

### **1. Dr. Alan Francis, PhD (Harvard University)**

Neuroscientist Harvard Medical School  
Laboratory of Neuropsychiatry & Neuromodulation  
AA Martinos Center for Biomedical Imaging  
Massachusetts General Hospital

#### **“Impaired Decision Making in Substance Use Disorders”**

This lecture will examine the Neurobiological and cognitive basis of decision making in addictive disorders. We will be examining several case studies as examples.

### **2. Prof. Amy Arnsten, PhD (Yale University)**

Albert E. Kent Professor of Neuroscience and Professor of Psychology; Member, Kavli Institute of Neuroscience at Yale University

#### **"The Brain's Response to Stress - How Our Brains May Be Altered During the COVID-19 Pandemic”**

The presentation by Arnsten will talk about the primitive brain circuits that govern emotion, and the higher brain circuits in prefrontal cortex that mediate cognition, and how these are altered by neurochemical changes in brain during uncontrollable stress. It is hoped that this lecture will provide insight about why our mental states can change during a stressor such as the COVID-19 pandemic, e.g. making us distracted, forgetful and anxious, and why it is so important to strengthen prefrontal cortical functions when facing an invisible threat such as a virus that requires abstract thinking to keep us safe.

### **3. Prof. Alexandra Basilakos, PhD (University of South Carolina)**

A. Alexandra Basilakos Kennedy, PhD, CCC-SLP  
Center for the Study of Aphasia Recovery (C-STAR)  
Department of Communication Sciences and Disorders  
Arnold School of Public Health  
University of South Carolina

#### **“Language and the Brain: Using Neuroimaging to Understand Aphasia”**

Language is a fascinating and complex topic. Early and influential neurologists, like Paul Broca and Carl Wernicke, showed how brain damage can affect communication, which provided some of the first insights into the relationship between the brain and language. Today, advances in technology and neuroimaging

capabilities have expanded our knowledge about the relationship between the brain and language. This technology has helped us understand aphasia, a language disorder that commonly results from stroke. Accordingly, the purpose of this talk will be to discuss aphasia, its neuroanatomical correlates, and how neuroscience has helped clinicians and scientists improve aphasia therapy.

#### **4. Prof. Erik Herzog, PhD (Washington University)**

Viktor Hamburger Professor of Arts and Sciences  
Professor of Biology and Neuroscience  
Director, ENDURE Program for Undergraduate Neuroscience Diversity  
Associate Director, Division of Biological and Biomedical Sciences  
Washington University

##### **“What wakes you up: Networked clocks in the brain”**

This talk will discuss the molecules, cells and circuits underlying daily rhythms in the brain and behavior. Using real-time imaging of gene expression and neural activity, these studies reveal how circadian cells synchronize to each other to drive rhythms including sleep-wake, metabolism and hormone secretion.

#### **5. Prof. James McGaugh, PhD (University of California, Irvine)**

Distinguished Professor Emeritus  
Department of Neurobiology and Behavior  
Center for the Neurobiology of Learning and Memory  
University of California, Irvine

##### **“Making lasting memories”**

Most of our experiences are briefly remembered and then forgotten. But, as memories are essential for survival, important experiences must be preserved. My research has investigated, in both animal and human subjects, the neurobiological systems that have the important role of regulating the storage of memories. The research has focussed on stress-activated hormones that influence activity of brain systems involved in regulating the consolidation of memories. These neurobiological systems have the important role of insuring that our emotionally significant experiences are well remembered.

## **6. Adj. Prof. Stephanie Rogers (Fordham University)**

Adjunct Professor at Fordham University  
Producer of "A Lot on the Mind"

### **"Introduction to mental health and strategies for its maintenance"**

The talk will cover the three major neurotransmitters, serotonin, norepinephrine, and dopamine's role in mental health. We will discuss a few of the major brain regions involved in anxiety and stress and how our environment, both external and internal, can change the balance of these neurotransmitters to affect our mental health. The talk will conclude with some strategies for maintaining mental health.