

2025 PROGRAM

COMPREHENSIVE NEUROSCIENCE CENTER ANNUAL RETREAT

SEPTEMBER 17-18, 2025

MARNIX E. HEERSINK INSTITUTE FOR
BIOMEDICAL INNOVATION CONFERENCE CENTER

UAB ALTEC/STYSLINGER GENOMIC MEDICINE
AND DATA SCIENCES BUILDING

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM



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Comprehensive Neuroscience Center

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About the CNC

Established as University Wide Interdisciplinary Research Center in 2009 the UAB Comprehensive Neuroscience Center (CNC) is a network of 247 UAB faculty representing 32 departments and 9 UAB Schools which serve as the focal point for UAB basic and applied neuroscience research.

Mission

The overall mission of the CNC is to promote and support interdisciplinary neuroscience research, clinical care and education at UAB.

Leadership



Jeremy Day, Ph.D.

Director
Professor
Department of Neurobiology
UAB Heersink School of Medicine



Karen Gamble, Ph.D.

Associate Director for Research
Professor
Department of Psychiatry
UAB Heersink School of Medicine



Lawrence Sincich, Ph.D.

Associate Director for Grants in Preparation (GRiP)
Professor
Department of Optometry & Vision Science
UAB School of Optometry



Kristina Visscher, Ph.D.

Associate Director for Outreach
Professor
Department of Neurobiology
UAB Heersink School of Medicine



Larry Ver Hoef, M.D.

Associate Director for Clinical Neuroscience
Associate Professor
Department of Neurology
UAB Heersink School of Medicine



Audrey Coachman, MHA

Program Director II
Comprehensive Neuroscience Center
Center for Neuroengineering and Computer Brain Interfaces

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2025 RETREAT SPONSORS

Gold Level Sponsors (\$1,000- \$2,500)



GE Healthcare- \$2,000

Representatives Present in Lobby: Alex Smith, Clinical Scientist for MR and Haris Kudrolli, PhD, Director, Research & Scientific Affairs



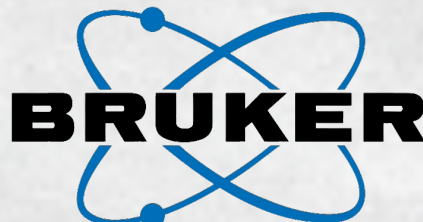
Hunt Optics & Imaging, Inc.- \$1,000

Representative Present in Lobby: Jason Floyd, PhD, Microscopy and Imaging Specialist - Alabama



Inscopix, A Bruker Company- \$1,000

Representative Present in Lobby: Nioka Burns, PhD, Sales Representative - US Southeast



Bruker Spatial Biology, Inc.- \$1,000

Representatives Present in Lobby: Brian Coe, nCounter Regional Account Manager and Jeff Stone, Spatial Regional Account Manager

KEYNOTE SPEAKER



Ishmail Abdus-Saboore, PhD
Associate Professor, HHMI Freeman
Hrabowski Scholar
Columbia University
Department of Biological Sciences
Zuckerman Mind, Brain, Behavior Institute

Session: Thursday, September 18 at 1P.M.

Ishmail Abdus-Saboore is an Associate Professor and Principal Investigator at Columbia's Zuckerman Mind Brain Behavior Institute. He is interested in the skin-brain axis for tactile sensations, with the goal of understanding how the brain generates the perception of pain and pleasure based on sensory stimuli applied to the skin. The lab is integrating the peripheral and central nervous systems, seeking to uncover genes and neural circuits for somatosensation from the skin to the spinal cord and brain. They are also interested in how encoding of somatosensation is altered in disease states like chronic pain, stress, and cancer.

Ishmail attended North Carolina A&T University for college, followed by a Ph.D. in Cell and Molecular Biology at the University of Pennsylvania. Following training in developmental genetics, he moved into sensory neuroscience as a postdoc at Cornell and the University of Pennsylvania. Since opening his lab in July 2018, he has received generous support for his research including an NIH Pathway to Independence Award and NIH New Innovator Award and ten private foundations including Howard Hughes Medical Institute, Alfred P. Sloan Foundation, United Negro College Fund, Burroughs Wellcome Fund, Rita Allen Foundation, Brain Research Foundation, Pew Charitable Trusts, Chan Zuckerberg Initiative, McKnight Foundation, and Simons Foundation (awarded to two postdoc junior fellows).

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LOCATION

Marnix E. Heersink Institute for Biomedical Innovation Conference Center

Altec/Styslinger Genomic Medicine and Data Sciences Building (ALGEN)

701 19th Street South, Birmingham, AL 35233



The 175,000-square-foot Altec/Styslinger Genomic Medicine and Data Sciences Building and Marnix E. Heersink Institute for Biomedical Innovation Conference Center brings together researchers, equipment, and staff for the Hugh Kaul Precision Medicine Institute, the Department of Biomedical Informatics and Data Science, the Heersink Institute for Biomedical Innovation, the Heersink Institute for Global Health, and the Center for Clinical and Translational Science, among others. It accommodates an estimated 80 existing and new faculty and include space for computational research, research support, offices, administrative and scientific collaboration, and meeting spaces.

