FROM MOLECULES TO MEMORY

CENTER FOR THE NEUROBIOLOGY OF
LEARNING AND MEMORY

2025
SPRING CONFERENCE

MAY 8-9 | HERKLOTZ CONFERENCE CENTER
UNIVERSITY OF CALIFORNIA, IRVINE

From Molecules to Memory

Organizing Committee

Michel Baudry, Christine Gall, Manuella Oliveira Yassa, Michael Yassa

Dear colleagues,

Welcome to the 2025 Spring Meeting of the CNLM! We are delighted to be joined by returning colleagues and first-time guests at this time-honored tradition at the Center. Since 1982, the CNLM has hosted annual scientific meetings in the spring to discuss recent advances in the field, foster synergies, and launch new collaborations.

This year's theme "From Molecules to Memory" celebrates the remarkable scientific journey sparked by the discovery of long-term potentiation (LTP) more than fifty years ago. What began as an intriguing electrophysiological phenomenon has since evolved into a vibrant field uncovering the intricate molecular choreography that allows synapses to strengthen, networks to rewire, and memories to form. This year's meeting will spotlight major advances in our understanding of the molecular and cellular basis of synaptic plasticity—featuring talks from leaders who are decoding how receptors, scaffolding proteins, intracellular signaling cascades, and gene expression all come together to enable memory.

A special feature this year is a panel on Industry and Entrepreneurship, featuring UCI and CNLM alumni and community leaders who are turning foundational discoveries into real-world applications. Finally, the conference will feature a keynote by Dr. Gary Lynch, whose seminal work on the molecular basis of memory helped define the field. We hope you will enjoy this chance to connect, exchange ideas, and reflect on how far we've come—and where the next breakthroughs might take us.

Our conferences would not be possible without the support of the Friends of the CNLM, whose philanthropic contributions perpetually support our mission. We are deeply grateful for this community and their generosity. We are also grateful to our highly capable team of staff, including Cecilia Szarnyasi, Eleanor Chan, Morgan Coburn, Erin Purvis, Raymond Villareal, Jessica Ha, Kryssi Teurn-Chao, and Erynn Nassif.

On behalf of the Organizing Committee, we thank you for joining us and hope you have a great time.

Michael A. Yassa, Ph.D.
Center Director

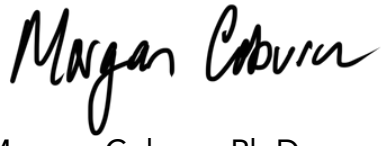
Manuella Oliveira Yassa, Ph.D.
Director of Outreach and Education

An Unexpected Story...

Picture this, it's 1966 and you just shut off *California Dreamin'* because you need to look closer at your data. You're studying the effects of activating the perforant path-to-dentate granule cells in the hippocampus of anesthetized rabbits, and you think you're seeing increased efficiency of transmission at those synapses that seem to last for hours, even after brief trains of stimuli. You and your PI are excited by your findings so you present them at a meeting of the Scandinavian Physiological Society in Åbo but "overcome by the complexity of the system and lack of understanding of what was behind the findings" you percolate on what you've found—look you're only here by chance, meeting your PI on the street in Oslo while on leave from your job as a doctor in the Norwegian Navy. You end up switching methods to try to understand the phenomenon better and pair up with an awesome new scientist in your lab to carry out new experiments in 1968 and '69. You both hang on to the data though, for one, you have to graduate and start a postdoc in London, but also let's be real, the "relative lack of enthusiasm expressed by most people upon hearing the results" isn't inspiring any urgency to get this published. Your PI's former advisor, who became very interested during his visit, seems to be the only exception. But again you and your grad school collaborator have to go to London and it isn't 2025 guys, those records live in Oslo! You work on the problem a bit in London and again in Oslo but it turns out science is hard because "we all failed in bringing the highly variable in vivo or in vitro preparations under such experimental control that we could fruitfully address underlying mechanisms." You sit on your data for a while because honestly you've mostly switched to studying neuromuscular junctions and it seems like the field is just more stoked on these results than that other stuff. It was some great work though and you notice it's almost 1973! I guess it's time to get your data together and get this thing published.

