCA study.

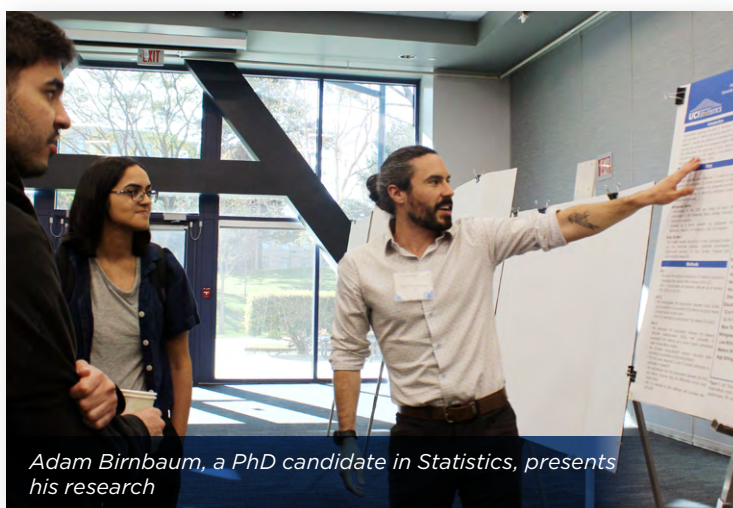
Throughout the afternoon, invited trainees presented their cutting-edge research on topics ranging from Huntington's disease and Alzheimer's neuropathology to innovative imaging techniques and microbiome interactions.

The event featured 5 "invited lectures" by select trainees. Mara Burns from the [Thompson Lab](#) described molecular patterns in Huntington's disease mouse models using advanced transcriptomic analysis. Jean Paul Chadarevian, PhD, from the [Blurton-Jones Lab](#) presented his work on

neuroinflammatory changes in early disease pathology. Gina Faraci, PhD, from the Whiteson Lab presented her work on how Alzheimer's-related mutations impact the gut microbiome.

Later in the afternoon, Elizabeth Andrews from the [Head Lab](#) discussed how age and sex influence Alzheimer's pathology in individuals with Down syndrome. Casey Hudson from the Acharya Lab introduced a promising therapy for treating "chemobrain" in breast cancer survivors using stem cell-derived extracellular vesicles.

A highlight of the event was the poster competition in which trainees presented their research to a panel of judges. This year, two trainees were recognized for their outstanding presentations, Casey Hudson and Gina Faraci, PhD.



Adam Birnbaum, a PhD candidate in Statistics, presents his research



In addition to the poster competition, UCI MIND presented the 2025 Carl W. Cotman Award, which recognizes trainees who demonstrate exemplary dedication to neurodegenerative disease research.

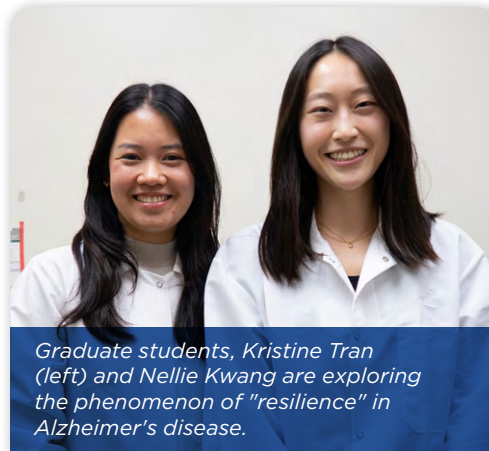
Claire Butler, PhD, from the Green Lab (left photo) was recognized for her work in understanding inflammation in Alzheimer's disease, particularly work she has done with MODEL-AD. Also awarded was **Lisi Flores-Aguilar, PhD, from the Head Lab** (right photo) who was recognized for her contributions to understanding Alzheimer's pathology in individuals with Down syndrome. The work of these early career scientists exemplifies the high-impact research being conducted at UCI MIND and their commitment to advancing the field.

EXPLORING REMARKABLE RESILIENCE

Recent news from UCI MIND has highlighted the scientific phenomenon of “resilience” in Alzheimer’s disease. Resilience occurs when a person’s clinical presentation does not match the pathology seen in their brain upon postmortem examination.

