May 10
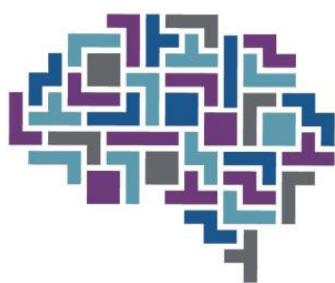**2024**

NINDS FELLOWS RETREAT

NINDS
OFFICE OF RESEARCH TRAINING & CAREER DEVELOPMENT
Developing Leaders in Neuroscience

DEPARTMENT OF HEALTH & HUMAN SERVICES • USA

NIH National Institute of Neurological Disorders and Stroke

8:30 -9:00 AM

Registration
Poster setup in Room 1175/1185

9:00 - 9:15 AM

Opening Remarks
Room 1145

9:15 - 10:00 AM

Three-minute Talks
Room 1145

10:00 - 11:00 AM

Keynote
Room 1145

11:00 AM - 12:15 PM

Poster Session 1
Room 1175/1185

12:15 - 1:30 PM

Lunch Break

1:30 - 2:15 PM

Breakout Sessions A
Room 1131, 1135, 1145 & 1155

2:20 - 3:05 PM

Breakout Sessions B
Room 1131, 1135, 1145 & 1155

3:15 - 4:30 PM

Poster Session 2
Room 1175/1185

4:30 - 4:45 PM

Closing Remarks
Room 1145

KEYNOTE SPEAKER: Dr. Sherilynn Black

Sherilynn Black is the associate vice provost for faculty advancement, providing leadership in many areas of faculty advancement including support for pre-tenure and mid-career faculty, professional development for non-tenure system faculty, and mentoring. She also leads initiatives to increase diversity among the faculty ranks. Dr. Black is an assistant professor of the practice of medical education and engages in social neuroscience research on the effectiveness of interventions to promote diversity and equity in academia. She has expertise in creating interventions to increase representation and equity among faculty and students across disciplines, and leads work nationally to catalyze systemic change in academia.

