

2020 BRAIN CONFERENCE

# NAVIGATING MODERN NEUROSCIENCE

DALLAS, TX



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The National Neuroscience Curriculum Initiative (NNCI) is an NIH-funded (R25 MH101076-02S1 and R25 MH086466-07S1) collaboration between educators and neuroscientists to create shared resources for effectively teaching neuroscience to psychiatry trainees and to provide faculty training on how to implement them. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices or organizations imply endorsement by the U.S. Government.

## OVERVIEW

Each year, the impact of modern neuroscience on psychiatry becomes increasingly clear. While biological models of mental illness once emphasized “chemical imbalances”, modern perspectives increasingly incorporate the role of genetics and epigenetics, a more nuanced understanding of molecular pathways, the importance of neuroplasticity, functional dynamics of neural circuits, and a range of novel therapeutic approaches.

But the challenge of integrating this content into our practice – and into the curricula that will train the next generation of psychiatrists – remains massive. Which content should be emphasized? And, critically, how can we bring this material to life in a compelling and engaging manner?

In this year’s BRAIN conference, participants will have the opportunity to define their own personal learning objectives – both as a teacher and as a student. They will then select from sessions that are designed to bring a wide range of neuroscience content to life, employing a diverse set of teaching methods.

BRAIN 2020: Navigating Modern Neuroscience.

## INTENDED AUDIENCE

Medical educators with or without a neuroscience background neuroscientists engaged in medical education, students, and residents.

## PRACTICE GAP

Psychiatry is in the midst of a paradigm shift. The diseases we treat are increasingly understood in terms of the complex interactions between genetic and environmental factors and the development and regulation of neural circuitry. Yet most psychiatrists have a relatively minimal knowledge of neuroscience. This may be due to many factors, including the difficulty of keeping pace with a rapidly advancing field or a lack of exposure to neuroscience during training. To date, neuroscience has generally not been taught in a way that is engaging, accessible, and relevant to patient care. Much of neuroscience education has remained lecture-based without employing active, adult learning principles. It is also frequently taught in a way that seems devoid of clinical relevance, disconnected from the patient’s story and life experience, and separated from the importance of the therapeutic alliance. Regardless of the reason, what has resulted is an enormous practice gap: despite the central role that neuroscience plays in psychiatry, we continue to under-represent and fail to integrate this essential perspective in our work.

## EDUCATIONAL OBJECTIVES

This year’s BRAIN Conference will continue to focus on strategies to teach neuroscience and incorporate a modern neuroscience perspective into clinical care. This half-day conference will include a series of workshops designed to:

- 1) Empower faculty with or without a neuroscience background to feel confident that they can teach neuroscience effectively;
- 2) Engage conference attendees to participate as both student and instructor using new and innovative teaching methods; and
- 3) Provide programs with resources for how they might address, teach, and assess neuroscience-specific milestones.

Through large and small group activities, attendees will receive training in various new and creative approaches to teaching neuroscience.

The registration fee for the BRAIN Conference will cover all sessions, hand-outs, and breakfast. Sign up online when registering for the AADPRT meeting. We hope you will join us for a fun and exciting morning!

## SCIENTIFIC CITATIONS

1. Insel, T. The future of psychiatry (= Clinical Neuroscience). April 20, 2012. <https://www.nimh.nih.gov/about/directors/thomas-insel/blog/2012/the-future-of-psychiatry-clinical-neuroscience.shtml>. Accessed October 24th, 2017.
2. Ross, DA, Travis, MJ, Arbuckle, MR. "The future of psychiatry as clinical neuroscience: Why not now?" JAMA Psychiatry, 2015; 72(5):413-414. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5347976/>
3. Arbuckle, MR, Travis, MJ, Ross, DA. "Integrating a neuroscience perspective into clinical psychiatry today". JAMA Psychiatry, 2017; 74(4):313-314. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5501322/>

**TABLE 1. MK3. CLINICAL NEUROSCIENCE MILESTONES**

### Neurodiagnostic Testing

Level 1	Knows commonly available neuroimaging and neurophysiologic diagnostic modalities and how to order them
Level 2	Knows indications for structural neuroimaging (cranial computed tomography [CT] and magnetic resonance imaging [MRI]) and neurophysiological testing (electroencephalography [EEG], evoked potentials, sleep studies)
Level 3	Recognizes the significance of abnormal findings in routine neurodiagnostic test reports in psychiatric patients
Level 4	Explains the significance of routine neuroimaging, neurophysiological, and neuropsychological testing abnormalities to patients. Knows clinical indications and limitations of functional neuroimaging.
Level 5	Integrates recent neurodiagnostic research into understanding of psychopathology

