

The NKI Informer



Nathan S. Kline
Institute

A newsletter of the Nathan S. Kline Institute for Psychiatric Research

Donald C. Goff, MD, Director
Antonio Convit, MD, Deputy Director
Thomas O'Hara, MBA, Deputy Director, Institute Administration

January – February 2019

Stuart Moss, MLS, Editor

KUDOS



NKI's animal facilities manager, **Kathleen Shannon**, was selected as the 2018 Manager of the Year by the Metropolitan New York Branch of the American Association for Laboratory Animal Science (AALAS). NY Metro is the oldest and largest regional branch of the national AALAS, which has approximately 12,000 members.



Abel Lajtha and RFMH Managing Director Robert Burke



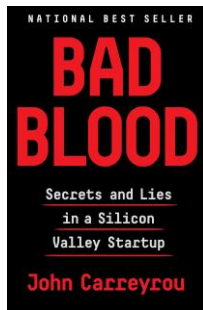
Dr. Abel Lajtha (Neurochemistry) was recently honored with a commemorative watch by the Research Foundation for Mental Hygiene for his nearly 40 years of service as President. NKI's Deputy Director for Institute Administration, Tom O'Hara, is the new RFMH President.

GRANTS RECEIVED



Dr. Brian Russ (Biomedical Imaging & Neuromodulation) received a subcontract from the grant titled "[Mechanistic and Causal Basis of fMRI Functional Connectivity in Non-Human Primates](#)". This is a multi-PI collaboration with Dr. Peter Rudebeck at Mount Sinai School of Medicine.

BOOK REVIEW



Reviewed by Kndeya Gebrewahed

In his 2018 book *Bad Blood: Secrets and Lies in a Silicon Valley Startup*, John Carreyrou meticulously debunks how and why Theranos, a health-tech “startup” that boasted a ground-breaking blood testing technology, came to be and later failed. The book is a pleasure to read, and this can be partially attributed to Carreyrou’s detailed narration of the startup’s realization, especially given the fact that it was based on nothing but lies and bogus projections. As an aspiring entrepreneur in the healthcare field, I was very excited to read *Bad Blood*, but every now and then I could not help but pause and wonder: How is it possible that Elizabeth Holmes, a nineteen-year-old Stanford dropout, was able to con everyone from venture capitalists to pharmaceutical companies to supermarket chains to government officials? Is it because she is White? Could another nineteen-year-old Black or Latina girl have pulled it off? Is it because she went to Stanford for however long? Is it because of her parents’ work that people were willing to give her the benefit of the doubt time and again? Or is it the field – healthcare – a field where people yearn for miracles and are sometimes led to believe them, that is too susceptible to such scams? And if it indeed is the field, are we immune from something similar happening again?

FROM AROUND THE INSTITUTE

Clinical Lab Celebrates Soup-er Bowl Friday

Members of the clinical laboratories accepted the healthy lifestyle challenge for February and made a healthy "Souper Bowl" lunch. I googled a healthy crockpot vegetable soup recipe and we chose to make a variety. Each lab tech brought in different vegetables, pasta, and grains. The ingredients were placed in crockpots and we all enjoyed a healthy soup. EAP Coordinator Mary Griffin joined in on our celebration and spoke about healthy eating habits. Mary also distributed cutting boards and pedometers as incentives for healthy lifestyles. The techs are weighing in weekly and are more mindful. It’s a wonderful way to help each other in our weight loss and healthy lifestyle journeys.

Contributed by Elizabeth Muenzer





Paul O'Connor (Information Sciences) was recently recognized by the International Consortium to Predict PTSD (ICPP) at the 34th Annual Symposium of the International Society for Traumatic Stress Studies (ISTSS) for his assistance with data management and quality assurance in a study funded by PHS Research Grant #MH101227 entitled "[Clinical Implications of the Proposed ICD-11 PTSD Diagnostic Criteria: Results from the International Consortium to Predict PTSD](#)".

The post-traumatic stress disorder (PTSD) diagnostic criteria have been revised in the eleventh edition of the International Classification of Diseases (ICD-11). While the former ICD-10 included 13 symptom criteria in its diagnostic template, the ICD-11 includes just these six:

- dissociative flashbacks
- nightmares
- hypervigilance
- exaggerated startle response
- avoidance of external reminders
- avoidance of thoughts and feelings associated with the trauma

As demonstrated in the shift from DSM-IV to DSM-V, such changes in diagnostic criteria can affect the prevalence estimates, clinical characteristics, and overlap between samples identified as having PTSD. Therefore, the radical change in ICD diagnostic criteria warrants investigation.