The project is funded by philanthropic gifts from the Altec/Styslinger Foundation and Dr. Marnix and Mary Heersink as well as \$50 million from the state of Alabama via the Public School and College Authority, and funds from the Heersink School of Medicine, Jefferson County, and the City of Birmingham. The building opened for occupancy in spring 2025.

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Wednesday, September 17

8:30 A.M. Breakfast & Check In

9 A.M. Welcome & State of the CNC Address

Jeremy Day, Ph.D.

Director, Comprehensive Neuroscience Center

Michael J. Friedlander Heersink Endowed Professorship

Professor, Department of Neurobiology

UAB Heersink School of Medicine

9:45 A.M. CNC Activity

10:30 A.M. CNC 2024-2026 Pilot Awards Session (Moderator: Lawrence Sincich)

“Dopaminergic Signaling in Dorsal Striatal Astrocytes”

Mariangela Scarduzio, PhD

Assistant Professor, Department of Neurology

“Microbial biofilms as regulators of psychostimulant use disorders”

Angela Carter, PhD

Assistant Professor, Department of Surgery - Division of Surgical Oncology

11:30 A.M. Lunch & Networking

(Seating available in the Lobby, Green Space and Terrace)

12:30 P.M. “New to UAB” Faculty Session I (Moderator: Kristina Visscher)

“Targeting the Negative Symptoms of Psychosis Using An Experimental Digital Therapeutics Approach”

Lauren Luther, PhD

Assistant Professor, Department of Psychology

“UAB Consciousness Lab: Into the Depths of Consciousness”

Jasmine Thum, MD

Assistant Professor, Department of Neurosurgery

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Comprehensive Neuroscience Center

Wednesday, September 17

1:30 P.M. Break

1:45 P.M. Trainee Platform Presentation Session (Moderator: Larry Ver Hoef)

“The Role of Functional Network Architecture in Resilience to Tau”

David Jin, Postdoc, Neurobiology (PI: Kristina Visscher)

“The encoding of interoceptive-based predictions by the paraventricular nucleus of the thalamus D2+ neurons”

Briana Machen, Graduate Student, Neurobiology (PI: Sofia Beas)

“Assessment of Bladder Function and Hypersensitivity in Hemopexin Knockout Mice Exposed to Psychological Stress”

Anastasiia Caangay, Graduate Student, Anesthesiology & Perioperative Med. (PI: Jennifer DeBerry)

“Monocyte derived border associated macrophages coordinate autoreactive T cell responses and drive neuroinflammation in an alpha-synuclein model of Parkinsons disease”

Aidan Miller, Graduate Student, Neurology (PI: Ashley Harms)

“Synuclein dependence of endocannabinoid release varies anatomically”

Reagan Pennock, Staff, Neurobiology (PI: Jacques Wadiche)

“Maternal Early Life Adversity Impairs Offspring Sociability via Dysfunction of the Midcingulate-Prelimbic Pathway”

Jose de Oliveira, Postdoc, Psychiatry (PI: Minae Niwa)

4 P.M.- 6 P.M. Poster Session #1

Second & Third Floors

Heavy Hors d'oeuvres and Beverages served on Third Floor

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Comprehensive Neuroscience Center

Thursday, September 18

8:30 A.M. Breakfast & Check In

9 A.M. “New to UAB” Faculty Session II (Moderator: Karen Gamble)

“Gene Function and Monogenic Disorders: The Curious Case of CASK in MICPCH”

Konark Mukherjee, PhD

Assistant Professor, Department of Genetics

“The Long and Short of It: Isoform Diversity in Alzheimer’s Disease”

Lindsay Rizzardì, PhD

Assistant Professor, Department of Biochemistry & Molecular Genetics

10 A.M. Poster Session #2
Second & Third Floors

Noon Group Photo, Lunch & Networking
(Seating available in the Lobby, Green Space and Terrace)

1 P.M. Keynote Speaker Presentation (Moderator: Jeremy Day)

“Skin-brain axis for tactile sensations”

Ishmail Abdus-Saboor, PhD

Associate Professor, Department of Biological Sciences

Freeman Hrabowski Scholar, Howard Hughes Medical Institute

Principal Investigator, Zuckerman Mind Brain Behavior Institute

Columbia University

2 P.M. Break

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Thursday, September 18

2:15 P.M. “New to UAB” Faculty Session III (Moderator: Karen Gamble)

“Targeting Fear-Related Neuropsychiatric Symptoms in Aging and Alzheimer’s Disease with Exogenous Ketones”

Caesar Hernandez, PhD

Assistant Professor, Department of Medicine- Division of Gerontology, Geriatrics, and Palliative Care

“Pathophysiology of inherited retinal disease”

Tylor Lewis, PhD

Assistant Professor, Department of Ophthalmology and Visual Sciences

“A framework for addressing sleep disturbances in substance use disorders”

Rui Zhang, PhD

Assistant Professor, Department of Psychiatry - Behavioral Neurobiology

4 P.M. Awards & Closing Remarks

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Presentation Awards

Trainee platform presentations were scored and selected by the CNC Leadership team from the group of submitted abstracts.