### Neuropsychological Testing

Level 1	Knows how to order neuropsychological testing
Level 2	Describes common neuropsychological tests and their indications
Level 3	Knows indications for specific neuropsychological tests and understands meaning of common abnormal findings
Level 5	Flexibly applies knowledge of neuropsychological findings to the differential diagnoses of complex patients

### Neuropsychiatric Co-morbidity

Level 2	Describes psychiatric disorders co-morbid with common neurologic disorders and neurological disorders frequently seen in psychiatric patients
Level 4	Describes psychiatric comorbidities of less common neurologic disorders and less common neurological comorbidities of psychiatric disorders

### Neurobiology

Level 3	Describes neurobiological and genetic hypotheses of common psychiatric disorders and their limitations
Level 4	Explains neurobiological hypotheses and genetic risks of common psychiatric disorders to patients
Level 5	Explains neurobiological hypotheses and genetic risks of less common psychiatric disorders to patients. Integrates knowledge of neurobiology into advocacy for psychiatric patient care and stigma reduction

### Applied Neuroscience

Level 2	Identifies the brain areas thought to be important in social and emotional behavior (Areas might include dorsolateral prefrontal cortex, anterior cingulate, amygdala, hippocampus, etc.)
Level 4	Demonstrates sufficient knowledge to incorporate leading neuroscientific hypotheses of emotions and social behaviors into case formulation. (Social behaviors might include attachment, empathy, attraction, reward/addiction, aggression, appetites, etc.)

## PROGRAM ASSESSMENT

Throughout the day we will ask you to provide feedback immediately after each workshop at:

<http://tinyurl.com/brain2020survey>

These surveys should take fewer than 5 minutes to complete. At the end of this year's BRAIN Conference we will ask you to complete an additional survey relevant to the BRAIN Conference Series and in order to obtain CME credit for this event. This brief survey will be part of the annual meeting survey distributed by AADPRT. The results of these surveys will be used to determine the effectiveness of this year's meeting and the BRAIN Conference series in achieving set learning objectives and educational goals.