Who are you? None other than Terje Lømo, who first observed Long Term Potentiation (LTP) in 1966. Lømo worked with Tim Bliss to further conduct the experiments highlighted in the 1973 seminal paper, "Long-Lasting Potentiation of Synaptic Transmission in the Dentate Area of the Anaesthetized Rabbit Following Stimulation of the Perforant Path." Lømo and Bliss worked in Per Andersen's Oslo based lab (who's supportive former PI was John Eccles), who championed Lømo strongly as the discoverer of LTP. You can read Lømo's own account of the discovery of LTP in a 2003 publication "The discovery of long-term potentiation," from which the above story was drawn. One can only assume he was listening to the Mamas & the Papas before digging into the data.

When I sat down to write this story, I was so pleasantly surprised to find such a human and candid account of the long, winding path from initial observation to publication of LTP. Science is hard, and getting your story out can be slow and difficult. Sometimes responses are lukewarm or you don't fully understand what you're seeing until the learning process that takes place during graduate school helps you connect the dots. Things take time — and that's okay — sharing your story matters. Neuroscience is still a young field, and it's amazing to look back and uncover the stories of the people behind these early discoveries, some of which take place at UC Irvine and the CNLM what with being home to the first "Psychobiology" department and center in the world focused on learning and memory. Each year, the CNLM hosts a Spring Conference to foster community and to share advances in this interdisciplinary and ever growing field, and we're so excited for this year's, theme "From Molecules to Memory." Now more than ever, it's important to come together to share not just our science, but our personal journeys, challenges, and successes. Thank you all for being here — I can't wait to hear your stories!



Morgan Coburn, Ph.D.
Assistant Director of Outreach and Education

Conference Details

Code of Conduct

The Center for the Neurobiology of Learning and Memory (CNLM) at the University of California, Irvine is committed to providing an atmosphere that encourages the free expression of ideas in a safe, positive, and harassment-free environment that is welcoming to all participants, regardless of race, color, national origin, religion, sex, gender, gender expression, gender identity, gender transition status, pregnancy, physical or mental disability, medical condition, genetic information (including family medical history), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services.

In alignment with University of California policies, CNLM scientific conferences and activities prohibit discrimination, harassment, abuse of power, bullying, sexual misconduct and inappropriate behavior in any form. The CNLM is committed to ensuring compliance with the University policies referenced herein and enforcing this Code of Conduct during any CNLM activity. By registering for and/or attending an event, all participants agree to abide by the Code of Conduct. The full text of the Code of Conduct can be found at http://cnlm.uci.edu/code-of-conduct.

Reporting Incidents
Any event participant affected by, or who may have witnessed, any inappropriate behaviors that breaches the Code of Conduct may make a complaint by using one of the following options:

You may contact the event organizers or CNLM Leadership:
Michael A. Yassa (he/him) | myassa@uci.edu
Manuella Oliveira Yassa (she/her) | yassamo@uci.edu

You may also contact the UCI Office of Equal Opportunity and Diversity (OEOD)/Title IX Office. Any person may report incidents of sexual harassment, discrimination, or sexual violence to the campus Title IX by visiting www.oeod.uci.edu, calling 949- 824-5594 or emailing oeod@uci.edu. You may also directly contact the Title IX Officer:

Tierney Anderson (she/they)
Title IX Officer | tierneya@uci.edu

More information, definition, and reporting options can be reviewed online at https://cnlm.uci.edu/code-of-conduct/

Wi-Fi Access

Guest Wi-Fi access is available through UC Irvine. Click on the network 'UCI-Guest' and agree to the terms of service. You may also access online services through the Eduroam network.

Travel Information

Air Travel

The closest airport to UC Irvine is John Wayne Airport (SNA) located just 10 minutes from campus. Alternatively, participants may fly into Long Beach Airport (LGB) and Los Angeles International Airport (LAX). Long Beach Airport is a 30-minute drive from campus, Los Angeles International Airport is 60 minutes from campus, without traffic. Traffic from both of these airports can be very heavy during commute times (7-10am and 4-8pm). Please plan accordingly.