Awards will be given for both platform and poster presentations.

Platform (oral) presentation awards:

1st place - \$500

2nd place - \$250

3rd place - \$100

Poster presentation awards:

1st place - \$500

2nd place - \$250

3rd place - \$100

Poster Presentations

1. Enhanced Excitability and Mechanical Sensitivity in Trigeminal A β -Nociceptors Contributes Oxaliplatin-Induced Orofacial Mechanical Allodynia
Saurav Gupta
Saurav Gupta, Amit Raj Sharma, Akihiro Yamada, Jennifer Ling, Jianguo Gu
Session: Wednesday, 4-6PM
2. Transcriptionally defined subpopulations of ventral tegmental area dopamine neurons exhibit distinct electrophysiological properties and response to cocaine
Dalton Fitzgerald
Emily T. Jorgensen, Lydia Slocum, Jeremy J. Day
Session: Wednesday, 4-6PM
3. Deficiency of CASK protein leads to optic nerve hypoplasia and Retinal dysfunction
Sheida Hashemi
Sheida Hashemi, Khushi Talajia and Konark Mukherjee
Session: Wednesday, 4-6PM
4. Selective knockout of Slc26a7-expressing combinatorial dopamine neurons
Lydia Slocum
Lydia G. Slocum, N. Dalton Fitzgerald, Jeremy J. Day
Session: Wednesday, 4-6PM
5. Using YOLO Deep Learning and Google Images to Detect Physical Environment Features Affecting Behavioral Symptoms of Dementia
Chunhong Xiao
Chunhong Xiao, Frank Puga, Lijun Ma, Rita Jablonski, Arie Nakhmani
Session: Wednesday, 4-6PM
6. Progranulin acts in astrocytic lysosomes to promote neuronal outgrowth
Azariah Kaplelach
Azariah Kaplelach
Session: Wednesday, 4-6PM
7. Examining Effort-Based Decision-Making in Antipsychotic Naïve First-Episode for Psychosis
Celeste Patron
Celeste Patron, Kristen Edwards, Sarah L. Comer, Adrienne C. Lahti, Lauren Luther
Session: Wednesday, 4-6PM
8. Uncovering Alzheimer's Disease Specific Isoform Diversity through scLong-Read Transcriptomics
Dev Raj Bhattarai
Dev R. Bhattarai, Jenna L. Ekstrom, Winston Timp, Lindsay F. Rizzardi
Session: Wednesday, 4-6PM
9. Characterization of measurable ALS phenotypes of TDP-43 M337V mutation and C9ORF72 hexanucleotide repeat expansion in induced pluripotent stem cell-derived sensorimotor organoid model
Anna Maria Schreiber
Anna Maria Schreiber, Anamika Gupta, Gessica Sabrina de Assis Silva, Russell D'Souza, João D. Pereira
Session: Wednesday, 4-6PM
10. Beta frequency activity reflects sensorimotor processing in the human subthalamic nucleus
Autum Key
A. Key, J. Olson, M. T. Holland, J. N. Bentley, H. C. Walker, and Z. T. Irwin
Session: Wednesday, 4-6PM
11. Anaerobic bacteria and amphetamine use disorder: Bacterial biofilms as key regulators of drug response.
Camila Gonzalez-Arancibia
Gonzalez-Arancibia C., Nakkella S., Zhu Y., Sunil A., Galli A, Carter AM
Session: Wednesday, 4-6PM

