

Reinvigorating Innovation
in **ALS**

UCSF Innovation
Ventures



MAY 16 & 17, 2024

Reinvigorating **INNOVATION** IN **ALS**

OVERVIEW OF ALS



Amyotrophic lateral sclerosis (ALS) is a progressive and fatal neurodegenerative disease that impacts the upper and lower motor neurons for voluntary movements and muscle control (Rowland and Shneider, 2001). ALS cases can be categorized as familial (in 5-10% of cases) with a family history of the disease and a gene mutation or sporadic (in 90% of cases) with no family history and no genetic mutation association. It has also been reported that military veterans, are twice as likely to develop ALS compared to the general public. For the treatment of ALS, the U.S. FDA has approved the drugs, Riluzole and Edaravone. There are multiple factors such as gene variants, the complex nature of the disease, and a number of cellular processes implicated in disease progression that have made it difficult to identify the causative nature of the disease.

The inaugural University of California (UC) system-wide amyotrophic lateral sclerosis (ALS) workshop will take place from May 16-17, 2024 at the University of California Livermore Collaboration Center (UCLCC) located in Livermore, CA.

This will be a day-and-a-half, highly interactive, multi-disciplinary workshop that maximizes the UC system-wide ALS expertise, bringing together university physicians, biomedical researchers, engineers, and computational scientists at all career levels, with Lawrence Livermore National Laboratory colleagues to address ALS challenges and opportunities at scale, and to collaborate across disciplines to accelerate ALS research and development.

Throughout the 1.5-day meeting, we'll focus on three themes:

- A. Next-generation ALS technologies: Development and evaluation of wearables and implantables
- B. ALS clinical data for impact: Data aggregation & standardization, development of AI/ML & visualization tools, and evaluation of the data
- C. Biomedical research: Mechanisms, genetics, and biomarkers of ALS

OBJECTIVES



MEETING GOALS

- ❁ Identify lean-in clinical and scientific challenge areas that push the limits of current ALS treatments and research practices and compel the development of innovative technologies and treatments.
- ❁ Build a community, multi-disciplinary engagement, and collaboration across the UC system to create transformative impact.
- ❁ Demonstrate how to break down silos and work across domains, disciplines, and organizations.
- ❁ Define the types of cultural shifts in ALS that could be possible with Department of Energy national laboratory capabilities and expertise.
- ❁ Develop new collaborative clinical trials.
- ❁ Develop new collaborative research projects and submit grant proposals.

AGENDA



DAY ONE

- 11:30 a Arrival – Registration and networking lunch
- 12:30 p Welcome with Director Kim Budil, LLNL
June Yu, Interim Vice President, UCNL
- 12:40 p *Conversation Starters: Meet & Greet*
- 12:50 p Purpose and Vision Statement
Amy Gryshuk, UCSF Innovation Ventures
- 1:00 p Keynote: Harnessing the Power of Innovation for Clinical Impact
Dr. Stephen Hauser, UCSF Professor of Neurology,
Director, UCSF Weill Institute for Neurosciences
- 1:30 p Clinician’s Perspective: A day in the life of an ALS Clinician
Moderator: Amy Gryshuk, UCSF Innovation Ventures
Nanette Joyce, UCD M. Betul Gundogdu, UCSD
Namita Goyal, UCI Cathy Lomen-Hoerth, UCSF
Martina Wiedau, UCLA
**High-Level session summary to be provided*
- 2:30 p *Afternoon Break – networking and idea creation*
- 3:00 p The Power of the DOE enterprise: National Laboratory Capabilities
Moderator: Elizabeth Wheeler,
Deputy Division Leader for Engineering’s
Materials Engineering Division (MED),
and Acting Director of LLNL’s Center for Bioengineering
Computing: Brian Spears, AI3 Director LLNL
Engineering: Elizabeth Wheeler, LLNL
Physical & Life Sciences: Kristen Kulp, Division Leader
Biosciences and Biotechnology, LLNL
**High-Level session summary to be provided*

DAY ONE

- 4:00 p Industry Perspective: Impact of Health Innovation
Moderator: Brandon Cardwell, City of Livermore
Mark Hettick, Precision Neuroscience
Joseph Lewcock, Denali Therapeutics
Raquel (Kely) Norel, Digital Health, IBM Research
- *High-Level session summary to be provided*
- 4:45 p *Late Afternoon Break – networking and idea creation*
- 5:00 p Summary from Day 1 – Planning and Prep for Day 2
- 5:15 p Adjourn
- 6:00 p Poster session with hors d'oeuvres and networking (6:00-7:00)

Dinner at Purple Orchid Winery (7:00-9:00)

Registered participants only- No host bar

Purple Orchid Winery

4549 Cross Rd, Livermore, CA 94550

purpleorchid.com

**There will be poster awards from ALS Network's*

Barber Research Awards for the top 3 posters

POSTER PRESENTATIONS

Frederick Arnold, UCI

TDP-43 dysregulation of polyadenylation site selection is a defining feature of RNA misprocessing in ALS/FTD (Mechanisms, Genetics, and Biomarkers for ALS)

Sidar Aydin, UCSD

Examining the changes to central nervous system blood vessels in patients with ALS (Mechanisms, Genetics, and Biomarkers for ALS)

Noah Goshi, LLNL

Characterization of 2D and 3D human iPSC-derived motor neuron cultures (Mechanisms, Genetics, and Biomarkers for ALS)

Anne Caroline Mascarenhas dos Santos, LLNL

Microbial profiling with Oxford Nanopore Technologies (ALS Clinical Data for Impact)

Greg Mohl, UCSF

Platforms for screening delivery and gene editing in neurons (Mechanisms, Genetics, and Biomarkers for ALS)

Everlyne Ogugu, UCD

Coping with Amyotrophic lateral sclerosis (ALS): Experiences of persons living with ALS and their caregiver (ALS Clinical data for impact)

Albara Ramli, UCD

Gait Characterization in Duchenne Muscular Dystrophy (DMD) Using a Single-Sensor Accelerometer: Classical Machine Learning and Deep Learning Approaches (Next-Gen ALS Tech)

Maitreyee Wairagkar, UCD

Brain-to-Voice: real-time voice synthesis from intracortical neural activity of a person with ALS (Next-Gen ALS Tech)

Mursall Mostamand, UCLA

Behavioral and Histological Tracking of Motor Neuron Degeneration and Symptom Onset in the SOD1G93A Mouse Model for Amyotrophic Lateral Sclerosis (Mechanisms, Genetics, and Biomarkers for ALS)

DAY TWO

- 7:30 a *Arrival – Registration and breakfast*
LLNL tours – please arrive to the UCLCC by 7:30 am
- 9:10 a Welcome
ALS Network’s Barber Research Award announcement –
Sheri Strahl, ALS Network
Summary from Day 1
Goals and plan for Day 2
- 9:20 a Summarized Findings – Idea Creation Topics from Day 1
- 9:30 a Lightning Talks Aligned with Workshop Themes
Moderator: Olivia Roberson, UCSF Innovation Ventures
Theme A: Next-generation ALS technologies
Theme B: ALS clinical data for impact
Theme C: Biomedical Research: Mechanisms, genetics and
biomarkers of ALS
- 11:00 a *Morning Break – networking and idea creation*
- 11:30 a Caregiver Perspective: Caring for patients with ALS
Presenter and Moderator: Heather Young, UC Davis
David Killoran, Caregiver
Linda Levine, Caregiver
Mary Ann Wittenberg, Caregiver

