

# Microbiome, Neurobiology and Disease

The Second Annual Scialog Conference  
April 7-8, 2022

**scialog2022**<sup>®</sup>



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FRONTIERS GROUP

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# Scialog: Microbiome, Neurobiology and Disease

## From the President

Welcome to the 2022 *Scialog: Microbiome, Neurobiology and Disease* meeting, cosponsored by Research Corporation, the Paul G. Allen Frontiers Group and Frederick Gardner Cottrell Foundation. This is the second of three Scialog meetings on this theme and it is great to see so many people returning. While we had hoped to see you in person this year, the lingering effects of the pandemic made it prudent to meet virtually again. Take the opportunity to catch up with colleagues you met for the first-time last year, and to welcome some new Scialog Fellows who are joining us for the first time.

The goal of this Scialog is to catalyze the creation of multidisciplinary collaboration to explore new and innovative projects that accelerate fundamental science on the gut-brain axis and how the microbiome contributes to and affects neurobiology and neuropathologies.

Scialog's overarching purpose is to advance cutting-edge science of great significance to humanity by catalyzing innovative, basic research leading to fundamental discoveries. Our focus is on scientists in the early years of their independent careers. Through the unique Scialog process, we seek to lay the foundation for an ongoing, highly creative, cross-disciplinary community of scientists that will prove adept at identifying exciting areas for research advances for decades to come.

This initiative continues under the guidance of Program Directors **Andrew Feig**, **Richard Wiener** and **Silvia Ronco** (Research Corporation), and with assistance from our initiative partners **Alexandra Basford** and **Kathryn Richmond** (Paul G. Allen Frontiers Group) and **Shaun Kirkpatrick** (Frederick Gardner Cottrell Foundation). We hope you will be engaged in passionate discussions with colleagues, many of whom you will have met for the first time at Scialog. We also welcome a new partnership with the **Walder Foundation** (represented by **Sandra Laney** and **Antonio Abeyta**) which is providing additional support across all of the biologically related Scialog initiatives this year. The process may push you out of your comfort zone with the goal of stimulating new and better ideas. The result, we expect, will be a meeting unlike others that you attend. We are confident that you will find the next two days to be extremely worthwhile.

This is your opportunity to air that wild idea you have been reluctant to share with others, or to discuss a nagging hunch that does not yet have sufficient supporting data, or to take a leap on a high- impact/high-risk project instead of concentrating all your effort on somewhat more "incremental" studies. This is the time to come up with, and be open to, completely new ideas that may truly change the world and to find new colleagues and collaborators with whom to pursue them.

We hope this meeting yields a crop of outstanding team proposals, which will make our job of determining who receives funding very challenging. I wish you every success in exploring new and compelling ideas over the next two days.

Have a terrific meeting!

**Daniel Linzer**

President

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 dialog, networking, and building new collaborations to pursue novel, high-risk discovery research. While we would all rather hold this meeting in person, we are excited to hold the meeting virtually and will do our best to make it a great experience for participants.

Research Corporation, the Paul G. Allen Frontiers Group and Frederick Gardner Cottrell Foundation chose to focus on Microbiome, Neurobiology and Disease because we believe this critical area of science requires major breakthroughs in fundamental understanding of the gut-brain axis and the interplay between the microbiome and neuropathologies. Just as firmly, we believe these breakthroughs can be accelerated by chemists, bioengineers, microbiologists, geneticists, neurobiologists, and many others, working collaboratively on novel, high-risk projects.

We have an outstanding keynote speaker: **Rosa Krajmalnik-Brown**, Biodesign Institute, Arizona State University.

We also have a team of terrific discussion facilitators: **Emily Balskus** (Harvard University), **Barbara Bendlin** (University of Wisconsin-Madison), **Judith Eisen** (University of Oregon), **Ali Keshavarzian** (Rush University Medical Center, Chicago), **Rosa Krajmalnik-Brown** (Arizona State University), and **George Weinstock** (The Jackson Laboratory).

Scialog meetings focus on dialog 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 throughout the conference. 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 to enable major advances in microbiome, neurobiology and disease technologies.

