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May – June 2019

*Stuart Moss, MLS, Editor*

## **THE IMPORTANCE OF STAYING CONNECTED**

### **Manhattan Psychiatric Center's Smartphone Group Project**

*Contributed by the MPC Inpatient Research Department*

In August of 2018, Manhattan Psychiatric Center (MPC) implemented the OMH initiative to provide an affordable digital communication method to patients with severe mental illness. Such a modern communication method is a smartphone, which many patients do not have. Thus, MPC staff have been applying for patients' smartphones through the Lifeline Assistance Program during their inpatient stay. Those who qualify under certain government assistance programs are provided with Android smartphones, free of charge. Every patient is asked whether they are interested in getting a smartphone at the start of their admission in order to be able to use it after their discharge from MPC. While many are interested, some are reluctant, either due to paranoia or unfamiliarity with this new technology.

We quickly became aware that many patients had never used a phone. Some had never even had an e-mail address. We decided to start an inpatient group to teach the navigation of a smartphone as well as to provide a safe space to use it.

When approved by the Lifeline Assistance Program, the phones are received by the patients' respective

social workers. Then, social workers contact the phone group leaders to store the phones in a designated locked cabinet in an office on the same floor where the class is held. Phones are charged on a weekly basis by group leaders. In the classroom, a hotspot has been set up so that the patients do not use their data plan during the group. Group leaders have a demo smartphone (Motorola Z<sup>3</sup>) with a Moto Insta-Share Projector to use when demonstrating and going through the lessons.



MPC Smartphone Project Staff:  
Joanne Yoon, Dr. Jacob Kader, Isidora Ljuri

The group is led by two staff members, who use a smartphone manual developed internally to train patients on Android phone use. The manual includes lessons such as setting up a new phone, making calls, sending text messages, accessing the internet, making calendar alerts, etc. Within the group, patients have an opportunity to learn how to use different functions of the smartphone. They also have some free time to listen to music, surf the internet, and call or text family and friends. When asked about the smartphone group experience, one of the most common answers given by the patients was that they enjoyed being able to call friends and family as well as being able to use some of their favorite apps. They all expressed that they would continue to use their phones upon discharge. In order to keep connected after discharge, we are working on adding an automated appointment messaging system, which would remind patients of their upcoming outpatient appointments.

With a continuing interest in technology-based treatments, we believe this is an important initiative and group to implement. This type of technology can help patients gain better access to health professionals. It may also be a source of empowerment for patients to be involved in their own treatment. And providing patients with smartphones not only allows them to be more connected to family and friends, but also helps patients connect with peers who have similar issues through group chats, blogs, and social media among other means, encouraging social interaction.

This project has been implemented by members of the MPC's Research, Social Work, and Psychiatry departments. For further information contact [lsidora.ljuri@omh.ny.gov](mailto:lsidora.ljuri@omh.ny.gov).



## KUDOS



**Regina Sullivan** (Emotional Brain Institute) received the 2019 Sigma Xi Christopher Clavius Award from St. Joseph's University in Philadelphia, for her pioneering work on developmental and behavioral neuroscience. The award was presented on April 5 at the 30th annual Saint Joseph's University Sigma Xi Student Research Symposium, where Dr. Sullivan was the **keynote speaker**. Sigma Xi is the Scientific Research Honor Society, with chapters throughout North America and beyond.

## COMPLIANCE CORNER



### The 3Rs of Animal Research: Part 2

*By Karya Ottey, PhD  
Director of Compliance*

This is part II in the 3Rs of Animal Research series of Compliance Corner. The 3Rs of animal research are characterized as Replacement, Reduction, and Refinement. In this issue the concepts of replacement and refinement are examined. Often when these topics are considered, the focus turns to removing animals from the research model entirely. Such considerations should not be taken lightly, and researchers should ponder other options seriously. Providing proper justification for any animal that is used in a project is as important a decision as choosing the research topic. Models using cell lines and simulations may be valid options to garner sufficient preliminary data and should not be ignored.

The concepts of replacement and refinement are not limited to removing animals from the equation. Sometimes, it may be best to consider using an entirely different animal to answer the research

question. Researchers should keep abreast of new information that can alter their perspective on what they consider the “appropriate animal model”. Look to new data that highlights the way an animal may express a characteristic that can be effectively evaluated for new implications. For example, cephalopods can bring unique interpretations in understanding, but they are not the typical research animal.

The Institutional Animal Care and Use Committee (IACUC) exists to assist researchers in asking these questions to confirm that the correct animal model is used and that the methods that are utilized are refined in order to reduce the burden on the species. When a researcher indicates that a project should be conducted with a particular type of animal, careful deliberations should take place to ensure that the project is best done with that species. Progress in science depends on the successful translation of knowledge gained from animal research. The 3Rs are significant from a legal, ethical, and scientific standpoint as they help to focus on important considerations in animal use.