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Poster Presentations

12. Inhalation of the Parkinson's disease risk factor trichloroethylene induces blood brain barrier dysfunction as a mechanism for cognitive impairment
Ashley Adamson
Ashley Adamson, Teel Walters, Allie Smith, Briana De Miranda
Session: Wednesday, 4-6PM
13. AKT is Necessary for Neuronal Hypertrophy and Excitatory Synaptogenesis Caused by Pten Knockout
Mackenzi Prina
Mackenzi L. Prina, Andrew R. Goyette, Kamran Tariq, Asan F. Abdulkareem, Wei Wang, Meijie Li, Lucky Drucker, Helena Seo, Nicole M. Desmet, Bridget Shafit-Zagardo, Bryan W. Luikart
Session: Wednesday, 4-6PM
14. Co-housing with Parous Mice Ameliorates Maternal Behavior Deficits Induced by Adolescent Social Isolation in Mice
Rinako Tanaka
Rinako Tanaka and Minae Niwa
Session: Wednesday, 4-6PM
15. Age-Associated Gzmk⁺ CD8⁺ T Cells Accumulate and Interact with Microglia to Drive Neuroinflammation in Vascular Dementia
MD Akkas Ali
MD Akkas Ali, Md Hasanul Banna Siam, Donald Vardaman III, Chase Bolding, J. Nicholas Brazell, Mallikarjun Patil, Daniel J Tyrrell
Session: Wednesday, 4-6PM
16. Endolysosomal dysfunction as a central mechanism of environmental toxicant-induced Parkinson's neurodegeneration
Teel Walters
Teel Walters, Gwendolyn Cohen, Ashley Adamson, Arielle Manabat, Karen Jaunarajs, Laura Volpicelli-Daley, Alison Bernstein, Briana De Miranda
Session: Wednesday, 4-6PM
17. The Expected Value of Control Influences Effort Allocation During Goal-Directed Activities in Daily Life in Schizophrenia
Davis Jones
Davis B. Jones, Gregory P. Strauss, Lisa A. Bartolomeo, Lauren Luther
Session: Wednesday, 4-6PM
18. Psychological and Physical Activity Outcomes Following Rotator Cuff Repair: A Scoping Review
Hadeel Alghanim
Hadeel Y. Alghanim, Naif Z. Alrashdi, and Matthew P. Ithurburn.
Session: Wednesday, 4-6PM
19. CD36-mediated Endothelial Cell Immunity in the Pathogenesis of Alzheimer's Disease
Jada Harvey
Atul Kumar, Jada Harvey*, Abdellah Akil, Rachael Guenter, Adam W. Beck, Bin Ren
Session: Wednesday, 4-6PM
20. Sniffing Out Neuroregeneration: Olfactory Neurogenesis in the Context of Alzheimer's Disease
Lynne Nacke
Lynne M. Nacke, Debangana Chakravorty, Sriivatsan G. Rajan, Ankur Saxena
Session: Wednesday, 4-6PM
21. Radiolytic Neuromodulation of Cell Activity
Daniele Zanella
Daniele Zanella*, Samuel J. Mabry*, Anna Marie Buchanan, Caleb Rowe, Camila Gonzalez-Arancibia, Hunter S. Goffinet, M. Iqbal Hossain, Brady D. Robinson, Sergio Mena Ortega, Andrea Marotta, Greta Galli, Shaida Andrabi, Parastoo Hashemi, Angela M. Carter, Mark Bolding# & Aurelio Galli#
Session: Wednesday, 4-6PM

Poster Presentations

22. Ketone supplementation ameliorates age-dependent deficits in the TgF344AD rat model of Alzheimer's disease
Macy Seijo
Macy A. Seijo, Amaya Rogers, Juan P. Carcamo Dal Zotto, Sherine A.G. Skjefte, Pheven A. Yohannes, Preetham Gundlapally, Emma Wahlers, Amaya Coker, Caesar M. Hernandez
Session: Wednesday, 4-6PM
23. Using ATP6V0A1 genetics and biology to understand dopaminergic neuron vulnerability in Parkinson Disease
Geir Sajdak
Geir Sajdak,(1) Stephanie M. Boas,(2,3) Stephanie N. Fox,(1,3) Micah Simmons,(1,3) Charlene Farmer,(4) Alexis Bergsma, (1) Laura A. Volpicelli-Daley,(1) Darren Moore,(4) Karen L. Gamble,(5) Rita M. Cowell (1,3)
Session: Wednesday, 4-6PM
24. Chemogenetic inhibition of Central Amygdala neurons acutely attenuates the anorexigenic effects of exogenous GLP-1 signaling
Miguel Duran
Miguel Duran, Jennifer Willis, Andrew Hardaway
Session: Wednesday, 4-6PM
25. Somatostatin Interneuron Involvement in the Pathogenesis of Huntington's Disease
Jahmel Fowler
Jahmel Fowler, MHA, Mariangela Scarduzio, PhD, Cayla Pool, Michelle Gray, PhD
Session: Wednesday, 4-6PM
26. The Role of Disease-associated Microglia in Parkinson's Disease
Vickie Yang
Ya-Ting Yang, David A Figge, Asta Zane, Jhodi M Webster, Aidan T Miller, Ashley S Harms
Session: Wednesday, 4-6PM
27. D1-MSNs Acquire New Epigenetic and Transcriptional States During Levodopa-Induced Dyskinesia Development and Persistence
Henrique de Oliveira Amaral
Henrique de Oliveira Amaral, David Figge, David G. Standaert, Karen L. Jaunaraajs
Session: Wednesday, 4-6PM
28. Inhibitory inputs to PPG neurons in the nucleus of the solitary tract: Dynamic communication with the extended amygdala
Nilay Dalvi
Nilay Dalvi, Sai Pochana, Miguel Duran, Jennifer Willis, J. Andrew Hardaway
Session: Wednesday, 4-6PM
29. Gender-Based Discrimination and Health: Sleep and Pain Sensitivity in Transgender and Non-Binary Adults.
Caroline Webb
Caroline K. Webb, Samantha Q. Stocking, Hazel L. Payne, Shruti R. Gunapati, Nathaniel M. Goldfeiz, Ayona Roychowdhury, Stacie K. Totsch, Tammie L. Quinn, Edwin N., Aroke, Mieke B. Thomeer, Lyse A. Norian, Sarah MacCarthy, Burel R. Goodin, & Robert E. Sorge.
Session: Wednesday, 4-6PM
30. GABAergic mechanisms support fear memory encoding in the dorsal peduncular cortex
Zephyr Desa
Zephyr R. Desa, Rodrigo Campos-Cardoso, Brianna L. Fitzgerald, Alana G. Moore, Jace L. Duhon, Victoria A. Landar, Roger L. Clem, Kirstie A. Cummings
Session: Wednesday, 4-6PM
31. Characterizing a μ -Opioid Receptor-Enriched Neuronal Subtype in the Nucleus Accumbens Shell
Olivia Drake
Olivia R. Drake, Jasper A. Heinsbroek, Jamie Peters, Lara Ianov, Jeremy J. Day
Session: Wednesday, 4-6PM