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** and **Silvia Ronco**, 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

# Scialog: Microbiome, Neurobiology and Disease

## Conference Agenda (Optional activities in green) April 7–8, 2022

### Thursday, April 7 (all times listed in Pacific time zone)

8:00 – 8:30 am	<b>Early login, Informal dialog, BYO breakfast/lunch</b>	Zoom Main Room & Breakout Rooms
8:30 – 8:40 am	<b>Welcome</b> Dan Linzer, President, RCSA Kathy Richmond, Director, Paul G. Allen Frontiers Group, Sloan Foundation	Zoom Main Room
8:40 – 8:55 am	<b>Conference Overview &amp; Desired Outcomes</b> Andrew Feig, RCSA	Zoom Main Room
8:55 – 9:30 am	<b>Small Group Ice Breakers</b>	Zoom Breakout Rooms
9:30 – 10:05 am	<b>Keynote Presentation &amp; Discussion</b> <i>Can Changing Gut Bacterial Community Improve Gastrointestinal and Autism Symptoms?</i> Rosa Krajmalnik-Brown, Arizona State University	Zoom Main Room
10:05 – 10:25 am	<b>Break</b>	
10:25 – 10:30 am	<b>Directions for Breakout Sessions</b>	Zoom Main Room
10:30 – 11:45 am	<b>Breakout Session I</b>	Zoom Breakout Rooms
11:45 am – 12:15 pm	<b>Report Out</b>	Zoom Main Room
12:15 – 12:45 pm	<b>Discussion of Proposal Writing</b>	Zoom Main Room
12:45 – 2:00 pm	<b>Lunch</b>	Zoom Breakout Rooms
2:00 – 2:45 pm	<b>Mini Breakout Session I (Fellows only)</b>	Gather Rooms
2:45 – 3:00 pm	<b>Break</b>	
3:00 – 3:45 pm	<b>Mini Breakout Session II (Fellows only)</b>	Gather Rooms
3:45 – 5:00 pm	<b>Break</b>	
5:00 – 7:00 pm	<b>Social Mixer</b>	Gather Rooms

### Friday, April 8 (all times listed in Pacific time zone)

7:30 – 8:00 am	<b>Early login, Informal dialog, BYO breakfast/lunch</b>	Zoom Main Room & Breakout Rooms
8:00 – 8:45 am	<b>Panel Discussion – last year's awardees</b>	Zoom Main Room
8:45 – 10:00 am	<b>Breakout Session II</b>	Zoom Breakout Rooms
10:00 – 10:30 am	<b>Report Out</b>	Zoom Main Room
10:30 – 11:00 am	<b>Break</b>	
11:00 – 12:15 pm	<b>Breakout Session III</b>	Zoom Breakout Rooms
12:15 – 12:45 pm	<b>Report Out</b>	Zoom Main Room
12:45 – 1:00 pm	<b>Wrap-up Discussions</b>	Zoom Main Room
1:00 – 2:00 pm	<b>Lunch</b>	Zoom Breakout Rooms
2:00 – 2:45 pm	<b>Mini Breakout Session III (Fellows only)</b>	Gather Rooms
2:45 – 3:00 pm	<b>Break</b>	
3:00 – 3:45 pm	<b>Mini Breakout Session IV (Fellows only)</b>	Gather Rooms
3:45 – 5:00 pm	<b>Break</b>	
5:00 – 7:00 pm	<b>Social Mixer</b>	Gather Rooms

**Keynote Presentation**

# Can Changing Gut Bacterial Community Improve Gastrointestinal and Autism Symptoms?

**Prof. Rosa Krajmalnik-Brown**

*The Biodesign Institute  
Arizona State University*

**Bio:** Dr. Rosa Krajmalnik-Brown is the director of the Biodesign Center for Health Through Microbiomes and a Professor at the School of Sustainable Engineering and The Built Environment, at Arizona State University. She came to the U.S. with a Fulbright Scholarship to get a Ph.D. in Environmental Engineering from Georgia Tech. She was awarded an NSF CAREER award, was selected Fulton Engineering Exemplar Faculty, in 2020 she was awarded Arizona Researcher of the year by AZBio and has been recognized as highly cited researcher in her field by Web of Science in 2020 and 2021. She has funding for her research from many federal agencies including NIH, DoE, DoD, and NSF. She is a pioneer in research on gut microbiome and autism. She is author of 5 patents and more than 120 peer-reviewed publications. She specializes on molecular microbial ecology for bioremediation, the use of microbial systems for bioenergy production, and the human intestinal microbial ecology and its relationship to obesity, bariatric surgery, metabolism, and autism.

