Neurobiology and Changing Ecosystems

The Second Annual Scialog Conference
March 12–15, 2026

scialog2026®

Allen Family Philanthropies

THE FREDERICK GARDNER COTTRELL FOUNDATION

RESEARCH CORPORATION *for* SCIENCE ADVANCEMENT

THE KAVLI FOUNDATION

Scialog: Neurobiology and Changing Ecosystems

Objectives

1. Engage in dialogue with the goal of accelerating high-risk/high-reward research.

2. Identify and analyze bottlenecks to advancing fundamental science for understanding Neurobiology and Changing Ecosystems and develop approaches for breakthroughs.

3. Build a creative, better-networked, collegial community that is more likely to produce breakthroughs.

4. Form teams to write proposals to seed novel projects based on highly innovative ideas that emerge at the conference.

5. Most importantly, enjoy the discussions about where this field should go and how we can work together to get there.

Process

- Brainstorming is welcome; don't be afraid to say what comes to mind.
- Consider the possibility of unorthodox or unusual ideas without immediately dismissing them.
- Discuss, build upon and constructively criticize each other's ideas — in a spirit of cooperative give and take.
- Make comments concise to avoid monopolizing the dialogue.

Conduct at RCSA Meetings

Research Corporation for Science Advancement fosters a welcoming and respectful environment for listening in which the different identities, backgrounds, and perspectives of all participants are valued, and in which everyone is empowered to share ideas as fellow scientists.

RCSA does not tolerate any form of harassment, which could include verbal or physical conduct that has the purpose or effect of substantially interfering with anyone else's participation or performance at this conference, or of creating an intimidating, hostile, or offensive environment. Any such harassment may result in dismissal from the conference.

Read RCSA's Code of Conduct

From the President

Dear Scialog Participants,

It is my great pleasure to welcome you to the second year of the Scialog on **Neurobiology and Changing Ecosystems** cosponsored by the **Research Corporation for Science Advancement**, the **Allen Family Philanthropies**, the **Frederick Gardner Cottrell Foundation**, and **The Kavli Foundation**.

The goal of this Scialog is to catalyze multidisciplinary collaboration on fundamental science projects that underlies how organisms are resilient in the face of anthropogenic changes to the environment. This includes global warming and ocean acidification, but also more subtle changes like the impact of air, noise and light pollution as well. A deeper understanding of how organisms adapt requires new methods to survey microenvironments that complement large-scale surveys of macro-level changes, better models of the changes and how they spread across ecosystems.

As RCSA founder Frederick Gardner Cottrell observed, *"Most of the great discoveries have not been made by those who were looking for them, but by those who were ready when they came."* This Scialog challenges us to be ready — to pair creativity with predictive approaches so that when the next breakthrough arises, we will recognize it and be ready to scale.

Thanks to your pre-conference input, our conversations will address the basic biochemistry in our neurons, the circuits they make up, and the manner in which organisms sense the environment. We will be discussing how organisms adapt their behaviors to the changes they sense and communicate those insights throughout their families and communities. And we will be thinking about how we measure changes in the environment at different temporal and spatial scales to understand how organisms differentiate normal fluctuations from those changes that pose existential risk.

This Scialog series is made possible through the leadership of RCSA Program Directors **Eileen Spain**, **Richard Wiener**, **Andrew Feig,** and **Silvia Ronco**.

Scialog thrives on collaboration across disciplines. The most important outcomes here are not intended to be incremental papers but **new teams with bold ideas** — ideas bold enough to redefine how we think about how environmental changes are impacting every organism on the planet in very fundamental ways – from the very biochemistry of our brains to the way organisms sense the world around us. This is your chance to share the idea you've been sitting on, to voice the hunch that doesn't yet have data, to take a leap with a concept that feels a little too risky for traditional venues.

Welcome, and thank you for contributing your creativity and vision to this important endeavor.

Sincerely,

Eric Isaacs
President & CEO
Research Corporation for Science Advancement

From the Program Director

Research Corporation's highly interactive Scialog meetings have the goal of catalyzing new collaborations based on blue-sky ideas among Scialog Fellows who constitute a highly select group of exemplary early-career scientists from the U.S. and Canada. The emphasis is on dialogue, networking, and building new collaborations to pursue novel, high-risk discovery research.