Travel by Train

A fun alternative to driving or flying in Southern California is taking the Pacific Surfliner. Connecting San Luis Obispo and San Diego through Los Angeles and Santa Barbara, the Pacific Surfliner route offers a unique vantage on the Southern California seascape. The closest Amtrak stop is in Irvine (IRV) located at the Irvine Transportation Center, 15215 Barranca Parkway, Irvine, CA 92618. From the station, the UCI campus is a short cab or Uber/Lyft ride away. For GPS navigation please use the address: 506 C Student Center, Irvine, CA 92617, which will get you closest to the Herklotz Conference Center. For more information visit: https://www.amtrak.com/pacific-surfliner-train

Driving to Irvine

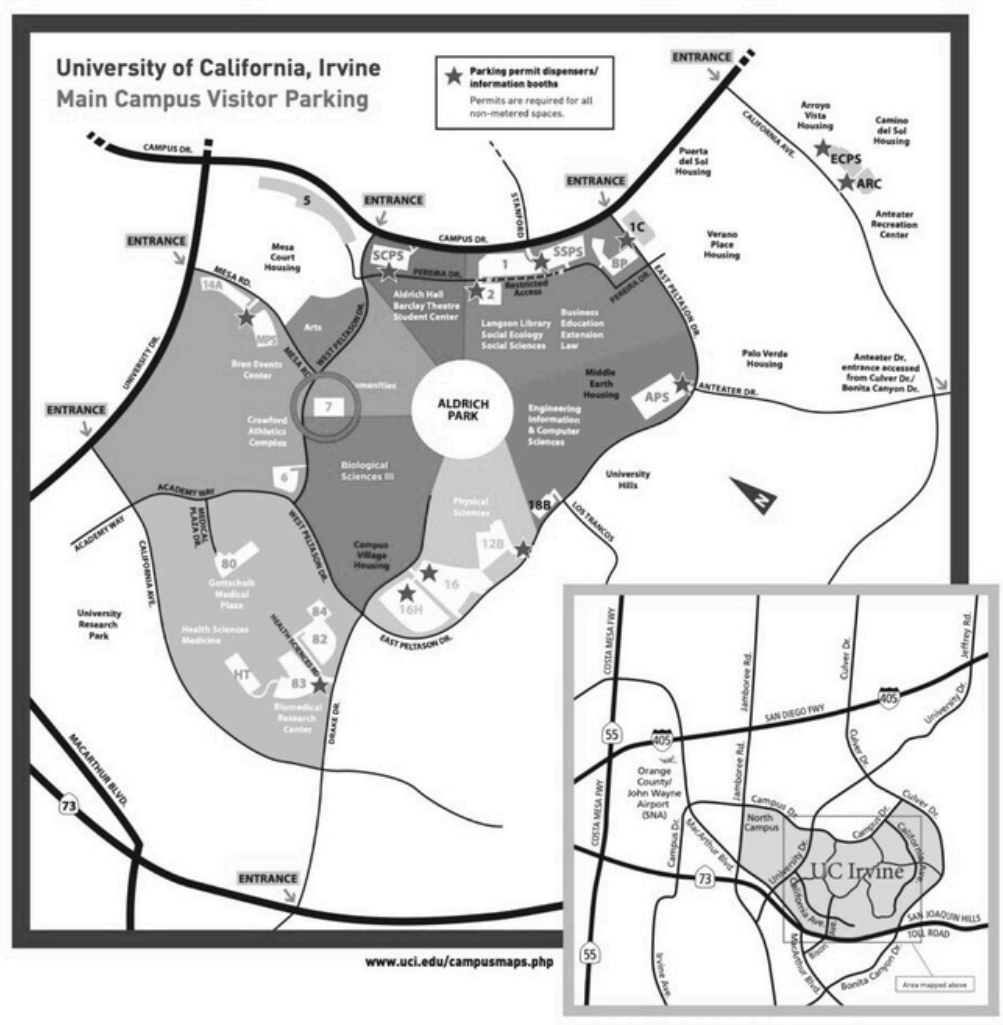
Irvine is centrally located between Los Angeles and San Diego, and can be reached easily by car. From Los Angeles, it is easiest to take the 405 Freeway to the 73 Freeway and exit on Bison Ave/Michael Drake Drive at the edge of campus. Follow the map on the next page to arrive at the CNLM. From San Diego you can take the 5 Freeway either to the 73 Toll Road and exit on Bison/Michael Drake Drive as above, or alternatively you can take the 5 to the 405 and exit on University Ave. From University make a left on Campus Drive and follow the map on the next page to arrive at the CNLM. For GPS navigation please use the address: 506 C Student Center, Irvine, CA 92617, which will get you closest to the Herklotz Conference Center.

