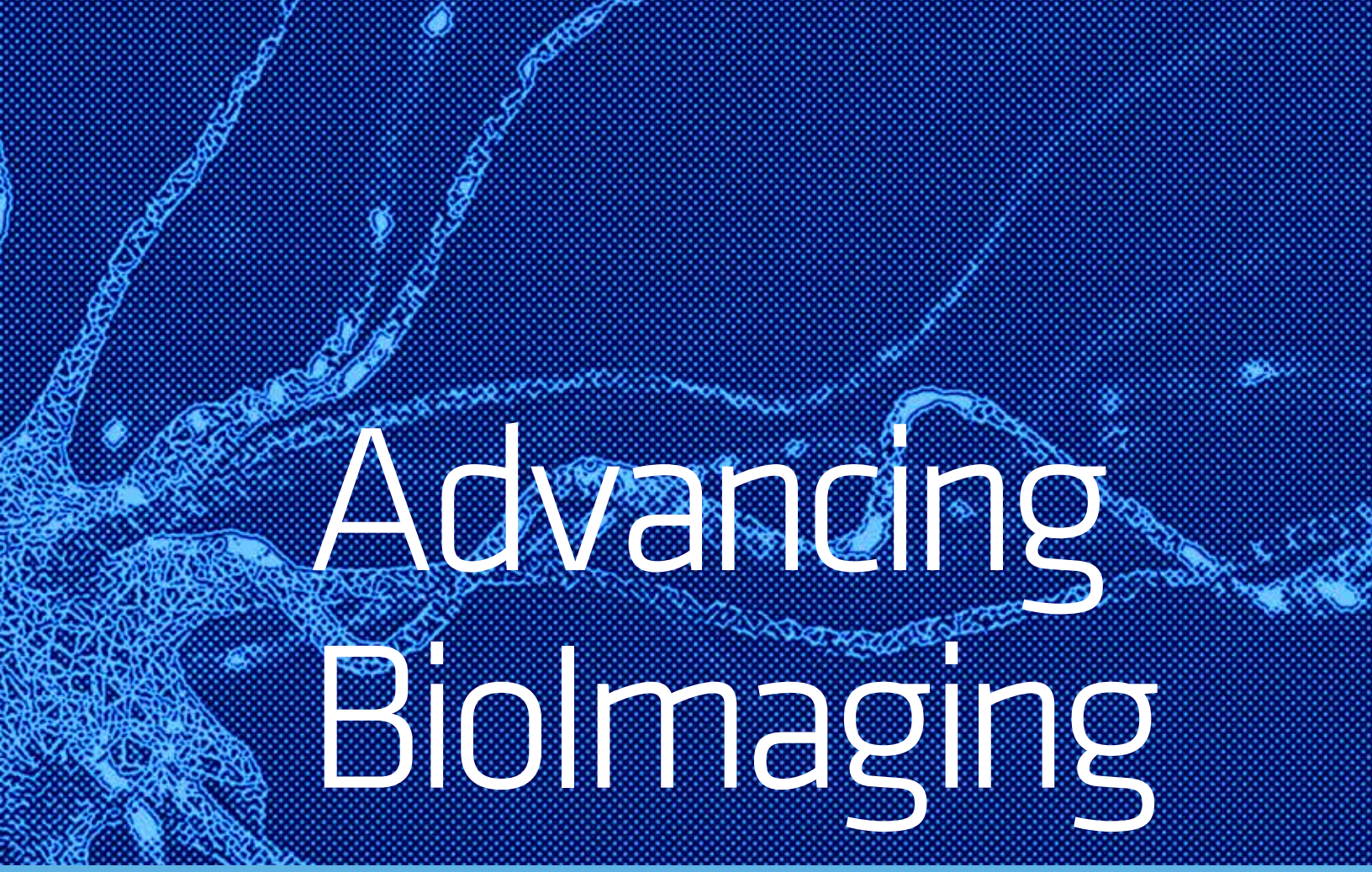


Advancing BioImaging

The First Annual Scialog Conference
May 20–21, 2021

scialog2021®

Chan Zuckerberg Initiative

RESEARCH CORPORATION *for* SCIENCE ADVANCEMENT

THE FREDERICK GARDNER COTTRELL FOUNDATION

Objectives

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

Identify and analyze bottlenecks to advance fundamental imaging science and improve its ability to impact human health and our understanding of biological structures and their function.