Dr. Black previously served as the founding director of the Office of Biomedical Graduate Diversity for the Duke University School of Medicine and was also a principal investigator of the NIH-IMSD funded Duke Biosciences Collaborative for Research Engagement (BioCoRE) Program. She holds several national appointments relating to faculty development and advancement with the NIH, HHMI, AAMC, The Burroughs Wellcome Fund, the National Academies of Sciences, Engineering and Medicine, and the Society for Neuroscience. She currently serves on the Advisory Committee to the Director of the National Institutes of Health (Working Group on Diversity) and has won a number of distinctions, including the Samuel Debois Cook Society Award, the Deans Award for Inclusive Excellence in Graduate Education, and the Equity, Diversity and Inclusion Award. She was named one of Cell's 'Most Inspiring Black Scientists in America'. Dr. Black earned her B.S. in psychology and biology with highest honors at the University of North Carolina–Chapel Hill as a Morehead-Cain Scholar. She earned her Ph.D. in neurobiology at Duke University and completed additional studies in educational statistics and intervention assessment in the School of Education at UNC–Chapel Hill.
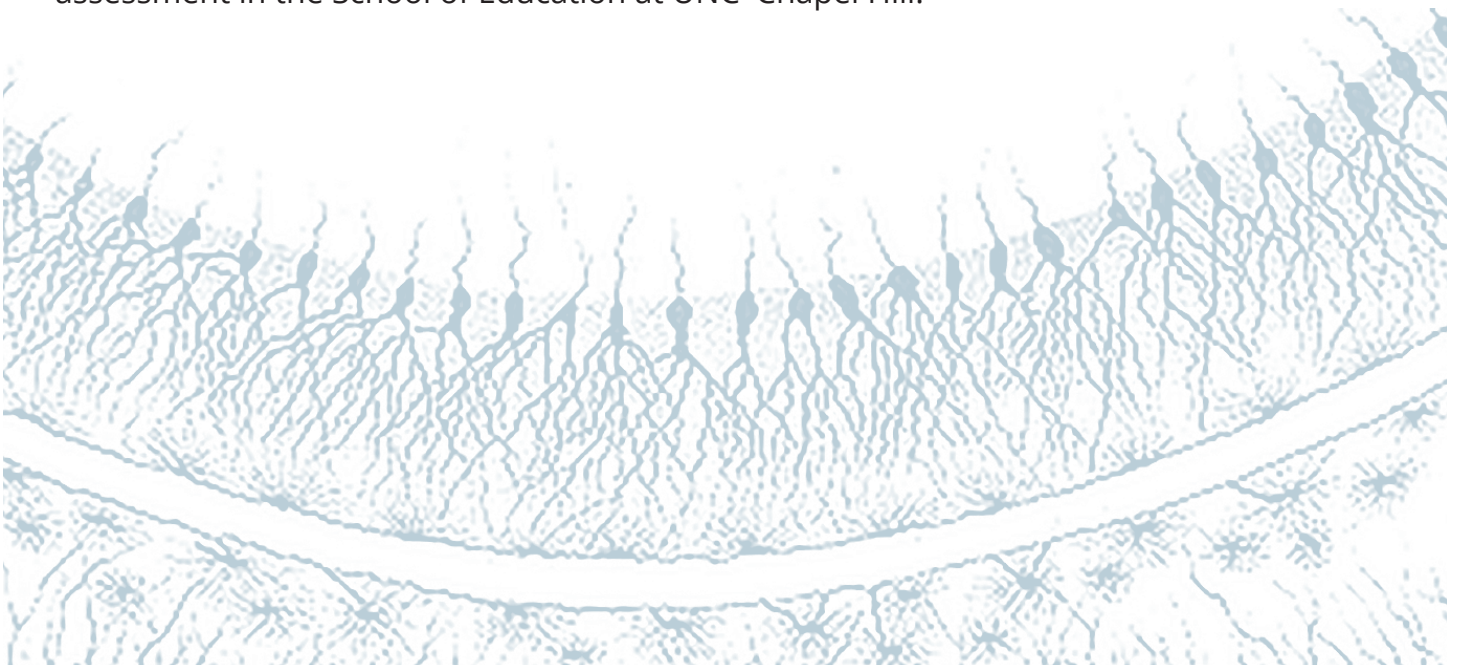
Three-minute Talks (TmT):