*High-Level session summary to be provided
- 12:20 p Call to Action: Breakout Sessions
Theme A: Next-generation ALS technologies
Theme B: ALS clinical data for impact
Theme C: Biomedical Research: Mechanisms, genetics and
biomarkers of ALS

DAY TWO

12:30 p *Networking Lunch: Breakout Groups*

1:30 p Breakout Discussions: Ideation (3 themes)

2:30 p Funding Landscape for Rare Diseases

Moderator: Gretchen Kiser, UCSF Office of Research

Amy Easton, Target ALS

Rosa Canet-Aviles, CIRM

Sheri Strahl, ALS Network

Srikanth Ranganathan, NIH NINDS

Scott Gorman, ARPA-H (pre-recorded message)

*High-Level session summary to be provided

3:15 p *Afternoon Break*

3:45 p Breakout Session Recap Presented by Session co-Leads

Theme A: Next-generation ALS technologies

Theme B: ALS clinical data for impact

Theme C: Biomedical Research: Mechanisms, genetics and
biomarkers of ALS

4:15 p *Survey/Questions/Feedback*

4:25 p Closing Remarks

4:30 p *Departure*

Thanks to our graphic recorder Rio Holaday

LIGHTNING TALKS

Theme A: Next-Generation ALS Technologies

Travis Massey, LLNL

High-density neural interfaces and outlook toward an implantable speech prosthesis

Anna Ivanovskaya, LLNL

Real-Time Chemical Sensing of Biomolecules: Potential New Applications in ALS

Theme B: ALS Clinical Data for Impact

Priyadip Ray, LLNL

Identification of Drug Repurposing Candidates for Amyotrophic Lateral Sclerosis Using Electronic Health Records

Ramita Karra, UCLA

Phenotypic characteristics, care utilization, and outcomes of ALS patients from different racial and ethnic backgrounds: planned analysis from a tertiary care center

Alan Kaplan, LLNL

Machine learning applications for subgrouping using medical data

Theme C: Biomedical Research: Mechanisms, Genetics, and Biomarkers

David Brandman, UCD

Towards an intracortical brain computer interface to restore communication in people with ALS

Claire Clelland, UCSF

CRISPR gene therapy for ALS: Overcoming the delivery challenge

Daniel Mordes, UCSF

Defining disruptions in autophagy in ALS

Noah Zaitlen, UCLA

An investigation of cell-free DNA epigenetics for ALS biomarkers

LIGHTNING TALKS

Sharmila Venugopal, UCLA

Elucidating Causal Pathways and Dynamics of Neural Vulnerability

Mai Yamakawa, UCLA

Towards robust and reproducible disease-associated features at single-cell level: Metaanalysis of single cell transcriptomics of ALS/FTD

SPEAKERS AND MODERATORS

Welcome

Kimberly S. Budil, PhD
Laboratory Director,
Lawrence Livermore
National Laboratory

Kimberly S. Budil is the director of Lawrence Livermore National Laboratory, where she leads a workforce of approximately 8,700 employees and manages an annual operating budget of \$3 billion. As director, she sets the strategic vision for the Laboratory and is responsible for the successful execution of programs and operations to enhance national security through application of cutting edge science and technology and to maintain an outstanding and diverse workforce.

She leads the development and implementation of the Laboratory's scientific vision, goals and objectives, and engages with the senior leadership of the Department of Energy, National Nuclear Security Administration, and other federal agencies, as well as senior leaders across government, academia and the private sector. She serves on several boards and participates in numerous professional and community outreach activities.

Budil holds a Ph.D. in engineering and applied science from the University of California, Davis, and a B.S. in physics from the University of Illinois at Chicago.



June Yu, PhD
Interim Vice President,
UC National Laboratories

June Yu is the Interim Vice President for UC National Laboratories (UCNL) as of February 1, 2024. As Interim Vice President she is responsible for the governance and contract administration of Lawrence Berkeley National Laboratory (LBNL) and for representation of the University in the management of limited liability companies (LLCs) that operate two other National Laboratories - Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL). UCNL is responsible for ensuring sustained excellence and integrity in the work and performance of the three UC-affiliated National Laboratories. She also oversees interactions with the Regents, Office of the President, the campuses, the Department of Energy (DOE), and the National Nuclear Security Administration (NNSA).

June joined the University of California Office of the President in July 2014 as Executive Director for National Laboratory Programs and was appointed Associate Vice President in May 2020. As UCNL's Associate Vice President, her responsibilities have focused on oversight and assurance of Science, Technology and Engineering (ST&E) and Mission functions at the National Labs.

Prior to UCOP, June had a distinguished career at LLNL, where she led research efforts in collaboration with scientific discipline organizations and interfaced with laboratory support organizations and all three Mission directorates (National Ignition Facility and Photon Sciences, Global Security, and Weapons Complex Integration). These efforts ranged from conducting cutting edge applied research to delivering quick-reaction capabilities in service of urgent national security needs. June has an undergraduate degree in Physics from California Polytechnic State University, a M.S and Ph.D. in Optical Sciences from the University of Arizona, and an International Security Graduate Certificate from Stanford University. She is also graduate of the UC-CORO System-wide Leadership Collaborative, the LLNL-UC Berkeley Haas School of Business Leadership Institute (LI) Program, and the UCLA Technical Management Program.

Keynote

Stephen L. Hauser, MD
Director, UCSF Weill Institute
for Neurosciences

Dr. Hauser is the director the UCSF Weill Institute for Neurosciences, linking the clinical and basic neurosciences at UCSF to accelerate research against neurologic diseases. Dr. Hauser's research has advanced our understanding of the genetics, immunology, and treatment of multiple sclerosis (MS). His work led to the development of B cell therapies for MS patients, representing a powerful new approach for relapsing forms of the disease and the first therapy of proven value for progressive MS.

Dr. Hauser is a member of the National Academy of Medicine and a fellow of the American Academy of Arts and Sciences and the American Academy of Physicians. He is an editor of the textbook *Harrison's Principles of Internal Medicine*.

Previously chairman of the Department of Neurology at UCSF for 25 years, he has also served as President of the American

Neurological Association, President of the Medical Staff at UCSF, Chair of the Research Advisory Committee for the VA, and editor-in-chief of *Annals of Neurology*. He also served the Obama administration as a member of the Presidential Commission for the Study of Bioethical Issues charged with advising the President on issues that may emerge from advances in biomedicine and related areas of science and technology. Dr. Hauser has received numerous awards and honors for his work, including the Jacob Javits Neuroscience Investigator Award; John Dystel Prize for Multiple Sclerosis Research (2008); Charcot Award (2013); Taubman Prize for Excellence in Translational Medical Research (2017); and Scientific Breakthrough Award from the American Brain Foundation (2022).



Amy L. Gryshuk, PhD
Associate Director,
Office of Strategic Alliances,
UCSF Innovation Ventures

Amy joined UCSF Innovation Ventures as the Associate Director of the Office of Strategic Alliances in July 2022. She has experience in designing, implementing, and maintaining tailored action plans and partnering strategies for multidisciplinary research collaborations and agreements with government, industry, academia, and philanthropy partners. Previously, Amy served as a Lead within the Strategic Science Engagements Office for the Physical and Life Sciences Directorate at Lawrence Livermore National Laboratory where she coordinated high-level efforts across various Department of Energy (DOE) labs and the National Cancer Institute and was recognized in 2017 by the United States Department of Energy for the Secretary's Appreciation Award for responding to the Vice President's Cancer Moonshot. She has focused on the application of computational predictive biology in oncology, drug discovery, and neurodegenerative efforts resulting in numerous publications and external funding. She received her PhD in Molecular Pharmacology from the State University of New York at Buffalo – Roswell Park Cancer Institute.