Research Corporation, Allen Family Philanthropies, the Frederick Gardner Cottrell Foundation, and The Kavli Foundation chose to focus on Neurobiology and Changing Ecosystems because of the huge changes occurring to our natural and built environments, and the significant issues of adaptation and resilience required as a result. Many of these environmental changes are occurring at rates faster than traditional evolution and natural selection can respond, so we seek to understand at a fundamental level how neural pathways are adapting to these challenges. At Scialog: NCE we are bringing together chemists, physicists, climate scientists, neurobiologists, and behavioral ecologists, among others, to work together collaboratively on novel, high-risk projects to better understand how organisms can be resilient in the face of these anthropogenic challenges, whether on land, in the sea, or in the air.

We have one outstanding keynote speaker – **Joellen Russell** (University of Arizona) – to set the stage for breakout discussions. She will be joined by a terrific group of senior scientists to round out the team of facilitators:

Carlos Baiz, University of Texas at Austin
Christina Grozinger, Penn State University
Amanda Lauer, Johns Hopkins University School of Medicine
Jeff Riffell, University of Washington
Kim Rosvall, Indiana University
Wolfgang Stein, Illinois State University
Stacey Tecot, University of Arizona

Scialog meetings focus on dialogue and team building with the goal of creating novel strategies and collaborative approaches. An important feature is the opportunity for Scialog Fellows to form teams and write proposals to pursue particularly creative ideas that emerge through the dialogue. We hope this competition is exciting, but regardless of which proposals are funded, the primary purpose is to catalyze a deeper and more meaningful exchange of ideas than ordinarily occurs at scientific conferences. Our intent is for this process to help participants gain new insights and connections that significantly advance fundamental science.

We hope each participant finds the Scialog experience of great value. Please do not hesitate to provide feedback on how to make the conference better. My fellow Program Directors, **Richard Wiener, Silvia Ronco**, and **Eileen Spain**, the RCSA staff, and I are here to help make the meeting a great experience!

Andrew Feig
Senior Program Director
Research Corporation for Science Advancement

Conference Agenda
March 12-15, 2026

Thursday, March 12

2:00 – 6:00 pm	**Registration**	Kiva B
2:00 – 5:00 pm	**Snacks & Informal Discussions**	Kiva B
5:00 – 6:30 pm	**Poster Session and Reception**	Kiva B & Kiva Patio
6:00 – 6:30 pm	**Meeting for Discussion Facilitators**	Kiva A
6:30 – 7:30 pm	**Dinner**	Kiva Patio
7:30 – 8:30 pm	**Welcome** Eric Isaacs, President & CEO, RCSA Han McDonald, Program Officer, Allen Family Philanthropies Angie Michaiel, Associate Program Officer, Kavli Foundation **Conference Overview, Outcomes and Proposal Guidelines** Andrew Feig, Senior Program Director, RCSA **Introductions/Ice Breakers**	Kiva A
8:30 – 10:00 pm	**Starlight Cafe**	Kiva Patio

Friday, March 13

7:00 – 8:00 am	**Breakfast**	Flying V
8:00 – 8:45 am	**Keynote Presentation** *Climate and the Deep Blue Sea* Joellen Russell, University of Arizona	Kiva A
8:45 – 9:00 am	**Orientation to New PRISM System** **Breakout Session Overview and Instructions**	Kiva A
9:00 – 10:15 am	**Breakout Session I**	Kiva A/B Hospitality Ste. 2205 Rincon & Sabino
10:15 – 10:35 am	**Report Out**	Kiva A
10:35 – 11:15 am	**Conference Photo and Morning Break**	TBD
11:15 – 11:45 am	**Mini Breakout Session I** (Fellows) **Facilitator Meeting**	All spaces Kiva A
11:45 – 1:00 pm	**Lunch**	Flying V
1:00 – 2:15 pm	**Breakout Session II**	Kiva A/B Hospitality Ste. 2205 Rincon & Sabino
2:15 – 2:35 pm	**Report Out**	Kiva A
2:35 – 3:05 pm	**Mini Breakout Session II** (Fellows)	All spaces
3:05 – 5:15 pm	**Afternoon Break, Informal Discussions and Leisure Time**	Kiva B
5:15 – 6:30 pm	**Poster Session and Reception**	Kiva B & Kiva Patio
6:30 – 7:30 pm	**Dinner**	Kiva Patio
7:30 – 8:30 pm	**2025 Team Award Presentations (1 of 2)**	Kiva A
8:30 – 10:00 pm	**Starlight Cafe**	Kiva Patio