Rideshare

If you are using a rideshare app such as Lyft or Uber, please provide the following address:
506C Student Center Drive
Irvine, CA 92697

Parking

Parking for participants traveling by car is available in Lot 7, marked with a red circle in the map below. Parking passes can be purchased at any of the kiosks on the UCI campus (marked with a star on the map below). Additionally, passes can be purchased online through Park-by-Plate at parking.uci.edu/pay. Enter code **7L222** and follow the instructions.



Lodging

We have negotiated special UCI rates with several area hotels. Please call the hotel directly to reserve your room. There is no deadline for room reservations. We include here our two preferred hotels that are convenient to campus.

Sonesta Irvine
17941 Von Karman Ave, Irvine, CA 92614
949-863-1999
Corporate/Group code: UC8

Hyatt Regency Newport Beach
1107 Jamboree Road, Newport Beach, CA 92660
949-729-1234
Corporate/Group Code: CR20258

Visit this link for more information and other options:
https://www.accounting.uci.edu/ap/travel/resources/hotels.php

Symposia and the 50/50 Rule

Symposia must adhere to the 50/50 rule, where 50% of the time is reserved for discussion and questions. All speakers are required to stay on time to allow for a robust general discussion to connect themes and ideas across talks.

Data Blitz Sessions

Presentations
Data blitz participants will NOT be able to use their own laptops. Presenters must upload their slide in PDF format prior to the meeting (follow instructions you receive by email). This will ensure that there are no animations and that slides will look as intended. Only one static slide (PDF format) is permitted. Each presenter has 4 minutes for their talk and 1 minute for Q&A and transition. These sessions are very fast paced!

Awards
Data blitz presentations will be judged by an anonymous panel and the top two data blitz presenters will be awarded. Blitzes will be judged based on (1) the ability to communicate a single idea effectively with a focused presentation and a clear concise visual image, (2) giving just enough context so that the listener understands the significance of the question and findings, and (3) strictly adhering to the rules, i.e. time limit and number of slides.

Open Paper Sessions

In addition to presentations from students, we will have one "open paper" session that will feature faculty and postdoctoral fellows delivering slightly shorter 8-minute brief talks with 2 minutes for questions. No more than 10 slides are permitted in open paper sessions.

Meals

The conference registration includes breakfast, lunch, and coffee breaks. Special events are planned for dinners on both evenings (see below).

Casual Pizza Networking Dinner

Join us for pizza and casual networking dinner! Event will be held on Thursday, May 8, 2025 at 5:30 PM in the CNLM Courtyard. **All attendees are invited!**

Brainfest Party

After the conclusion of the final session on Friday, we will celebrate with dinner, music, and games! Faculty and students will face off against each other with our themed games. Put your game face on and come ready to blow off some steam. Colleagues who are driving back to other UC campuses should consider sticking around to miss rush hour traffic!

Agenda

Day One: Thursday, May 8

8:30 am	**Check in, Breakfast, and Poster Set-up**
9:15 am	**Welcome and Introduction**
9:30 am	**Symposium Session 1**
11:30 am	**Lunch and Poster Session**
1:00 pm	**Data Blitz Session**
3:00 pm	**Refreshment Break**
3:30 pm	**Industry Panel**
5:30 pm	**Casual Pizza Networking Dinner**