The study sample consisted of 3,863 survivors of traumatic events, evaluated in eleven longitudinal studies of PTSD. ICD-10 and ICD-11 diagnostic rules were applied to the Clinician-Administered PTSD Scale (CAPS) to derive ICD-10 and ICD-11 diagnoses at different time intervals. Studies to date evaluating the rates of PTSD diagnoses using ICD-10 and ICD-11 criteria have addressed chronic PTSD patients using one-time, cross-sectional assessment. However, as recent work has shown that trauma survivors' symptoms fluctuate, and

diagnostic statuses change following trauma exposure, longitudinal examination of the effects of the ICD-11 criteria is necessary. For this work, rates, overlap, and PTSD severity of survivors of trauma from six countries were assessed from the time of trauma exposure up to 15 months.

The study findings indicate that significantly fewer individuals would be diagnosed with PTSD using the proposed ICD-11 criteria. Though ICD-11 criteria identify more severe cases, those meeting ICD-10 but not ICD-11 criteria remain in the moderate range of PTSD symptoms. Use of ICD-11 criteria will have critical implications for case identification in clinical practice, national reporting, and research.

PUBLICATIONS OF NOTE



A new paper by **Efrat Levy**, **Paul Mathews**, **Katherine Peng**, and numerous others in the Center for Dementia Research, Analytical Psychopharmacology, and Neurochemistry departments appears in the January issue of *Brain*.

Peng KY, Pérez-González R, Alldred MJ, Goulbourne CN, Morales-Corraliza J, Saito M, Saito M, Ginsberg SD, Mathews PM, Levy E. [Apolipoprotein E4 genotype compromises brain exosome production](#). *Brain*. 2019 Jan 1;142(1):163-175. PMID: 30496349.

This open access article was selected for a Research Highlights piece in *Nature Reviews Neurology* (Fyfe, I. [APOE*ε4 links exosomes to cognitive decline](#)).



Jay Nierenberg (Biomedical Imaging & Neuromodulation) contributed an Invited Commentary piece on imaging and substance abuse relapse to *JAMA Network Open*.

Nierenberg J. [Use of Functional Magnetic Resonance Imaging to Identify Risk Factors for Relapse in Patients with Stimulant Use Disorders: Bridging the Gap Between Research and Clinical Practice](#). *JAMA Network Open* 2018; 1(8):e186503.



Molecular Psychiatry

Zhen Yang (Biomedical Imaging & Neuromodulation) is the first author of this open access paper published in the December issue of *Molecular Psychiatry* with her colleagues at the University of Pennsylvania.

Yang Z, Gu S, Honnorat N, Linn KA, Shinohara RT, Aselcioglu I, Bruce S, Oathes DJ, Davatzikos C, Satterthwaite TD, Bassett DS, Sheline YI. [Network changes associated with transdiagnostic depressive symptom improvement following cognitive behavioral therapy in MDD and PTSD](#). *Mol Psychiatry*. 2018 Dec;23(12):2314-2323. PMID: 30104727.




Developmental Cognitive Neuroscience

Xavier Castellanos (Clinical Research) authored this open access article appearing in *Developmental Cognitive Neuroscience* with colleagues at Yale.

Vanderwal T, Eilbott J, Castellanos FX. [Movies in the magnet: Naturalistic paradigms in developmental functional neuroimaging](#). *Dev Cogn Neurosci*. 2018 Nov 20. PMID: 30551970.

The latest publication by **Babak Ardekani, Alvin Bachman**, and colleagues (Biomedical Imaging & Neuromodulation) appears in the *American Journal of Neuroradiology*. The main findings in this paper are that: (1) as we age, the hippocampus volume declines asymmetrically across brain hemispheres, and (2) the degree of asymmetry is slightly (but statistically significantly) greater in men as compared to women.

Ardekani BA, Hadid SA, Blessing E, Bachman AH. [Sexual Dimorphism and Hemispheric Asymmetry of Hippocampal Volumetric Integrity in Normal Aging and Alzheimer Disease](#). *AJNR Am J Neuroradiol*. 2019 Jan 17. PMID: 30655257.



