THE FUTURE OF PSYCHIATRY, TODAY

2019 BRAIN CONFERENCE / SAN DIEGO

NIH National Institutes of Health
NNCI NATIONAL NEUROSCIENCE CURRICULUM INITIATIVE
AADPRT American Association of Directors of Psychiatric Residency Training

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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

"I don't know what happened in education… somewhere between kindergarten and medical education we decided that learning shouldn't be fun…" - Melissa Arbuckle, AADPRT President, 2020-2021

Over the past two decades, advances in neuroscience have dramatically enhanced our understanding of the brain and of the neurobiological basis of psychiatric illness. 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 neurotransmitters and corresponding second messenger systems, the importance of neuroplasticity, and the functional dynamics of neural circuits. New methods and technologies are leading to new discoveries and paving the way to new frontiers in diagnosis and treatment. As educators, we have the responsibility to train the leaders of this new world.

Yet for many programs, implementing an effective neuroscience curriculum has been fraught. Determining which content to prioritize is challenging – especially in the context of the many other pressing issues in graduate medical education today. Many programs lack faculty to teach neuroscience in the classroom and who can role model its applicability to patient care. Students may feel alienated from material that seems overly complex and lacking in overt clinical relevance. At its worst, neuroscience teaching may feel rote if not torturous.

It all changes today. This year's conference will address some of the most cutting-edge topics in psychiatry and neuroscience. Whether you're starting from scratch or already have a fully developed curriculum, this year's conference will help you move your program forward. Get ready for our most memorable set of teaching and learning resources that promises to be relevant, engaging, and fun.

BRAIN 2019.

INTENDED AUDIENCE

Medical educators with little or no 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 all-day conference will include a series of morning and afternoon 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. We hope you will join us for an exciting and fun day!

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.
3. Arbuckle, MR, Travis, MJ, Ross, DA. "Integrating a neuroscience perspective into clinical psychiatry today". JAMA Psychiatry, 2017; 74(4):313-314.

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 neurologic 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/brain2019survey

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

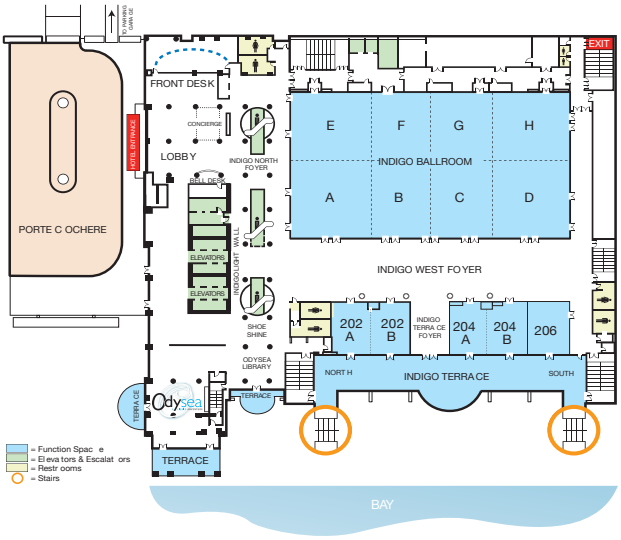
Check-in times for pre-registered attendees are on Tuesday, February 26th from 3:00pm - 6:00pm and Wednesday, February 27th from 7:00am - 10:00am at the 1st floor registration counters.