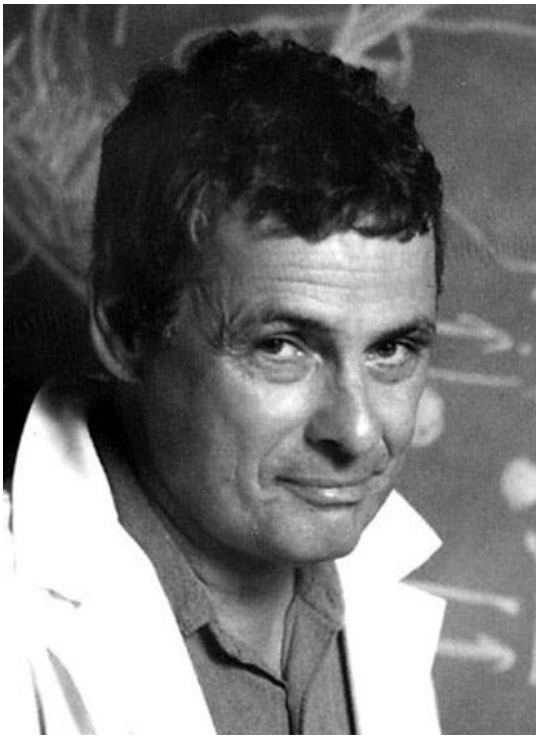
Day Two: Friday, May 9

9:00 am	**Breakfast and Poster Setup**
9:30 am	**Symposium Session 2**
11:30 am	**Lunch and Poster Session**
1:00 pm	**Open Paper Session**
3:00 pm	**Break**
3:30 pm	**Keynote Lecture: Gary Lynch, UC Irvine**
4:45 pm	**Brainfest Party**

Keynote

The Synaptic Science of Memory Encoding:
How We Got Here and Where We're Going

May 9, 3:30 PM | Herklotz Conference Center



Gary S. Lynch, Ph.D.

Distinguished Professor
Department of Psychiatry and Human Behavior
Department of Anatomy and Neurobiology
Founding Fellow
Center for the Neurobiology of Learning and Memory
University of California, Irvine

Lynch earned his Bachelor of Science in Psychology from the University of Delaware in 1965 and his Ph.D. from Princeton University in 1968. He is renowned for his pioneering research on long-term potentiation (LTP), a process that strengthens synaptic connections and is fundamental to learning and memory. His work has significantly advanced the understanding of how synaptic changes contribute to memory formation.

Lynch was one of the earliest faculty members to arrive at the University of California, Irvine to work with colleagues to build the first department of neuroscience in the world. In 1983, he was one of the visionaries who aspired to build the CNLM, the world's first center focusing on the biology of learning and memory. Lynch continues to serve on the Steering Committee for the Center and is a major contributor to its success.

Lynch's impact extends beyond the laboratory and lecture halls. He co-invented a class of drugs known as ampakines, which enhance synaptic communication and have potential therapeutic applications for cognitive disorders. As a co-founder of Synaptics, Inc. (1986), Cortex Pharmaceuticals, Inc. (1988), and Thuris Corporation (1996), and holder of 25 patents, he has played a pivotal role in translating scientific discoveries into tangible applications.

Lynch's extensive publication record (over 650 publications) and influence in neuroscience have made him one of the most highly cited authors in the field.

Industry / Entrepreneurship Panel

This panel brings together leaders in biotech, pharma, technology, and science policy to explore how academia and industry can—and should—work together to translate discovery into impact. Each panelist offers a distinct perspective shaped by decades of experience across sectors, from drug development and clinical trials to federal policy and startup innovation. Together, they will address how academic research fuels industry pipelines, how intellectual property and partnerships are negotiated, and how shifting funding landscapes are forcing a rethinking of where knowledge lives and how it moves. The conversation will also touch on what drives industry to engage with universities, what academia gains from these collaborations, and how policy frames and sometimes constrains these dynamics.

Panelist Bios

Nicola Broadbent, Ph.D., Director of Biological Research, Allergan/AbbVie

Dr. Nicola J. Broadbent is Director of Biological Research at Allergan Aesthetics, an AbbVie company, and a neuroscientist with over 25 years of research experience, including 15+ years in the pharmaceutical industry. As a behavioral pharmacologist and multidisciplinary drug discovery leader, she has advanced novel small molecules for a range of central nervous system (CNS) disorders and is now working with botulinum neurotoxins for aesthetic and therapeutic clinical indications. Dr. Broadbent is an expert in neuropharmacology, translational disease models, biomarkers, and behavioral assessments of motor function, cognition, learning, and memory. Her work spans neurodevelopmental, neurodegenerative, and psychiatric diseases, and she has led cross-functional teams through complex preclinical pipelines. Her current team supports the entire life cycle of drug discovery from early preclinical to on-market product support. Dr. Broadbent is passionate about mentoring and sharing science with diverse audiences. Her work stands at the intersection of rigorous neuroscience and translational medicine, driving the development of next-generation therapies.