Brain Structure & Function

NKI investigators contributed to two papers recently published online in *Brain Structure & Function*. The first is from **Donald Wilson's lab** (Emotional Brain Institute). **Arnaud Falchier** and **Gary Linn** (Biomedical Imaging & Neuromodulation) are coauthors of the second.

Courtiol E, Neiman M, Fleming G, Teixeira CM, Wilson DA. [A specific olfactory cortico-thalamic pathway contributing to sampling performance during odor reversal learning](#). *Brain Struct Funct*. 2018 Dec 1. PMID: 30506279.

Oligschläger S, Xu T, Baczkowski BM, Falkiewicz M, Falchier A, Linn G, Margulies DS. [Gradients of connectivity distance in the cerebral cortex of the macaque monkey](#). *Brain Struct Funct*. 2018 Dec 13. PMID: 30547311.



Dan Iosifescu (Clinical Research) is a coauthor of this letter appearing in the January issue of *Nature Reviews Drug Discovery*.

Krystal AD, Pizzagalli DA, Mathew SJ, Sanacora G, Keefe R, Song A, Calabrese J, Goddard A, Goodman W, Lisanby SH, Smoski M, Weiner R, Iosifescu D, Nurnberger J Jr, Szabo S, Murrrough J, Shekhar A, Potter W. [The first implementation of the NIMH FAST-FAIL approach to psychiatric drug development](#). *Nat Rev Drug Discov*. 2018 Dec 28;18(1):82-84. PMID: 30591715.



Adriana Joseph, Marilena Lekas, and Crystal Lewis (Social Solutions & Services) have a new paper on synthetic cannabinoid use in *Substance Use & Misuse*.

Joseph A, Lekas HM, Manseau M, Lewis C. [A Polydrug and Psychosocial Profile of Synthetic Cannabinoid Use in a New York City Community Sample, 2016-2017](#). *Subst Use Misuse*. 2018 Dec 7:1-6. PMID: 30526203.



Journal of Preventive Medicine

Kerstin Pahl (Social Solutions & Services) coauthored this article in the open access *Journal of Preventive Medicine*.

Lee JY, Brook JS, Pahl K. [Human Immunodeficiency Virus \(HIV\) Risk Behaviors by African American and Puerto Rican Women in the 4th Decade of Life: Substance Use and Personal Attributes](#). *J Prev Med*. 2018;3(3). PMID: 30574574.



The latest publication from **Emily Stern** (Clinical Research) and colleagues appears in the *Journal of Psychiatric Research*.

Brown C, Shahab R, Collins K, Fleysher L, Goodman WK, Burdick KE, Stern ER. [Functional neural mechanisms of sensory phenomena in obsessive-compulsive disorder](#). *J Psychiatr Res*. 2019 Feb; 109:68-75. PMID: 30508745.



Robert Smith (Neurochemistry) is the corresponding author of this review in *Psychopharmacology*.

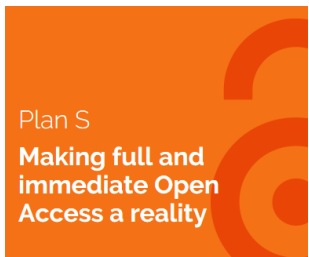
Smith RC, Leucht S, Davis JM. [Maximizing response to first-line antipsychotics in schizophrenia: a review focused on finding from meta-analysis](#). *Psychopharmacology*. 2018 Nov 30. PMID: 30506237.

INFO UPDATE



A new open access journal, *Psychiatric Research and Clinical Practice*, is being published by the American Psychiatric Association and is available on [Psychiatry Online](#). Research published in this new journal covers all aspects of mental and behavioral health to inform the field from bench to bedside, building upon the psychiatric knowledge base through features that bring research findings closer to clinical utility.

If you would like to set up remote/mobile access to Psychiatry Online, please contact the librarian.



Plan S, an open access publishing initiative launched in September, has generated a fair amount of discussion. Check out the [website](#) for details and to read the [10 principles](#) of Plan S. For a sampling of some concerns raised by the initiative, see these news items from *Science*:

[Open-access plan draws online protest](#)

[The world debates open-access mandates](#)

[Scientific societies worry about threat from Plan S](#)

The President of the National Academy of Sciences published [this opinion](#) in *PNAS*. And “[No Free Lunch — What Price Plan S for Scientific Publishing?](#)” appears in the *New England Journal of Medicine*.