Saturday, March 14

7:00 – 8:00 am	**Breakfast**	Flying V
8:00 – 8:30 am	**2025 Team Award Presentations (2 of 2)**	Kiva A
8:30 – 9:00 am	**Mini Breakout Session III** (Fellows)	All Spaces
9:00 – 10:15 am	**Breakout Session III**	Kiva A/B Hospitality Ste. 2205 Rincon & Sabino
10:15 – 10:35 am	**Report Out**	Kiva A
10:35 – 11:10 am	**Morning Break**	Kiva B
11:10 - 11:45 am	**Mini Breakout Session IV** (Fellows)	All Spaces
	Facilitator and Funding Partners Discussion	Kiva A
11:45 – 1:00 pm	**Lunch**	Flying V
1:00 – 5:45 pm	**Team Formation, Informal Discussions and Proposal Writing**	All Spaces
5:45 – 6:30 pm	**Reception**	Kiva Patio
6:30 – 7:30 pm	**Dinner**	Kiva Patio
7:30 – 10:00 pm	**Starlight Cafe**	Kiva Patio

Sunday, March 15

6:30 – 7:30 am	**Breakfast**	Flying V
7:30 – 11:00 am	**Presentation of Proposals**	Kiva A
	Assessment Survey and Wrap-up	
11:00 – 12:00 pm	**Lunch** (available to go)	Kiva B

Keynote Presentation

Climate and the Deep Blue Sea

Joellen Russell
Distinguished Professor and Department Head
University of Arizona

Abstract: Strong winds in Southern Ocean storms drive significant, two-way air-sea exchanges of carbon and heat. The partitioning of heat and carbon in the Earth system, and therefore the global climate, is a function of the strength and position of these Southern Hemisphere Westerlies. This is especially true during the ongoing transient response to anthropogenic forcing where the ocean moderates the pace of carbon and heat increases in the atmosphere. The revolution in autonomous ocean float technology and sensor design has allowed us to estimate ocean carbon and heat inventory changes in near real time. This shift from decadal surveys to a continual global ocean biogeochemistry data stream, in conjunction with satellite wind measurements and the latest Earth system models, has moved us toward our objectives of quantifying the global carbon budget and carbon accounting.

2025 Team Awards

Ina Anreiter, Biological Sciences, University of Toronto Scarborough
Clare Rittschof, Entomology, University of Kentucky
Alexander Zestos, Chemistry, American University
Bee-ing Aware: Monitoring Honeybee Larval Nutrition, Chemical Exposure, and Neurobiological Effects

Mara Freilich, Earth, Environmental, and Planetary Sciences / Applied Mathematics, Brown University
Diana Rennison, Biological Sciences, University of California, San Diego
Jason Keagy, Ecosystem Science and Management, Pennsylvania State University
From Feeding to Flux: Unraveling the Impact of Animal Behavior on Global Ocean Carbon Flow

Brian DePasquale, Biomedical Engineering, Boston University
Matthew Lovett-Barron, Neurobiology, University of California, San Diego
Brandon Weissbourd, Biology, Massachusetts Institute of Technology
A Community AI Approach to Identify and Predict Behavioral Motifs Across Marine Life

Felipe Almeida de Pinho Ribeiro, Medicine, Washington University School of Medicine
Duncan Leitch, Integrative Biology and Physiology, University of California, Los Angeles
Eviatar Yemini, Neurobiology, University of Massachusetts Medical School
Comparative TRPV1 Function in Sensory Adaptability and Resilience to Global Warming

Ioana Carcea, Pharmacology, Physiology and Neuroscience, Rutgers, The State University of New Jersey
Laura Stein, Biological Sciences, University of Oklahoma
Duncan Leitch, Integrative Biology and Physiology, University of California, Los Angeles
Thermal Priming and Parental Care: Investigating Conserved Neural Pathways of Parental Care Plasticity in Response to Heat

Pinar Ayata, ASRC Neuroscience Initiative, The City University of New York, CUNY
Chayan Dutta, Chemistry, Georgia State University
Zihao Ou, Physics, University of Texas at Dallas
Understanding Nanoplastic-Nervous System Interactions within Organisms: A Multipronged Approach

2026 Proposal Guidelines

1. Awards are intended to provide seed funding for teams of two to three Scialog Fellows formed at this conference for high-risk, high-impact projects.

2. The application package should be submitted as a single PDF file. Pages one and two should describe the project and role of each team member. A third page may be used for references. No budget is necessary.

3. Awards will be in the amount of $60K direct funding per team member, plus a small percentage for overhead. Grant duration will be one year.

4. No Scialog Fellow can be a member of more than two teams. If a Scialog Fellow is a member of two teams, other members of the teams must be different. No team can submit more than one proposal.

5. No Scialog Fellow who previously has won a Scialog NCE Collaborative Award can be a member of more than one team. The other team members must be different from the members of the previously awarded team.