3m

Hannah Bow

How is OGT affecting GnRH neuron migration rate?

Preceptor: Dr. Susan Wray

Héctor Cancel Asencio

The Eyes Never Lie: A Window into Multiple Sclerosis with OCT Scans

Preceptor: Dr. María Inés Gaitán

Ariana Duckett

Mind-Motor Crossroads: Capturing Cognitive and Motor Decline in Frontotemporal Dementia

Preceptor: Dr. Justin Kwan

Jessica Kearney

A Novel Approach to Reduce Autofluorescence of Red Blood Cells

Preceptor: Dr. Susan Wray

Ava Mandel

Developing molecular tools to study the biology of PIKfyve: a lipid kinase that is a potential target for treating ALS

Preceptor: Dr. Tamás Balla

Heather Schneps

Substantia nigra neurophysiology in mouse models of lysosomal dysfunction linked to Parkinson's
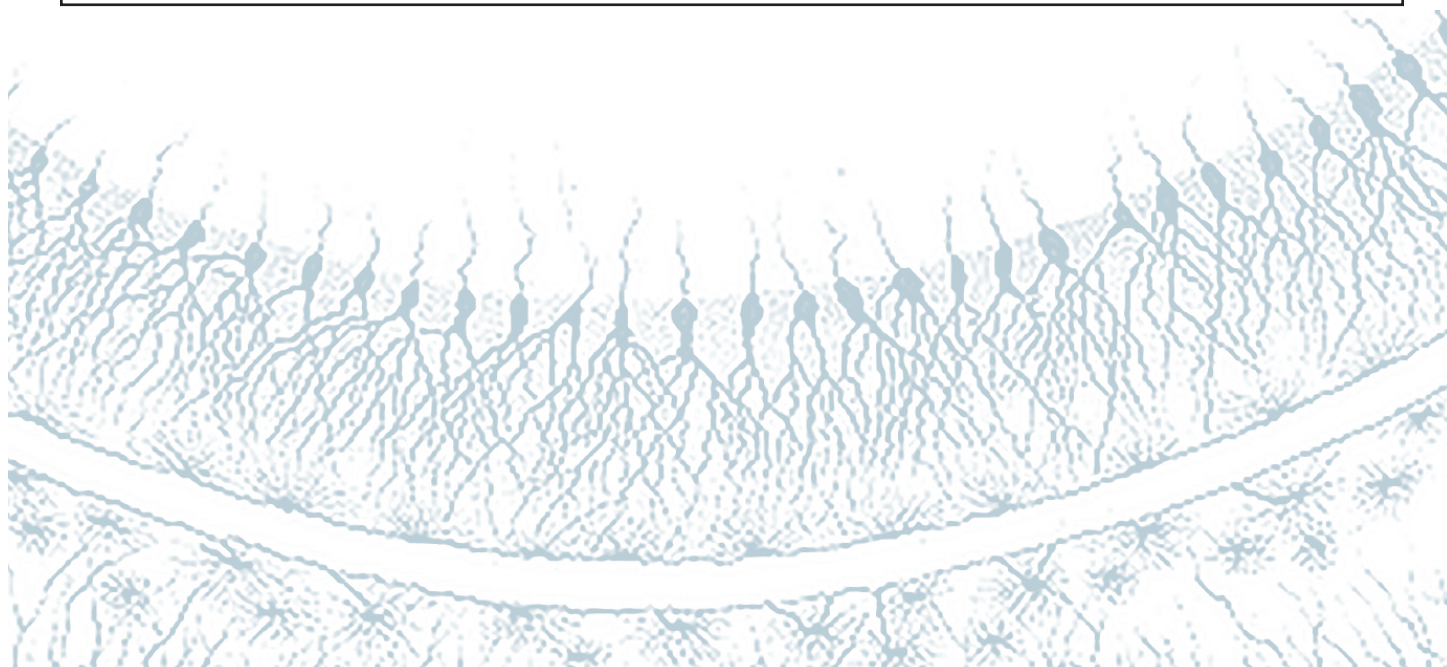
Preceptor: Dr. Zayd Khaliq

Jessica Tang

Tracking Trouble with a T Cell Tracer

Preceptor: Dr. Daniel Reich

Milo Taylor

A Consensus Model for Disease Staging in Progressive Multifocal Leukoencephalopathy

Preceptor: Dr. Irene Cortese

# PANELISTS: Non-research Careers – Spotlight on Science Policy

Andrew Wright

Dr. Andrew M. Wright is an AAAS Science and Technology Policy Fellow in the Office of Neuroscience Communications and Engagement (ONCE). Prior to joining NINDS, he received his Ph.D. from the Brown-NIH Graduate Partnership Program where he studied changes in frontocortical serotonin signaling in animal models of cocaine use disorder at the National Institute on Drug Abuse (NIDA). Andrew performed his postdoctoral work at the University of California San Diego, where he expanded his work to investigate the contributions of dopamine to maladaptive decision-making in alcohol use disorder. Andrew has been active in organizational and policy work, serving as the NIDA Representative and Graduate Student Liaison to the NIH Fellows Committee. He also served as director of the Baltimore Brain Series, a cross-institutional merit award and talk series that focuses on fostering collaboration among early career neuroscientists in the Baltimore region. He was a member of the NIH Science Policy Discussion Group and a regular contributor to the Science Policy for All blog, where he wrote in-depth essays and contextualized science policy news for a broad audience. In his current role as an AAAS Fellow, Andrew is excited to engage in collaborative cross-cutting work to support the mission of NINDS.