**Abstract:** Recent studies in human cohorts and mouse models have shown a link between gut microbiota and autism. With a Microbiota Transfer therapy approach, we modified the microbiome of children with autism in an open-label clinical trial. After microbiome modification, gastrointestinal symptoms and behavior improved significantly, and most improvements remained two years after treatment. Using a multi-omic approach we are looking at microbes, pathways, genes, and metabolites, which likely contributed to the trial's success and can lead to biomarkers or targets for treatment. I will present data of this initial exciting trial and summarize other efforts to modify the microbiome currently going on in my lab.

# Scialog: Microbiome, Neurobiology and Disease

## 2022 Proposal Guidelines and Collaborative Awards

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. Two-page proposals should describe the project and role of each team member. No budget is necessary. A third page may be used for references.
3. Awards will be in the amount of \$50K 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. Scialog Fellows who have previously won a Scialog MND Collaborative Award may be a member of only one team. The other team members must be different from the members of the previously awarded team (Applies to Years 2 and 3).
6. 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 didn't significantly interact), please check for clarification with an RCSA program director.
7. Teams are encouraged (but not required) to:
  - a. Include members with different research approaches and methods.
  - b. Include members from different disciplines.
8. Proposals must be submitted electronically by 11:59 p.m. PST on **Friday, April 15, 2022**. Instructions for submission will be provided at the meeting.
9. Awards are anticipated to start around **July 1, 2022**.



## 2021 Collaborative Awards

### ***Harnessing the Microbiome to Combat the Neurotoxic Effects of Dietary Mercury***

**Elaine Hsiao**, Integrative Biology & Physiology, University of California, Los Angeles

**Amina Schartup**, Scripps Institution of Oceanography

**Mei Shen**, Chemistry, Neuroscience Program, Beckman Institute,  
University of Illinois at Urbana-Champaign

### ***Do Aging Microbiomes Evolve Pathogenicity Via Gene Shedding? Using Evolutionary Theory to Deconstruct Microbiome-based Neurodegeneration***

**Nandita Garud**, Ecology and Evolutionary Biology, University of California, Los Angeles

**Will Ludington**, Embryology, Carnegie Institution

### ***Do Bacterial Outer Membrane Vesicles (OMVs) Act as Modulators of Microbiota-brain Communication Involved in the Development of Neurological Diseases?***

**David Durgan**, Anesthesiology, Baylor College of Medicine

**Abhishek Shrivastava**, School of Life Sciences, Arizona State University

### ***Species-specific Modulation of Human Enteric Neurons by Gut Microbiome Metabolites***

**Faranak Fattahi**, Biochemistry and Biophysics, University of California, San Francisco

**Mark Mimee**, Microbiology/Pritzker School of Molecular Engineering, University of Chicago

### ***Engineering Enteric Neuron Activity to Enhance Antimicrobial Immunity in the Gut***

**Maayan Levy**, Microbiology, University of Pennsylvania

**Ashley Ross**, Chemistry, University of Cincinnati

**Kai Zhang**, Biochemistry, University of Illinois at Urbana-Champaign

### ***Impact of Missing Microbes on Brain Development***

**Carolina Tropini**, Microbiology and Immunology, School of Biomedical Engineering,  
University of British Columbia

**JP Yu**, Radiology, Psychiatry, and Biomedical Engineering, University of Wisconsin-Madison

## Scialog Fellows

**Annika Barber** [annika.barber@waksman.rutgers.edu](mailto:annika.barber@waksman.rutgers.edu)

Rutgers, the State University of New Jersey,  
Molecular Biology and Biochemistry  
*The Barber lab is a behavioral chronobiology lab that uses fruit flies to investigate the neural control of rhythmic processes including sleep, locomotion and feeding, and how those rhythms become impaired by nutritional stress, traumatic injury and aging.*