The NKI librarian is always available to assist with literature searching, citation searching (Web of Science, Scopus), bibliographic reference management, and the like. When you have any information needs, or questions about available resources, don't hesitate to turn to us.

The library offers a comfortable, quiet space for reading, work, and small meetings. To use the library's Wi-Fi network, ask the library staff for the password.

You can [link to the NKI Library's website](#) from myNKI. The Library site includes quick links to the NYU Health Sciences Library and to the New York State Library, as well as links to NKI's own library resources ([journal finder](#), [online catalog](#), [PsychiatryOnline](#), etc.). Remote access is available using NKI's VPN.



[Emojipedia](#) is a fun website that lets you find out the meaning and common usage of emoji symbols for various platforms including Apple, Facebook, and Google. You can look up the meaning of a particular emoji and copy and use symbols in any platform. Emojipedia – because we all need more emoji in our lives. At least I do.



DEPARTMENT OF WONDER

The New York Times

A few months ago, on the 40th anniversary of the weekly Science Times section of the newspaper, *The Times* published a follow-up article on the most pressing questions in science: “[11 Things We'd Really Like to Know \(and a few we'd rather not discuss\)](#)”. Among the questions posed are “[When Will We Solve Mental Illness?](#)” and “[Will We Ever Cure Alzheimer's?](#)”



The [PsychENCODE](#) initiative was launched in 2015 by NIMH to try to gain a better understanding of how genes affect the brain and contribute to the risk for mental illnesses. The first results of this effort were published in [a series of papers](#) in December. To get up to speed on PsychENCODE, check out this [NIH press release](#) (including video) and this [overview](#) in *NIH Research Matters*.



Also in *The Times* recently was a Sunday Magazine [article on beauty and evolution](#). The article begins with a description of the mating ritual of the flame bowerbird. Here I would like to recommend to you this video documentation from BBC Earth of "[The Bowerbird's Grand Performance](#)". It is quite incredible to behold.



Top Stories in Science and Medicine

The end of the year typically brings a spate of top 10 lists and similar compilations. Here is a sampling of links covering some of the "best of" 2018.



Highlights in NIH-supported research.

- [Clinical Advances](#)
- [Promising Medical Advances](#)
- [Advances in Basic Research](#)



- [Research Achievements by Foundation Grantees, Prizewinners, and Scientific Council members in 2018](#)



- [Breakthrough of the Year and Runners-Up](#)



- [Top Psychiatry Stories of 2018](#)

EVENTS AND SEMINARS

Emotional Brain Institute 2019 Distinguished Scientist Lecture

Hakwan Lau, PhD

UCLA and University of Hong Kong

The Unconscious Basis of Conscious Emotion

Smilow Seminar Room @ NYU Langone Medical Center (550 First Ave - follow the yellow pathway)

March 8, 2019

Lecture starts at 4pm

Reception to follow in Smilow Cafe



Center for Dementia Research Seminar Series

Held on Thursdays at 10 am

Shane Liddelow, PhD

New York University

What do reactive astrocytes do?

February 28th

Kostantin Dobrenis, PhD

Albert Einstein College of Medicine

Title TBA

March 21st

The New York State Office of Mental Health (OMH) regularly hosts an interactive video broadcast covering the latest research, technology, and treatment implementation in the fields of psychiatry and psychology. These programs are recorded, and the archived Statewide Grand Rounds programs can be viewed [on the OMH website](#).

**Center for Biomedical Imaging and
Neuromodulation Seminar Series**

Megan K. Horton, PhD, MPH

Assistant Professor, Department of
Environmental Medicine and Public Health
Icahn School of Medicine at Mount Sinai

***Novel Developments in Children's
Environmental Health: Dentine Biomarkers
and Pediatric Neuroimaging***

February 11th

Ki Sueng Choi, PhD

Assistant Professor, Radiology and Neurosurgery
Center for Advanced Circuit Therapeutics,
Translational and Molecular Imaging Institute
Icahn School of Medicine at Mount Sinai

Title TBA

February 25th

Stewart H. Mostofsky, PhD

Kennedy Krieger Institute
Johns Hopkins University

Title TBA

March 4th

Boris Bernhardt, PhD

McGill University

Title TBA

March 25th

Jonny Smallwood, PhD

University of York

Title TBA

April 1st

Amy Margolis, PhD

Columbia University
Director of Neuropsychology,
Brooklyn Learning Center

Title TBA

April 8th

NKI PUBLICATIONS UPDATE

Below is a list of references that have been added to the NKI publications database since the previous update. The full database contains over 5,900 items dating back to 1995 and can be searched from the [myNKI website](#).