The Christchurch mutation was identified in 2019 in a now famous case report of a woman who lived well into her 70s, relatively cognitively unimpaired, despite carrying a gene that should have given her dementia due to Alzheimer’s decades earlier. When she passed, scientists learned two important facts: 1) she had a brain riddled with amyloid plaques and 2) she also carried a rare mutation on her APOE gene that we now know as the Christchurch mutation that seemed to confer a level of cognitive protection.

In the time since this case report was published, many scientists have used the discovery of the Christchurch mutation to advance our understanding of AD. In fact, earlier this year Kristine Tran, a PhD candidate in the [Green Lab](#) and Nelly Kwang, an MD-PhD student in the [Swarup](#) and Green Labs were lead authors on a important paper in the



journal [Molecular Neurodegeneration](#) demonstrating a mechanism for the protective role that the APOE Christchurch mutation may offer in AD. Tran and Kwang, along with a team of UCI MODEL-AD scientists, used two different mouse models of Alzheimer’s disease to show that the Christchurch mutation acts in one model to enhance the microglial response to amyloid plaques but in another to inhibit the microglial inflammatory response to tau neurofibrillary tangles.



Another remarkable woman enrolled in research at UCI has made the news in

recent weeks, including Newsweek and the New York Post. She was enrolled for decades in longitudinal brain aging cohort studies for people with Down syndrome, including the Alzheimer’s Biomarker Consortium-Down Syndrome (ABC-DS) study under the leadership of Professor of Pathology and Laboratory Medicine at UCI, Elizabeth Head, PhD. What makes this woman unique is that she lived dementia free well past the age that most people with Down syndrome develop cognitive decline (typically in their late 40’s or early 50’s). She contributed years of clinical data, blood, CSF, and neuroimaging, and when she died in her 60’s, she donated her brain. Dr. Head and colleagues at the University of Pittsburgh, Harvard, Columbia and Washington University recently published a case report about the neuropathological findings from this participant in the journal [Alzheimer’s & Dementia](#). The team found that despite being cognitively stable at a late age, her brain showed signs of Alzheimer’s disease and other pathologies. Work to understand her resilience is underway and will leverage the immense amount of data she has provided scientists. ■



UCI MIND PROFESSOR AWARDED GRANT TO STUDY EARLIEST PATHOLOGICAL CHANGES OF AD IN DOWN SYNDROME

Every year, the Alzheimer’s Association awards millions of dollars in grants to researchers around the globe. Kevin Beier, PhD, an associate professor in the Department of Physiology and Biophysics with joint appointments in Neurobiology and Behavior, Biomedical Engineering, and Pharmaceutical Sciences, is the most recent UC Irvine recipient of the Association’s *International Research Grant Program*. He will receive \$200,000 to pursue his project titled, The role of the retrosplenial cortex in mouse and human Alzheimer’s disease.

His [lab](#) uses retroviruses to map neural circuits in order to study the basis of addiction, mood disorders and neurodegenerative diseases. “My proposal aims to explore the retrosplenial cortex as an early driver of Alzheimer’s disease,” says Dr. Beier. “We have found in mouse models that hyperactivity in the retrosplenial cortex causally contributes to the progression of AD; we are testing whether similar changes occur in the retrosplenial cortex in people, and whether these changes can be observed early in disease. As our findings could lead to new disease targets as well as new biomarkers of early AD, the Down syndrome population, who are genetically predetermined to develop AD neuropathologic changes, may disproportionately benefit from our research. Therefore, we are testing whether similar molecular changes occur in the brains of donors with Down syndrome.”

Dr. Beier adds, “breaking into Alzheimer’s research as an outsider can be particularly difficult. Funding from the Alzheimer’s Association is an important validation of our research goals, and a critical step towards our long-term mission of performing ground-breaking research in AD.”

CINCO DE MINDO: CELEBRATING MILESTONES & RAISING FUNDS FOR ALZHEIMER'S RESEARCH



Mr. Jonathan Varenchik (kneeling center) celebrates his birthday with friends in support of UCI MIND.

On a sunny afternoon in late April, longtime supporters of UCI MIND, Jonathan and Kim Varenchik gathered with 40 of their closest friends and family to celebrate his birthday and advocate for a cause close to their hearts. It was the second annual holding of the cleverly named, Cinco de MINDo, a Cinco de Mayo-themed party to support Alzheimer's disease research.