Namita Goyal, MD
Professor of Neurology
Director of ALS Clinic, UCI

Dr. Namita Goyal is a Professor of Neurology at University of California, Irvine, and specializes in Neuromuscular Medicine. She completed her residency in neurology at the University of Chicago Medical Center, and her neuromuscular fellowship at Massachusetts General Hospital, Harvard Medical School in 2006. She was subsequently appointed to the faculty at MGH/Harvard Medical School as a neuromuscular clinician for seven years. She then joined the University of California, Irvine in 2012 and currently serves as the Director of the ALS clinic, Director of the Neuromuscular Medicine Fellowship program, and co-Director of the Neuromuscular Center at UC Irvine. Dr. Goyal has authored several neuromuscular manuscripts and has given many national talks on neuromuscular diseases. In addition to evaluating and treating patients, she is a lead site investigator in several clinical trials involving neuromuscular diseases, with a special focus on ALS and muscle diseases.



M. Betul Gundogdu, MD
Chief, Neuromuscular Division,
Co-Director ALS Clinic, UCSD

A physician teacher at University of California, San Diego (UCSD) specializing in amyotrophic lateral sclerosis (ALS). My formal training is in clinical neurology and neuromuscular diseases with emphasis on neuromuscular pathology and I am board-certified in these areas. I serve as the head of the Neuromuscular Division and co-direct UCSD's ALS Center of Excellence, which includes an active clinic program in diagnosis and a Multidisciplinary Care Program following a panel of about 200 patients. I am a member of UCSD's ALS Translational Research Program, which is active in observational studies and biobanking, that also carries out clinical trials including an international effort to develop antisense oligonucleotide therapies for SOD-1 and C9orf72 mutation familial ALS patients. My primary research interest is ALS-FTD complex directed at characterizing and better understanding of presentation and progression of cognitive deficits in this population.

**Nanette Cunningham Joyce,
D.O., M.A.S.
Associate Professor,
Department of Physical Medicine
and Rehabilitation, UCD**

I believe in providing patient/family centered care for those with complex medical needs caused by neuromuscular disease. I work with expert allied professionals in a team-based multidisciplinary clinic to provide the highest quality care. Our goal is to offer interventions that maximize independence, improve quality of life, and treat the underlying disease process to prolong life. Dr. Joyce is a physiatrist who is fellowship-trained in neuromuscular medicine and electrodiagnosis. She has special clinical interest and expertise in treating patients with amyotrophic lateral sclerosis, spinal muscular atrophy, and hereditary muscular dystrophies.

Dr. Joyce's research focuses on the translation of disease-modifying therapeutics targeting the rare disease neuromuscular patient population. She participates in large international and national research groups studying these diseases; defining natural history and developing outcome measures in order quantify change with clinical trial interventions.



**Cathy Lomen-Hoerth, MD, PhD
ALS Center Director, UCSF**

I direct the ALS Center at UCSF and follow over 400 patients with ALS, with 100 new referrals a year, in our ALS multidisciplinary center at the University of California San Francisco. We are certified by both the MDA and the ALS association and have a full multidisciplinary team of professionals including speech pathology, dietitian, social work, physical therapy, occupational therapy, respiratory therapy, nurse, and neurologist. I trained under Dr. Richard Olney and took over as director of the ALS Center in 2004 when he retired and have an endowed professorship in his name.

I am a full professor of neurology at UCSF and have significant experience in ALS clinical trials since joining the faculty after completing my neurology residency and EMG fellowship at UCSF in 1999. I was a site PI for the following ALS clinical research trials: all 3 Avanir studies, the Creatine study, the Co-Q10 study, the Ceftriaxone study, the Pennant trial, and the FLX trial. I am a member of both NEALS and WALS, which are the major ALS clinical trial groups. In addition I have received grants from the NIH, ALS association, and DOD to study ALS predictors of prognosis, ALS environmental risk factors, the gut microbiome in ALS, imaging abnormalities in PLS and ALS, and also the overlap with ALS and frontotemporal dementia.

I have a strong track record of mentoring students, residents, and faculty. I am an associate director for the MSTP program at UCSF and am the assigned mentor for the 100 plus MSTP students at UCSF. I revamped the faculty mentoring program for the department of neurology and matched over 100 junior faculty with senior faculty mentors each year. I plan mentoring trainings locally and nationally, focusing on mentoring across differences. Lastly, in 2020 I was appointed chief of the Neuromuscular Division at UCSF after a national search.



Martina H. Wiedau, MD
Professor of Neurology,
Director ALS Clinic and
Research Center, UCLA

After graduating in Germany from Medical School and completing my research thesis in neuroimmunology, I continued with neurodegenerative research, neurology residency, fellowship and a faculty appointment at UCLA. I am UCLA neurology faculty. I have more than 20 years of experience in ALS patient care and both ALS basic and clinical research. My primary focus is on ALS therapeutic target identification and disease mechanisms. I have investigated immune factors in ALS linked immune system changes in blood samples and monocyte cultures from ALS patients. I have worked for many years with the G93A transgenic mouse model of ALS and neuronal cell culture models. I am the director of the ALS Clinic and Research Center in the UCLA Neurology department where I direct clinical and translational studies and aim to bring together clinical and scientific knowledge for my projects.

Anup Singh
Principal Associate Director
for Engineering, LLNL

Anup Singh is the Principal Associate Director for Engineering at Lawrence Livermore National Laboratory in Livermore, CA. In this role, he leads an organization of approximately 3,000 professionals with responsibility for the full breadth of the Laboratory's engineering needs including research and development, integrated systems, and engineering tools. The engineering directorate relies on multidisciplinary collaboration to achieve breakthroughs in areas vital to national security including nuclear deterrence, national ignition facility, and global security programs at LLNL. Many of the leading-edge concepts and innovations in the directorate have been translated into commercial products that improve everyday life in novel and practical ways. In addition to his management role, Anup continues to be engaged in technical leadership roles. He is a co-Champion of Bioresilience Mission Focus Area at LLNL that is leveraging supercomputing, biotechnology and bioengineering to transform development of therapeutics and early detection of biothreats.



He is also an Adjunct Professor at the University of Texas Medical Branch in Galveston, TX and Director of Microfluidics at the Joint BioEnergy Institute, Emeryville, CA, a DOE-funded Bioenergy Research Center. His current research interests include applying microfluidic technology for clinical diagnostics, single cell analysis, and high-throughput platforms for biofuels research. Before joining LLNL, he served as Director of the Biological and Engineering Sciences Center at Sandia National Laboratories, managing critical capabilities in support of Sandia's Energy & Homeland Security, Global Security, Nuclear Deterrence and Advanced Science and Technology portfolios. In 2020, he served on a special assignment reporting to the Laboratory Director coordinating Sandia's COVID-19 R&D efforts, serving as the Sandia's representative on the Department of Energy's (DOE) National Virtual Biotechnology Laboratory (NVBL) team, and leading a team to establish a COVID testing laboratory at Sandia. He won two Secretary of Energy Achievement Honor Awards for his contributions as a member of the NVBL and DOE National Laboratories' COVID-19 Clinical Testing teams. He is internationally recognized for his scientific leadership in biological applications of microfluidics and has published more than 100 peer-reviewed publications, delivered more than 150 presentations at national and international conferences, and his inventions have led to more than 40 patents and patent applications. Many of his inventions have been licensed to companies engaged in medical diagnostics and sensor technology development.