Brown C, Shahab R, Collins K, Fleysler L, Goodman WK, Burdick KE, Stern ER. Functional neural mechanisms of sensory phenomena in obsessive-compulsive disorder. *J Psychiatr Res.* 2019 Feb; 109:68-75. PMID: 30508745.

Bruno D, Gleason CE, Kosciak RL, Pomara N, Zetterberg H, Blennow K, Johnson SC. The recency ratio is related to CSF amyloid beta 1-42 levels in MCI-AD. *Int J Geriatr Psychiatry.* 2018 Nov 14. PMID: 30430632.

Ciarleglio A, Petkova E, Ogden T, Tarpey T. Constructing treatment decision rules based on scalar and functional predictors when moderators of treatment effect are unknown. *J R Stat Soc Ser C Appl Stat.* 2018 Nov;67(5):1331-1356. PMID: 30546161.

Courtioi E, Neiman M, Fleming G, Teixeira CM, Wilson DA. A specific olfactory cortico-thalamic pathway contributing to sampling performance during odor reversal learning. *Brain Struct Funct.* 2018 Dec 1. PMID: 30506279.

Dondé C, Silipo G, Dias EC, Javitt DC. Hierarchical deficits in auditory information processing in schizophrenia. *Schizophr Res.* 2018 Dec 12. PMID: 30551982.

Fleming G, Wright BA, Wilson DA. The Value of Homework: Exposure to Odors in the Home Cage Enhances Odor Discrimination Learning in Mice. *Chem Senses*. 2018 Dec 24. PMID: 30590399.

Gaspar PA, Castillo RI, Maturana A, Villar MJ, Ulloa K, González G, Ibaceta O, Ortiz A, Corral S, Mayol R, De Angel V, Aburto MB, Martínez A, Corcoran CM, Silva H. Early psychosis detection program in Chile: A first step for the South American challenge in psychosis research. *Early Interv Psychiatry*. 2018 Dec 11. PMID: 30548415.

Glodzik L, Rusinek H, Tsui W, Pirraglia E, Kim HJ, Deshpande A, Li Y, Storey P, Randall C, Chen J, Osorio RS, Butler T, Tanzi E, McQuillan M, Harvey P, Williams SK, Ogedegbe G, Babb JS, de Leon MJ. Different Relationship Between Systolic Blood Pressure and Cerebral Perfusion in Subjects with and without Hypertension. *Hypertension*. 2019 Jan;73(1):197-205. PMID: 30571554.

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Joseph A, Lekas HM, Manseau M, Lewis C. A Polydrug and Psychosocial Profile of Synthetic Cannabinoid Use in a New York City Community Sample, 2016-2017. *Subst Use Misuse*. 2018 Dec 7:1-6. PMID: 30526203.

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Qian X, Castellanos FX, Uddin LQ, Loo BRY, Liu S, Koh HL, Poh XWW, Fung D, Guan C, Lee TS, Lim CG, Zhou J. Large-scale brain functional network topology disruptions underlie symptom heterogeneity in children with attention-deficit/hyperactivity disorder. *Neuroimage Clin*. 2018 Nov 19. PMID: 30472167.

Salloum NC, Fava M, Freeman MP, Flynn M, Hoepfner B, Hock RS, Cusin C, Iosifescu DV, Trivedi MH, Sanacora G, Mathew SJ, DeBattista C, Ionescu DF, Papakostas GI. Efficacy of intravenous ketamine treatment in anxious versus nonanxious unipolar treatment-resistant depression. *Depress Anxiety*. 2018 Dec 30. PMID: 30597688.

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de Leon MJ, Isaacson RS, Mosconi L. Associations of lifestyle and vascular risk factors with Alzheimer's brain biomarker changes during middle age: a 3-year longitudinal study in the broader New York City area. *BMJ Open*. 2018 Nov 25; 8(11):e023664. PMID: 30478117.

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