Poster Presentations

32. Perceptual Learning Improves Pattern Classification in the Primary Visual Cortex Representation of the Trained Location
Pinar Demirayak
Pinar Demirayak, Paul Stewart, Elam Cutts, Madeline Ragland, Elliot Maxwell, Marcello Maniglia, Samyukta Jayakumar, Jaap Munneke, Nicholas Turk-Browne, Aaron R Seitz, Kristina M Visscher
Session: Wednesday, 4-6PM
33. Development of a T1 Mapping Pipeline for Ferritin-Based Iron Quantification: A Preliminary Step Toward Quantitative MRI of cerebral hemorrhages.
Ogechukwu NGWU HYACINTH
Ogechukwu NGWU-HYACINTH and Mark Bolding
34. The role of HIV protein Tat in psychostimulant abuse
Yanqi Zhu
Cesar E. Hernandez, Yanqi Zhu, Mary Hongying Chen, Heinrich J. G. Matthies, Hunter S. Goffinett, Branden Duyvestyn, Clarence H. Mullins, Angela M. Carter, Ivet Bahar, Aurelio Galli
Session: Wednesday, 4-6PM
35. Development of an ethologically relevant rodent model of social stress
Brianna Fitzgerald
Fitzgerald, B.L. and Cummings, K.A.
Session: Wednesday, 4-6PM
36. The rostral lateral septum orchestrates state-dependent inhibition of cued threat memory across the estrous cycle
Nina E. Baumgartner
Nina E. Baumgartner, Neysa S. Dechachutinan, Kristen H. Adcock Binion, Gaven C. Bell, Amuktha S. Dasari, Audrey M. Dahlen, Gavin C. Newberry, Meghna Penumudi, Timothy H. Rumbell, Jeremy M. Simon, & Elizabeth K. Lucas
Session: Wednesday, 4-6PM
37. Modulation of Cellular and Mitochondrial Glycosylation in Neuroinflammation Models
Meghana Tummala
Meghana Tummala, Adam Amissah, Meghana Madabhushi, Ashlyn Hinton, Juhi Samal
Session: Wednesday, 4-6PM
38. Understanding Extracellular Vesicles-Brain communications with Integrated Computational and Experimental Approaches
Md Sorwer Alam Parvez
Md Sorwer Alam Parvez, Takahiro Kochi, Eisuke Dohi, Phoebe Garcia, Ken Matoba, James Mobley and Shin-Ichi Kano
Session: Wednesday, 4-6PM
39. Circulating EV miRNAs Modulate GABAergic Synaptic Function of mPFC
Mirmohammadali Mirramezani Iazamini
Mirmohammadali Mirramezani Iazamini, Jose Francis-Oliveira, Phoebe A. Garcia, Eisuke Dohi, Ken Matoba, Minae Niwa, and Shin-ichi Kano
Session: Wednesday, 4-6PM
40. A new framework for modeling latent learning
Eli Mrug
Eli Mrug, Kauê M. Costa
Session: Wednesday, 4-6PM
41. An investigation of the relationship between glucagon-like peptide-1 and estradiol in a mice model of menopause
Neysa Dechachutinan
Neysa S. Dechachutinan, Nina E. Baumgartner, & Elizabeth K. Lucas
Session: Wednesday, 4-6PM