David Bochner

David Bochner, PhD is Branch Chief for Data Integration and Dissemination within the Division of Data Integration, Modeling, and Analytics at the National Institute of General Medical Sciences (NIGMS). David's team at NIGMS is responsible for science policy, legislative, and reporting functions of the institute, and along with their sister branch, co-leads evaluations of NIGMS programs. David joined NIGMS in this role in July 2021, and has previously worked as a health science policy analyst at NIDA and OD-OSP. He joined NIH as a AAAS S&T Policy fellow in OD-OSP in 2014, after receiving his PhD in neuroscience from Stanford University.
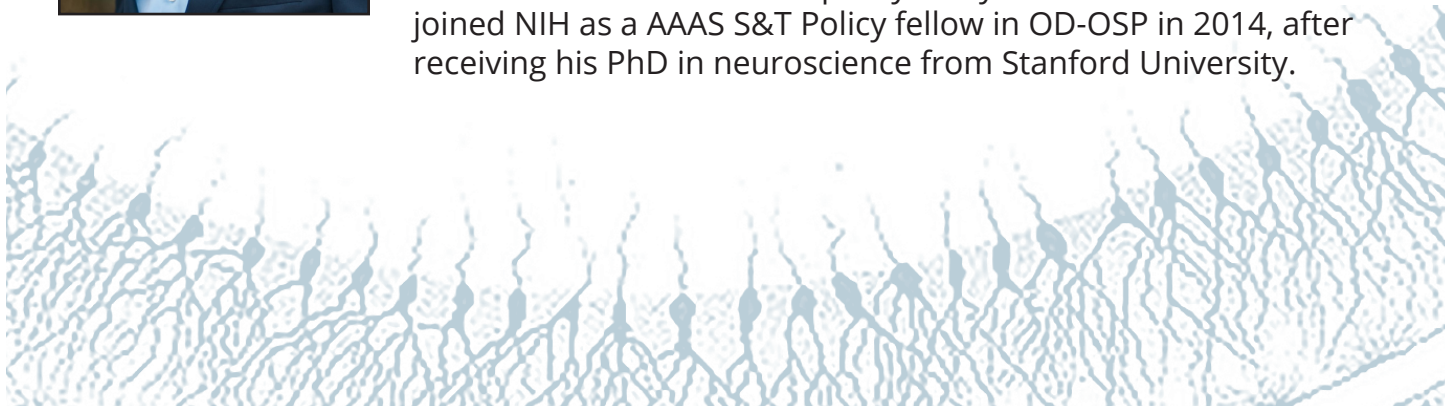
## PANELISTS: Careers in Independent Research – Research-Intensive vs. Teaching-Intensive

Afonso Silva

Dr. Silva earned his BS (1990) and MS (1992) degrees in Electrical Engineering from Universidade Federal de Pernambuco in Recife, Brazil. He moved to the USA in 1992 to attend the graduate program in Bioengineering at Carnegie Mellon University in Pittsburgh, PA. Dr. Silva's doctoral work focused on developing using the arterial spin labeling (ASL) technique to image and quantify cerebral blood flow (CBF) noninvasively with MRI. He made significant contributions to the development of ASL, from modeling water exchange across the blood-brain barrier to quantifying CBF accounting for arterial transit times and labeling efficiency. After earning his Ph.D. degree in 1996, Dr. Silva undertook post-doctoral training at the Center for Magnetic Resonance Research at the University of Minnesota, where he used ultra-high field MRI to investigate the temporal and spatial characteristics of cerebral hemodynamics as surrogate markers of functional brain activation. In 1999, Dr. Silva joined the Intramural Research Program of the National Institute of Neurological Disorders and Stroke (NINDS) as a Staff Scientist, becoming a Principal Investigator in 2004 and obtaining tenure in 2012. In 2018, Dr. Silva moved to the University of Pittsburgh, where he is the Endowed Professor of Translational Neuroimaging in the Department of Neurobiology.