Attendees enjoyed Mexican food, margaritas, and the opportunity to

speak with UCI MIND experts including Geriatric Psychiatrist Lydia Ann, MD, and Associate Professor of Neurology, Crystal M. Glover, PhD.

Mr. Varenchik, who lost 3 of his 4 grandparents to Alzheimer's disease, established a new tradition, by naming sponsorship levels in honor of the tequilas that instill the party refreshments. His friends, Matt and Natasha Stevenson were deemed this year's "Extra Anejo" sponsors for their generous support

of the event. Mr. Varenchik discussed why he supports UCI MIND and his hope to use his birthday to convince others to do similarly. UCI MIND Director Dr. Grill shared the story of UCI MIND and the remarkable progress being made in Alzheimer's disease research.

Community support is vital to the mission of UCI MIND. Leaders like Jonathan and Kim Varenchik will ensure this mission continues and accelerates. ■



Kim (left) and Jonathan (center) with Dr. Grill



Jonathan tells partygoers why he supports UCI MIND (lower image) and names his friends Matt and Natasha Stevenson "Extra Anejo" sponsors (right image).

SPOTLIGHT

UCI MIND IN THE NEWS

UCI MIND faculty have been heavily featured recently in the media for their headline grabbing research findings or expertise. Here's a glimpse of where our faculty have been "getting press".

martha stewart

FOOD HOLIDAYS & ENTERTAINING HOME GARDENING WEDDINGS LIVING SHOPPING NEWS ABOUT US

10 Hobbies for Older Adults That Improve Brain and Body Health

Dr. Craig Stark's study showing open world video games can improve memory in older adults was highlighted in *Martha Stewart Magazine*.

Science

News Home All News Science Insider News Features DONATE

A 'ticking DNA clock' in brain cells drives the progression of Huntington disease

Genetic stutters that expand during a person's life explain why the disorder takes so long to develop—and could point the way to new therapies

10 JAN 2025 · 12:50 PM ET · BY LESLIE THOMPSON

As one of foremost experts in Huntington's disease, Dr. Leslie Thompson was quoted in *Science* for an important paper recently published in the journal *Cell* on the fatal disease.

NEW YORK POST

HEALTH

Woman with Alzheimer's — but no dementia symptoms — stumps doctors

By McKenzie Beard
Published March 7, 2025, 10:10 a.m. ET

20 Comments

Newsweek

LATEST Two More Countries Could Take Deported U.S. Migrants: Report

Science Dementia Health And Medicine Neuroscience Health And Science Scientists Research Brain Down Syndrome Brain Health

Woman Donated Her Brain to Science—Alzheimer's Experts Shocked by Discovery

Published Mar 04, 2025 at 5:56 AM EST

People

ENTERTAINMENT CRIME HUMAN INTEREST LIFESTYLE ROYALS STYLEWATCH SHOPPING

Doctors Shocked After Woman with Alzheimer's Disease Stays Cognitively 'Intact': 'Remarkable'

Researchers hope her brain can lead to "profound discoveries" in treating the illness

By Cara Lynn Shultz Published on March 7, 2025 03:28PM EST

Dr. Elizabeth Head was featured in the *New York Post*, *Newsweek*, and *People* for being lead author on a case report of a woman with Down syndrome who showed no dementia symptoms but had Alzheimer's pathology in her brain when she died.

SCIENTIFIC AMERICAN

FEBRUARY 13, 2025 | 20 MIN READ

This Researcher Discovered the Cause of Down Syndrome, But For 50 Years Got None of the Credit

Marthe Gautier speaks out about how she found the genetic cause of Down syndrome

BY LORENA GALLIOT, SOPHIE MCNULTY & THE LOST WOMEN OF SCIENCE INITIATIVE

Dr. Elizabeth Head was quoted in *Scientific American* regarding the woman who discovered the cause of Down syndrome

ALZFORUM
NETWORKING FOR A CURE

HOME | ABOUT US | NEWSLETTER

NEWS WEBINARS DATABASES PAPERS PROFESSIONAL RESOURCES ABOUT AD MY ALZFORUM

In Alzheimer's Due to Down's, Spatial Omics Spots Signs of Trouble

AlzForum showcased a study published in *Nature* and led by Dr. Vivek Swarup comparing spatial gene expression patterns in the brains of people with Down syndrome and Alzheimer's versus people with sporadic Alzheimer's.