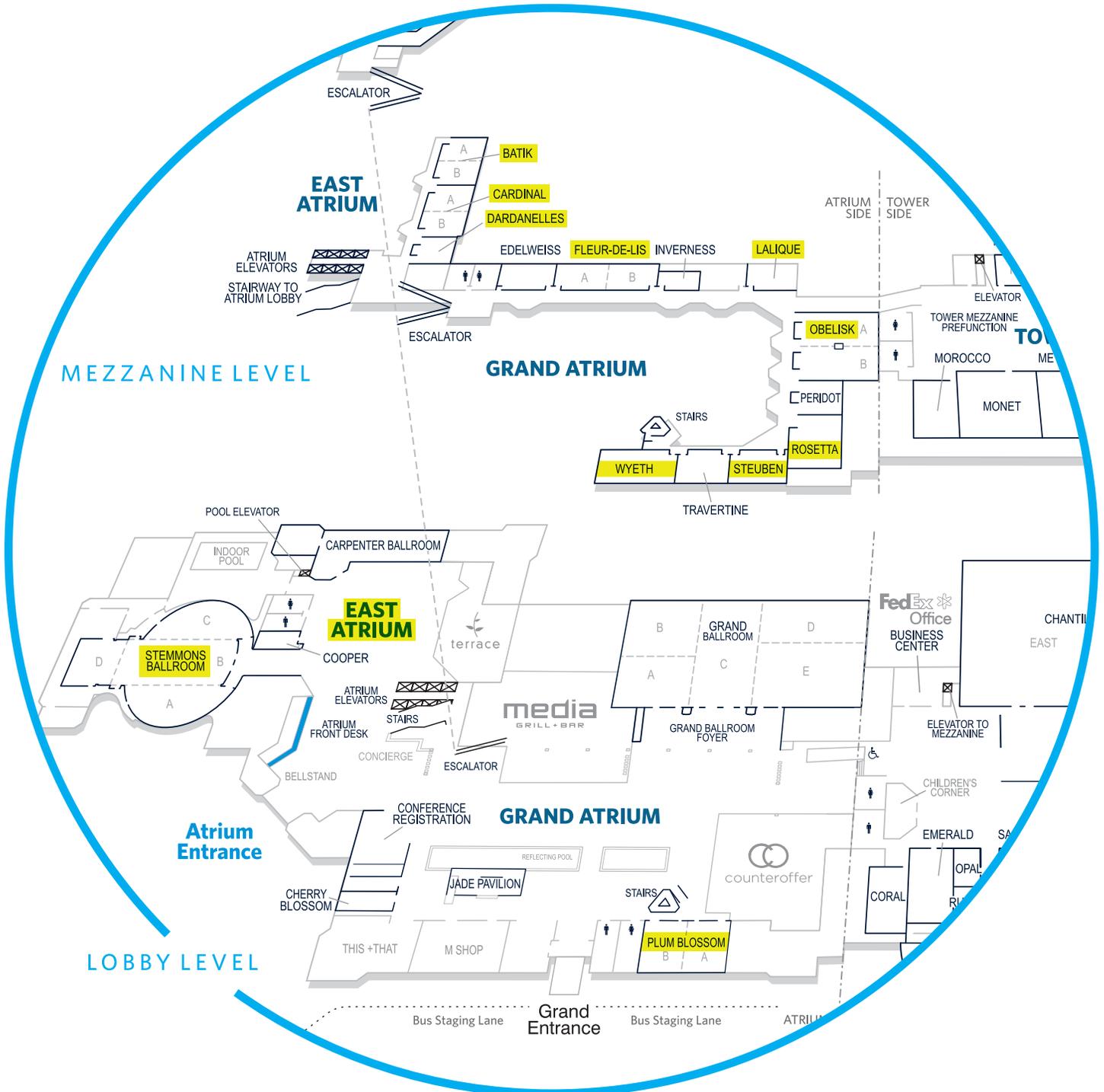
## SCHEDULE

Check-in times for pre-registered attendees are on Tuesday, March 3rd from 3:00pm - 6:00pm and Wednesday, March 4th from 7:00am - 10:00am at the 1st floor registration counters.

RETURNING STUDENTS WEDNESDAY, MARCH 4TH, 2020			
07:00am - 07:30am	30 minutes	Continental Breakfast	East Atrium
07:30am - 08:00am	30 minutes	Introduction	Stemmons Ballroom
08:00am - 09:45am	1 hour, 45 minutes	Workshop Sessions	Stemmons, Batik, Cardinal, Dardanelles, Fleur de Lis, Lalique, Obelisk A/B, Rosetta, Steuben, Wyeth
09:45am - 10:15am	30 minutes	Coffee Break	East Atrium; Stemmons
10:15am - 12:00pm	1 hour, 45 minutes	Workshop Sessions	Stemmons, Batik, Cardinal, Dardanelles, Fleur de Lis, Lalique, Obelisk A/B, Rosetta, Steuben, Wyeth

NEW STUDENTS WEDNESDAY, MARCH 4TH, 2020			
07:00am - 07:30am	30 minutes	Continental Breakfast	East Atrium
07:30am - 08:00am	30 minutes	Introduction	Plum Blossom A/B
08:00am - 09:45am	1 hour, 45 minutes	Workshop Sessions	Plum Blossom A/B
09:45am - 10:15am	30 minutes	Coffee Break	East Atrium; Stemmons
10:15am - 12:00pm	1 hour, 45 minutes	Workshop Sessions	Plum Blossom A/B

# ROOM LOCATIONS



## MODERATORS & FACILITATORS

**Mayada Akil, MD**

Georgetown University Hospital  
Washington, DC

**Melissa Arbuckle, MD, PhD**

Columbia University Medical Center and  
the New York State Psychiatric Institute  
New York, NY

**Belinda Bandstra, MD, MA**

Stanford University School of Medicine  
Stanford, CA

**Adrienne Bentman, MD**

Institute of Living / Hartford Hospital  
Hartford, CT

**Joyce Chung, MD**

National Institute of Mental Health  
Bethesda, MD

**Joseph Cooper, MD**

University of Illinois at Chicago  
Chicago, IL

**Adriane delaCruz, MD, PhD**

The University of Texas Southwestern Medical Center  
Dallas, TX

**Chandlee Dickey, MD**

Harvard South Shore / VAMC  
Brockton, MA

**Elizabeth Fenstermacher, MD**

Cambridge Health Alliance  
Cambridge, MA

**Marshall Forstein, MD**

Cambridge Health Alliance / Harvard Medical School  
Cambridge, MA

**Erick Hung, MD**

University of California  
San Francisco, CA

**Sansea Jacobson, MD**

Western Psychiatric Institute and Clinic  
at the University of Pittsburgh  
Pittsburgh, PA