**Heather Bean** [heather.d.bean@asu.edu](mailto:heather.d.bean@asu.edu) Arizona State University, School of Life Sciences

*The Bean Lab studies microbial volatile metabolites as bioactive compounds that induce phenotype changes in other microbes and as biomarkers for diagnosing disease.*

**Elizabeth Bess** [elizabeth.bess@uci.edu](mailto:elizabeth.bess@uci.edu)

University of California, Irvine, Chemistry  
*The Bess Lab uses a fusion of chemistry and microbiology to identify how the gut microbiome shapes the body's chemical environment in disease incidence and treatment.*

**Ran Blekhman** [blekhman@umn.edu](mailto:blekhman@umn.edu)

University of Minnesota,  
Genetics, Cell Biology, and Development  
*My lab uses high-throughput genomics and employs machine learning analytical approaches, with the goal of understanding how host genetics shapes the microbiome, how the microbiome regulates host genes, and how host gene-microbiome interactions affect human health.*

**Pamela Chang** [pamela.chang@cornell.edu](mailto:pamela.chang@cornell.edu)

Cornell University, Microbiology and Immunology  
*Scialog Fellow Pam Chang brings expertise in understanding how the immune system is regulated by gut microbial metabolites, including identification of these chemical signals and their effects on inflammatory and infectious disease.*

**Stephanie Cologna** [cologna@uic.edu](mailto:cologna@uic.edu)

University of Illinois at Chicago, Chemistry  
*Mass spectrometry, neurodegeneration, proteomics, lipidomics.*

**David Durgan** [durgan@bcm.edu](mailto:durgan@bcm.edu)

Baylor College of Medicine, Anesthesiology  
*Role of the gut microbiome in cardiovascular diseases.*

**Aida Ebrahimi** [Sue66@psu.edu](mailto:Sue66@psu.edu)

Pennsylvania State University, Electrical Engineering  
*Developing new diagnostic tools for biosensing and life science studies.*

**Ukpong B. Eyo** [ube9q@virginia.edu](mailto:ube9q@virginia.edu)

University of Virginia, Neuroscience  
*Microglia in neural injury, neurovascular interactions and sex differences.*

**Faranak Fattahi** [faranak.fattahi@ucsf.edu](mailto:faranak.fattahi@ucsf.edu)

University of California, San Francisco,  
Cellular and Molecular Pharmacology  
*My lab uses human pluripotent stem cells to develop tools for the study of the brain-body network. We use these tools to understand the gut-brain interaction in normal physiology and disease.*

**Linnea R. Freeman** [linnea.freeman@furman.edu](mailto:linnea.freeman@furman.edu)

Furman University, Biology  
*Sex differences in the gut microbiome and their impact on neuroinflammation.*

**Melanie Gareau** [mgareau@ucdavis.edu](mailto:mgareau@ucdavis.edu)

University of California, Davis,  
Anatomy, Physiology and Cell Biology  
*Neuroimmunophysiology of the microbiota-gut-brain axis.*

**Nandita Garud** [ngarud@ucla.edu](mailto:ngarud@ucla.edu)

University of California, Los Angeles,  
Ecology and Evolutionary Biology  
*I study evolution in natural populations, with an emphasis on the human gut microbiome.*

**Gianna Hammer** [gianna.hammer@duke.edu](mailto:gianna.hammer@duke.edu)

Duke University, Immunology  
*I am an immunologist who obsesses with the question of how immune cells respond to and are sculpted by the microbiome in health and disease.*

**Stavroula Hatzios** [stavroula.hatzios@yale.edu](mailto:stavroula.hatzios@yale.edu)

Yale University, Molecular, Cellular, and Developmental Biology/Microbial Sciences Institute  
*My lab uses chemical tools to understand how gastrointestinal microbes influence host cell signaling at the post-translational level.*

**Iliyan Iliev** [iliev@med.cornell.edu](mailto:iliev@med.cornell.edu)

Weill Cornell Medicine, Medicine  
*We explore mechanisms of mycobiota-host interactions that impact immunity, inflammation, the gut- lung and the gut-brain axis.*

**Yang-Yu Liu** [yyl@channing.harvard.edu](mailto:yyl@channing.harvard.edu)

Brigham and Women's Hospital  
and Harvard Medical School, Medicine  
*Microbiome modeling and data analysis; probiotic cocktail design; deep learning.*