Elizabeth Wheeler, PhD
Acting Director
Center for Bioengineering, LLNL

Elizabeth Wheeler is a Deputy Division Leader in the Materials Engineering Division and the Acting Director of the Center for Bioengineering at the Lawrence Livermore National Laboratory. She holds a bachelor's degree in chemical engineering from the University of California at Davis and a Ph.D. in chemical engineering from Stanford University. She began her career at LLNL as a post-doc working on optical coatings for use in the National Ignition Facility (NIF) prior to joining the Center for Micro and Nano Technology where she began working on interdisciplinary research. She has been involved with and lead efforts in bioinstrumentation for biosecurity applications at LLNL for 20+ years. Her research interests focus on integrating biology and engineering to yield new platforms or flexible devices for biosecurity or medical applications.

She has worked on numerous multidisciplinary teams that have field tested technology developed at LLNL. Currently she also serves as the Engineering Academic Partnership lead and the chair of the Lab-Wide Laboratory Directed Research & Development committee.

Kristen S. Kulp, PhD
Division Leader, Biosciences
and Biotechnology, LLNL

Kristen (Kris) Kulp is currently the Division Leader for the Biosciences and Biotechnology Division (BBTD) within the Physical and Life Sciences Directorate at Lawrence Livermore National Laboratory (LLNL). BBTD focuses on research at the intersection of biological, physical, and engineering sciences. By using LLNL's cutting-edge technologies, in combination with experimental and computational methods, BBTD's researchers solve important national problems in biosecurity, human health, and environmental biology. The division performs fundamental and applied research in areas such as genomics, molecular toxicology, nanotechnology, host-pathogen biology, structural biology, genetics, microbial systems, and medical countermeasures. Kris joined LLNL as a postdoc to do research on the role of dietary carcinogens in the development of human cancer.

Over the course of her career at the lab, she has also worked on developing and applying advanced mass spectrometry techniques for determining disease effects on single cells and tissues and has teamed with engineers to create tissue-based assay systems that model human physiological response. Her prior management assignments include serving as the Director of the LLNL Institutional Postdoc Program, Deputy Division Leader for BBTD and Group Leader of the Pharmacology and Toxicology Group within BBTD. Kris's scientific work has been focused on understanding how toxicological exposures effect human health and creating analytical capabilities to better assess those effects.





Brian Spears

Director, AI Innovation Incubator, LLNL

Brian Spears currently serves as director of the AI Innovation Incubator at Lawrence Livermore National Laboratory, applying AI/ML and cognitive simulation to increase the predictive power of broad range of simulation models, design new molecules for needs ranging from pandemic response to energetic materials, integrate complex multimodal data for national security decision support, enhance the next generation of predictive climate models, and more. He has been a principal architect of cognitive simulation methods—artificial intelligence methods that combine high-performance simulation and precision experiments with the goal of improving model predictions, including applications to guide development of nextgeneration supercomputers. His responsibilities include setting vision for AI development and deployment at the Laboratory while driving LLNL leadership in AI for science.

Brandon Cardwell

Director Innovation & Economic Development, City of Livermore

Brandon Cardwell currently serves as the city of Livermore's Innovation and Economic Development Director. Brandon has worked for the city for the past 16 years, beginning his journey in 2006 and joining the economic development team in 2011. Cardwell has helped shape Livermore's economic development priorities, working in tourism and special events, land use planning, place branding and the technology sector. In 2014, he served as the executive director of i-GATE Innovation Hub, an organization providing business development services for startups and an independent nonprofit created by the cities of Livermore, Dublin, Pleasanton and the town of Danville along with Lawrence Livermore National Laboratory and Sandia National Laboratories. In his executive director role at i-GATE, Cardwell oversaw the development of the Daybreak Labs startup incubator and the Startup Tri-Valley ecosystem development initiative.





Mark Hettick, PhD
Head of Microfabrication,
Precision Neuroscience

Mark obtained his PhD at UC Berkeley in 2018, studying low temperature growth techniques for advanced optoelectronic materials. Following his graduation, he worked as a process engineer at Neuralink developing high-density polymer neural probes, and in 2021 he joined Precision Neuroscience to head design and development of flexible high density micro-electrocorticography arrays for minimally invasive neural interfaces.

Joe Lewcock, PhD
Chief Scientific Officer,
Denali Therapeutics

Joe serves as CSO and Head of Discovery at Denali Therapeutics, a biotechnology company focused on novel therapeutic strategies for neurodegenerative diseases including Alzheimer's, Parkinson's, ALS, and genetically defined rare disorders. In this role, he serves as a member of the Denali Management team and coordinates the preclinical stage portfolio, which has resulted in the progression of 8+ molecules ranging from small molecules to biotherapeutics advancing to clinical trials. His group defines therapeutic strategies based on genetically defined pathways that contribute to neurodegeneration including Lysosomal Function, Glial Biology, and Cellular Homeostasis. As delivery to the brain represents a major challenge, Joe's discovery team has developed Denali's proprietary Transport Vehicle (TV) platform to shuttle biologics across the Blood-Brain Barrier. This highly modular technology enables effective brain delivery and broad biodistribution of a range of cargos including enzymes, antibodies, and oligonucleotides. Prior to joining Denali in early 2016, Joe spent 9 years at Genentech, where he helped to build the neuroscience research team and portfolio.



In his role as Director of the Department of Neuroscience, he was responsible for generating the disease area strategy and management of the neuroscience portfolio, which included both large and small molecule programs. During his time at Genentech, Joe also served as a project team leader where he led a program for neurodegenerative disease from target discovery to IND filing and led a discovery lab focused on identification of new therapeutic drug targets for Amyotrophic Lateral Sclerosis (ALS) and Alzheimer's Disease. He received his BS from University of California, San Diego, a Ph.D. from Johns Hopkins University School of Medicine, and did a Postdoctoral fellowship at the Salk Institute.

Raquel (Kely) Norel, PhD
Research Staff Member
Digital Health, IBM Research

Dr. Norel is a Research Staff Member in Digital Health at the IBM T. J. Watson Research Center, where she focuses on using mathematics and computing to bring insight into complex biological problems. Over the past seven years, she has focused on implementing automatic language-based analysis for neuropsychiatric and neurodegenerative assessment. Her expertise spans mathematical modeling, geometric hashing, bioinformatics, systems biology, and speech analysis. Dr. Norel and her team at the Digital Health Lab employ machine learning, signal processing, and natural language processing to enhance disease detection and progression. Their work engages academic and industrial partners collaboratively, aiming to leverage these interdisciplinary approaches to advance healthcare research. Dr. Norel is a coauthor of 6 awarded patents and over 50 peer-reviewed publications, with one of them having over 900 citations.



Olivia Roberson, PhD
Senior Alliance and Business
Development Manager,
UCSF Innovation Ventures

Olivia joined the Office of Strategic Alliances in November 2018. She is a Sr. Alliances and Business Development Manager. Previously, Olivia worked as a scientific advisor at Wilson Sonsini Goodrich & Rosati where she focused on protection of biotechnology intellectual property. Olivia received her PhD in Immunology from Mayo Clinic School of Biomedical Sciences where she studied the endogenous antiviral mechanisms in the domestic cat. Subsequently, Olivia was awarded an NIH institutional research and academic career development award to pursue her postdoctoral studies at UCSF in the laboratory of Dr. Melanie Ott. A focus of her postdoctoral research was to identify the molecular mechanisms contributing to transcriptional repression at the HIV-2 promoter. During her tenure as a UCSF postdoctoral fellow, she also worked as an immunology consultant, where she provided technical expertise to support a biotechnology litigation case at Latham and Watkins LLP. Additionally, Olivia was an intern in the Office of Technology Management where she conducted prior art searches for patentability and determined commercial assessment of UCSF technologies.