Build a creative, better-networked community across disciplinary silos that is more likely to produce scientific breakthroughs.

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

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.

Diversity, Inclusion and No Harassment

Research Corporation for Science Advancement fosters an environment for listening and considering new ideas from a diverse group, with respect for all participants without regard to gender, race, ethnicity, sexual orientation, age or any other aspect of how we identify ourselves other than 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.

From the President

Welcome to the 2021 *Scialog: Advancing BioImaging* meeting, cosponsored by Research Corporation, the Chan Zuckerberg Initiative and the Frederick Gardner Cottrell Foundation. This is the first of three Scialog meetings on this theme.

The goal of this Scialog is to catalyze the creation of multidisciplinary collaboration to explore new and innovative projects that accelerate fundamental science on advanced imaging techniques that can stimulate new approaches to visualize biological structures and processes with ever-greater clarity and resolution.

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.

To that end, under the guidance of Program Directors **Andrew Feig**, **Richard Wiener** and **Silvia Ronco** (Research Corporation), and with assistance from our initiative partners **Vladimir Ghukasyan**, **Ed McCleskey** and **Stephani Otte** (Chan Zuckerberg Initiative) 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. The process may even 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 first meeting on this topic 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, Chan Zuckerberg Initiative and Frederick Gardner Cottrell Foundation chose to focus on Advancing BioImaging because we believe this critical area of science will impact the way we understand biology and human health. Gone are the days of just seeing physiological features. Modern imaging crosses spatial and temporal boundaries with the ability to see not just the physical morphology of a cell or piece of tissue, but also chemical and biological pathways taking place within the physical structures. And by combining multiple imaging technology and the ability to design photophysical probes and new hardware, and new algorithms that process data in real time and adjust data collection in response, imaging across wide fields and while stopping to acquire high resolution at the most critical loci is becoming possible We believe these breakthroughs can be accelerated by bringing together chemists, physicist, biologists, bioengineers and medical imaging specialists to work together collaboratively on novel, high-risk projects.

We have an outstanding keynote speaker to set the stage for breakout discussions:

Jin Zhang, University of California, San Diego

We also have a team of terrific discussion facilitators: **Samuel Achilefu** (Washington University in St. Louis), **Matt Bogyo** (Stanford University), **Maryellen Giger** (University of Chicago), **Kristen Maitland** (Texas A&M University), **Wei Min** (Columbia University), **Anna Moore** (Michigan State University), **Brian Pogue**, (Dartmouth University), **Brad Smith** (Notre Dame University), and **Jin Zhang** (University of California, San Diego).

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 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 to enable major advances in imaging 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
Program Director
Research Corporation for Science Advancement

Conference Agenda (Optional activities in green)
June 10-11, 2021

Thursday, May 20 *(all times listed in Pacific time zone)*

8:00 – 8:30 am	**Early login, Informal dialog, BYO breakfast/lunch**	Zoom Main Room & Breakout Rooms
8:30 – 8:40 am	**Welcome** Dan Linzer, President, *RCSA* Stephani Otte, Science Program Officer, *CZI*	Zoom Main Room
8:40 – 8:55 am	**Conference Overview & Desired Outcomes** Andrew Feig, *RCSA*	Zoom Main Room
8:55 – 9:30 am	**Small Group Ice Breakers**	Zoom Breakout Rooms
9:30 – 10:05 am	**Keynote Presentation & Discussion** *Illuminating the Biochemical Activity Architecture Across Scales* Professor Jin Zhang, *UCSD*	Zoom Main Room
10:05 – 10:20 am	**Break**	
10:20 – 10:30 am	**Directions for Breakout Sessions**	Zoom Main Room
10:30 – 11:45 am	**Breakout Session I**	Zoom Breakout Rooms
11:45 am – 12:15 pm	**Report Out**	Zoom Main Room
12:15 – 1:30 pm	**Lunch**	Zoom Breakout Room
1:30 – 2:15 pm	**Mini Breakout Session I (Fellows only)**	Gather Rooms
2:15 – 2:30 pm	**Break**	
2:30 – 3:15 pm	**Mini Breakout Session II (Fellows only)**	Gather Rooms
3:15 – 5:30 pm	**Break**	
5:30 – 7:30 pm	**Social Mixer**	Gather Rooms