Scialog Fellows Continued**Erin Longbrake** [erin.longbrake@yale.edu](mailto:erin.longbrake@yale.edu)

Yale University, Neurology

*Identification of early immunologic, microbiome, and serologic patterns associated with multiple sclerosis; prevention of multiple sclerosis by preclinical interventions.*

**Tom Mansell** [mansell@iastate.edu](mailto:mansell@iastate.edu)Iowa State University,  
Chemical and Biological Engineering

*The Mansell lab uses the toolbox of synthetic biology, glycobiology, and genome engineering to engineer prebiotics, probiotics, and targeted antimicrobial therapies to shape the human microbiome and maximize performance of engineered live biotherapeutics.*

**Corinne Maurice** [corinne.maurice@mcgill.ca](mailto:corinne.maurice@mcgill.ca)

McGill University, Microbiology and Immunology

*I'm interested in how bacteria and phages interact in the human gut.*

**Mark Mimee** [mmimee@uchicago.edu](mailto:mmimee@uchicago.edu)

*In the Mimee Lab, we develop strategies to engineer the microbiome, investigating genetic design of commensal bacteria and bacteriophage.*

**Shikha Nangia** [snangia@syr.edu](mailto:snangia@syr.edu)Syracuse University,  
Biomedical and Chemical Engineering

*My research focuses on neuroscience and gastrointestinal microbiome using computational approaches.*

**Mike O'Donnell** [m.odonnell@yale.edu](mailto:m.odonnell@yale.edu)Yale University,  
Molecular, Cellular and Developmental Biology

*We study how microbial metabolites alter nervous system function, sensory driven decisions and feeding behavior in the nematode host, *Caenorhabditis elegans*.*

**Lisa Osborne** [lisa.osborne@ubc.ca](mailto:lisa.osborne@ubc.ca)University of British Columbia,  
Microbiology and Immunology

*What's missing and why does it matter? Industrialization correlates with increased autoimmunity and reduced diversity in the intestinal ecosystem. We focus on how microbial diversity, including the presence of helminths, limits neuroinflammation and neurodegeneration in MS.*

**Leah Pyter** [leah.pyter@osumc.edu](mailto:leah.pyter@osumc.edu)

Ohio State University, Psychiatry

*My interests include how microbes and permeability of the gut influence brain and behavior during cancer and cancer treatments.*

**Ashley Ross** [ashley.ross@uc.edu](mailto:ashley.ross@uc.edu)

University of Cincinnati, Chemistry

*The Ross lab develops and applies electrochemical and microfluidic methods to measure real-time neurotransmitter sensing in the brain and immune system.*

**Lisa M. Ryno** [lryno@oberlin.edu](mailto:lryno@oberlin.edu)

Oberlin College, Chemistry and Biochemistry

*The Ryno lab studies the impact of signaling pathways on biofilm formation and is developing whole cell sensors for detection of subinhibitory concentrations of antibiotics.*

**Rachel Saylor** [rsaylor@oberlin.edu](mailto:rsaylor@oberlin.edu)

Oberlin College, Chemistry and Biochemistry

*Developing and employing analytical methods to study neurobiological systems.*

**Mei Shen** [mshen233@illinois.edu](mailto:mshen233@illinois.edu)University of Illinois at Urbana-Champaign,  
Chemistry, Neuroscience program, Bioengineering

*Shen group aims to develop nanoscale sensing probes (radius as small as 10 nm) for the real-time detection of glutamate, cholinergic, and monoamine transmitters at single cells and single synaptic cleft to understand neurological disorders.*

**Abhishek Shrivastava** [ashrivastava@asu.edu](mailto:ashrivastava@asu.edu)Arizona State University, Biodesign Center for  
Fundamental and Applied Microbiomics

*I study the role that bacterial secretion machineries play in shaping the human oral and gut microbiota.*

**Jae Sung** [sung.jaeyun@mayo.edu](mailto:sung.jaeyun@mayo.edu)

Mayo Clinic, Surgery

*Computational approaches for precision medicine and clinical translation. Discovery of novel biomarkers and in silico design of probiotic consortia for chronic autoimmune disease.*