Poster Presentations

42. Characterizing the genetic landscape of MAPT regulation by identifying cis-regulatory elements and assessing the functional impact of genetic variation
Henry Limbo
Henry L. Limbo, Rebecca M. Hauser, Belle A. Moyers, J. Nicholas Brazell, Shelby N. Lauzon, Erin A. Barinaga, S. Quinn Johnston, Brianne B. Rogers, J. Nicholas Cochran
Session: Wednesday, 4-6PM
43. Dynamic Microcircuit Modulation of Basolateral Amygdala During Threat Memory Learning
Alexa Jo Tellez
Alexa J. Tellez, Bryana Whitaker Hardin, & Elizabeth K. Lucas
Session: Wednesday, 4-6PM
44. Investigating the Interplay between Inflammation, Depression, Conditioned Pain Modulation, and Gender Minority Status
Samantha Stocking
Samantha Q. Stocking, Caroline K. Webb, Hazel L. Payne, Shruti R. Gunapati, Nathaniel M. Goldfeiz, Ayona Roychowdhury, Stacie K. Totsch, Tammie L. Quinn, Edwin N. Aroke, Sarah MacCarthy, Mieke B. Thomeer, Lyse A. Norian, Burel R. Goodin, & Robert E. Sorge
Session: Thursday, 10AM-12PM
45. Calcium dynamics of amygdala microcircuits during valence processing
Bryana Whitaker Hardin
Bryana Whitaker Hardin, Alexa Jo Tellez, and Elizabeth K. Lucas
Session: Thursday, 10AM-12PM
46. FcyR- and CD9-dependent synapse engulfing microglia in the thalamus drives cognitive impairment following cortical brain injury
Ken Matoba
Ken Matoba, Takahiro Kochi, Oluwaseun Fatoba, Inssaf Berkiks, Jana Badrani, Harrison J Strong, Yassin R Mreyoud, Hency Patel, David K. Crossman, Minae Niwa, and Shin-ichi Kano
Session: Thursday, 10AM-12PM
47. Probiotic administration of Lactobacillus paracasei attenuates early cognitive impairment in TgF344-AD rats
Brea Ford
Brea J. Ford, Anisha Banerjee, Nateka Jackson, SarahPenny Ryan, DJ Adcock, Daniel Knight, Lori L. McMahon, Thomas W. Buford, Abbi R. Hernandez
Session: Thursday, 10AM-12PM
48. Behavioral Phenotypes and Morphology of the R335X Mutation of the PTEN Gene in Mouse Model.
Halla Stallworth
Halla Stallworth¹, Mackenzi Prina¹, Xia Qiangqiang¹, Nicole Desmet^{1,2}, Asan Abdulkareem^{1,2}, Craig Powell¹, Kristopher Kahle³, Bryan W. Luikart¹
Session: Thursday, 10AM-12PM
49. Estrous Cycle Regulation of the Transcriptional Landscape of Basolateral Amygdala Neurons
Peter Teravskis
Peter J Teravskis, MD & Elizabeth K Lucas, PhD
Session: Thursday, 10AM-12PM
50. Glutamate transmission during sequential motor tasks in a murine model of cortical Lewy pathology
Zoe Fokakis
Zoe Fokakis, B.S.; Angel Varghese; J. Andrew Hardaway, Ph.D.; Laura Volpicelli-Daley, Ph.D.
Session: Thursday, 10AM-12PM
51. Resolving Single Cone Receptive Field Centers in Macaque LGN Neurons
Keaton Ramsey
Keaton Ramsey, Alexander Meadway, Philipp Tellers, Cyril N.A. Nyankerh, Lawrence C. Sincich
Session: Thursday, 10AM-12PM