Friday, May 21 *(all times listed in Pacific Standard time zone)*

8:00 – 8:30 am	**Early login, Informal dialog, BYO breakfast/lunch**	Zoom Main Room & Gather Rooms
8:30 – 8:40 am	**Check-in regarding Thursday Sessions**	Zoom Main Room
8:40 – 9:00 am	**Proposal Writing and Team Formation**	Zoom Main Room
9:00 – 10:15 am	**Breakout Session II**	Zoom Breakout Rooms
10:15– 10:45 am	**Report Out**	Zoom Main Room
10:45 – 11:00 am	**Break**	
11:00 am – 12:15 pm	**Breakout Session III**	Zoom Breakout Rooms
12:15 – 12:45 pm	**Report Out**	Zoom Main Room
12:45 – 1:00 pm	**Wrap-up**	Zoom Main Room
1:00 – 2:00 pm	**Lunch**	Zoom Breakout Room
2:00 – 2:45 pm	**Mini Breakout Session III (Fellows only)**	Gather Rooms
2:45 – 3:00 pm	**Break**	
3:00 – 3:45 pm	**Mini Breakout Session IV (Fellows only)**	Gather Rooms
3:45 – 5:30 pm	**Break**	
5:30 – 7:30 pm	**Social Mixer**	Gather Rooms

2021 Proposal Guidelines & Collaborative Awards

Scialog: Advancing Bioimaging

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. No Scialog Fellow who previously has won a Scialog ABI 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 (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 **May 28, 2021.** Instructions for submission will be provided at the meeting.

9. Awards are anticipated to start around **August 1, 2021.**

Scialog Fellows

Shiva Abbaszadeh sabbasza@ucsc.edu
University of California Santa Cruz,
Electrical and Computer Engineering
In my laboratory, we develop novel detectors and radiation detection techniques combined with computational developments in image reconstruction and image processing to visualize and detect cancer at molecular levels and further our understanding of disease mechanisms.

Benjamin Bartelle Benjamin.Bartelle@asu.edu
ASU, Biological and Health Systems Engineering
My lab develops methods and technology to resolve and manipulate neuroimmune signaling within the living brain.

Carolyn Bayer carolynb@tulane.edu
Tulane University, Biomedical Engineering
My research laboratory develops light and acoustic-based imaging tools for imaging deep within tissue, including the placenta, cardiovascular system, and reproductive anatomy.

Josh Brake jbrake@hmc.edu
Harvey Mudd College, Engineering
Building tools to tackle problems in biophotonics with a particular focus on peering deep into tissue with optical wavefront shaping and synergistically exploiting optical hardware design and computation to improve system performance in microscopy.

Molly G. Bright molly.bright@northwestern.edu
Northwestern University, Biomedical Engineering,
Physical Therapy and Human Movement Sciences
I develop MRI techniques to study neurovascular function of the human brain. I modulate physiology, develop signal models, and aim to translate methods into new clinical applications, with a special interest in imaging how vascular plasticity can support neural plasticity.

Dylan T. Burnette dylan.burnette@vanderbilt.edu
Vanderbilt University, Cell and Developmental Biology
I am interested in understanding how the muscle of the human heart grows and changes during disease.

Kevin J. Cash kcash@mines.edu
Colorado School of Mines,
Chemical and Biological Engineering
My interests lie at the intersection of imaging and sensing. We develop and use next generation sensors to quantify metabolic dynamics at multiple scales, ranging from the cellular, to the organism, and communities of organisms in biomedical and environmental applications.

Fanny Chapelin fchapelin@uky.edu
University of Kentucky, Biomedical Engineering
I develop non-invasive magnetic resonance imaging (MRI) methods to track immune cell dynamics in different pathologies such as cancer, autoimmune disorders and transplantation .

Larry Cheng huanyu.cheng@psu.edu
Penn State University, Engineering Science and Mechanics
The research in Larry Cheng's group focuses on the design, fabrication, and application of skin-like wearable devices and degradable electronics for biomedicine, enabling applications from diagnostic and/or therapeutic platforms to human-machine interfaces.

Shwetadwip Chowdhury
shwetadwip.chowdhury@utexas.edu
University of Texas at Austin,
Electrical and Computer Engineering
My research interests include optical microscopy and design, computational reconstruction, multi-dimensional imaging, large-scale data analysis, and scientific translation.

Mini Das mdas@uh.edu
University of Houston,
Physics and Biomedical Engineering Multimodality
Cancer imaging (X-ray, ultrasound, optical, thermal) to understand cancer metabolism from microscopic to macroscopic scales. Systems and algorithms for spectral x-ray phase contrast imaging and computed tomography. Psychophysics and human observer image perception.