6. Scialog Fellows who have previously won two Scialog NCE Collaborative Awards are not eligible to be funded members of a team, but they can participate as a non-funded team member.

7. Teams cannot include members who have previously collaborated with one another. If you are unsure of your status (e.g., prospective team members were part of a large collaboration but did not significantly interact), please check for clarification with an RCSA Program Director.

8. Teams are encouraged (but not required) to:
    a. Include members with different research approaches and methods.
    b. Include members from different disciplines.

9. Proposals must be submitted electronically by **6:00 a.m. PST Sunday, March 15, 2026**. Instructions for submission will be provided at the meeting.

10. Awards are anticipated to start around **June 1, 2026**.

Scialog Fellows

Juan Angueyra angueyra@umd.edu
Biology, University of Maryland, College Park
I an interested in how light information is flexibly processed by the visual system to support behaviour. I have studied diverse species, from scallop and lancelets, to primates and squirrels and currently zebrafish and cichlids.

Ina Anreiter ina.anreiter@utoronto.ca
Biological Sciences, University of Toronto Scarborough
I am a behavioral geneticist and neurobiologist focused on understanding the gene-regulatory processes that influence behavioral responses to external environments as well as individual differences in development and behavior.

Pinar Ayata payata@gc.cuny.edu
ASRC Neuroscience Initiative, The Graduate Center, CUNY
Our lab is interested in understanding the role of the brain's primary immune cells, microglia, in the susceptibility to neurodegenerative diseases. As dementia risk is driven by external factors, we focus on how the changing environment impacts microglia function.

Lisa Baik Lbaik@ucdavis.edu
Entomology and Nematology, University of California, Davis
Mosquitoes are the deadliest animal on earth. We take on a multidisciplinary approach to investigate and develop new ways to manipulate the neurophysiology and behavior of these dangerous disease vectors.

Katie Barott kbarott@sas.upenn.edu
Biology, University of Pennsylvania
The cellular mechanisms of environmental sensing and their role in the resilience of reef-building corals and other model cnidarians to climate change stressors. Our work focuses on cellular and organismal physiology as well as gamete physiology and early development.

Roxanne Beltran roxanne@ucsc.edu
Ecology & Evolutionary Biology, University of California, Santa Cruz
I study species interactions in the open ocean, through the lens of marine mammal movement, behavior, and demography. My lab group is interested in understanding how navigational cues, sensory eavesdropping, and movement decisions contribute to individual success.

Isaiah Bolden iwb@gatech.edu
Earth & Atmospheric Sciences, Georgia Institute of Technology
I use isotopes/geochemistry to decipher the fingerprints of climate hazards as they are logged in waters, corals, and bivalves. I am interested in generating high-resolution datasets capable of linking environmental stressors to neurobiological/genetic adaptations in organisms.

Scialog Fellows Continued

Ioana Carcea ioana.carcea@rutgers.edu
Pharmacology, Physiology and Neuroscience, Rutgers, State University of New Jersey
My laboratory aims to reveal the biological mechanisms by which social behaviors adapt to changes in ambient temperature, one of the major ecosystem threats in recent decades. We investigate adult and developmental effects of heatwave exposure on mouse social behavior.

Eleanor Caves eleanor_caves@brown.edu
Ecology, Evolution, and Organismal Biology, Brown University
Our research merges behavioral ecology, vision, and evolution. We focus on marine cleaning interactions and ask how organisms perceive their visual world, and how perception influences signals, behaviors, and ability to recognize and interact with other individuals.

Larry Cheng huanyu.cheng@psu.edu
Engineering Science and Mechanics, Pennsylvania State University
Design, fabrication, and application of the standalone stretchable device platform for biomedical applications

Chelsea Cook chelsea.cook@marquette.edu
Biological Sciences, Marquette University
I am most interested in how animals work together to manage a changing environment. Specifically, I am interested in how sensory physiology and brains balance different information to make decisions.

James Crall james.crall@wisc.edu
Entomology, University of Wisconsin - Madison
Interested in the role of behavior in animal responses to global change (as both a target of stressors like pesticides, but also behavioral buffering, e.g. behavioral thermoregulation). Interests and expertise in social/collective behavior, pollination, computer vision, and AI.

Chayan Dutta cdutta@gsu.edu
Chemistry, Georgia State University
My interests are how nanoplastics alter amyloid aggregation and neuronal function. Using advanced imaging and spectroscopy can we track aggregate fate in neuronal cells and probe their impact on electrophysiological responses, revealing nanoscale mechanisms of neurotoxicity?