The New York Times

This Kind of Sleep Is Essential for a Healthy Brain

Two particular phases in your nightly routine seem to play outsize roles in cognitive health.

Bryce Mander, PhD was quoted in the *New York Times* describing the important link between sleep and dementia risk.

Daily Mail
.com

Home | Showbiz | TV | News | Femal | Sports | Health | Science | Royals | Money | Real Estate | Media | U.K. | Video | Shopping |

Latest Headlines | NASA | Apple | Twitter | Games

Scientists create first reprogrammed brain cells that could cure Alzheimer's

By ELLYN LAPOINTE FOR DAILYMAIL.COM
PUBLISHED: 23:15 EDT, 23 April 2025 | UPDATED: 08:47 EDT, 24 April 2025

Dr. Blurton-Jones and Postdoctoral scholar Jean Paul Chadarevian are garnering significant attention for their recent publication in *Cell Stem Cell* about the therapeutic potential of microglial replacement. Their work was even featured in the *Daily Mail*.



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

The UCI MIND AD Research Center is supported by the National Institute on Aging (NIA) of the National Institutes of Health (NIH) under award number P30 AG066519.



This newsletter is supported in part by the California Department of Public Health, AD

Program. Funding is pursuant to California Health and Safety Code Section 125275 - 125285.

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

CONNECT WITH US



x.com/ucimind/



facebook.com/UCIrvineMIND/



instagram.com/ucimind/



youtube.com/user/UCIMIND



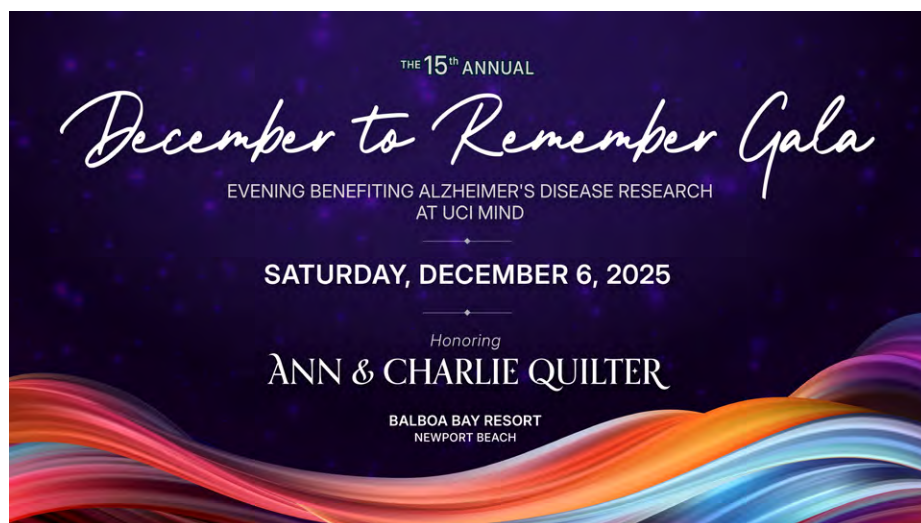
36th Annual Southern California Alzheimer's Disease Research Conference

Nature, Nurture, & Neurodegeneration: Decoding Risk for Dementia

October 24, 2025

8:00 am - 3:00 pm | Irvine Marriott

conference.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/)

ASK THE DOC



Differentiating
Symptoms of
Dementia from
Normal Aging

Michelle McDonnell, PhD

ASK THE DOC



The
Neuroimmune
System as a
Therapeutic
Target for
Alzheimer's

Jean Paul Chadarevian, PhD

ASK THE DOC



The Role of
the Immune
System in
Alzheimer's

Lindsay Hohsfield, PhD

SPLIGHT ON CARE



Finding
Strength in
Support
Groups

Ruth Ann Rousseau

ACCELERATING DISCOVERY



The Impact of
APOE and the
Christchurch
Mutation on
Alzheimer's
Disease

Kristine Tran & Nellie Kwang

BE THE SOLUTION



Why I Use My
Birthday to
Support
UCI MIND

Kim and Jonathan Varenchik