Allison Dennis aldennis@bu.edu B
Boston University, Biomedical Engineering
Semiconductor quantum dots for fluorescence biosensing and biomedical imaging applications.

Joyoni Dey deyj@lsu.edu
Louisiana State University, Physics and Astronomy
My research focuses on medical imaging and image processing, particularly imaging system design and optimization, image reconstruction with physical modeling, and quantitative image analysis.

Scialog Fellows Continued

Jazz Dickinson adickinson@ucsd.edu
University of California San Diego,
Cell and Developmental Biology
My lab explores small molecule regulation of development in plant roots.

Uzay Emir uemir@purdue.edu
Purdue University, School of Health Science
Molecular Composition of human body via non invasive Metabolomics and Myeloarchitectonic approaches.

Candace Fleischer ccfleis@emory.edu
Emory University School of Medicine,
Radiology and Imaging Sciences; Biomedical Engineering
My research is focused on understanding and characterizing the metabolic and thermometric profiles of the human brain in health and after injury using non-invasive magnetic resonance spectroscopy and biophysical modeling.

Nick Galati nick.galati@wwu.edu
Western Washington University, Biology
We are interested in using fluorescence imaging techniques with high spatial and temporal resolution to understand how evolutionarily ancient cilia and centrosomes facilitate cellular motility and communication.

Anna-Karin Gustavsson
anna-karin.gustavsson@rice.edu
Rice University, Chemistry
We strive to gain detailed information about cellular nanoscale structure, dynamics, and molecular mechanisms. Our work is focused on development and application of 3D single-molecule tracking and 3D super-resolution imaging using light sheet illumination for optical sectioning.

Arnold Hayer arnold.hayer@mcgill.ca
McGill University, Biology
How can collective cellular behavior emerge from coordinated autonomous cellular activities? We use live-cell imaging, biosensors, microfabrication, and computational image analysis to explore the signaling dynamics underlying autonomous and collective cell migration.

Ulugbek Kamilov kamilov@wustl.edu
Washington University,
Computer Science and Engineering
I develop computational imaging algorithms that integrate both physical and learned models to enable fast, high-quality, and interpretable imaging.

Katy Keenan kathryn.keenan@nist.gov
National Institute of Standards and Technology,
Applied Physics Division
I am excited about quantitative MRI including multiparametric methods for understanding underlying tissue properties, low field MRI, and validation of MRI methods, including assessing the limits of detection. For example, can MRI detect cellular or sub-cellular changes?

Yevgenia (Genia) Kozorovitskiy
Yevgenia.Kozorovitskiy@northwestern.edu
Northwestern University, Neurobiology
Using new optical approaches to understand neuromodulation and neuroplasticity in the vertebrate brain.

Melike Lakadamyali melikel@pennmedicine.upenn.edu
University of Pennsylvania, Physiology
My lab studies the molecular mechanisms that regulate sub-cellular organization and its significance on cell function. To do so, we develop advanced microscopy methods to visualize the spatial organization of cellular machinery with near molecular spatial resolution.

Matthew D. Lew mdlew@wustl.edu
Washington University in St. Louis,
Electrical and Systems Engineering
Computational imaging at the nanoscale, single-molecule spectroscopy, designing optimal imaging systems, chemical sensing.

Vivian Q. Liu qian.liu3@mcgill.ca
McGill University, Institute of Parasitology
I use various super-resolution imaging technologies to study virus-host interactions during the virus life cycle. I aim to dissect the key biological processes for the function of a cell in space and time.

Matthew Lovett-Barron mlb@ucsd.edu
University of California, San Diego,
Division of Biological Sciences—Neurobiology Section
My lab studies the brain of zebrafish larvae, and we're interested in applying new technologies for whole-brain cellular-level functional brain imaging.

Scialog Fellows Continued

Morteza Mahmoudi mahmou22@msu.edu
Michigan State University,
Radiology and Precision Heath Program
My specific research interest is in nanomedicine and regenerative medicine for the development of new nano-based platforms for prevention/treatment of life-threatening conditions such as cardiomyopathy, cancer, and neurodegenerative diseases.