Poster Presentations

52. Relationship between CD3+ T cells and social behavior across neurodevelopment in mice
Vaishnavia Balaji
Vaishnavi Balaji, Eisuke Dohi, Inssaf Berkiks, Rinako Tanaka, Tomoaki Murakawa, Shinichi Kano
Session: Thursday, 10AM-12PM
53. Preserving Native Tumor Cellularity, Extracellular Matrix Architecture, and Tumor Microenvironment Complexity in a 3D Miniaturized Glioma Organotypic Slice Model
Parth Kommidi
Parth Kommidi, Dilani Patel
Session: Thursday, 10AM-12PM
54. Quantitating Gene Expression Levels in Zebrafish Olfactory Epithelia
Hayleigh Smith
Hayleigh Smith, Lynne M. Nacke, Debangana Chakravorty, Ankur Saxena
Hayleigh Smith, Lynne M. Nacke, Debangana Chakravorty, Ankur Saxena
Session: Thursday, 10AM-12PM
55. A Modular Open Source Olfactometer for Behavioral Research
Jeff Horbatiuk
Jeff Horbatiuk, Kaue Machado Costa
Session: Thursday, 10AM-12PM
56. Tabernanthalog: A Case for Pain Management
Samantha Way
Schwarz, A., Way, S., Mesco, A., Peters, J., and Heinsbroek, J.A.
Session: Thursday, 10AM-12PM
57. Endogenous Synuclein Tunes Multivesicular Release
Xiaohui Yan
Xiaohui Yan, Reagan Rennock, J Wadiche
Session: Thursday, 10AM-12PM
58. Striatal Astrocyte and Interneuron Activity Revelations from Full Length Mutant Huntingtin Expressing Mouse Models
Jewel S. Hairston
Jewel S. Hairston^{1,2}, Hope K. Migwi³, Michelle Gray, PhD¹
Session: Thursday, 10AM-12PM
59. Mechanical and Psychosocial Factors effect individuals with Parkinson's disease on dynamic stability during postural disturbances
Alyson Moll
Moll AN, Kongsuk J, Fowler M, Walker HC, and Hurt CP
Session: Thursday, 10AM-12PM
60. The role of prelimbic interneurons in reward learning
Hunter Franks
Hunter Franks, Julia Gonzalez, Kirstie Cummings
Session: Thursday, 10AM-12PM
61. Synuclein dependence of endocannabinoid release varies anatomically
Gabrielle Smith
Reagan L. Pennock, Gabrielle N. Smith, Linda Overstreet-Wadiche, Jacques I. Wadiche
Session: Thursday, 10AM-12PM
62. The voltage- gated calcium channel Cav1.4 and the auxiliary subunit, $\alpha 2\delta 4$, in retinal synaptic function and circuitry.
Abubakar Sadik Mohammed
Abubakar Sadik Mohammed, Gillian Huskin, Choice I Uwumwonse, Ung Trong, Konstantin Gavrikov, Yuchen Wang
Session: Thursday, 10AM-12PM

Poster Presentations

63. Brain region specific changes in cortical perineuronal net density (PNNs) after heroin self-administration and extinction
Stephen Holbert
Hauke, S., Holbert, S., Guaderrama, S. D., Kregar, N., Schwarz, A. M., and Heinsbroek, J. A.
Session: Thursday, 10AM-12PM
64. Porphyromonas gingivalis infection increased the accumulation of lipid droplets and impaired the functionality of microglia cells
Muhammad Shahid Riaz
Muhammad Shahid Riaz Rajoka, Wei Li, Kristina Nicole Valladares, Chloe La Prairie, Ping Zhang
Session: Thursday, 10AM-12PM
65. Analyzing Estradiol-Driven Transcriptional Activity in Preproglucagon Expressing Neurons of the Nucleus of the Solitary Tract
Meghna Penumudi
Meghna Penumudi, Sai Pochana, Nina Baumgartner, Neysa Dechachutinan, J. Andrew Hardaway, & Elizabeth Lucas
Session: Thursday, 10AM-12PM
66. EEG Neurofeedback Training to Improve Inhibitory Abilities in Younger Adults
Ashton Weber
Ashton Weber, Kristina Visscher, Ph.D, and Keith McGregor Ph.D.
Session: Thursday, 10AM-12PM
67. ZEB1 as a mediator of neuronal ER stress response in Alzheimer's Disease
Jenna Ekstrom
Jenna Ekstrom, Cameron Church, Azariah Kaplelach, Sorwer Parvez, Lindsay Rizzardi
Session: Thursday, 10AM-12PM
68. Spatially distinct macroglial responses to acute intraocular pressure elevation in the living human macula
Ryan Strickland
Ryan G Strickland, McKenna M Somerville, Sydney Lin, Mary Anne Garner, Alan S Blake, Gregory H Grossman, Massimo A Fazio, Christopher A Girkin, Alecia K Gross
Session: Thursday, 10AM-12PM
69. Acute Intraocular Pressure Elevation Induces Microglial Activation and SASP Signaling in the Human Macula
McKenna Somerville
McKenna M. Somerville, Ryan G. Strickland, Sydney Lin, Mary Anne Garner, Massimo A. Fazio Christopher A. Girkin, Alecia K. Gross
Session: Thursday, 10AM-12PM
70. Subthalamic nucleus deep brain stimulation local evoked potentials differ based on stimulation and recording depth in three patients with Parkinson disease
Sarah Brinkerhoff
Sarah A. Brinkerhoff, Hannah G. Cowart, Arie Nakhmani, Archana Mysore, Marshall T. Holland, J. Nicole Bentley, Jasmine Thum, Harrison C. Walker
Session: Thursday, 10AM-12PM
71. Compensatory Regulation of Actin-Severing Proteins Supports Recovery in Rod Photoreceptors Lacking Cofilin1
Sydney Lin
Sydney Lin, Jean Sun, Mary Anne Garner, Alecia K. Gross
Session: Thursday, 10AM-12PM
72. Cognitive Control Mechanisms in Patients with Movement Disorders Undergoing Deep Brain Stimulation Surgery
Archana Shashidhar Mysore
A. Mysore, J. Thum, M. Holland, H. Walker, N. Bentley
Session: Thursday, 10AM-12PM
73. ALS-linked proteins are enriched in the ribonucleoprotein complex of ALS-associated circular RNA hsa_circ_0000119
Kate Smith
Katherine A. Smith, Blaine Roberts, and Peter H. King
Session: Thursday, 10AM-12PM