**Heather M. Young,
PhD, RN, FAAN,
UCD**

A nurse leader, educator, scientist and nationally recognized expert in gerontological nursing and rural health care, Heather M. Young is national director of the Betty Irene Moore Fellowship Program for Nurse Leaders and Innovators and professor at the Betty Irene Moore School of Nursing at UC Davis. As founding dean and Associate Vice Chancellor for Nursing for UC Davis Health, Dr. Young led the establishment of the Betty Irene Moore School of Nursing. Young researches healthy aging with a particular focus on the interface between individuals, family and formal health care systems. She co-leads the Healthy Aging in a Digital World initiative at UC Davis Health and codirects the Family Caregiving Institute and is a Senior Policy Fellow with the AARP Public Policy Institute focusing on policy and systems supports for family caregivers. She recently led a study of perspectives of needs by persons with ALS, their caregivers and health care providers.



**David S. Killoran, Esq.
Member, Dykema Gossett PLLC
President, ALS Action Foundation**

David S. Killoran is an attorney with a national litigation practice. After spending years caring for a spouse with ALS and fighting numerous battles to secure adequate home healthcare and DME for her, David founded the ALS Action Foundation, whose mission is to conduct research and promote education and awareness concerning the resources available to people living with ALS and their families.



Linda Levine
Personal Coach Specializing in
Life & Loss,
Surprise Enterprise

San Jose State University, Faculty Emerita M.Ed & B.S. in
Recreational Therapy Loving, Laughing Caregiver to Beloved
PALS.

Personal & Professional Coach:
Creating a Meaningful Life
Grief and Loss
Retirement Planning
Habits of Happiness
Caregiver Support
Art for the Heart



Mary Ann Wittenberg, MA
Special Educator

Mary Ann's involvement with the ALS community began in January 2018 when her husband Harry was first told he had ALS. They quickly decided that though they could not change the diagnosis they could control how they responded to it. That meant being very upfront with their community about the disease and finding ways they could contribute to raising awareness and badly needed funds. Mary Ann currently sits on the board of The ALS Network. In addition she currently serves on the board of Congregation B'nai Tikvah in Walnut Creek as President Elect, is a member of the fund development committee for ALS Golden West and is on the advisory board of Unite Genomics. Mary Ann recently retired after working almost 40 years in special education for the Oakland Unified School District. She credits her last position in UCSF Benioff Children's Hospital Oakland School Program and work with the Rehabilitation Team for preparing her for what she considers her most important role, as Harry's primary caretaker and advocate. She currently lives in Walnut Creek, CA and is the parent of 3 interesting and creative young adults.

Gretchen Kiser, PhD
Executive Director
Research Development Office,
UCSF

Dr. Gretchen Kiser is a research development professional with a strong foundation in academic research and the biotech industry, as well as 20 years-experience on the administrative side of the research enterprise. As the Executive Director of the Research Development Office (RDO) at UCSF, Dr. Kiser also oversees a team that supports several programmatic areas: providing intra- and inter-institutional collaboration and large grant proposal development support; managing intramural funding competitions (RAP as well as others) and limited submission nominee selection (LSP); supporting training grants through the associated T32 trainee tracking system (3TS); as well as facilitating and supporting faculty development and campus strategic initiatives.

She holds a Ph.D. in Molecular and Cellular Biology, and as a Fellow and former President of the National Organization of Research Development Professionals, is a recognized expert in research development, team science, program development and management, faculty development, strategic planning, and technical writing. She works in partnership with individual faculty members, teams of researchers, external cross-sector stakeholders and institutional leadership and administrators to develop and implement strategies that increase institutional competitiveness, attract research funding, and foster innovation.



Rosa Canet-Avilés, PhD
Vice President Scientific Programs
and Education
California Institute for Regenerative
Medicine (CIRM)

Rosa brings nearly two decades of experience in developing and leading multi-stakeholder initiatives across the biopharmaceutical, government, and nonprofit sectors. At the California Institute for Regenerative Medicine (CIRM), she oversees the Scientific, Educational, and Collaborative Infrastructure programs, including Data and Shared Resources, and spearheads the development and execution of the Strategic prioritization framework. Previously, as the Director of Strategic Alliances at Eisai's Center for Genetics Guided Dementia Discovery (G2D2), Rosa was at the helm of strategic planning for alliances and external innovation partnerships within the neurobiology sector.

Over the prior seven years, in her capacity as the Director of Neuroscience Research Partnerships at the Foundation for the National Institutes of Health (FNIH), she led the strategic design,

development, and stewardship of the Neuroscience Research Partnership portfolio, encompassing projects and programs such as the Alzheimer's Disease Neuroimaging Initiative (ADNI), and the Accelerating Medicines Partnership programs for Alzheimer's Disease (AMP AD), Parkinson's Disease (AMP PD), and Schizophrenia (AMP SCZ), along with the Biomarkers Consortium Neuroscience Steering Committee. Rosa earned a PhD in Neuroscience from the University of Leeds in the UK, complemented by a Bachelor of Science degree in Organic Chemistry from the University of Barcelona in Catalonia, Spain.





Amy Easton, PhD Sr. Director of Scientific Programs, Target ALS

Amy received her PhD in Neuroscience from Northwestern University and completed a postdoctoral fellowship at The Rockefeller University. She moved into industry in 2005, serving as a senior scientist at Bristol Myers Squibb. Her lab was responsible for generating in vivo PoC data, pk/pd data, and IND-enabling data packages for drug discovery programs developing treatments for Schizophrenia and Alzheimer's disease. From there, Amy became Head of Translational Neuroscience at Genentech for 7 years, supporting all aspects of preclinical research for neurodegenerative disease programs including generation of IND packages. There, Amy supported multiple ALS programs in the preclinical and clinical development space. She worked closely with scientists across functional groups including those in biomarker assay development, bioinformatics and pathology. Amy also contributed significantly to the Neuroscience strategy through her work in new modalities including antisense oligonucleotides. In November 2022, Amy joined Target ALS as Sr. Director of Scientific Programs where she oversees funding

opportunities, development of research tools and resources, and a Natural History Study where longitudinal biosamples and comprehensive datasets will be collected from 800 ALS and 200 healthy participants across 18 US and International sites.

Sheri Strahl, MPH, MBA President and CEO, ALS Network

Sheri Strahl has excelled as a nonprofit leader, community advocate, and public speaker. She has been on the executive teams of some of the largest nonprofits in California, providing critical strategic visioning and effective leadership.

Strahl took the helm of the ALS Network (formerly the ALS Association Golden West Chapter), one of the nation's leading ALS nonprofits, on February 1, 2024, during a period of meaningful change underscored by the organization's name and brand refresh. Strahl, a renowned and visionary leader, brings more than 20 years of nonprofit experience to the role with a proven track record of expanding programs, driving efficiency in operations, and ensuring fiscal responsibility as the organization's COO since 2019.

As the organization's first president and CEO with a public health background, Strahl's dynamic, servant-leadership approach reflects how the ALS Network engages the ALS



community - through meaningful connections to urgently advance three mission pillars of work in care, research, and advocacy. Under her guidance the ALS Network begins a new era of serving the ALS community by driving the discovery of prevention strategies, treatments, and cures for ALS; providing access to quality care and connection; and promoting initiatives to improve health outcomes.