Daniel Gil, Ph.D., Chief Executive Officer, Pelage Pharmaceuticals

Dr. Daniel Gil is the CEO of Pelage Pharmaceuticals, where he leads the development of novel treatments that stimulate hair growth by targeting hair follicle stem cell metabolism. He is also Founder of CELLerity Consulting, advising biotech and pharmaceutical companies on early-stage drug development, and a Venture Partner at Visionary Ventures, a fund focused on innovation in ophthalmology. Dr. Gil has served as an Associate Adjunct Professor at UC Irvine for over 15 years, teaching courses on drug discovery, neurotransmission, and the pharmaceutical industry. Previously, he was a Vice President at Allergan, where he led early clinical development across neuroscience, dermatology, and ophthalmology—advancing over a dozen drug candidates and contributing to five marketed therapies. He is the inventor on more than 70 issued U.S. patents and has authored over 40 peer-reviewed publications. Dr. Gil holds a Ph.D. in pharmacology from the University of Pennsylvania and a B.A. in biology from Harvard University. His work sits at the intersection of discovery and delivery—driving innovation from molecule to market.

Keith Hoffman, Ph.D., Chief Business Officer, Athos Pharmaceuticals

Dr. Keith Hoffman is Chief Business Officer at Athos Therapeutics, a clinical-stage biotech company using AI to develop small molecule therapies for immune-mediated diseases and cancer. With over 25 years of experience in biotech, health data, and commercialization, he has led business development across startups, research institutes, and life science companies. At the Lundquist Institute, he managed commercialization for 600+ research projects and oversaw an 18,000 sq ft bioscience incubator and biotech park development. He was also a founding executive at Advera Health Analytics, creating real-world data platforms for drug safety. Dr. Hoffman earned his Ph.D. in neuropharmacology from UC Irvine in the lab of Dr. Gary Lynch, where he studied the molecular mechanisms of learning and memory. His career bridges science and business, turning innovation into impact.

Katherine Olsen, Ph.D., Founder and President, KLO International

Dr. Kathie L. Olsen is the Founder and President of KLO International, LLC, a science and engineering consulting firm. A neuroscientist by training and a former senior leader in federal science policy, she has held key positions including Deputy Director of the National Science Foundation, Chief Scientist at NASA, and Associate Director for Science at the White House Office of Science and Technology Policy. With over 20 years in federal service, she has led research and education strategy at the highest levels and played a major role in national science funding and policy. Dr. Olsen holds a Ph.D. in neuroscience from UC Irvine and has held academic appointments and NIH-supported research positions. Her career reflects a bold vision for advancing science—uniting leadership, policy, and advocacy to drive meaningful progress.

Denise Ruffner, M.S., Chief Executive Officer, ApexQuantum Computing

Denise Ruffner is a recognized innovator and the CEO of ApexQuantum, a stealth-mode startup at the forefront of quantum technology. In addition, she leads a consulting practice that supports deep tech and quantum startups in fundraising, product launches, and early customer acquisition. Denise is also the co-founder of Diversity in Quantum (diviQ.org), a fast-growing nonprofit focused on building a global community for Women, LGBTQ+, and BIPOC professionals in quantum science. Previously, Denise served as Chief Business Officer at Atom Computing and Cambridge Quantum Computing, and as Vice President of Business Development at IonQ, where she secured the company's first sales. She also held numerous leadership roles during her tenure at IBM, including on the IBM Quantum team, where she launched the influential Ambassador and Startup programs and led global sales strategy. Denise holds a Master's degree in Neurobiology and Molecular Biology from the University of Pittsburgh and a B.S. in Biological Sciences from UC Irvine.

Symposium Sessions

Session 1: Thursday May 8 | 9:30 AM

Moderator: Michel Baudry, Western University

Christine Gall, University of California, Irvine
Metabotropic NMDA signaling contributes to sex differences in synaptic plasticity and memory

Kim Dore, University of California, San Diego
NMDA receptor dependent synaptic depression; more than coincidence

Javier Diaz-Alonso, University of California, Irvine
Extracellular mechanisms regulating AMPA receptor function and LTP

Session 2: Friday May 9 | 9:30 AM

Moderator: Christine Gall, University of California, Irvine

Michel Baudry, Western University
Remembrance of things past: How to be right by doing wrong

Serena Dudek, National Institutes of Health
Insights into hippocampal function from an unexpected place: area CA2

Lulu Chen, University of California, Irvine
Synaptic mechanisms underlying behavioral inflexibility and impaired strategy shifting in response to environmental changes.

