PSYCHIATRY, NEUROSCIENCE, AND YOU

THE *story* OF THE *future*

BRAIN CONFERENCE 2018, NEW ORLEANS

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Overview

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 the task is daunting, and it may not be possible to achieve using traditional approaches. As physicians, we know that simply telling patients what they should do – *lose weight, quit smoking, exercise more* – rarely elicits the change we seek. Similarly, as teachers, we know that lecturing at students does not achieve our educational goals. This is especially true for technically complex content such as neuroscience. As psychiatrists, we appreciate that the process of *how* we communicate is at least as important as what we say.

BRAIN 2018 will be dedicated to exploring the central skills of *Effective Scientific Communication*. Through a series of interactive workshops, we will focus on how to make cutting edge neuroscience accessible for a clinical audience and the general public, including how to distill complex topics down to their core concepts, to craft a narrative arc around key translational applications, to optimize the visual representation of data, and to attend to performative aspects of presentation. We will also focus on the critical process of defining appropriate learning objectives and ensuring that they are achieved.

The future of psychiatry is bright. The story you tell begins at BRAIN.

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 is poised to assume 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/brain2018survey

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.
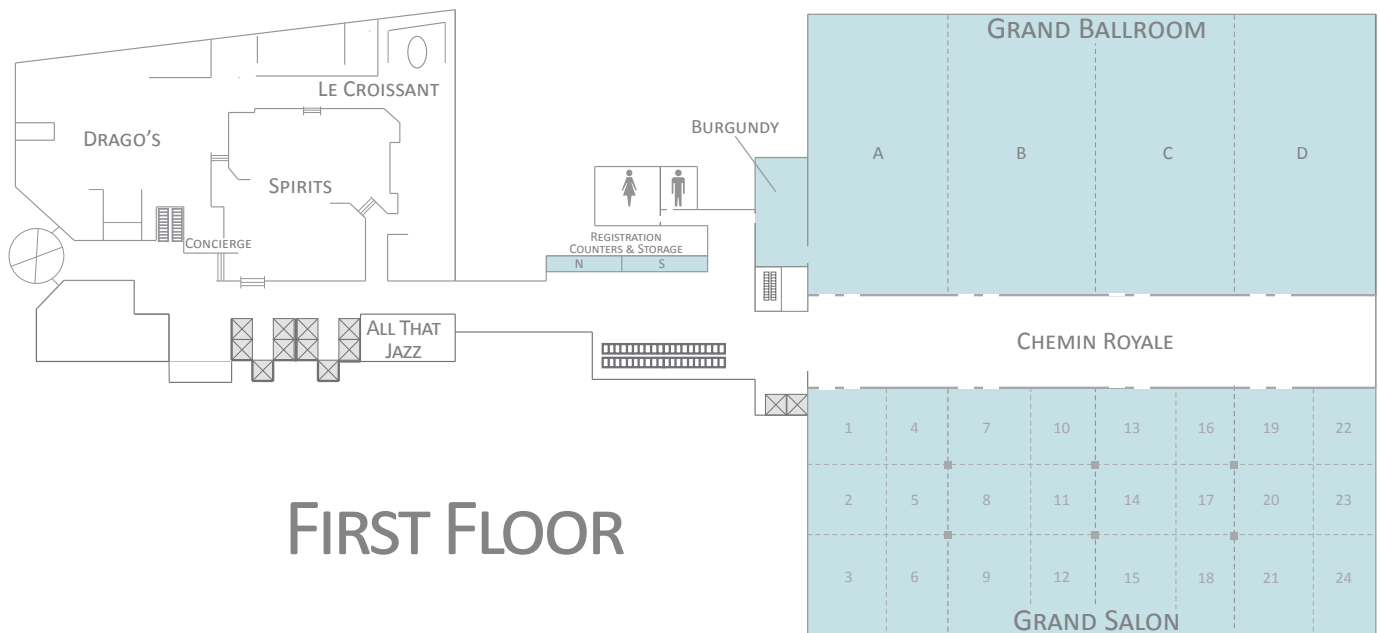
Schedule

Check-in times for pre-registered attendees are on Tuesday, February 27th from 3:00pm - 6:00pm and Wednesday, February 28th from 7:00am - 10:00am at the 1st floor registration counters.