**Jhimmy Talbot** [jhtalbot@fredhutch.org](mailto:jhtalbot@fredhutch.org)Fred Hutchinson Cancer Research Center,  
Basic Science Division

*Our lab studies how interactions between the diet, neurons and intestinal immune cells controls intestinal immunity and organ physiology.*

**Carolina Tropini** [carolina.tropini@ubc.ca](mailto:carolina.tropini@ubc.ca)University of British Columbia,  
School of Biomedical Engineering,

Department of Microbiology and Immunology  
*I am interested in understanding how the physical environment of the gut (pH, osmolality, temperature) affects the microbiota in health and disease.*

# Scialog: Microbiome, Neurobiology and Disease

## Scialog Fellows Continued

**Harris H. Wang** [hw2429@columbia.edu](mailto:hw2429@columbia.edu)

Columbia University, Systems Biology

*I develop new genomics and synthetic biology technologies to probe the workings of the gut microbiome and to engineer next-gen probiotics for microbiome-based therapeutics and personalized medicine.*

**Wenjing Wang** [wenjwang@umich.edu](mailto:wenjwang@umich.edu)

University of Michigan,

Life Sciences Institute and Chemistry

*Our group is interested in designing optogenetic and chemogenetic tools to study GPCR signaling at high spatial and temporal resolution.*

**Chris Whidbey** [whidbeyc@seattleu.edu](mailto:whidbeyc@seattleu.edu)

Seattle University, Chemistry

*Chemical biology to study host-microbe interactions and maternal-child health.*

**Irene Yang** [irene.yang@emory.edu](mailto:irene.yang@emory.edu)

Emory University, School of Nursing

*As a nurse researcher, my work focuses on the oral microbiome and inflammation as an underlying mechanism to explain the relationship between oral health and extra-oral conditions like Alzheimer's disease.*

**Kaixiong (Calvin) Ye** [kaixiong.ye@uga.edu](mailto:kaixiong.ye@uga.edu)

University of Georgia, Genetics

*I am a human geneticist with a research focus on Gene-Diet Interactions in human health and evolution. My research combines computational/bioinformatic and molecular approaches.*

**JP Yu** [jp.yu@wisc.edu](mailto:jp.yu@wisc.edu)

University of Wisconsin-Madison,

Radiology, Psychiatry, and Biomedical Engineering

*We aim to understand and non-invasively image the molecular and cellular drivers of neurocognitive, neurodegenerative, and neuropsychiatric illness with molecular neuroscience, advanced quantitative PET/MRI, and state-of-the-art machine and deep learning data science approaches.*

**Kai Zhang** [kaizkaiz@illinois.edu](mailto:kaizkaiz@illinois.edu)

University of Illinois at Urbana-Champaign, Biochemistry

*We develop enabling technologies to study cell signaling and create new ways to restore and enhance cell functions.*

**Yanjiao Zhou** [yazhou@uchc.edu](mailto:yazhou@uchc.edu)

University of Connecticut Health, Medicine

*Mechanisms of the gut-brain interactions and microbiome-based diagnostic and therapeutics for CNS diseases.*

## Discussion Facilitators

**Emily Balskus** [balskus@chemistry.harvard.edu](mailto:balskus@chemistry.harvard.edu)  
Harvard University, Chemistry and Chemical Biology  
*Understanding and manipulating the chemistry of the human microbiome.*

**Barbara Bendlin** [bbb@medicine.wisc.edu](mailto:bbb@medicine.wisc.edu)  
University of Wisconsin, Medicine  
*Interested in modifiable risk factors for Alzheimer's including metabolic risk, gut microbiome, and social determinants of health.*

**Judith Eisen** [eisen@uoregon.edu](mailto:eisen@uoregon.edu)  
University of Oregon, Biology  
*Underlying interactions among the nervous system, immune system, and host-associated microbiota.*

**Rima Kaddurah-Daouk** [kaddu001@mc.duke.edu](mailto:kaddu001@mc.duke.edu)  
Duke University, Psychiatry and Behavioral Sciences, Medicine