Panel: Thursday 3:30 PM

Moderator: Michael Yassa

Nicola Broadbent
Director of Biological Research, Allergan Aesthetics | an AbbVie Company

Daniel Gil
Chief Executive Officer, Pelage Pharmaceuticals

Keith Hoffman
Chief Business Officer, Athos Pharmaceuticals

Katherine Olsen
Founder and President, KLO International

Denise Ruffner
Chief Executive Officer, ApexQuantum Computing

Data Blitz: Thursday 1:00 PM

Manali Dey, University of California, Irvine
Unlocking memory potential: Targeting ACC1 facilitates synaptic plasticity and long-term memory formation in the adult and aging mouse brain

Johanna Extremet, University of California, Irvine
Neuron lineage-specific deletion of the AMPA receptor subunit GluA1 reveals distinct contributions to hippocampal function and novelty-driven behavior

Abigail Flores, University of California, Irvine
Adolescent stress exposure induces persistent, sex-specific cognitive deficits

Kate Lawson, University of California, Irvine
Developing animal models of psychedelic therapy

Bianca Leonard, University of California, Irvine
Early life adversity is associated with a reduction in functional connectivity between the paraventricular nucleus of the thalamus and hippocampus

Joseph Picone, University of California, Irvine
Dorsal hippocampal DNA methylation is a predictor of age and hippocampal-dependent long-term memory, but not memory updating

Erica Ramirez, University of California, Irvine
Hugs or Heroin? Investigating Subcortical Circuits in Social vs. Drug Choice

Alyssa Rodriguez, University of California, Irvine
The phosphorylation state of HDAC3 modulates long-term memory formation and synaptic plasticity in the young adult and aged mouse brain

Matthew Sandoval, University of California, Irvine
Assessing the function of putative schizophrenia-associated protein MDGA1 in the mouse hippocampus

Shreeya Walawalkar, University of California, Irvine
Rat Chat: Dissecting Affective Output via the Ventral Pallidum

Justin Yi, University of California, Irvine
Loss of bilateral sharp-wave ripple synchronization in a rodent model of focal temporal lobe epilepsy

Open Papers: Friday 1:00 PM

Xiaoning Bi, Western University
Roles of TRPML1 in Learning and Memory and Its Regulation

Greg Brewer, University of California, Irvine
Hippocampal CA3 axonal theta oscillations increase probability of CA1 target bursting

Liz Chrastil, University of California, Irvine
Abstract relational distance coding in the human brain

Tracy Fetterly, University of California, Irvine
Investigating the mechanistic role of nucleus accumbens cholinergic interneurons in drug-seeking

Franklin Garcia, University of California, Irvine
The nBAF complex subunit CREST/SS18L1 regulates hippocampal memory processes via tyrosine 397 and histone acetyltransferase CBP

Benjamin Gunn, University of California, Irvine
Hippocampal circuits and depression

Eitan Schechtman, University of California, Irvine
Affective processing during sleep correlates with depression symptoms

Hyeijung Yoo, University of California, Irvine
Chronic stress impairs delayed sensory discrimination and alters synaptic gene expression

Thursday Poster Session

Paula Assakura Miyazaki, University of California, Irvine
Establishing optogenetic approaches to test hippocampal-prefrontal causal relationships underlying the temporal organization of memories

Ian Chen, University of California, Irvine
Early life adversity impairs mGluR5 expression in dorsal-medial striatum neurons of female mice

Gregory Belo de Carvalho, University of California, Irvine
Neurexin-2 regulates short-term plasticity in hippocampal CA1 synapses

Selen Dirik, University of California, Irvine
Breaking the cycle: Chronic cannabidiol treatment mitigates dependence, withdrawal, and neurodegeneration in rat models of alcohol use disorder

Elle Giovanni, University of California, Irvine
Substance use and the value of control

Casey Hudson, University of California, Irvine
Neuroprotective effect of human neural stem cell-derived extracellular vesicles following cranial irradiation and chemotherapy for brain cancer

Allison Jian University of California, Irvine
Neuroprotective impact of human neural stem cell-derived exosomes following cranial irradiation and chemotherapy for brain cancer

Bianca Leonard, University of California, Irvine
Early life adversity is associated with a reduction in functional connectivity between the paraventricular nucleus of the thalamus and hippocampus

Gautam Narayan, University of California, Irvine
Reactivating spatial memories during sleep using multi-sensory cueing and an immersive virtual environment