Dylan A. McCreedy dmccreedy@bio.tamu.edu
Texas A&M University, Biology
My lab is developing a novel 3D imaging toolbox that enables morphological characterization of molecularly-defined spinal cord neurons through the use of transgenic fluorescent vectors, passive tissue clearing, lightsheet microscopy, and 3D image analysis.

Aseema Mohanty aseema.mohanty@tufts.edu
Tufts University, Electrical and Computer Engineering
Chip-scale implantable and wearable nanophotonic devices for 3D biological stimulation and sensing, structured illumination, nanoscopy, and quantum-enhanced sensing. Striving for a 3D optical sensor on the tip of a needle.

Luke Mortensen Luke.mortensen@uga.edu
University of Georgia, Regenerative Bioscience Center,
School of Chemical, Materials and
Biomedical Engineering
We aim to develop multiphoton optical technologies for fluorescence and label-free nonlinear scattering imaging of tiny sub cellular features deep in highly scattering tissue to understand the dynamic processes of regeneration and differentiation in living organs like the bone.

Girgis Obaid girgis.obaid@utdallas.edu
The University of Texas at Dallas, Bioengineering
I am interested in the interface between molecular targeted nanotechnology approaches for optical therapies for cancer, and molecular imaging strategies. Molecular imaging offers unparalleled opportunities for the rational engineering of tumor-personalized targeted nanomedicines.

Sapun Parekh sparekh@utexas.edu
University of Texas at Austin, Biomedical Engineering
My lab uses chemical microscopy to understand the molecular basis and biophysics of disease. We study how physical and metabolic stimuli affect cancer and neurodegenerative disorders.

Paris Perdikaris pgp@seas.upenn.edu
University of Pennsylvania,
Mechanical Engineering and Applied Mechanics
Integrating computational modeling, machine learning and medical imaging: perspectives, challenges, and opportunities in the biological, biomedical, and behavioral sciences.

Lisa V. Poulikakos lpoulikakos@eng.ucsd.edu
University of California San Diego,
Mechanical and Aerospace Engineering
My research leverages the science of nanoscale optical materials to visualize changes in structural order in biological matter. The resulting miniaturized, translatable nanophotonic platforms promise to elucidate the origin and propagation of a host of fiber-affecting diseases.

Shannon Quinn spq@uga.edu
University of Georgia, Computer Science
Building generative spatiotemporal models of biological systems learned from large fluorescence microscopy datasets.

Aniruddha Ray aniruddha.ray@utoledo.edu
University of Toledo, Physics and Astronomy
We focus on developing novel imaging and biosensing platforms based on nanotechnology and photonics for studying complex problems in biomedical research, e.g. interaction of drugs with cancer cells, pathophysiology of diseases, as well as develop point-of-care diagnostic devices.

Crystal D. Rogers crdrogers@ucdavis.edu
UC Davis, Anatomy, Physiology, and Cell Biology
My lab focuses on understanding the mechanisms that control the development of neural crest cells in multiple species.

Mimi C. Sammarco msammarc@tulane.edu
Tulane School of Medicine, Surgery
My laboratory's current research addresses the impact of cell metabolism on skeletal regeneration, in the context of wound healing and aging. We will identify common metabolic mechanisms that will aid in fracture healing, bone regrowth, and age-dependent impaired regeneration.

Ferdinand Schweser schweser@buffalo.edu
University at Buffalo, The State University of New York
Neurology My lab develops quantitative MRI methods to measure biophysical properties of the human brain that are affected by neurological diseases.

Mark Sellmyer
mark.sellmyer@pennmedicine.upenn.edu
University of Pennsylvania,
Radiology / Biochemistry and Biophysics
I'm interested the development of new chemical tools for basic research as well as translational imaging. I'm practicing nuclear radiologist, so there is a pathway to the clinic for molecular imaging approaches.

Doug Shepherd douglas.shepherd@asu.edu
Arizona State University, Physics
I am interested in understanding the robustness of cell lineage specification in dynamic signaling environments. To quantify molecular expression changes inside individual cells, my group develops and applies integrated labeling, imaging, analysis, and modeling approaches.

Lingyan Shi Lingyanshi@ucsd.edu
University of California San Diego, Bioengineering
Develop and apply novel optical imaging techniques to solve biological questions such as neurodegenerative diseases.

Seu Sim s.sim@uci.edu
University of California Irvine, Chemistry
I'm interested in engineering cell-material interfaces for living composite materials containing bacterial cells. Interrogating cellular states integrated into polymeric or protein networks is critical for building our fundamental understanding of immobilized living systems.