Carmen Falcone cfalcone@towson.edu
Biological Sciences, Towson University
I am a neurobiologist interested in the evolution and development of the brain. In particular, I focus on astrocytes, a type of non-neuronal cells, and study their role in the evolution and development of the mammalian brain, by using in vitro and in vivo techniques.

Scialog Fellows Continued

Mara Freilich mara_freilich@brown.edu
Earth, Environmental, and Planetary Sciences and Applied Mathematics, Brown University
I study the role of oceans and lakes on climate with a focus on the link between biological and physical processes. I use a range of methods from numerical models and theory to observations and engagement with community groups to mobilize science for environmental justice.

Ling Hao linghao1@umd.edu
Chemistry and Biochemistry, University of Maryland, College Park
We develop mass spectrometry-based omics methods to identify and quantify proteins, peptides, lipids, and metabolites in nervous systems. We apply these methods to understand neurobiology, particularly mitochondrial and lysosomal functions in neurons and nervous system.

Elizabeth Heath-Heckman each@msu.edu
Microbiology, Genetics, and Immunology, Michigan State University
Post-embryonic Nervous system development, peripheral nervous systems, the effect of the microbiome on peripheral nervous systems

Andrew Hein amh433@cornell.edu
Computational Biology, Cornell University
My research interests span ecology, evolution, and neurobiology, and include neurobiology of natural behavior, ecological decision-making, sensory-motor control, collective behavior, and interactions between nervous system and dynamic environments (e.g.. wind/water currents).

Rachael Heuer rheuer@miami.edu
Marine Biology and Ecology, University of Miami
I study how climate stressors and pollutants impact neural function and behavior in aquatic animal models. Using zebrafish and Aplysia californica, I apply an integrative physiology approach to identify patterns of risk and resilience across life stages.

Yuanwen Jiang ywjiang@seas.upenn.edu
Materials Science and Engineering, University of Pennsylvania
We are an interdisciplinary team working in the field of bioelectronics. Through fundamental innovations in material and device designs, we are passionate about transforming breakthroughs in physical sciences and engineering into novel tools to address unmet medical needs.

Franne Kamhi kamhif@denison.edu
Psychology, Denison University
My research focuses on the neural mechanisms of adapting to living in social groups and changing environmental conditions. My work primarily focuses on ants and I integrate behavioral, pharmacological, and neuroanatomical techniques in both the lab and the field.

Scialog Fellows Continued

Jason Keagy jxk6051@psu.edu
Ecosystem Science and Management, Pennsylvania State University
My lab studies animal cognition and flexibility in behavior and physiology to solve conservation and wildlife management problems. Specifically, our research focuses on two main topics and their intersection: response to environmental stressors and evolution of cognition.

Kenry kenry@arizona.edu
Pharmacology and Toxicology, University of Arizona
My research focuses on the engineering of platform tools to probe the biological and toxicological impacts of nanomaterials on neuroimmune system to enable more targeted and safer detection and treatment of environmentally influenced neurological disorders.

David Kikuchi kikuchid@oregonstate.edu
Integrative Biology, Oregon State University
I study how animals use information to make adaptive decisions in across contexts, including long coevolved relationships and new opportunities for innovation.

Alexandra Kingston ack6226@utulsa.edu
Biological Science, University of Tulsa
We use an organismal approach to understand how animals interact with their rapidly and extensively changing environments. We engage this topic by studying how marine invertebrates use and adapt their sensory systems as their environments change.

Tracy Larson larson.tracy@gmail.com
Biology, University of Virginia
We study how cellular, organismal and ancestral environments shape neural degeneration and regeneration. Using genomics, neuroanatomy and functional manipulations, we explore variation in spatiotemporal patters of adult neurogenesis across individuals, species, and environments.

Hojoon Lee hojoon.lee@northwestern.edu
Neurobiology, Northwestern University
The survival of an animal in its ambient environment relies on accurately assessing its current and near-future internal states. We are interested in the neural circuits that detect sensory mismatches in postural and/or balance information to initiate nausea.

Duncan Leitch dleitch@ucla.edu
Integrative Biology and Physiology, University of California, Los Angeles
My research uses comparative neurophysiology to investigate sensory system organization and function across vertebrates, integrating molecular, electrophysiological, and behavioral approaches to understand how diverse species detect and process environmental information.

Scialog Fellows Continued

Grace Lindsay gracewlindsay@gmail.com
Psychology and Data Science, New York University
My lab engages in two different lines of research, one on neuroscience and one on climate change. On the neuroscience side, we use artificial neural network models to study sensory processing and attention. On the climate side, we use remote sensing for mitigation & adaptation.