Srikanth Ranganathan, PhD
Program Director, Division of Neurodegeneration, Dementia, and Repeat Expansion Disorders (NDR) Cluster at the National Institute of Neurological Disorders and Stroke (NINDS)

Dr. Ranganathan is a Program Director in the Division of Neurodegeneration, Dementia, and Repeat Expansion Disorders (NDR) Cluster at the National Institute of Neurological Disorders and Stroke. He transitioned to NINDS from the Center for Scientific Review (CSR) where he served as a Scientific Review Officer (SRO) and Referral Officer at the Center for Scientific Review in NIH. In this role, Dr. Ranganathan managed the peer review for the NIH Director's New Innovator Award (DP2) of the trans-NIH Common Fund high risk, high reward program before taking over the chartered study section of Musculoskeletal Tissue Engineering. In addition to the primary role as an SRO,

he served as a Referral Officer for the Division of Receipt and Referral at CSR referring applications to the appropriate review branches.

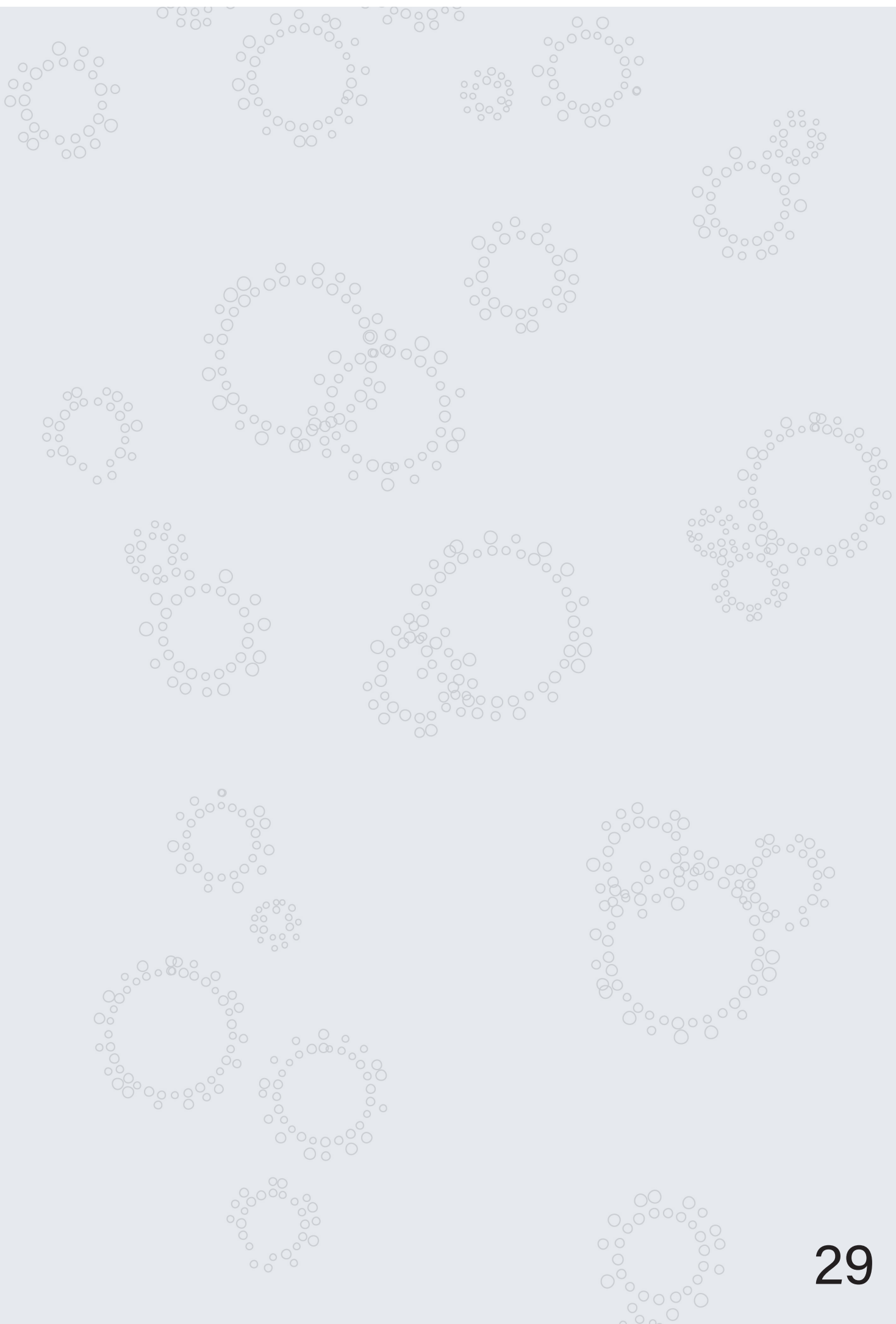
Dr. Ranganathan earned a Ph.D. in Cellular and Molecular Pathology (Neuropathology) from the University of Pittsburgh for investigating the molecular mechanisms of ALS and identifying mass spectrometry-based proteomic biomarkers in CSF, the latter resulting in an active patent as well as a biotech startup. Following this, he completed couple of post-doctoral fellowships, the first of which was in the Neurogenetics Branch of NINDS working on polyglutamine diseases (primarily mitochondrial dysfunction in SBMA) followed by a second fellowship on movement disorders (Huntington's and Parkinson's diseases) at the Wallenberg Neuroscience Center, Lund University, Sweden. After successful completion of the fellowships,

Dr. Ranganathan served as a Chief Scientific Advisor and consultant in the biotech sector in Lund, Sweden before transitioning to CSR, NIH. Dr. Ranganathan currently manages a portfolio of grants in basic mechanisms in neurodegeneration including that of spinal and bulbar muscular atrophy (SBMA), Hereditary Spastic Paraplegias (HSPs), Spinocerebellar Ataxias (SCAs), and Friedreich's Ataxia. His areas of scientific interests span amyotrophic lateral sclerosis (ALS), SBMA, movement disorders, neuromuscular junction, bioenergetics, disease models, iPSCs, and biomarkers.

Scott Gorman, JD, MBA
Program Manager
ARPA-H, Proactive Health

Scott Gorman joined ARPA-H as a Program Manager in April 2024. He previously served as a Presidential Innovation Fellow at ARPA-H, the Department of Energy's AI and Technology Office, and the Veterans Health Administration's National AI Institute. During this time, he led initiatives on trustworthy AI strategy and implementation, digital transformation, and helped to launch the U.S. Digital Corps. prior to federal service, gorman was the co-founder, CEO, and CTO of a number of technology companies spanning health and education. He has led the development of healthcare products from conception through clinical validation and commercialization, including digital therapeutics that leveraged emerging technologies such as VR/AR/AI. gorman also serves as an Innovation Officer with the 75th Innovation Command, Army futures and previously served as a Military Intelligence and Counterterrorism Officer. He completed his Mba at the University of Oxford and his J.d. at University of California Berkeley.