Ellen Sletten sletten@chem.ucla.edu
UCLA, Chemistry and Biochemistry
The Sletten Group develops shortwave infrared fluorophores, enabling real-time, multiplexed, non-invasive, imaging in mice.

Barbara S. Smith BarbaraSmith@asu.edu
Arizona State University,
School of Biological and Health Systems Engineering
The Smith group is chemistry-based and develops new molecular probes for optical imaging and therapy. Recent research has produced new classes of high performance near-infrared dyes for peptides and antibodies. A related interest is new strategies for point-of-care diagnosis.

Bryan Q. Spring b.spring@northeastern.edu
Northeastern University, Physics
Miniaturized microscopy to guide surgery and targeted therapies.

Gokul Upadhyayula sup@berkeley.edu
University of California Berkeley,
Molecular and Cell Biology
Gokul is interested in developing scalable image processing tools for data generated using advanced microscopes.

David Van Valen vanvalen@caltech.edu
California Institute of Technology,
Division of Biology and Bioengineering

Alex Walsh walshaj@tamu.edu
Texas A&M University, Biomedical Engineering
My research interests include label-free optical imaging and quantitative image analysis for quantification of functional information and cellular and sub-cellular heterogeneity.

Ping /P Wang wangpin4@msu.edu
Michigan State University, Radiology
Theranostic molecular imaging on transplanted pancreatic islets and endogenous beta cells for type 1 diabetes treatment; Image-guided stem cell therapies for diabetes, liver dysfunction and cardiovascular diseases.

Lu Wei lwei@caltech.edu
Caltech, Division of Chemistry and Chemical Engineering
Lu is interested in developing new optical imaging strategies utilizing vibrational spectroscopy to understand complex cellular processes.

Katharine White kwhite6@nd.edu
University of Notre Dame, Chemistry and Biochemistry
The White Lab studies how intracellular pH dynamics regulate proteins, pathways, and cell behaviors, with approaches across experimental scales. We also develop new optogenetic tools to spatiotemporally manipulate pHi in living cells.

Stefan Wilhelm stefan.wilhelm@ou.edu
University of Oklahoma,
Stephenson School of Biomedical Engineering
As a biomedical nano-engineering laboratory, the Wilhelm Lab is interested in studying the intracellular transport pathways and mechanisms of nanoparticle carriers and payloads with 3D super-resolution imaging for the development of safer and more effective nanomedicines.

Sixian You sixian@mit.edu
Massachusetts Institute of Technology,
Electrical Engineering and Computer Science
My research interests are biophotonics, microscopy, and computational imaging. We focus on developing optical imaging tools to enable noninvasive, deeper, faster, and richer visualization of dynamic biological processes and disease pathology.

Discussion Facilitators

Samuel Achilefu achilefu@wustl.edu
Washington University in St. Louis, Radiology
I am interested in using light to detect and treat cancer.

Matthew Bogyo mbogyo@stanford.edu
Stanford University, Pathology Chemical
Probes for mechanistic, therapeutic and imaging applications in cancer and infectious diseases.

Maryellen Giger m-giger@uchicago.edu
University of Chicago, Radiology/Medical Physics
For decades, my research in computer-aided diagnosis / machine learning in medical imaging has included cancer risk assessment, diagnosis, prognosis, and therapeutic response yielding "virtual biopsies", with extension to analysis of COVID-19 on CT and chest radiographs.

Kristen Maitland kmaitland@tamu.edu
Texas A&M University, Biomedical Engineering
My research is focused on development of light-based technologies for applications in medicine and biology, including fiber-based imaging systems, handheld microscopes, volumetric imaging systems, portable spectrometers, and point-of-care devices.

Wei Min wm2256@columbia.edu
Columbia University, Chemistry
Developing novel optical microscopy techniques and imaging probes for biomedical applications.

Anna Moore moorea57@msu.edu
Michigan State University, Radiology
My research interest is in application of nanotechnology to imaging and image-guided therapies in cancer and diabetes.

Brian Pogue brian.w.pogue@dartmouth.edu
Dartmouth, Engineering
Optical imaging systems in medicine, cancer imaging and therapy; molecular guided surgery; dose imaging in radiation therapy.

Brad Smith smith.115@nd.edu
University of Notre Dame, Chemistry and Biochemistry
The Smith group is chemistry-based and develops new molecular probes for optical imaging and therapy. Recent research has produced new classes of high performance near-infrared dyes for peptides and antibodies. A related interest is new strategies for point-of-care diagnosis.