Yanxin Liu yxliu@umd.edu
Chemistry and Biochemistry, University of Maryland, College Park
We study how molecular chaperones maintain protein homeostasis and mediate stress responses in cyanobacteria using an integrative approach that combines biophysics, biochemistry, cryo-EM, and molecular dynamics simulations.

Matt Lovett-Barron mlb@ucsd.edu
Neurobiology, University of California, San Diego
My lab investigates the how animals use their brains to adapt to the challenges and constraints of their external environment and internal needs, using small optically-accessible fishes as model systems.

Guoyu Lu guoyulu62@gmail.com
Computer Science, Binghamton University SUNY
My research integrates AI, computer vision, and robotics with neurobiology and ecosystem science. I design multimodal sensing and machine learning methods to study how organisms perceive and adapt to changing ecosystems, supporting climate resilience and environmental stewardship

Xiaokang Lun xlun@umn.edu
Genetics, Cell Biology and Development, University of Minnesota Twin Cities
I develop single-cell and proteomics tools to uncover intracellular signaling network heterogeneity in brain tumors and to study how environmental stressors such as radiation and microplastics reshape neuronal health.

Grace McKenzie-Smith gmckenziesmith@wesleyan.edu
Physics, Wesleyan University
I use high-resolution videos and computational ethology to study the behavior of small groups of Drosophila melanogaster and ant colonies from the Temnothorax genus. My focus is on how individual history and identity interact with system level rules to dictate group behavior.

Carlene Moore carlene.moore@duke.edu
Neurology, Duke University
I study the neurobiology of migraine, post-traumatic headache, and new daily persistent headache (NDPH). My lab investigates TRP channels, neuroinflammation, and neuro-immune crosstalk using mouse models and human biomarker studies to develop new therapies.

Scialog Fellows Continued

Zihao Ou Zihao.Ou@UTDallas.edu
Physics, University of Texas at Dallas
Our research focus lies at the intersection of fundamental physical principles and cutting-edge biotechnology advancements. Our goal is to create advanced imaging platforms that allow real-time monitoring of materials and biological processes in their native environments.

Orit Peleg orit.peleg@colorado.edu
Computer Science Department and BioFrontiers Institute, University of Colorado Boulder
Fireflies use dim, species-specific flashes to find mates. My lab maps these signals and measures the firefly eye's sensitivity to guide smarter monitoring and conservation, to strengthen monitoring and conservation as habitat loss, light pollution, and climate change.

Rebecca Pinals rpinals@stanford.edu
Chemical Engineering, Stanford University
In my lab, we are engineering neuro-models and nano-tools to study the human brain and uncover the mechanisms of neurodegenerative disease.

Cosima Porteus cosima.porteus@utoronto.ca
Biological Sciences, University of Toronto Scarborough
Expert in sensory physiology of aquatic animals, fish physiology, and olfaction. Interested in modelling approaches and new technology development in the area of aquatic environments.

Diana Rennison drennison@ucsd.edu
Biological Sciences, Univesity of California, San Diego
I am an eco-evolutionary genomicist interested in characterizing the capacity of organisms to evolve and persist in the face of rapid environmental change.

Clare Rittschof clare.rittschof@uky.edu
Entomology, University of Kentucky
I study how the environment shapes behavior and health in the highly social and agriculturally significant honey bee. My research approach is
multidisciplinary and integrative, including behavioral experimentation, molecular neuroscience tools, and neurophysiology.

Laura Stein laura.stein@ou.edu
Biological Sciences, University of Oklahoma
My research is broadly focused on behavior's role in phenotypic plasticity and evolution, with a goal to understand how and why variation in parental experience influences offspring phenotype. We test the impact of chronic and transient heat on parental care and parental effects.

Scialog Fellows Continued

Eric Sun edsun@mit.edu
Biological Engineering, Massachusetts Institute of Technology
I am interested in understanding how molecular and cellular changes traverse across scales to influence tissue function and higher-order functions like cognition, particularly in the context of aging. I primarily develop computational and systems biology approaches.

Yun Tao yuntao@uga.edu
Institute of Bioinformatics, University of Georgia
I am a theoretical ecologist working at the interface of behavioral, disease, and population biology. I have developed model frameworks for modeling the impact of toxin exposure on organismal behavior, spatial ecological patterns, and risk of disease outbreaks.

