
Donald C. Goff, MD, Director
Antonio Convit, MD, Deputy Director
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September – October 2019

Stuart Moss, MLS, Editor

From Neuroscience to Linguistics: EBI Researcher Takes a Varied Approach to Psychiatric Research

By Catarina Cunha, PhD



Catarina Cunha, PhD, joined NKI's Emotional Brain Institute in March as a Research Scientist. Originally from Portugal, she completed her Masters in Germany at Ruhr-University-Bochum and her PhD training with Dr. George Augustine (Duke University) and Dr. Joseph LeDoux (NYU), working on technology development such as

optogenetic transgenic mice and the role of the inhibitory circuitry in emotional learning. Dr. Cunha has many years of experience with electrophysiology, optogenetics, and transgenic mice. In the lab, she performs cutting edge neuroimaging techniques combined with electrophysiology and optogenetics in vivo and in vitro. Catarina also leads an exercise class in the NKI library twice a week, and some of her photography is on display in the new coffee room. Below, she describes her lab research as well as a language analysis project she is working on.

My research focuses on epigenetics in basic neural processes and in mental health disorders. Epigenetics ('epi-' is Greek for 'above') is a mechanism in which chemical compounds are added to genes, affecting the way those genes code for proteins. These natural processes are crucial for normal development, especially in cell differentiation, where different proteins are expressed based on the same genome. From as far back as 1969, DNA methylation has been linked with long-term memory function. New studies provide further evidence that epigenetic mechanisms can regulate long-term neuronal changes. In addition, these changes affect neuroplasticity, learning capacity, memory, and other related functions. In light of these results, I am starting to examine the role of epigenetics in psychiatric diseases. Faulty epigenetic mechanisms are thought to contribute

to depression, psychosis, Alzheimer's, autism, addiction, etc. Epigenetic therapies are not new; a number are already approved for the treatment of various cancers. My most recent [publication](#) related to OCD suggests that mental health outcomes can benefit from epigenetic therapies such as RG108.

In addition to my work in the laboratory, I am involved in a natural language analysis project. The aim is to create a tool that will facilitate the rapid assessment of certain mental states. In collaboration with Dr. German Todorov and Ariel Spivakovsky, I have developed a diagnostic tool to screen for PTSD and other mental states based on natural language scanning. Language is the most common and reliable way for people to communicate. The words we use in daily life reflect not only our conscious thoughts, but also our subconscious feelings. Peer reviewed research has demonstrated that we can correlate daily word usage to explicit inner mental states ([Tausczik & Pennebaker, 2010](#)).

Using training datasets that were pre-classified into a positively diagnosed group and a control group, my colleagues and I identified salient patterns of language usage. Then, using mathematical, statistical, and machine learning methods, we constructed a data model and selected analytical techniques that yield the best screening accuracy. This included the use of linear and nonlinear regression, or classification (for score-based or Boolean result, correspondingly), Bayesian classifiers, and deep machine learning (using artificial multi-layer neural nets). Once the data model was constructed and the analytical algorithms were trained using the initial pre-classified dataset, we developed a software tool with a defined API. The user interface takes a writing sample as input and can yield either a binary or score-based diagnosis of PTSD and other mental states. ***In order to develop a more accurate analyzer, I am looking for word data from pre-screened individuals, and anyone who would be interested in collaborating. For more information, I can be reached at Catarina.Cunha@nki.rfmh.org.***

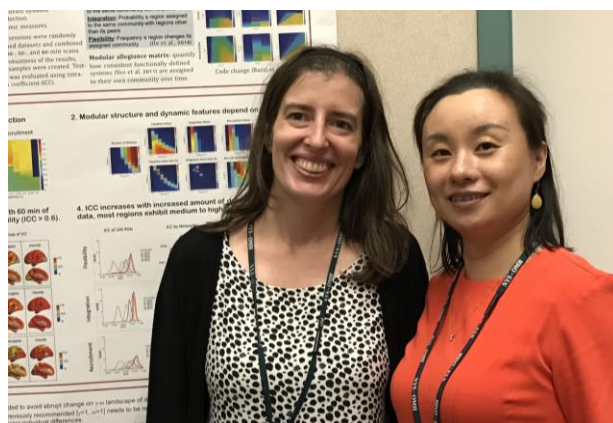
The current analyzer versions are available at the following links:

PTSD, Impulsivity, Resilience, Positivity:
<http://www.personalytic.com:8080/analysis/analyze>

Different Depression categories:
<http://www.personalytic.com:8080/depression/analyze>

NKI SCIENCE DAY

NKI Science Day 2019, held on September 24th, was a resounding success. The auditorium was packed for the five morning presenters, followed by refreshments and then an exhibit of more than 50 posters. It was a great opportunity to mingle in a relaxed environment, meet new people, and learn about the wide-ranging work going on throughout the Institute. The event program and additional photos will be archived on the NKI website soon.



KUDOS



At the 2019 International Society for Neurochemistry – American Society for Neurochemistry (ISN-ASN) meeting in Montreal, **Abel Lajtha** was honored during a session titled “Glutamate at the Crossroad”. **Fifty years ago**, Dr. Lajtha was one of the 12 founders who incorporated ASN and served on its first Council. He later became President of ISN (1975-77) and of ASN (1979-81) and assumed many other leadership roles.

GRANTS RECEIVED



UNIVERSITY OF MINNESOTA

Dr. Arnaud Falchier (Translational Neuroscience) will be collaborating with Dr. Alex Opitz (University of Minnesota) on the project “Investigating the Molecular, Cellular and Circuit Effects of Transcranial Magnetic Stimulation.”