Torry Dennis

Dr. Dennis is an Assistant Professor of Neuroscience and Psychology at St. Mary's College of Maryland, where he also holds the Pandion Haliaetus Professorship in Neuroscience. He completed his PhD in Experimental Psychology: Health & Neuroscience from the University of Texas at Arlington and a Postdoctoral Fellowship in the Neuroscience program at the Medical University of South Carolina. His current work focuses on the impact of ovarian hormones as well as environmental factors (such as stress, exercise, and diet) on addiction, reward/aversion, and risky behaviors.
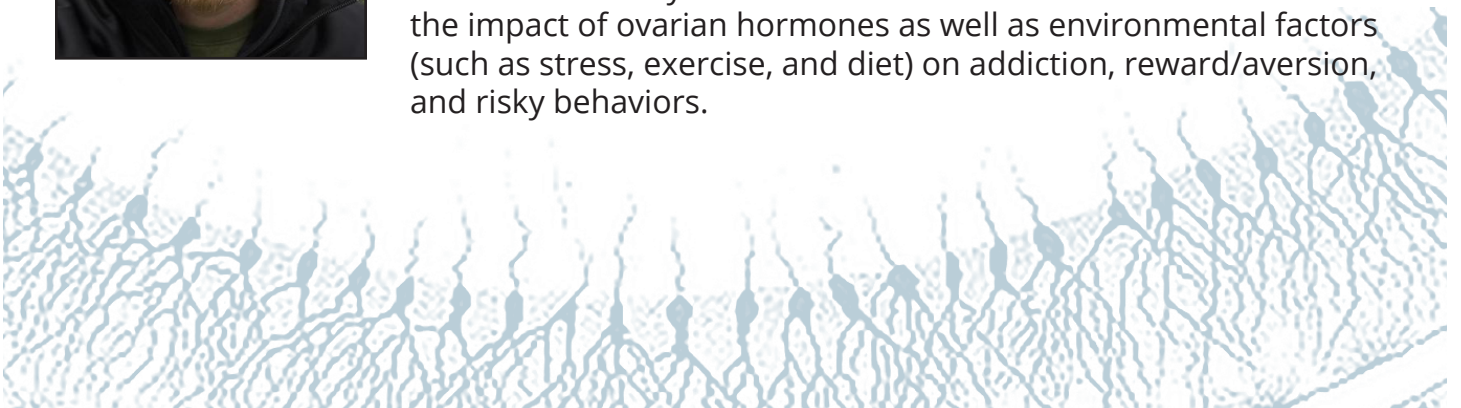
PANELISTS: NIH Grants 101 – Strategies for Success

Jianhua Xu

Jianhua Xu, Ph.D., is chief of the Developmental and Cellular Processes Branch in the Division of Genetics and Molecular, Cellular, and Developmental Biology, where he administers research grants in the areas of cellular signaling in growth. He also manages the F32 postdoctoral fellowships in cell biology, genetics, and developmental biology.

Before joining NIGMS, Xu was a tenured associate professor in neuroscience at the Medical College of Georgia. He earned a B.S. in zoology and a Ph.D. in entomology from Nankai University, China. He conducted postdoctoral research at the University of Alberta, Canada, and at the National Institute of Neurological Disorders and Stroke.

Jenny Kim

Jenny Kim, Ph.D. is a Program Manager in the Office of Programs to Enhance Neuroscience Workforce Diversity (OPEN). Dr. Kim helps to implement, analyze, and provide outreach for the NINDS diversity efforts and programs. She earned her Ph.D. in Behavioral Neuroscience from Michigan State University. Her doctoral work focused on neuro- and gliogenesis in the adolescent rodent brain. She then went on to do her postdoctoral work at NIMH continuing her research on postnatal neurogenesis. Prior to joining OPEN, Dr. Kim was a 2019-2020 AAAS Science and Technology Policy Fellow in the Office of Science Policy and Planning (OSPP).

PANELISTS: Career Pathways to Industry

Jeremy Ratiu

Jeremy Ratiu, Ph.D. is an immunologist passionate about discovery and driven by a desire to improve health. Jeremy began his research career in the laboratory of Dr. Jenifer Fenton while pursuing his Bachelor of Science in Genomics and Molecular Genetics at Michigan State University. Upon graduation, Jeremy worked as a research assistant in Dr. Dave Serreze's lab at The Jackson Laboratory for three years. After, Jeremy began graduate studies in the department of Immunology at Duke University and joined the lab of Yuan Zhuang, focusing on a novel transcriptional network in early T cell development. Up to this point, Jeremy was uncertain of a specific career path, and so began a post-doc in a prestigious lab. After several serendipitous life events and a realization that he did not wish to spend his career in academia, Jeremy quit his post doc, moved to a new state with his best friend, and into industry. This first job was a Senior Scientist position at a small start-up creating iPSC-derived pancreatic islets. At the beginning of 2024, Jeremy made the jump to big pharma as a Senior Scientist in a new strategic initiative between translational medicine and Clinical Immuno-oncology Discovery at AstraZeneca. The focus of this work is development of 3D culture platforms for testing oncology drugs in patient tumors ex vivo and using multi-modal data generated to create models to predict clinical patient responses.