Valerie Tornini vtornini@ibp.ucla.edu
Integrative Biology and Physiology ; Institute for Society and Genetics, University of California, Los Angeles
We seek to understand how gene networks are co-opted to drive cell type emergence and development in healthy and disease states, especially for neural cell types that are particularly susceptible to environmental stressors and human disorders and disease.

Floria Uy floria.uy@rochester.edu
Biology, University of Rochester
Our lab group studies wasps with remarkable plasticity that adjust to dynamic evolutionary, ecological, and social conditions. We also leverage parasite-induced brain reprogramming that targets caste-related plasticity.

Alicia Walf walfa@rpi.edu
Cognitive Science, Rensselaer Polytechnic Institute
I explore how ancient neuroendocrine systems are engaged, or not, during modern day challenges and affect cognition. My studies of the mechanisms of stress and wellbeing are not limited to a physical lab space and can occur in the "wild" (e.g. built environments, virtually).

Jadiel Wasson jw8745@nyu.edu
Biology, New York University
Your perception of the environment shapes your world—but can it shape your offspring's? Key questions include why some cues trigger epigenetic inheritance, how perception influences it, and what determines if effects are beneficial or harmful to offspring.

Kim Weirich weirich@clemson.edu
Materials Science & Engineering, Clemson University
Experimental biophysics and soft and active matter. Self-organization, remodeling, and mechanics of cytoskeletal assemblies, interaction of biomolecular condensates and cytoskeleton, influence of environmental contaminates on cytoskeletal mechanics and biomolecular aggregration.

Scialog Fellows Continued

Fei Xia fei.xia@uci.edu
Electrical Engineering and Computer Science, University of California, Irvine
We develop new optical microscopy and computational imaging methods to probe the living brain and its microenvironment. This allows higher spatiotemporal resolution, deeper penetration, and more information-rich visualizations of the brains' structure, dynamics, and functions.

Eviatar Yemini eviatar.yemini@umassmed.edu
Neurobiology, University of Massachusetts Medical School
I'm interested in how brains are reprogrammed during development and evolution to change behavior (via changes in genetics, molecules, neurons, & neural activity).

Alex Zestos zestos@american.edu
Chemistry, American University
I am a bioanalytical chemist that develops novel sensors for the measurement of neurotransmitters. My work aims to correlate the detection of neurotransmitters and other biomolecules to neurological disorders, complex behaviors, environmental stress, and the certain drugs.

Peter Zhou zhou62@illinois.edu
Materials Science and Engineering, University of Illinois Urbana-Champaign
We leverage advanced optical detection techniques to study the interface between biology and polymers. The central goal of our research is to elucidate the cellular-level mechanism of information processing and dysfunction in the brain through bioelectric and biochemical signals.

Discussion Facilitators

Carlos Baiz cbaiz@cm.utexas.edu
Chemistry, University Texas at Austin
Spectroscopy, biophysics, microplastics, ion channels, lipid membranes, analytical chemistry.

Christina Grozinger cmgrozinger@psu.edu
Entomology, Pennsylvania State University
I use an integrative approach – spanning genomics, behavior, spatial ecology, and AI – to study bee behavior and support management and conservation of bees.

Amanda Lauer alauer2@jhmi.edu
Otolaryngology-HNS, Johns Hopkins University School of Medicine
My research focuses on understanding the physiological, perceptual, and cognitive effects of noise exposure and hearing loss, and how the auditory efferent feedback system affects noise susceptibility across the lifespan in a range of species.

Jeff Riffell jriffell@uw.edu
Biology and Neuroscience, University of Washington
The Riffell lab is a sensory neuroscience and animal behavior laboratory at the University of Washington (Seattle). The lab focuses on the neural basis of behavior and its role in shaping patterns of organism abundance and species distribution in the field.

Kim Rosvall kimrosvall@gmail.com
Biology, Indiana University Bloomington
My research integrates how & why questions about animal behavior, combining muddy boots fieldwork with neurobiology & transcriptomics. I am interested in how evolution 'builds' an organism that is resilient to environmental stressors, including competition & rising temperatures.

Joellen Russell jrussell@arizona.edu
Geosciences, University of Arizona
climate and oceans

Wolfgang Stein wstein@ilstu.edu
Biological Sciences, Illinois State University
My lab studies the mechanisms that allow neurons to generate perturbation-robust activity. Using electrophysiology, imaging, and computer modeling, we investigate the cellular and circuit properties that enable neurons to adjust to changing environments.