Jin Zhang jzhang32@health.ucsd.edu
University of California San Diego, Pharmacology
My lab focuses on developing enabling technologies to probe the active molecules in their native environment and characterizing how these active molecules change in diseases.

Guests

Arne Bakker abakker@chanzuckerberg.com
Chan Zuckerberg Initiative, Science
I am interested in how to build effective collaborative scientific teams that advance biomedical research through community engagement.

Cori Bargmann cori@chanzuckerberg.com
Chan Zuckerberg Initiative, Science

Alexandra Basford alexandra.basford@alleninstitute.org
The Paul G. Allen Frontiers Group
The Paul G. Allen Frontiers Group explores the landscape of science to identify and support pioneers with ideas.

Katja Brose kbrose@chanzuckerberg.com
Chan Zuckerberg Initiative, Science
I am a Science Program Officer at CZI where I lead out neurodegeneration program.

Nina Cardoza nina@chanzuckerberg.com
Chan Zuckerberg Initiative, Science

Andréa C Clavijo aclavijo@chanzuckerberg.com
Chan Zuckerberg Initiative, Science Initiative

Jonah Cool jcool@chanzuckerberg.com
Chan Zuckerberg Initiative, Science
I am a cell biologist, geneticist, and tissue engineer that loves to work at the intersection of technology in order to clarify cellular heterogeneity in complex organs.

Vladimir Ghukasyan vghukasyan@chanzuckerberg.com
Chan Zuckerberg Initiative, Imaging program
Development of Imaging Community.

Anne Hultgren ahultgren@beckman-foundation.org
Arnold and Mabel Beckman Foundation, Program Office
Supporting young scientists today for tomorrow's breakthrough discoveries.

Steve Jett sjett@chanzuckerberg.com
Chan Zuckerberg Initiative, Imaging
Imaging. Informatics. Biophysics. STEM Policy. DEI. Education. Engagement. Mix Well=Steve.

Shaun Kirkpatrick skirkpatrick@rctech.com
Frederick Gardner Cottrell Foundation

Sandra Laney slaney@walderfoundation.org
Walder Foundation, Science Innovation
Science innovation that advances health equity.

Justine Larsen jlarsen@chanzuckerberg.com
Chan Zuckerberg Initiative, Science
I'm interested to learn and better understand how CZI can help to advance Science.

Ed McCleskey emccleskey@chanzuckerberg.com
Chan Zuckerberg Initiative, Science
I am an electrophysiologist who studied both permeation through ion channels and the biology of certain ion channels in triggering pain. I now am a Science Officer at CZI interested in advancing imaging.

Jim Mitchell james_g_mitchell@yahoo.com
The Shurl & Kay Curci Foundation,
Science Advisory Board
I am interested in basic research in the life sciences including cancer research, regenerative medicine, neuroscience, and bio/nano-technology.

Meagan Mnich mmnich@chanzuckerberg.com
Chan Zuckerberg Initiative, Science
Meagan works on the science grants operations team at the Chan Zuckerberg Initiative.

Patrick Osmer osmer.1@osu.edu
The Ohio State University, Astronomy
Using computational modeling of the 3D structure of the HIV-1 5' UTR in conjunction with experimental results to elucidate clues about how to regulate translation of HIV.

Stephani Otte stephani.otte@chanzuckerberg.com
Chan Zuckerberg Initiative, Science

Nicholas Sofroniew nsofroniew@chanzuckerg.com
Chan Zuckerberg Initiative, Imaging, Science
Nicholas Sofroniew leads the Imaging Tech work at CZI, and maintains napari, a Python image visualization and analysis platform.

Chan Zuckerberg Initiative

Vlad Ghukasyan
vghukasyan@chanzuckerberg.com
Manager

Edwin McCleskey
emccleskey@chanzuckerberg.com
Science Program Officer

Stephani Otte
stephani.otte@chanzuckerberg.com
Imaging Program Lead

Frederick Gardner Cottrell Foundation

Shaun Kirkpatrick
skirkpatrick@rctech.com
President

Research Corporation for Science Advancement

Laura Esham
lesham@rescorp.org
Program Assistant

Andrew Feig
afeig@rescorp.org
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