## FROM AROUND THE INSTITUTE

### Yoga, Dance, and Exercise in the NKI Library

#### Yin Yoga

Tuesdays at 4:30 pm – Led by Lindsay Laughlin. A simple 30-minute guided yoga/meditation. Bring a mat.

#### Dance

Wednesdays from 12-12:30 pm – Led by Qawi Telesford. Casino dance to Timba music. Sneakers preferred.

#### Cardio

Mondays at 5:15 pm and Thursdays from 4:30-5 pm – Led by Catarina Cunha. Full body cardio/strength training. Bring a mat and water.

Additional workouts can be undertaken using the Smart TV at your leisure. Grab a friend and go!

## PUBLICATIONS OF NOTE



**Helen Scharfman** (Dementia Research) coauthored this paper in *Science* examining the role of adult neurogenesis in hippocampal brain circuitry. The authors found that adult-born neurons either inhibited or excited the dentate gyrus, depending on whether synaptic inputs originated from the lateral or the medial entorhinal cortex. The action of adult-born neurons depended on the demands of the environment, which alters cortical and subcortical input to the dentate gyrus. A [Perspective article](#) in the same issue provides additional context.

Luna VM, Anacker C, Burghardt NS, Khandaker H, Andreu V, Millette A, Leary P, Ravenelle R, Jimenez JC, Mastrodonato A, Denny CA, Fenton AA, Scharfman HE, Hen R. [Adult-born hippocampal neurons bidirectionally modulate entorhinal inputs into the dentate gyrus](#). *Science*. 2019 May 10;364(6440):578-583. PMID: 31073064.



This paper from the **Nixon Lab** (Dementia Research) was recently published in *The Journal of Neuroscience*.

Ying J, Sato Y, Im E, Berg M, Bordi M, Darji S, Kumar A, Mohan PS, Bandyopadhyay U, Diaz A, Maria Cuervo A, Nixon RA. [Lysosomal dysfunction in Down syndrome is APP-dependent and mediated by APP-βCTF \(C99\)](#). *J Neurosci*. 2019 May 1. PMID: 31043483.

## The American Journal of Psychiatry

**Xavier Castellanos** (Clinical Research) is one of the coauthors of this large-scale analysis of brain imaging samples in ADHD.

Hoogman M, Muetzel R, Guimaraes JP, Shumskaya E, Mennes M, et al. [Brain Imaging of the Cortex in ADHD: A Coordinated Analysis of Large-Scale Clinical and Population-Based Samples](#). Am J Psychiatry. 2019 Apr 24. PMID: 31014101.



**Michael Milham** (Biomedical Imaging & Neuromodulation) and Arno Klein (Child Mind Institute) published a commentary piece in the open access journal *BMC Biology*, advocating open science practices.

Milham MP, Klein A. [Be the change you seek in science](#). BMC Biol. 2019 Mar 27;17(1):27. PMID: 30914050.

## Biological Psychiatry CNNI Cognitive Neuroscience and Neuroimaging

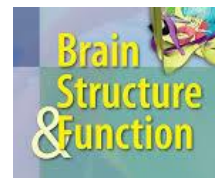
**Michael Milham** and **Charles Schroeder** (Biomedical Imaging & Neuromodulation) are coauthors of this study of interindividual variation of brain connectivity in nonhuman primates.

Xu T, Sturgeon D, Ramirez JSB, Froudish-Walsh S, Margulies DS, Schroeder CE, Fair DA, Milham MP. [Interindividual Variability of Functional Connectivity in Awake and Anesthetized Rhesus Macaque Monkeys](#). Biol Psychiatry Cogn Neurosci Neuroimaging. 2019 Mar 11. PMID: 31072758.

## Developmental Cognitive Neuroscience

**Maya Opendak** and **Regina Sullivan** (Emotional Brain Institute) recently published this open access paper on trauma processing in infants.

Opendak M, Sullivan RM. [Unique infant neurobiology produces distinctive trauma processing](#). Dev Cogn Neurosci. 2019 Mar 12; 36:100637. PMID: 30889546.



**John Smiley** (Neurochemistry) and several NKI colleagues published a new paper in *Brain Structure & Function*, showing a developmental sequence of neonatal ethanol effects.

Smiley JF, Bleiwas C, Masiello K, Petkova E, Betz J, Hui M, Wilson DA, Saito M. [Effects of neonatal ethanol on cerebral cortex development through adolescence](#). Brain Struct Funct. 2019 May 2. PMID: 31049690.

## Community Mental Health Journal

**Sharifa Williams** (Social Solutions & Services) coauthored this new article appearing in *Community Mental Health Journal*.

Jiao B, Zafari Z, Ruggeri K, Williams SZ. [Depressive Symptoms and Sexually Transmitted Disease: Evidence from a Low-Income Neighborhood of New York City](#). Community Ment Health J. 2019 May 9. PMID: 31073663.