Kelly Nguyen, University of California, Irvine
Adenosine augmentation to protect the CNS against organophosphate exposure

Tracy Nguyen, University of California, Irvine
Alleviating breast cancer chemobrain using human neural stem cell-derived extracellular vesicles

Benedict Pruess, University of California, Irvine
Theta initiated self-sustained activity in hippocampal field CA3

Matthew Sandoval, University of California, Irvine
Assessing the localization and function of the putative schizophrenia-associated protein MDGA1 in the mouse hippocampus

Jasmin Santacruz, University of California, Irvine
Context-Dependent Language Control in Heritage Bilinguals: an exploratory neurocognitive investigation

Angela Snyder, University of California, San Diego
Amyloid-beta (Aβ) increases the interaction of protein kinase C alpha (PKCα) with the postsynaptic scaffolding protein PSD95, an effect regulated by PKCα activity

Devyani Swami, University of California, Irvine
Human neural stem cell-derived miRNA Let-7 to counteract radiation-induced cognitive decline

Shreeya Walawalkar, University of California, Irvine
Squeak Sesh: The Ventral Pallidum and the Sounds of Rewards

Michelle Zheng, University of California, Irvine
Empowering the next generation: Undergraduate experiences in neuroscience outreach

Friday Poster Session

Darrien Coates, National Institute of Environmental Health Sciences
Prenatal corticosterone treatment alters hippocampal area CA2's molecular profile and hypothalamic connectivity

Lucas Garcia, University of California, Irvine
Neuron lineage-specific deletion of the AMPA receptor subunit GluA1 reveals|distinct contributions to hippocampal function and novelty-driven behavior

Jessica Ha, University of California, Irvine
Using BioRender for active learning: Exploring learning-style preference and visual-spatial ability in undergraduate students

Abbey Houchin, University of California, Irvine
Global and Regional Assessment of Perivascular Spaces as a Biomarker of Alzheimer's Disease in Cognitively Normal Older Adults

Vanessa Johnson, University of California, Irvine
The effect of specific exercise patterns on metabolism, memory-related gene expression, and long-term memory formation in the dorsal hippocampus of aging mice

Haritha Karthikeyan, University of California, San Diego
Increasing PSD-95 palmitoylation rescues memory deficits in Alzheimer's model mice

Robert Krattli, University of California, Irvine
Comparing functional consequences of iPSC-microglia- and human neural stem cell-derived extracellular vesicles in mitigating the cognitive decline in Alzheimer's disease

Amber Lawrence, University of California, San Diego
Neurosciences Impact of sex and age on hippocampal long-term depression

Neda Morakabati, University of California, Irvine
The effects of targeted memory reactivation of rescripted content during sleep on subsequent intrusive memories

Sasha Patel, University of California, Irvine
Investigating the effect of HDAC3 phospho-mutations on *per1* gene expression during memory consolidation

Hazael Ramirez, University of California, Irvine
Effects of VP GABA inhibition after punishment-induced abstinence on relapse-relevant neuronal networks

Gerardo Sandoval, University of California, Irvine
The VGCC auxiliary subunit α2δ-1 is an extracellular AMPAR interactor regulating synaptic transmission and LTP at hippocampal synapses

Zoe Treadwell, University of California, Irvine
Effects of calcineurin inhibition on hippocampal integrity and Alzheimer's disease pathology in aged canines

Casey Vanderlip, University of California, Irvine
Cognitive trajectories in Alzheimer's disease differ in ApoE4 carriers

Leah Varghese, University of California, Irvine
Evaluating plasma ptau-217 sensitivity in detecting individual differences in early-stage tau aggregation in cognitively unimpaired older adults

Zhishun Yang, University of California, Irvine
Awake hippocampal replay reflects stimuli information during a nonspatial sequence memory task

Emily Yi, University of California, Irvine
Investigating the role of estradiol in white matter hyperintensities and pattern separation abilities in older adults

Yuguang "Irene" Zhao University of California, Irvine
Coupling between cerebral blood flow and metabolism is associated with Alzheimer’s disease progression and memory performance

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See you next year!

2026 CNLM
Spring Conference

April 9-10, 2026

Suggestions? Ideas?
Scan the QR code to let us know!

UC Irvine

Center for the Neurobiology of Learning & Memory