Discussion Facilitators Continued

Stacey Tecot stecot@arizona.edu
Anthropology, University of Arizona

I'm a biological anthropologist studying how caregivers adjust behavior, hormones, and gut microbiomes to support infants in changing environments. I co-direct the Long-Term Red-Bellied Lemur Project in Madagascar and lead the Evolutionary Endocrinology of Primates lab in Arizona

Guests

Ruoming Gong ruoming.gong@northwestern.edu
Applied Math, Northwestern University
I am interested in conversational dynamics in scientific conferences. I am also interested in the evolution of collective synchrony for different biological groups.

Han McDonald HanM@allenphilanthropies.org
Allen Family Philanthropies, The Paul G. Allen Frontiers Group
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the question of whether neuro diseases are result of aging or rather whole journey of life process.

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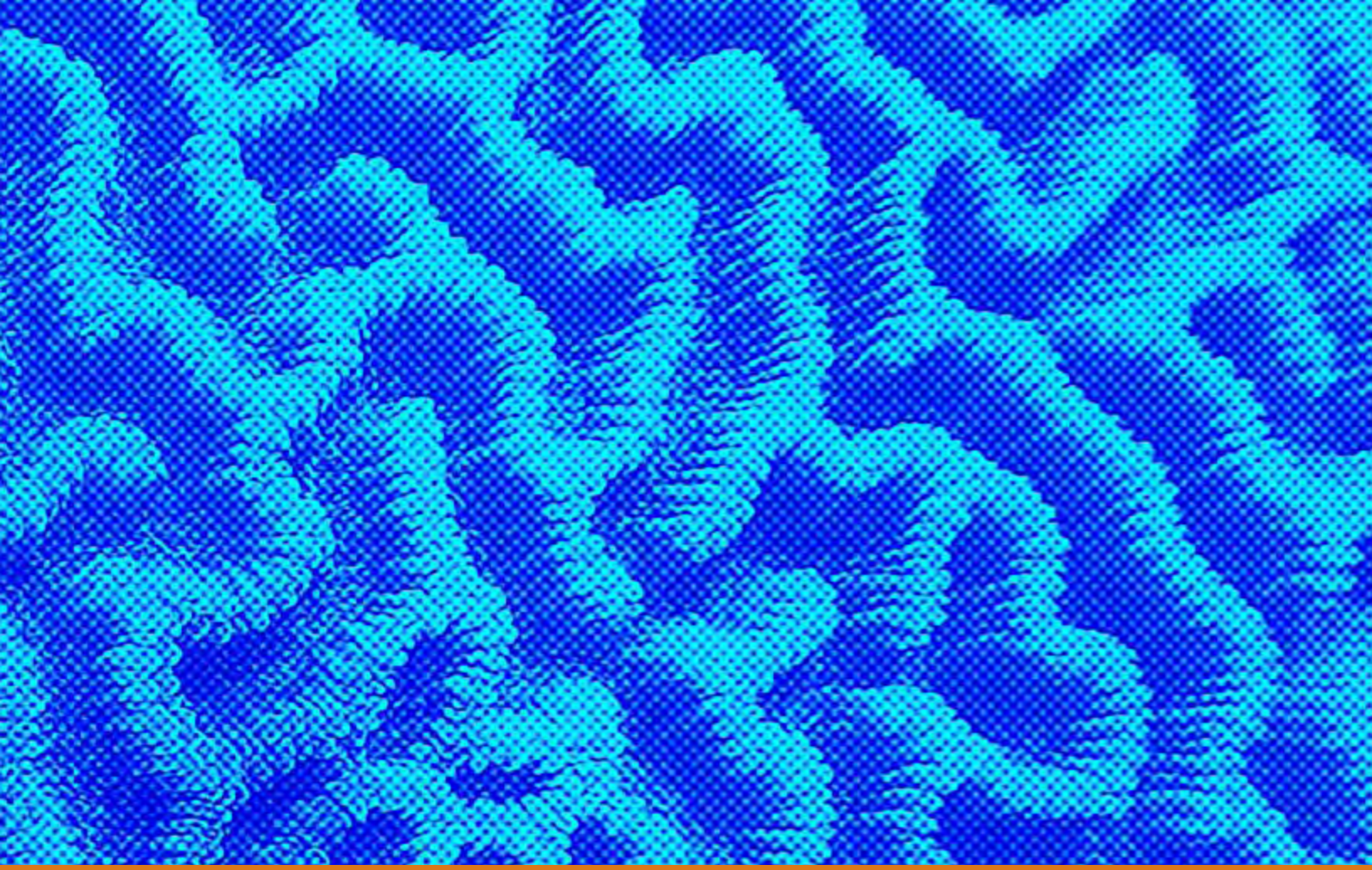

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