Journal of  
Immigrant  
and Minority  
Health

**Kerstin Pahl** (Social Solutions & Research) and colleagues at NKI and NYU published this new paper on sexual risk behaviors in the *Journal of Immigrant and Minority Health*.

Pahl K, Lee JY, Capasso A, Lekas HM, Brook JS, Winters J. [Sexual Risk Behaviors Among Black and Puerto Rican Women in Their Late Thirties: A Brief Report](#). *J Immigr Minor Health*. 2019 Mar 28. PMID: 30924047.



BRAIN  
STIMULATION

This paper by **Joshua Kantrowitz**, **Daniel Javitt**, and colleagues at NKI (Schizophrenia Research) and Columbia reports on the effects of tDCS for auditory verbal hallucinations in schizophrenia.

Kantrowitz JT, Sehatpour P, Avissar M, Horga G, Gwak A, Hoptman MJ, Beggel O, Girgis RR, Vail B, Silipo G, Carlson M, Javitt DC. [Significant improvement in treatment resistant auditory verbal hallucinations after 5 days of double-blind, randomized, sham controlled, fronto-temporal, transcranial direct current stimulation \(tDCS\): A replication/extension study](#). *Brain Stimul*. 2019 Mar 5. PMID: 30922713.

INFO UPDATE

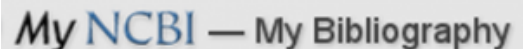


PSYCHIATRY  
online

[PsychiatryOnline](#), the electronic resource platform for publications of the American Psychiatric Association, now includes resource centers on topics including [schizophrenia](#), [depression](#), and [gun violence](#). Each resource center gathers relevant information from books, journals, and other APA sources into a single place.



[Psychiatry Unbound](#) is APA Publishing's Books Podcast, hosted by APA Books Editor-in-Chief, Laura Roberts, M.D. This podcast offers the opportunity to hear the voices behind the most prominent psychiatric scholarship in the field today. Some recent topics include telepsychiatry, transgender and LGBTQ mental health, psychopharmacology, and physician suicide.



My NCBI — My Bibliography

A redesigned and rebuilt version of My Bibliography, the National Library of Medicine's citation management application, was recently released. My Bibliography version 3.0 includes useful new tools and a streamlined interface. The new version also facilitates compliance with the NIH Public Access Policy. To learn about the new interface and features, see this [article in the NLM Technical Bulletin](#) and this [additional information for eRA Commons users](#).

## Health Statistics Tutorial

The National Information Center on Health Services Research and Health Care Technology (NICHSR) has released a newly revised tutorial on [Finding and Using Health Statistics](#). This tutorial is aimed at students and other professionals interested in an introduction to the principles behind health statistics. The interactive course is divided into four sections: About Health Statistics; Common Terms; Health Data Sources; and Finding Health Statistics. [Click here](#) to link to this free tutorial.



The [NYS Historic Newspapers](#) project provides free online access to millions of pages from a wide range of newspapers documenting the history of New York State. Some of the titles recently added are from Rockland County and nearby areas. These include:

- [The Journal-News](#)  
Nyack, N.Y., 1932-1990
- [The Palisades](#)  
Camp Shanks, N.Y., 1943-19??
- [The Rockland News](#)  
Nyack, N.Y., 1???-192?
- [Rockland County Times Weekly](#)  
Haverstraw, N.Y., 1889-current
- [The Shanks Villager](#)  
Orangeburg, N.Y., 1946-19??

From the NYS Historic Newspapers home page, you can select a county on the state map to see all the publications from that county. You can also use the search function to search all or some of the content on the site.

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.

## DEPARTMENT OF WONDER



A [paper](#) recently published in *PNAS* documents the discovery of an extraordinary fossil deposit in North Dakota. According to the authors, the site provides powerful evidence of the asteroid collision that wiped out the dinosaurs around 66 million years ago. This discovery and its significance are the focus of an article in *The New Yorker* called "[The Day the Dinosaurs Died](#)". But piecing together the available evidence is highly complex and scientists are not all in agreement about what it means, as [this Nature editorial](#) makes clear.

## NKI ON THE ROAD



The Society of Biological Psychiatry held its **74<sup>th</sup> Annual Scientific Meeting** recently in Chicago. Presenters representing NKI were **Dan Iosifescu** (Clinical Research), **Joshua Kantrowitz** (Schizophrenia Research), and **Emily Stern** (Clinical Research). Dr Iosifescu was co-chair of a symposium on “Neuromodulation with Near-Infrared Light: Cell Survival, Neurophysiology, Cognition and Mood”. Dr. Kantrowitz participated in a symposium on “Psychotropic Drug Development in the 21st Century; The NIMH Experimental Medicine Program” and presented a poster titled “A Randomized, Single-Blind, Parallel-Group Study to Evaluate the Effects of TS-134 on Ketamine- Induced Bold Signals in Resting fMRI in Healthy Adult Subjects”. Dr. Stern presented a poster on “Patterns of Functional Connectivity Associated with Phenotypic Heterogeneity in Obsessive-Compulsive Disorder”.