Eunchong Park

Eunchong Park, Ph.D. is a scientist specializing in T cell immunology. He earned a B.S. and a M.S. from Korea University in South Korea before pursuing a Ph.D. at Duke University. His Ph.D. research focused on understanding Th17 cell pathogenicity in autoimmunity. After completing his Ph.D. in 2022, Eunchong Park joined AstraZeneca as a Scientist. His current research at AstraZeneca aims to develop CAR-Treg cell therapies for autoimmune diseases.
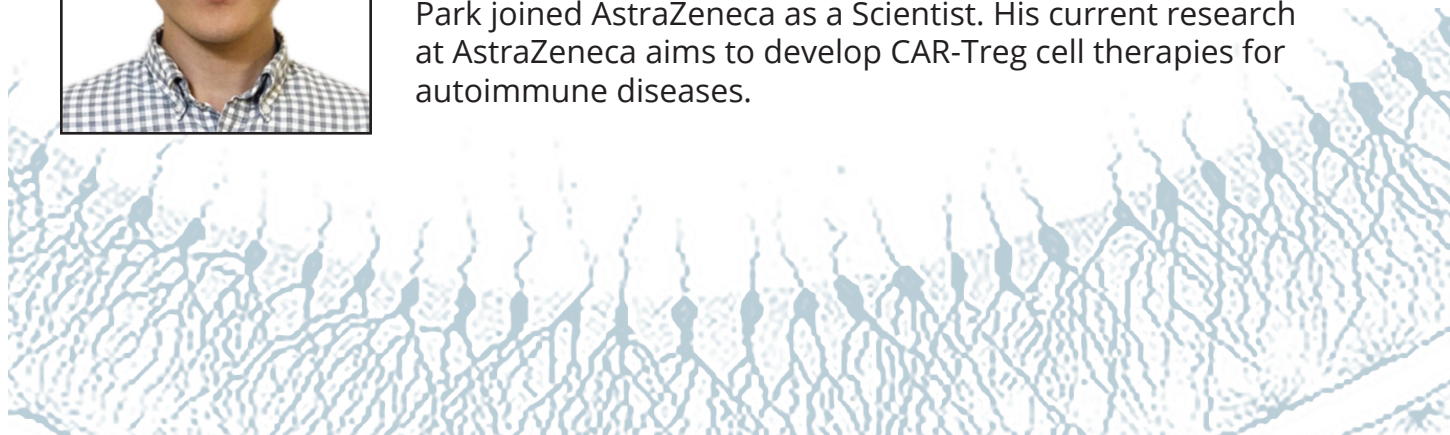
Poster Session 1 Presenters

Setup starts at 8:30 AM

1. Antoniya Aleksandrova

Investigating the physiological substrates of a putative bacterial serotonin transporter

Preceptor: Dr. Lucy Forrest

3. Emily Baniewicz

Morphology of traumatic microbleeds imaged with 7T MRI demonstrates persistent pathological characteristics

Preceptor: Dr. Lawrence Latour

5. Radhika Chatterjee

Evaluating Semi-Automatic Resection Mask Creation in Drug-Resistant Epilepsy Patients: A Comparison with Manual and Automatic Approaches

Preceptor: Dr. Sara Inati

7. Sean Cleary

Phospholamban inhibits the cardiac calcium pump by interrupting an allosteric activation pathway

Preceptor: Dr. Miguel Holmgren

9. Ariana Duckett

The GENFI Motor Score Enhances Sensitivity of Disease Severity Scores in FTD

Preceptor: Dr. Justin Kwan

11. Martha Garcia Garcia

Cerebellar granule cells and climbing fibers jointly acquire signals to learn reward timing

Preceptor: Dr. Mark Wagner

13. Jaskaran Grewal

Radiological-Histopathological Correlation to Study the Progression of Progressive Multifocal Leukoencephalopathy

Preceptor: Dr. Irene Cortese

15. Eva Hellsberg

The potassium binding site in human serotonin transporter hSERT

Preceptor: Dr. Lucy Forrest

17. Eunhye Hong

A New NLGN4X Variant Cluster in Autism Spectrum Disorder

Preceptor: Dr. Katherine Roche

19. Adrian Koretsky

Exploring Ion Channel Interactions with Auxiliary Partners using Computational and Experimental Approaches