Poster Presentations

74. Training to use peripheral vision after simulated central vision loss: behavioral outcomes
Elam Cutts
Elam Cutts, Pinar Demirayak, Marcello Maniglia, Samyukta Jayakumar, Paul Stewart, Madeline Ragland, Jaap Munneke, Nicholas Turke-Browne, Aaron Seitz, Kristina Visscher
Session: Thursday, 10AM-12PM
75. The role of STING signaling and microglial activation in trichloroethylene-related mitochondrial damage in a Parkinsonian mouse model
Neda Ilieva
Neda M. Ilieva, Ashley Adamson, Allie Smith, Teel Walters, Gwendolyn Cohen, Briana De Miranda
Session: Thursday, 10AM-12PM
76. Burst Frequency-Dependent Prominence of Evoked Resonant Neural Activity in DBS
Alex Varghese
A. Varghese, S. Brinkerhoff, A. Nakhmani, J. Thum, M. Holland, N. Bentley, H. Walker
Session: Thursday, 10AM-12PM
77. The role of T cell activation in solvent induced Parkinson's disease
Gwendolyn Cohen
Gwendolyn Cohen, Allie M. Smith, Teel Walters, Ashley Adamson, Mohammed A. Ghalib, Neda Ilieva, Jhodi Webster, Briana R. De Miranda
Session: Thursday, 10AM-12PM
78. Cellular mechanisms of Tabernanthalog for the treatment of opioid use disorder
Christopher Driskill
Driskill, C., Drake, O., Kregar, N., Newman, C., Day, J., and Peters, J.
Session: Thursday, 10AM-12PM
79. A Preliminary Examination of Tau and Functional Networks
Alex Kahn
Alex T. Kahn M.S., David S. Jin Ph.D., Kristina M. Visscher Ph.D.
Session: Thursday, 10AM-12PM
80. Modulating Attention and Cognitive Performance in ADHD with taVNS Using EEG and Driving Simulation
Christian Lopez Blanco
Christian Lopez Blanco, William Jamie Tyler
Session: Thursday, 10AM-12PM
81. Assessing NMDA receptor distribution by cortical layer in human postmortem dorsolateral prefrontal cortex
Cheyenne Griffin
Cheyenne Griffin, Kirsten Schoonover
Session: Thursday, 10AM-12PM
82. Evaluating the therapeutic value of disrupting Tau-SH3 Interactions
Aanishaa Jhaldiyal
Aanishaa Jhaldiyal, Natalie Davis, Mary Bullock, Anthoni Goodman, Erik Roberson
Session: Thursday, 10AM-12PM
83. Globus Pallidus Internus deep brain stimulation local evoked potentials differ based on stimulation and recording depth in two patients with Parkinson's disease
Hannah Cowart
Hannah Cowart, Sarah A. Brinkerhoff, Arie Nakhmani, Archana Mysore, Marshall T. Holland, J. Nicole Bentley, Jasmine Thum, Harrison C. Walker
Session: Thursday, 10AM-12PM
84. Infralimbic interneurons' dynamic activity is critical for switching between high and low fear states
Rodrigo Campos Cardoso
Authors: Rodrigo Campos-Cardoso, Hunter T. Franks, Noelle R. Potter, Zephyr R. Desa, Brianna L. Fitzgerald, Victoria A. Landar, Faith A. Brown and Kirstie A. Cummings
Session: Thursday, 10AM-12PM

Poster Presentations

- 85. The effects of trichloroethylene exposure on cognitive behavior in PFF injected mice.
Allie Smith
Allie M. Smith, Gwendolyn Cohen, Ashley Adamson, Briana De Miranda
Session: Thursday, 10AM-12PM
- 86. Tiam1 orchestrates heterogeneous VTA microcircuits to bidirectionally gate opioid reward and withdrawal
Qisheng Wang
Qisheng Wang , Fenfen Qin , Changqun Yao, Lingyong Li
Session: Thursday, 10AM-12PM
- 87. Multi-omic Profiling Reveals Cell-Type-Specific Gene Regulatory Networks in the Rat Nucleus Accumbens
Guy Twa
Guy M. Twa, Cathy Newman, Robert A. Phillips III, Jen Tuscher, Jeremy J. Day
Session: Thursday, 10AM-12PM
- 88. Role of KCNQ2/3 channels in striatal response to dopamine and cocaine conditioned place preference
Emily Jorgensen
Emily T. Jorgensen, N. Dalton Fitzgerald, and Jeremy J. Day
Session: Thursday, 10AM-12PM

Thank you for attending!