WEDNESDAY, FEBRUARY 27TH, 2019			
07:00am - 08:00am	60 minutes	Continental Breakfast (Brain Registrants Only)	Indigo Ballroom A&E
08:00am - 09:00am	60 minutes	Introduction and Workshop Session #1	Classic Track - Indigo Ballroom A&E Artisanal Track - Indigo 202A, 202B, 204A, 204B, 206
09:00am – 09:45am	45 minutes	Workshop Session #2 (NNCI Scholars Showcase)	Indigo 202A, 202B, 204A, 204B, 206; Aqua Salons A, C, D, E; Aqua 303, 305, 307
09:45am – 10:00am	15 minutes	Coffee Break	Indigo West Foyer, Aqua West Foyer
10:00am – 11:30pm	1 hour, 30 minutes	Workshop Session #3	Indigo 202A, 202B, 204A, 204B, 206; Aqua Salons A, C, D, E; Aqua 303, 305, 307
11:30pm – 12:30pm	60 minutes	Lunch (BRAIN registrants only) and NNCI Scholars Award Presentation	Indigo Ballroom A&E
12:30pm – 03:00pm	2 hours, 30 minutes	Workshop Session #4	Indigo 202A, 202B, 204A, 204B, 206; Aqua Salons A, C, D, E; Aqua 303, 305, 307
03:00pm - 03:15pm	15 minutes	Coffee Break	Indigo West Foyer, Aqua West Foyer
03:15pm – 05:00pm	1 hour, 45 minutes	Workshop Session #5	Indigo Ballroom A&E; Indigo 202A, 202B, 204A, 204B, 206

*Participants will receive their group and room assignments when they arrive at the meeting.

ROOM LOCATIONS

Indigo:



Aqua:

BREAKOUT GROUPS: ARTISANAL

GROUP	ACETYLCHOLINE	ANANDAMIDE	DOPAMINE	EPINEPHRINE	GABA
ROOM	INDIGO 202A	INDIGO 202B	INDIGO 204A	INDIGO 204B	INDIGO 206
MODERATORS AND FACILITATORS	MICHAEL TRAVIS	ASHLEY WALKER	MELISSA ARBUCKLE	JOSEPH COOPER	ASHER SIMON
	SUSSANN KOTARA	SALLIE DEGOLIA	SEAN WILKES	ADRIENNE BENTMAN	SANSEA JACOBSON
	SAMANTHA FRIEND	ANDREW NOVICK			

BREAKOUT GROUPS: CLASSIC

GROUP	GLUTAMATE	GLYCINE	NEUROPEPTIDE Y	NOREPINEPHRINE	OXYTOCIN
ROOM	AQUA SALON A	AQUA SALON C	AQUA SALON D	AQUA SALON E	AQUA 303
MODERATORS AND FACILITATORS	DAVID ROSS	MICHAEL JIBSON	LINDSEY PERSHERN	BELINDA BANDSTRA	JOYCE CHUNG
	ELIZABETH SCHWARTZ	AARON RELIFORD	RANDON WELTON	SOURAV SENGUPTA	AMANDA SILVERIO
		ELISE STEPHENSON SCOTT	ELIZABETH FENSTERMACHER	MARGUERITE SCHNEIDER	

GROUP	SEROTONIN	SUBSTANCE P
ROOM	AQUA 305	AQUA 307
MODERATORS AND FACILITATORS	ERICK HUNG	MAJA SKIKIC
	DEBORAH COWLEY	SANJAI RAO
	MANESH GOPALDAS	

MODERATORS & FACILITATORS

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Tulsa, OK

Randon Welton, MD
Wright State University
Dayton, OH

NNCI SCHOLARS

Seven 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:

Samantha Friend, MD, PhD
University of California, San Diego
San Diego, CA

Manesh Gopaldas, MD
Vanderbilt University Medical Center
Nashville, TN

Andrew Novick, MD, PhD
Brown University
Providence, RI

Maggie Schneider, MD, PhD
Harvard Longwood
Boston, MA

Elizabeth Schwartz, MD, PhD
Dartmouth-Hitchcock Medical Center
Lebanon, NH

Amanda Silverio, MD
Dartmouth-Hitchcock Medical Center
Lebanon, NH

Sean Wilkes, MD, MSc
Tripler Army Medical Center
Honolulu, HI

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 two 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), 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 41,565 users from 158 countries with 418,611 page views.

At the 2019 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
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CO-CHAIRS:

Joseph J. Cooper, MD
University of Illinois at Chicago

Ashley E. Walker, MD
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