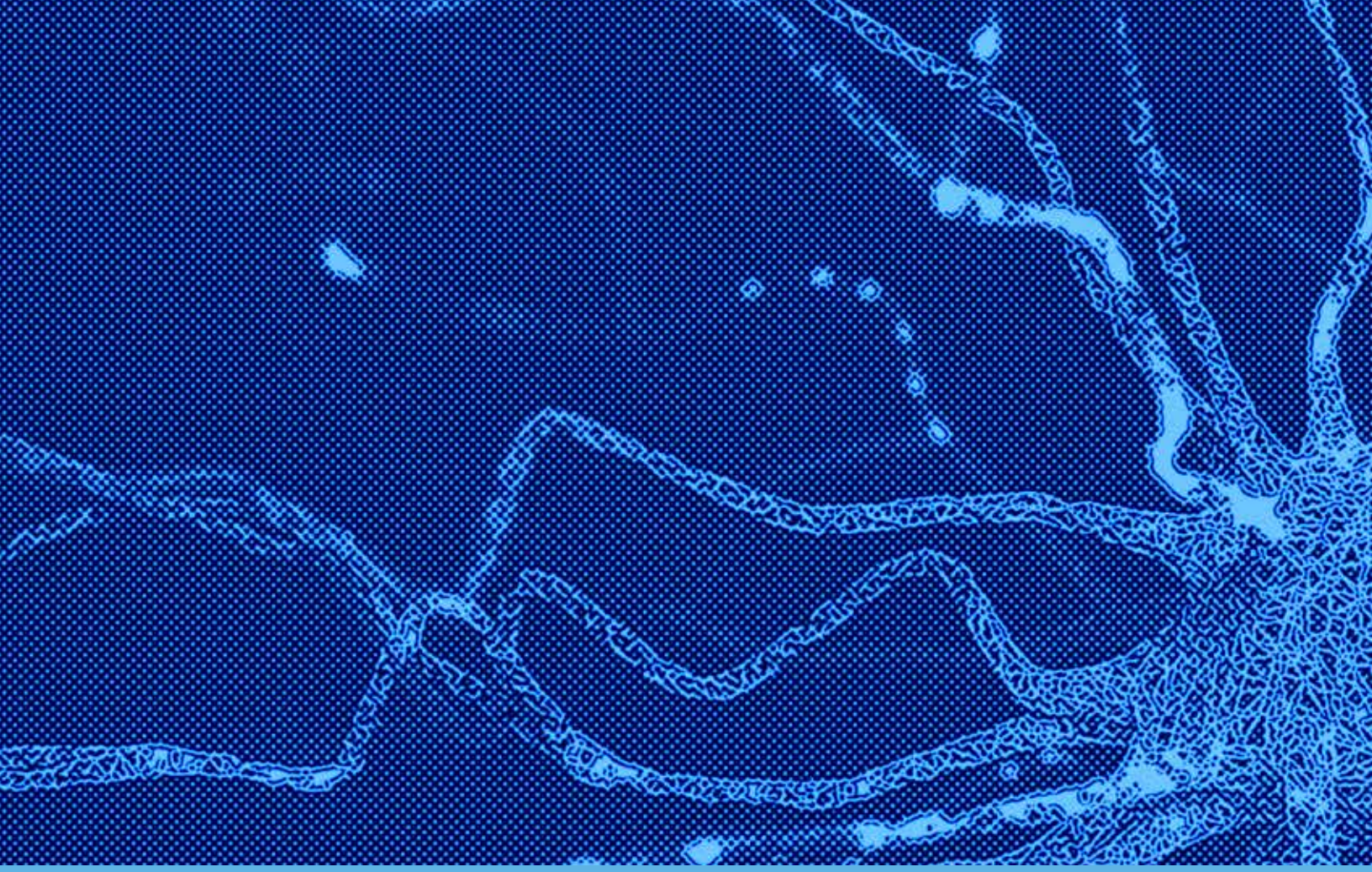
Dan Linzer
dlinzer@rescorp.org
President

Meg Martin
mmartin@rescorp.org
Pre & Post Award Manager

Silvia Ronco
sronco@rescorp.org
Senior Program Director

Barbara Shapiro
bshapiro@rescorp.org
Program Assistant

Richard Wiener
rwiener@rescorp.org
Senior Program Director



4703 East Camp Lowell Dr.
Suite 201
Tucson, Arizona 85712
Phone 520.571.1111
www.rescorp.org

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for SCIENCE ADVANCEMENT