Preceptors: Dr. Lucy Forrest, Dr. Kenton Swartz

21. Carolyn Lomahan

Detection of hyperemia on dynamic susceptibility contrast and arterial spin labeling perfusion imaging in acute stroke

Preceptor: Dr. Lawrence Latour

23. Ava Mandel

Developing molecular tools to study the biology of PIKfyve: a lipid kinase that is a potential target for treating ALS

Preceptor: Dr. Tamás Balla

25. Amurta Nath

Retrograde signaling at the blind spot of the retina

Preceptor: Dr. Jeffrey Diamond

27. Anindita Ray

Genome Analyses Reveals Novel Risk Loci for Multiple System Atrophy

Preceptor: Dr. Sonja Scholz

29. Heather Schneps

Physiological properties of GABAergic and dopaminergic substantia nigra neurons in an Atp10b knockout mouse

Preceptor: Dr. Zayd Khaliq

31. Catrina Sullivan

Acute Cortical Lesions in Minor Ischemic Stroke Patients: Visual Cortical Thinning Confirmed by Gray Matter Loss Using Automated Quantitative Segmentation

Preceptor: Dr. Lawrence Latour

33. Srijan Thota

Cortico-Cerebellar Dynamics in Learning Multiple Behavioral Tasks

Preceptor: Dr. Mark Wagner

Poster Session 2 Presenters

Setup starts at 8:30 AM

2. Annika Backer

Modulation of Serotonin Transport by Chloride Ions Examined using Molecular Simulations

Preceptor: Dr. Lucy Forrest

4. Astrid Brull Cañagueral

Use of Circular RNA Guides to Correct a Hotspot of Dominant-Negative Glycine Substitutions Causing Collagen VI-Related Dystrophies

Preceptor: Dr. Carsten Bönnemann

6. Sean Chen

Visualization of APEX2 Tagged Endogenous CaMKII in Hippocampal Synapses with STEM Tomography

Preceptor: Dr. Thomas Reese

8. Katherine Dore

Investigating an ALS-linked CHCD Variant in an iPSC model

Preceptor: Dr. Derek Narendra

10. Benjamin Filio

Cerebellar Representations of Reward Signals

Preceptor: Dr. Mark Wagner

12. Hallie Gaitsch

Examining OPC and microglial cell death during remyelination following toxin-induced experimental demyelination

Preceptor: Dr. Daniel Reich

14. William Hayward

Learning, forgetting, and consolidation change with age

Preceptor: Dr. Leonard Cohen

16. Jacob Hilton

Insights into the gating and transport mechanisms of the lysosomal chloride/proton antiporter ClC-7

Preceptor: Dr. Joseph Mindell

18. Shahrnaz Kemal

Oligodendrocytes in neurodegeneration

Preceptor: Dr. Joseph Mindell

20. Xiaoyi Li

A metabotropic glutamate receptor agonist enhances visual signal fidelity in a mouse model of retinitis pigmentosa

Preceptor: Dr. Jeffrey Diamond

22. Delores Luttrell

Exploring the Relationship Between Human Endogenous Retrovirus K, Human Immunodeficiency Virus, and Cellular Senescence

Preceptor: Dr. Avindra Nath

24. Vedrana Mikusevic

Exploring the Link Between Disease-Causing ClC-7 Mutations and Lysosomal pH

Preceptor: Dr. Joseph Mindell

26. Prithviraj Rajebhosale

Neuregulin1 Nuclear Signaling Regulates Composition of Dentate Gyrus Granule Cell Subtypes.

Preceptor: Dr. David Talmage

28. Shaimaa Sait

Identification of Pathogenic Variants for Parkinson's Disease in a Greek Cohort from Crete Island

Preceptor: Dr. Sonja Scholz

30. Subhiksha Srinivasan

All-Optical Investigation of Corticopontine Adaptation for Cerebellar Learning

Preceptor: Mark Wagner

32. Milo Taylor

Towards a Formula for Disease Staging in Progressive Multifocal Leukoencephalopathy

Preceptor: Dr. Irene Cortese

34. Anthony Yanez

Overexpression of human wild-type alpha-synuclein subtly enhances excitability in murine dopamine neurons

Preceptor: Dr. Zayd Khaliq