### **NEUR Poster Presentations** continued

26 Assessment of Human Mental Workload Dynamics During High and Low Demand Cognitive-motor Tasks

**Daniel Gross** 

27 Risk, Reward, and Punishment: Deciphering the Dynamics Among College Students

Sasha Goyal, Michelle Yu

- 28 Quantifying the Effects of Gender-Affirming Hormone Therapy on Bone
  Density of Transgender Patients: Emerging Results of a Single-Center Study
  Osei Bonsu
- 29 Computational Modeling of Spinal Cord Stimulation for Restoring Somatosensation after Amputation

Ashlyn N. Casp

30 Associations Between Infant Self-regulation and Socio-emotional Development

Cansu Erkan

31 Exploring How the Length and Frequency of a Word Impacts Literacy Performance in High and Low Skill Readers

Sabrina Chen, Asmita Brahme, Stuti Khanna, Nesochi Mere, Emma Martin

32 The Relationship Between Reading Skill and the Tendency to Produce Typical Spellings/Pronunciations for Pseudowords

Sophia Hale, Stuti Khanna

33 Addressing Health Disparities in Neurorehabilitation: Aphasia Assessment for Spanish-English Bilingual Speakers

Marcia Morales Contreras

- **34 Disfluency Timing in Speakers with Agrammatic Aphasia**Victoria Aloba
- 35 Building a Growing Genomic Data Repository for Maternal and Fetal Health through the PING Consortium

Clara Abdelmalek

36 Establishing an Efficient Analysis Pipeline for in vitro Single Cell Tracking through Cellpose and Trackmate

Neha Chandra

- 37 Developing Virtual Experiential Neuroanatomy Educational Resources
  Hana Tujjar, Sophie Hale, Alexandra Tara Close
- 38 High Spatial & Temporal Resolution Brain Scan Using AI
  Cartor Hancock





NACS Research Day and NEUR Research Fair April 26, 2024

### Schedule

10:00am - 11:30am

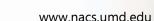
Welcome & research talks by NACS students (1103 BRB)

11:00am - 1:00pm

**NEUR poster session (BRB colonnade)** 

12:00pm - 1:00pm

**Lunch (BRB colonnade)** 



# **NACS Student Speakers**

(10:00am-11:30am, 1103 BRB)

#### Zeynep Atak (advisors Tarik Haydar and Colenso Speer)

Disrupted Neurogenesis from Basal Intermediate Precursor Cells Leads to Altered

Development of the Postnatal Neocortex in the TcMAC21 Humanized Mouse Model of

Down Syndrome

#### Yash Kommula (advisor Carson Smith)

Acute Aerobic Exercise and Mental-Health-Related Brain Function

#### Anna Packy (advisor Rodolphe Gentili)

Cortical Correlates of Collaborative Human-Robot Team Environments

#### Xinchi Yu (advisor Ellen Lau)

Representing Objects and Structures in Human Working Memory

### **NEUR Poster Presentations**

(11:00am-1:00pm, BRB Colonnade)

- 1 Kif18a Function in a Genetically Engineering Mouse (GEM) Model of Glioblastoma with Whole Genome Duplication
  Sean Jameson
- 2 Characterizing Retinal Inputs to the Suprachiasmatic Nucleus Natalie Yeager
- 3 Elucidating the Interrelationship between Cadherins and Elp1 during
  Trigeminal Ganglion Assembly
  Trinity Obiorah
- 4 Synapses Development in Mouse Purkinje Cell in P3 and P7 Cells
  Sanjana Chimaladinne
- 5 Mitochondrial Morphology in Orbitofrontal Cortical Neurons During Incubation of Oxycodone Craving Xiang Luo
- 6 Effects of Glia Cell Density in the Plasticity of Neuronal Astrocytic Co-cultures
  Noah Glaser
- 7 Repeated Low-Level Blast Overpressure (BOP) Exposure's Effect on Astrocyte
  Reactivity in the Cortex in a Rat Model
  Asbah Oadri
- 8 The Subcellular Localization of HDAC4 in Anterior Intralaminar Nucleus of Thalamus after Prolonged Abstinence from Methamphetamine Self-administration

  Julia Firlie
- 9 A Novel Role of Submedius Thalamus in Incubation of Oxycodone Craving Jessica Strauch

## **NEUR Poster Presentations** continued

10 Pyrethrin and Lidocaine on Action Potential Properties of Medial and Lateral Giant Fibers in Earthworms

Nada Abouelseoud, Lani Tran, Trinity Obiorah

- 11 Effects of Eserine Exposure on the Cricket Cercal Sensory System Mahan Haghighatian, Hartley Carlson, Michail Siokis
- 12 Social and Physical Environments Shape Alcohol Sensitivity in Crayfish Matthew M. Williams, Natalie C. Tai
- 13 Orientation Selectivity in the Mammalian Retina is Dependent on Widefield Amacrine Cell Orientation in Space

  John Pisano
- 14 Auditory Deprivation Leads to Shrinkage in Low Best Frequency Nucleus Magnocellularis but Not in High Best Frequency Regions

  Nada Abouelseoud
- 15 The Role of Corticocollicular Neurons in Auditory Perceptual Learning
  Nicole Miko
- 16 The Role of the 5-HT1b Receptor in Experience Dependent Critical Period Plasticity

Jacob Epstein

- 17 Understanding the Impact of Acute Alcohol Administration on Fear and Anxiety Circuitry: Study Overview and Preliminary Behavioral Results
  Gaby B. Castro
- 18 Effect of Minocycline on Tonic and Phasic Craving in Individuals with Alcohol
  Use Disorder and Healthy Controls
  Natalia Rincon
- 19 Sleep Quantification to Demonstrate Experience-dependent Sequence
  Plasticity in Mouse Primary Visual Cortex

  Adam M. Didouchevski
- **20 Perception of Optogenetic Stimulation in Mouse Auditory Cortex**Gabrielle Stepens
- 21 RTK Inhibition and Photodynamic Therapy as Combinatorial Treatment for Glioblastoma Multiforme Brain Cancer

Nada Fadul

- 22 Observing How Race, Ethnicity, and Socioeconomic Status Affect Age of Autism Diagnosis at Children's National Hospital

  Clara Abdelmalek
- 23 Exploring Sleep-Dependent Memory Consolidation in Preschoolers
  Cansu Erkan, Leah Freisinger, Anna Karan, Rishita Sharan
- 24 The Association Between the P300 and Internalizing Behaviors during Adolescence

Hailey Steier

25 Comparing Gut Microbiome Diversity and Function Between Individuals with Alcohol Use Disorder and Healthy Controls

Natalia Rincon