## EVENTS AND SEMINARS

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](#).

## 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 6,000 items dating back to 1995, and can be searched from the [myNKI website](#).

Arfuso M, Salas R, Castellanos FX, Krain Roy A. Evidence of Altered Habenular Intrinsic Functional Connectivity in Pediatric ADHD. *J Atten Disord*. 2019 Apr 23:1087054719843177. PMID: 31014160.

Ashourvan A, Telesford QK, Verstynen T, Vettel JM, Bassett DS. Multi-scale detection of hierarchical community architecture in structural and functional brain networks. *PLoS One*. 2019 May 9;14(5):e0215520. PMID: 31071099.

Bradley KA, Stern ER, Alonso CM, Xie H, Kim-Schulze S, Gabbay V. Relationships between neural activation during a reward task and peripheral cytokine levels in youth with diverse psychiatric symptoms. *Brain Behav Immun*. 2019 Apr 3. PMID: 30953769.

Brown HE, Freudenreich O, Fan X, Heard SO, Goff D, Petrides G, Harrington AL, Kane JM, Judge H, Hoepfner B, Fava M, Perlis RH. Efficacy and Tolerability of Adjunctive Intravenous Sodium Nitroprusside Treatment for Outpatients With Schizophrenia: A Randomized Clinical Trial. *JAMA Psychiatry*. 2019 Mar 27. PMID: 30916714.

Butler T, Deshpande A, Harvey P, Li Y, Rusinek H, Pirraglia E, Osorio RS, Glodzik L, de Leon MJ, Madelin G, Yu WW, Gallagher D, Masaeka J. Precisely-Measured Hydration Status Correlates with Hippocampal Volume in Healthy Older Adults. *Am J Geriatr Psychiatry*. 2019 Jun;27(6):653-654. PMID: 30879941.

Chaieb L, Antal A, Derner M, Leszczyński M, Fell J. New perspectives for the modulation of mind-wandering using transcranial electric brain stimulation. *Neuroscience*. 2019 Apr 29. PMID: 31047978.

Chiou KS, Jiang T, Chiaravalloti N, Hoptman MJ, DeLuca J, Genova H. Longitudinal examination of the relationship between changes in white matter organization and cognitive outcome in chronic TBI. *Brain Inj.* 2019 Apr 24;1-8. PMID: 31017479.

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Dondé C, Avissar M, Weber MM, Javitt DC. A century of sensory processing dysfunction in schizophrenia. *Eur Psychiatry.* 2019 May 9;59:77-79. PMID: 31082567.

Dunsmoor JE, Kroes MCW, Murty VP, Braren SH, Phelps EA. Emotional enhancement of memory for neutral information: The complex interplay between arousal, attention, and anticipation. *Biol Psychol.* 2019 May 7;145:134-141. PMID: 31075362.

Dura-Bernal S, Suter BA, Gleeson P, Cantarelli M, Quintana A, Rodriguez F, Kedziora DJ, Chadderdon GL, Kerr CC, Neymotin SA, McDougal RA, Hines M, Shepherd GMG, Lytton WW. NetPyNE, a tool for data-driven multiscale modeling of brain circuits. *Elife.* 2019 Apr 26;8. pii: e44494. PMID: 31025934.

Ercan ES, Polanczyk G, Akyol Ardic U, Yuce D, Karacetin G, Tufan AE, Tural U, et al. The prevalence of childhood psychopathology in Turkey: a cross-sectional multicenter nationwide study (EPICPAT-T). *Nord J Psychiatry.* 2019 Feb;73(2):132-140. PMID: 30964388.

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Girgis RR, Baker S, Mao X, Gil R, Javitt DC, Kantrowitz JT, Gu M, Spielman DM, Ojeil N, Xu X, Abi-Dargham A, Shungu DC, Kegeles LS. Effects of acute N-acetylcysteine challenge on cortical glutathione and glutamate in schizophrenia: A pilot in vivo proton magnetic resonance spectroscopy study. *Psychiatry Res.* 2019 May;275:78-85. PMID: 30884334.

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Lee JY, Brook JS, Finch SJ, Kim W, Brook DW. Single and dual diagnoses of major depressive disorder and posttraumatic stress disorder predicted by triple comorbid trajectories of tobacco, alcohol, and marijuana use among urban adults. *Subst Abus.* 2019 Mar 19:1-8. PMID: 30888260.



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### Schizophrenia International Research Society 2019 Abstracts

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