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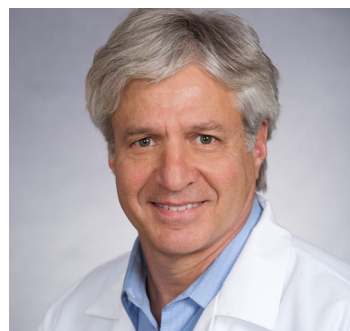
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ORGANIZATIONS



UCSF Innovation Ventures

Dedicated to (helping the UCSF community navigate the complexities of translational technology development by working up-close with our research faculty, promising students, and industry partners to really understand the science and how it can be applied to) **healing.**

Translational technology development and commercialization is a complex process because every project is unique. Innovation Ventures is dedicated to helping the UCSF community navigate those complexities by working up-close with our research faculty and promising students to really understand their science. We have a single purpose and that is to support the transition of UCSF innovation out of the lab and into the marketplace as more fully developed therapies, with a greater confidence of success. Whether evaluating a new discovery, securing funding, seeking external partnerships, or starting new companies, Innovation Ventures is here to facilitate protection, development, and commercialization of novel and valuable healing inventions.

The powerful combination of high-quality science, an entrepreneurial culture, and strategic partnerships between UCSF's researchers and Innovation Ventures, has resulted in an impressive track record of commercial successes. We work with you to evaluate and grow new ideas, devise a commercialization and intellectual property (IP) plan including the possible formation of a start-up, connect your research with appropriate potential internal and external collaborators, and negotiate suitable licenses with appropriate commercialization partners such as existing companies, venture capitalists or other investors.





ALS Clinics at the University of California



At the ALS Center at UCI Health, a certified center of Excellence, ALS patients are provided comprehensive care through multidisciplinary clinics and have access to cutting edge clinical trials. The dedicated experts on the UCI research team collaborate with a dynamic network of scientists, physicians, industry partners, and patients to accelerate drug discovery and development for people with ALS, test the most effective therapies to treat, and have an ultimate goal to slow down disease progression, identify cures and prevent the disease.



The UCSF ALS & Neurodegenerative Disease Center offers holistic care for patients with progressive nervous system disorders, including ALS. Our multidisciplinary team comprises specialists in neurology, pulmonology, gastroenterology, nutrition, communication, social work, and various therapies. We also provide orthotic support and collaborate with local patient advocacy groups. Through comprehensive care and clinical trials, we strive to deliver effective treatment tailored to each patient. Our program holds certification as a treatment center of excellence by the ALS Association and operates within the UCSF Weill Institute for Neurosciences.



UCSD ALS Clinic is certified by ALS Association as a center where excellence meets compassionate care. Our team of specialist collaborates seamlessly to provide comprehensive support for a panel of 200 patients living with the disease. With a focus on ongoing research, we strive to enhance the quality of life for our patients and families.



ALS Clinics at the University of California



We built the clinic on four cornerstones:

- 1) Correct diagnosis: ALS can look very different in different people and there are other diseases that can appear much like ALS. We make sure to exclude other diseases and treat them when we find them.
- 2) Multidisciplinary Team Care: By bringing together specialists who are knowledgeable about the specific problems that ALS can cause, we are able to create care plans that are comprehensive and help the whole person.
- 3) Education: We educate our patients about what ALS is and how we can treat it. Our patients and the ALS team also educate physicians and therapists in training so that they recognize and understand the challenges that ALS presents.
- 4) Research: Through research we strive to understand ALS so that we can learn better ways to treat the disease. We engage ALS in many ways. In the immediate term we conduct studies to figure out why ALS occurs and what makes ALS progress the way it does, to find ways of helping people to live better with ALS, and to treat the disease with promising experimental therapies. In the long term we are working to develop stem cell treatments for ALS through the UC Davis Institute for Regenerative Cures.



This clinic is for patients with a new or existing amyotrophic lateral sclerosis (ALS) diagnosis. We use state-of-the-art tools to diagnose ALS. Our specialists can recommend effective treatment options or refer you to other specialists as appropriate. Our multispecialty team includes:

Neurologists; Palliative Specialist; Pulmonologist; Occupational therapist;
Physical therapist; Respiratory therapist; Speech pathologist; Social worker;
DME Expert; Research Coordinator.



For more than 70 years, Lawrence Livermore National Laboratory has applied science and technology to make the world a safer place. While keeping our crucial mission-driven commitments in mind, we apply cutting-edge science and technology to achieve breakthroughs across many domains, including nuclear deterrence, energy and environmental security, computing and machine learning, and physical and life sciences. Activities began at Livermore under the aegis of the University of California with a commitment by its first director, Herbert York, to be a “new ideas” laboratory and follow a multidisciplinary, team-science approach to research that Lawrence had pioneered on the Berkeley campus of the University of California.

Biomedical and biological research has been a part of LLNL’s efforts since 1963, when the first biomedical and environmental research program was set up by University of California professor John Gofman. Work at Livermore and other national labs under the Human Genome Initiative in 1987 served as a basis for the Human Genome Project. Today, Livermore performs research in areas of large-scale simulation of biological systems including rare disease biological modeling, computational methods for drug candidate discovery, design and development of implantable neural-interface biomedical devices, and detection systems for biological and chemical threats, among much more.

Currently, LLNL researchers are engaged in more than 500 collaborations with university faculty worldwide. More than 250 postdoctoral fellows work at the Laboratory—many of whom stay on to become full-time employees. More than 1,000 graduate and undergraduate students per year participate in LLNL’s Visiting Scholar and Summer Employment programs. Ties remain very strong with UC: In addition to the many LLNL researcher–UC professor relationships, UC administers a collaborative research projects program funded by contract management fees received as a Lawrence Livermore National Security, LLC, partner.



University of California
Livermore
Collaboration Center

The University of California Livermore Collaboration Center (UCLCC) offers a modern physical space and expert staff for anyone in the UC system and national labs looking to host multi-institutional collaborative programs.

Since September 2022, the Center has been growing in popularity as a place where UC faculty members, post-docs, students and national lab colleagues meet to address important scientific, technical or engineering challenges. We believe that harnessing the combined capabilities, expertise and research facilities of the UC system can lead to exciting opportunities and enduring partnerships for researchers, faculty and students alike.

Whether you're expanding and accelerating a research program, educating colleagues and students, cultivating an expert workforce, deepening community ties or improving the workplace, we encourage you to explore the use of our no-cost facility to expand your UC partnerships.

For more information, please contact Garren Weiss at garren.weiss@ucop.edu



The Livermore Lab Foundation (LLF) serves as an independent key philanthropic partner with Lawrence Livermore National Laboratory (LLNL), providing mechanisms for public and private investments, grants and philanthropic gifts that support research, innovation, student fellowships, education and community initiatives at LLNL.

Learn more at livermorelabfoundation.org



The ALS Network (formerly the ALS Association Golden West Chapter) serves the ALS community through innovation, excellence, and collaboration to advance three mission pillars: care, research, and advocacy. We connect need with support. We connect questions with answers. We connect thought leaders with new ideas. We connect research to funding and advocates to challenge the status quo. The ALS Network's mission is to partner with the ALS community as we drive the discovery of prevention strategies, treatments, and cures for ALS; provide access to quality care and connection; and promote initiatives to improve health outcomes. To learn more visit us online at alsnetwork.org.

About the ALS Network Web: alsnetwork.org | Social: [@youralsnetwork](https://twitter.com/youralsnetwork)



Our Mission:

Conduct foundational research to identify the ALS disease mechanism and ALS biomarkers to enable pharmaceutical and biotechnology companies to develop the ALS cure.

Our Funding

ALS CURE Project was founded in 2019 by Mike Piscotty and Stephen Piscotty in honor of Gretchen Piscotty with the sole purpose of finding a cure for ALS.