**Ali Keshavarzian** [Ali\\_Keshavarzian@rush.edu](mailto:Ali_Keshavarzian@rush.edu)  
Rush University Medical Center, Rush Center for Integrated Microbiome and Chronobiology Research  
*Gut-microbiota Brain-Axis in Parkinson's.*

**Rosy Krajmalnik-Brown** [dr.rosy@asu.edu](mailto:dr.rosy@asu.edu)  
Arizona State University, Biodesign Center for Health Through Microbiomes/ Environmental Engineering  
*Studying interventions that modify human gut microbial structure and function, and the effect of these changes on the gut-brain connection.*

**George Weinstock** [george.weinstock@jax.org](mailto:george.weinstock@jax.org)  
Jackson Laboratory, Microbial Genomics  
*My lab focuses on the human medical microbiome.*

## Guests

**Tony Abeyta** [aabeyta@walderfoundation.org](mailto:aabeyta@walderfoundation.org)  
Walder Foundation, Science Innovation  
*Molecular regulation of DNA repair mechanisms.*

**Alexandra Basford** [alexandra.basford@alleninstitute.org](mailto:alexandra.basford@alleninstitute.org)  
Allen Institute, The Paul G. Allen Frontiers Group  
*The Paul G. Allen Frontiers Group encourages new ways of doing science, nurtures breakthroughs, and fosters a creative community built on a shared passion for discovery.*

**Brent Iverson** [iversonb@austin.utexas.edu](mailto:iversonb@austin.utexas.edu)  
Research Corporation for Science Advancement, Board Member Emerita / University of Texas at Austin, School of Undergraduate Studies and Enrollment Management, Chemistry

**Sandra Laney, PhD** [slaney@walderfoundation.org](mailto:slaney@walderfoundation.org)  
Walder Foundation, Science Innovation  
*Life Sciences*

**Jodi Lilley** [jodi.lilley@alleninstitute.org](mailto:jodi.lilley@alleninstitute.org)  
Allen Institute, The Paul G. Allen Frontiers Group  
*The Paul G. Allen Frontiers Group encourages new ways of doing science, nurtures breakthroughs, and fosters a creative community built on a shared passion for discovery.*

**Charles Neblett** [charles.neblett@mcnairinterests.com](mailto:charles.neblett@mcnairinterests.com)  
McNair Medical Institute, Medical Director

**Kathy Richmond** [kathrynr@alleninstitute.org](mailto:kathrynr@alleninstitute.org)  
Allen Institute, The Paul G. Allen Frontiers Group  
*Excited to surface frontier ideas in neurobiology, and foster a creative community built on a shared passion for discovery.*

**Elizabeth Weiss** [eweiss@sciphil.org](mailto:eweiss@sciphil.org)  
Science Philanthropy Alliance

## Paul G. Allen Frontiers Group

**Alexandra Basford**  
alexandra.basford@alleninstitute.org  
Program Officer

**Kathryn Richmond**  
kathrynr@alleninstitute.org  
Director

**Rachel Tompa**  
rachelt@alleninstitute.org  
Senior Writer

## Frederick Gardner Cottrell Foundation of Research Corporation Technologies, Inc.

**Shaun Kirkpatrick**  
skirkpatrick@rctech.com

## Walder Foundation

**Tony Abeyta**  
aabeyta@walderfoundation.org  
Science Innovation

**Sandra Laney, PhD**  
slaney@walderfoundation.org  
Science Innovation

## Research Corporation for Science Advancement

**Jennifer Dukes** jdukes@rescorp.org  
Program & Award Administrator, Senior

**Laura Esham** lesham@rescorp.org  
Program Assistant

**Andrew Feig** afeig@rescorp.org  
Senior Program Director

**Danny Gasch** dgasch@rescorp.org  
Chief Financial Officer

**Angela Hagen** ahagen@rescorp.org  
Communications Director

**Kimberly Huynh** khuynh@rescorp.org  
Data Analytics Specialist

**Dan Linzer** dlinzer@rescorp.org  
President

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Pre & Post Award Manager

**Aileen Quezada** aquezada@rescorp.org  
Program & Award Administrator

**Silvia Ronco** sronco@rescorp.org  
Senior Program Director

**Richard Wiener** rwiener@rescorp.org  
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