

# UTSA Brain Health Consortium

**1<sup>st</sup> Investigator's Workshop – Loeffler Room, BSB 3.03.02**

**Tuesday, January 8, 2019**

8:30-9:00am Breakfast

**Session 1: Precision Medicine** (Chair – Jenny Hsieh)

9:00-9:15 **Jenny Hsieh/Chris Navara** (Biology, COS) Precision models of brain development and disease

9:15-9:30 **Asif Maroof** (Biology, COS) Neurodegenerative disease modeling using differentiated human pluripotent stem cells

9:30-9:45 **John McCarrey** (Biology, COS) Epigenetics: the good, the bad, and the ugly

9:45-10:00 **Brian Hermann** (Biology, COS) Using single cell genomics to uncover heterogeneity and reveal cell state trajectories

10:00-10:15 **Doug Frantz** (Chemistry, COS) Chemical biology approaches to probe brain disorders

10:15-10:30 **Stan McHardy** (Chemistry, COS) Modern medicinal chemistry/drug development methods and strategies for CNS diseases

10:30-10:45 Coffee break

**Session 2: Neuroscience** (Chair – Isabel Muzzio)

10:45-11:00 **Isabel Muzzio** (Biology, COS) Variables affecting spatial representations and memory in young and old animals

11:00-11:15 **Fidel Santamaria** (Biology, COS) Convergent computational and experimental studies of cerebellar function in health and disease

11:15-11:30 **Lindsey MacPherson** (Biology, COS) Gut-brain signaling in health and disease

11:30-11:45 **Charlie Wilson** (Biology, COS) Oscillations, resonance, and the activity of neurons

11:45-12:00 **Hyung-gon Lee** (Biology, COS) Pathogenic mechanisms of Alzheimer's disease

12:00-12:15 **Astrid Cardona** (Biology, COS) Neuroprotective effects of fractalkine in CNS inflammation via regulation of microglia activation

12:15-1:15 Lunch

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## **Session 3: Neuroengineering** (Chair – Amina Qutub)

- 1:15-1:30 **Amina Qutub** (BME, COE) *Digitizing brain health: from neurogenesis to models of daily behavior*
- 1:30-1:45 **Yufei Huang** (ECE, COE) *Intelligent brain health research: when brain health meets AI*
- 1:45-2:00 **Taposh Banerjee** (ECE, COE) *Sequential inference and change point detection*
- 2:00-2:15 **Gabriela Uribe** (BME, COE) *Wireless magnetothermal excitation and inhibition of neural activity*
- 2:15-2:30 **JingYong Ye** (BME, COE) *Imaging and biosensing techniques for brain research*
- 2:30-2:45 **Marcelo Marucho** (Physics, COS) *Bionanowire properties of cytoskeleton filaments and their role in information processing*
- 2:45-3:00 *Coffee break*

## **Session 4: Psychology & Behavior** (Chair – Sandra Morissette)

- 3:00-3:15 **Sandra Morissette** (Psychology, COLFA) *Military brain health and disease*
- 3:15-3:30 **Alicia Swan** (Psychology, COLFA) *Assessment of physical and mental health outcomes to guide improved health and longevity*
- 3:30-3:45 **Ed Golob** (Psychology, COLFA) *Brain-computer interface*
- 3:45-4:00 **Nicole Wicha** (Biology, COS) *Using EEG to understand the brain-basis of human behavior*
- 4:00-4:15 **Lee Mason/Alonzo Andrews** (Interdisciplinary Learning and Teaching, COEHD) *Analyzing the functional language of individuals with autism*
- 4:15-4:30 **John Quarles** (Computer Science, COS) *The effects of cybersickness in virtual reality on the brain*
- 4:30-5:30 *Happy Hour - networking and refreshments*

*Thanks to the COS Dean's support for catering and refreshments*