Our Challenge

There are two key challenges in developing an ALS cure: the ALS disease mechanism and ALS biomarkers are unknown. This is compounded by the reality that the revenue opportunity for pharmaceutical companies is limited as only 18,000 people in United States have the disease at a given time compared to the 2 million people battling cancer. Unfortunately, due to a lack of a diagnostic test for ALS, a patient typically has to endure multiple uncomfortable nerve tests in addition to several tests for MS, AIDS, Parkinson's Disease, Lyme Disease, and heavy metals poisoning. As ALS progresses, it attacks the motor neurons throughout the body immobilizing the patient, ultimately resulting in an inability to breathe.

Our Approach

Through identifying the ALS disease mechanism, our research will help develop a cure for ALS. The successful identification of the ALS disease mechanism is the first step in identifying progression, diagnostic, and prognostic ALS biomarkers. The diagnostic biomarker will help develop a diagnostic test that will promptly and accurately diagnose patients with ALS so they can begin treatment immediately.

Our Vision

A day when a person contracting ALS, is quickly diagnosed, treated with the ALS cure to stop progression.

Learn more at www.alscure.org

UCSF Weill Institute for Neurosciences

Established by the extraordinary generosity of Joan and Sanford I. "Sandy" Weill, the UCSF Weill Institute for Neurosciences brings together world-class researchers with top-ranked physicians to solve some of the most complex challenges in the human brain. Leveraging UCSF's unrivaled bench-to-bedside excellence, the UCSF Weill Institute links clinical and basic neurosciences to promote and support innovative collaborations and catalyze a new era of advances against brain diseases.

The UCSF Weill Institute aims to unify and bolster the entire UCSF neurosciences community, at all levels, providing support of key departmental/center initiatives as well as enabling new large-scale cross-departmental activities and partnerships. Formally united within the UCSF Weill Institute umbrella are the departments of Neurology, Neurological Surgery, and Psychiatry and Behavioral Sciences, as well as the Neuroscience Graduate Program, a cross-disciplinary alliance spanning basic-science and clinical departments, and the UCSF Institute for Neurodegenerative Diseases, a multidisciplinary research center focused on finding effective treatments for neurodegenerative disorders. Additionally, through core program initiatives, the UCSF Weill Institute actively supports neuroscience activities spanning across more than 15 additional departments and centers.

UCSF Office of Research

Established by the extraordinary generosity of Joan and Sanford I. "Sandy" Weill, the UCSF Weill Institute for Neurosciences brings together world-class researchers with top-ranked physicians to solve some of the most complex challenges in the human brain. Leveraging UCSF's unrivaled bench-to-bedside excellence, the UCSF Weill Institute links clinical and basic neurosciences to promote and support innovative collaborations and catalyze a new era of advances against brain diseases.

ALS Network's Barber Research Awards

The **ALS Network's Barber Research Awards** celebrate scientific achievement by recognizing early-career researchers whose work holds the promise of new treatments and cures for ALS.

Named for Jim Barber, a Vietnam War veteran and successful attorney who lived with ALS for nearly a decade, the awards have been given annually since 2017. Jim was committed to the mission of the ALS Network (formerly the ALS Association Golden West Chapter) and held a deep passion for advancing scientific achievement by fostering researchers and developing new ideas.

The ALS Network's collaborative approach to research accelerates progress by harnessing innovative ideas to translating scientific concepts into therapies. Empowering the next generation of scientists and funding the most promising research around the globe, the ALS Network fuels innovative partnerships across all sectors – government, industry, academia, and other nonprofit organizations.

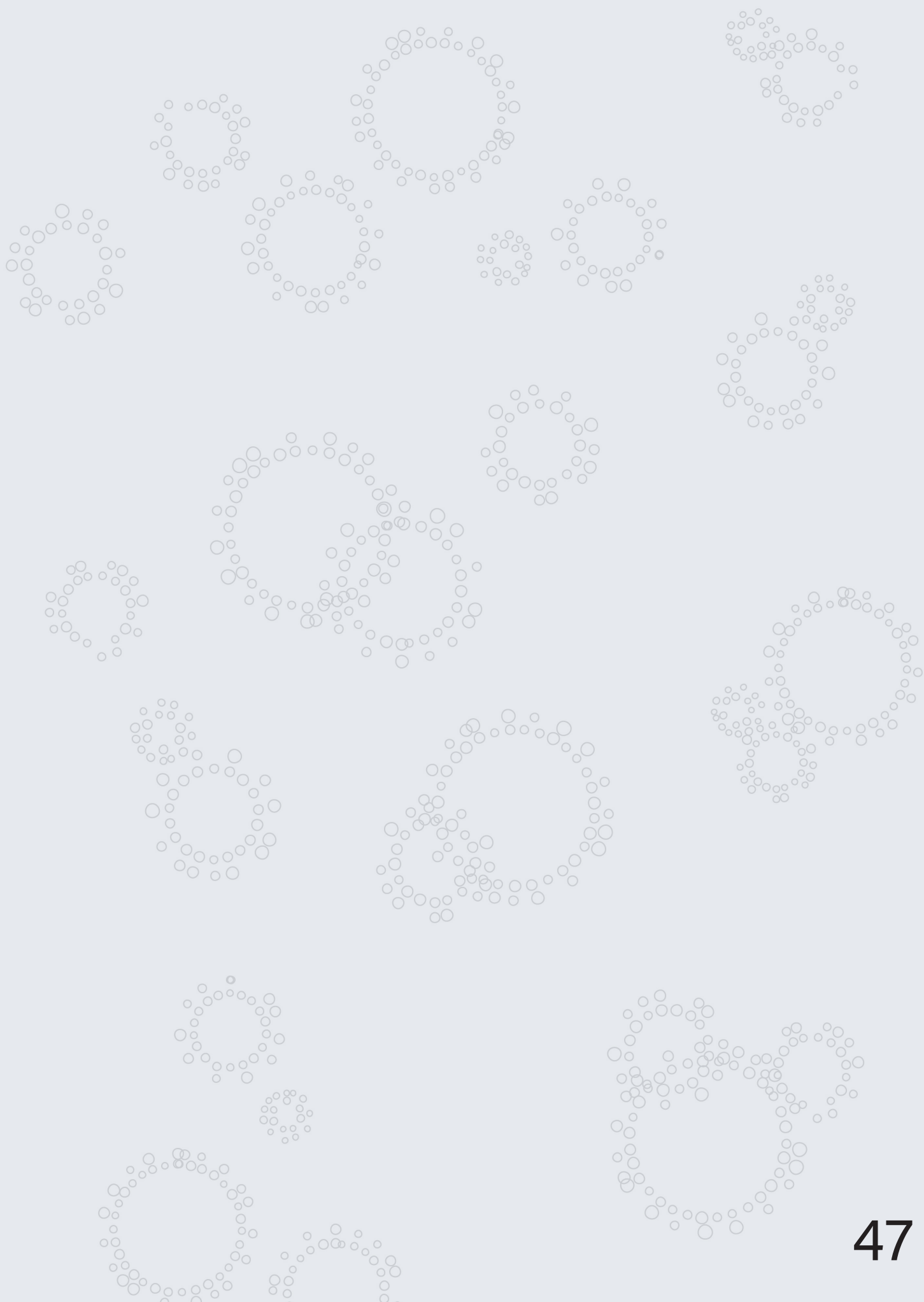


Jim Barber | 1944-2016

During his nearly decade-long battle with the disease, Jim became an instrumental voice in the ALS community. A significant outcome of his work was the formation of the annual California ALS Research Summit in 2011.

To all our supporters, thank you!







Brochure Design by Sean Karlin UCSF Innovation Ventures

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