**Michael Jibson, MD, PhD**

University of Michigan Health System  
Ann Arbor, MI

**Sussann Kotara, MD**

The University of Texas at Austin  
Dell Medical School  
Austin, TX

**Brian Kurtz, MD**

Cincinnati Children's Hospital Medical Center  
Cincinnati, OH

**Andrew Novick, MD, PhD**

University of Colorado School of Medicine  
Aurora, CO

**Lindsey Pershern, MD**

The University of Texas Southwestern Medical Center  
Dallas, TX

**Sanjai Rao, MD**

University of California, San Diego  
San Diego, CA

**Aaron Reliford, MD**

Harlem Hospital Center  
Columbia University Medical Center  
New York, NY

**David Ross, MD, PhD**

Yale School of Medicine  
New Haven, CT

**Sourav Sengupta, MD**

University at Buffalo School of Medicine  
Buffalo, NY

**Asher Simon, MD**

Icahn School of Medicine at Mount Sinai  
New York, NY

**Maja Skikic, MD**

Vanderbilt University Medical Center  
Nashville, TN

**Hanna Stevens, MD, PhD**

University of Iowa Carver College of Medicine  
Iowa City, IA

**Michael Travis, MD**

Western Psychiatric Institute and Clinic  
at the University of Pittsburgh  
Pittsburgh, PA

**Ashley Walker, MD**

University of Oklahoma School of Community Medicine  
Tulsa, OK

**Randon Welton, MD**

Wright State University  
Dayton, OH

**Sean Wilkes, MD, MSc**

Tripler Army Medical Center  
Honolulu, HI

## **NNCI SCHOLARS**

Five residents were selected as NNCI Scholars and were invited to attend this year's BRAIN Conference. Scholars were selected based on research and scholarly accomplishments, interest and experience in teaching, and potential as future academic psychiatrists. Please join us in congratulating this year's awardees:

**Josh Eloge, MD**

Rush University Medical Center  
Chicago, IL

**Marquis Peacock, MD**

University of Texas Southwestern Medical Center  
Dallas, TX

**Elise Stephenson Scott, MD, MPH**

Vanderbilt University Medical Center  
Nashville, TN

**Tara Thompson-Felix, MD**

Temple University Hospital  
Philadelphia, Pennsylvania

**Halide Bilge Turkozer, MD**

University of Texas Southwestern Medical Center  
Dallas, TX

# BRAIN AND THE NATIONAL NEUROSCIENCE CURRICULUM INITIATIVE

The idea for the National Neuroscience Curriculum Initiative (NNCI) emerged as an extension of the 2014 BRAIN Conference. As we began to plan for the conference, we considered the many challenges that psychiatry programs face in trying to teach neuroscience effectively. We recognized that addressing these challenges would require educators and researchers coming together, across institutions, to develop a comprehensive set of shared teaching resources. In addition, these resources needed to be based upon the principles of adult learning and focused on the relevance of neuroscience to the clinical practice of psychiatry. In order to formalize this effort, we developed the NNCI.

Since BRAIN 2014 we have obtained three NIMH grants to support this ongoing effort and the BRAIN Conference. In addition, we have built a website to host a broad collection of shared resources ([www.NNCIonline.org](http://www.NNCIonline.org)), and conducted faculty development and outreach exercises at grand rounds and at major national conferences, including the annual meetings of the American Psychiatric Association (APA), the Association for Academic Psychiatry (AAP), Society of Biological Psychiatry (SOBP), Academy of Psychosomatic Medicine (APM), American Academy of Child and Adolescent Psychiatry (AACAP), and the American College of Neuropsychopharmacology (ACNP). Most importantly, we are thrilled by how much this effort has grown. Since launching the new National Neuroscience Curriculum Initiative (NNCI) website in March 2015, we have had 59,451 users from 163 countries with 610,403 page views.

At the 2020 BRAIN Conference, you will get a taste of many of the new teaching resources we have been working on for the past year. As we continue to grow, we are eager for your input. If you have used NNCI teaching resources, please take a moment to provide us with your feedback. If you have teaching resources or approaches you would like to share, let us know. Suffice it to say: we are very excited about the year ahead and hope that you will contribute to the effort!

David Ross, MD, PhD  
Melissa Arbuckle, MD, PhD  
Michael Travis, MD

Co-Chairs of the Neuroscience Education Committee for AADPRT and the NNCI

## ACKNOWLEDGEMENTS

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### CHAIR:

**David A. Ross, MD, PhD**  
Yale School of Medicine

### CO-CHAIRS:

**Joseph J. Cooper, MD**  
University of Illinois at Chicago

**Ashley E. Walker, MD**  
University of Oklahoma School of  
Community Medicine

### STEERING COMMITTEE:

**Melissa R. Arbuckle, MD, PhD**  
Columbia University Medical Center  
New York State Psychiatric Institute

**Michael J. Travis, MD**  
Western Psychiatric Institute and Clinic  
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