Wednesday, February 28th, 2018			
07:00am - 08:00am	60 minutes	Continental Breakfast (BRAIN Registrants Only)	Grand Ballroom D
08:00am - 09:45am	1 hour, 45 minutes	Workshop Session #1	Grand Ballroom A and Grand Salon: 3, 4, 9, 10, 15, 16, 18, 21, 22, 24
09:45am - 10:00am	15 minutes	Coffee Break	
10:00am - 11:45am	1 hour, 45 minutes	Workshop Session #2	Grand Ballroom A and Grand Salon: 3, 4, 9, 10, 15, 16, 18, 21, 22, 24
11:45am - 12:30pm	45 minutes	Lunch (BRAIN Registrants Only)	Grand Ballroom A
12:30pm - 01:00pm	30 minutes	NNCI Scholars Award Presentation	Grand Ballroom A
01:00pm - 03:00pm	2 hours	Workshop Session #3	Grand Salon: 3, 4, 9, 10, 15, 16, 18, 21, 22, 24
03:00pm - 03:15pm	15 minutes	Coffee Break	
03:15pm - 04:30pm	1 hour, 15 minutes	Workshop Session #4	Grand Salon: 3, 4, 9, 10, 15, 16, 18, 21, 22, 24
04:30pm - 05:00pm	30 minutes	Closing Session	Grand Salon: 3, 4, 9, 10, 15, 16, 18, 21, 22, 24

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

Room Locations

First Floor

Grand Ballroom — A, B, C, D
Burgundy
Registration Counters & Storage — N, S
Le Croissant
Drago's
Spirits
Concierge
All That Jazz
Chemin Royale
Grand Salon — 1–24

Breakout Groups

GROUP	AMYGDALA	CAUDATE	DORSOLATERAL PFC	HYPOTHALAMUS	INSULA
GRAND SALON ROOM	3	4	9	10	15
MODERATOR	MARSHALL FORSTEIN	SALLIE DEGOLIA	DEBORAH COWLEY	CHANDLEE DICKEY	JANE EISEN
FACILITATOR	JOSEPH COOPER	ASHLEY WALKER	ASHER SIMON	MICHAEL TRAVIS	MAYADA AKIL
FACILITATOR	BELINDA BANDSTRA	SOURAV SENGUPTA	ERICK HUNG	LINDSEY PERSHERN	TATIANA RAMAGE*
FACILITATOR	YASH JOSHI*		ALISON LENET*		

GROUP	NUCLEUS ACCUMBENS	ORBITOFRONTAL CORTEX	PUTAMEN	SUBSTANTIA NIGRA	TEMPOROPARIETAL JUNCTION
GRAND SALON ROOM	16	18	21	22	24
MODERATOR	RANDON WELTON	MELISSA ARBUCKLE	ROBERT BOLAND	MICHAEL JIBSON	ADRIENNE BENTMAN
FACILITATOR	SHASHANK JOSHI	HANNA STEVENS	LISA CATAPANO	JOYCE CHUNG	DAVID ROSS
FACILITATOR	ELIZABETH MADVA*	KRISTIN CADENHEAD	SANJAI RAO	KATHARINE NELSON	SANSEA JACOBSON

BRAIN scholars denoted by *

Moderators & Facilitators

Mayada Akil, MD
Georgetown University Hospital
Washington, DC

Joan Anzia, MD
McGaw Medical Center,
Northwestern University
Chicago, IL

Melissa Arbuckle, MD, PhD
Columbia University Medical Center and the
New York State Psychiatric Institute
New York, NY

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Stanford, CA

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Boston, MA

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San Diego, CA

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Pittsburgh, PA

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University of Oklahoma School of Community Medicine
Tulsa, OK

Randon Welton, MD
Wright State University
Dayton, OH

NNCI Scholars

Four 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:

Yash Joshi, MD, PhD, MBE
University of California, San Diego
San Diego, CA

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

Elizabeth Madva, MD
Massachusetts General Hospital /
Harvard Medical School / McLean Hospital
Boston, MA

Tatiana Ramage, MD
San Mateo County Behavior Health & Recovery Services
San Mateo, CA

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 26,000 users from 145 countries with 252,536 page views.

At the 2018 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

Chair:	Co-Chairs:	Steering Committee:
David A. Ross, MD, PhD	Joseph J. Cooper, MD	Melissa R. Arbuckle, MD, PhD
	Ashley E. Walker, MD	Michael J. Travis, MD