Dr. Alexandre Franco (Biomedical Imaging & Neuromodulation) received a Core award on Dr. Charles Schroeder’s P50 Center grant entitled “Neurobiology and Dynamics of Active Sensing.” This is a collaboration with Columbia University.



Dr. James Clelland (Clinical Research) received a subcontract from Columbia University Medical Center for the project entitled “A Novel Pharmacogenetic Approach Towards Treating Comorbid Alcohol Use Disorder in Schizophrenia Patients.”

New York State Psychiatric Institute

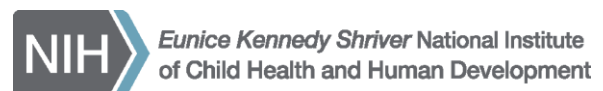
Dr. Tarek Sobeih and ISD (Information Sciences) will be providing data management support for an EPINET award entitled “OnTrackNY’s Learning Healthcare System.” This is a collaboration with Drs. Lisa Dixon and Jennifer Humensky at NYSPI.



Dr. Mariko Saito (Neurochemistry) received an R21 award from the NIAAA for the grant entitled “Receptor Specific Retinoids Probes to Study the Brain Damage Caused by Developmental Alcohol Exposure.” This is a multi-PI collaboration with Dr. Bhaskar Das at the Icahn School of Medicine at Mount Sinai.



Dr. Robert Sears (Emotional Brain Institute) received an award from the Templeton Foundation for a grant entitled “Survival Circuit Influences on Human Nature.” This is a collaboration with NYU (Dr. Joseph LeDoux).



Dr. Donald Wilson (Emotional Brain Institute) received an Administrative Supplement on Dr. Regina Sullivan’s R37 (MERIT) grant entitled “Maternal Influence Over Prefrontal Cortex and Transition to Independence.” This is a collaboration with NYU School of Medicine.

FROM AROUND THE INSTITUTE

Scharfman Lab Welcomes Two New Postdoctoral Fellows



Dr. Chiara Criscuolo earned a BS and MS in Medical Biotechnology at the University of Rome Tor Vergata and completed her PhD in Neurobiology at the Neuroscience Institute of the National Research Council in Pisa, Italy, with a graduate scholarship awarded by the University of L'Aquila. In Pisa, she also did a first postdoc collaborating with Scuola Normale Superiore of Pisa and the European Brain Research Institute – Rita Levi-Montalcini Foundation (EBRI) of Rome. During her time in Pisa, Dr. Criscuolo had the opportunity to work a variety of projects, exploring the neurobiology both of Alzheimer's disease and of visual system development, and investigating new strategies for Alzheimer's disease treatment (new methods and drug molecules – i.e., neurotrophic factors intranasal delivery) and early diagnosis. Before joining the Scharfman Lab in 2019, Dr. Criscuolo worked at the Columbia University Irving Medical Center Department of Neurology, where she studied alterations in the cortico-striatal circuitry in a murine model of autism spectrum disorder. At Columbia, she also explored the effects of sleep deprivation on the development and progression of neurodegenerative diseases such as Parkinson's disease. Chiara is currently investigating how sex differences affect the brain in animal models of AD and epilepsy, and the role played by neurotrophic factors and their receptors in the early stages of AD.



Dr. Christos Lisgaras received his Integrated Master's Degree in Applied Biology and Technology from the University of Ioannina in Greece and his PhD in Neurophysiology and Neuropharmacology from the same institution. His PhD work focused on the role of the cholinergic system in the hyperexcitability of developmental epilepsies with a particular focus on hippocampal and cortical oscillations. He subsequently trained at the Albert Einstein College of Medicine where he investigated post-traumatic EEG abnormalities and antiepileptogenic treatments as a part of a preclinical consortium, the Epilepsy Bioinformatics Study for Antiepileptogenic Therapy (EpiBioS4Rx). Christos is currently investigating cholinergic aspects of hyperexcitability by using wideband video-EEG and silicone probes, slice electrophysiology and closed-loop optogenetic interventions. He has been awarded the Herbert H. Jasper Junior Investigator Award and supported by the International League against Epilepsy, the Alexander S. Onassis Public Benefit Foundation, the Greek National Scholarships Foundation and the World Hellenic Biomedical Association.



A [comment](#) by Center for Dementia Research Director **Ralph Nixon** appears on the Alzforum website in response to "Familial AD Mutations, β -CTF, Spell Trouble for Endosomes".

New Human Resources in Human Resources

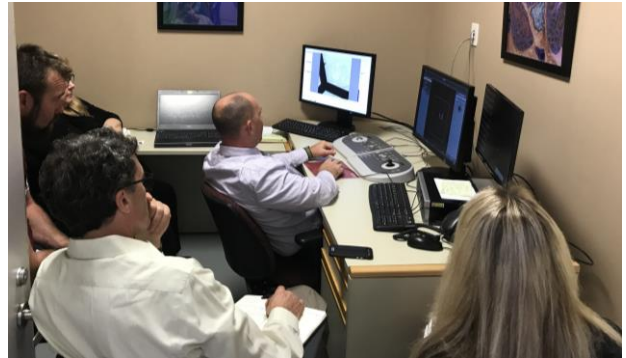
Two administrative assistants recently joined the Human Resources department.



Andrew Carlone grew up nearby in Sparkill, NY. He graduated from Tappan Zee High School and then from St. Thomas Aquinas College where he majored in business administration. Before coming to NKI, he worked at a local title insurance company as an Applications Coordinator and Post-Closing Processor. In his free time, Andrew enjoys going to the movies and watching sports. He is a long-suffering Jets fan, so please go easy on him.

Before coming to NKI, **Elizabeth Henriquez** worked in the retail sector for over ten years. After completing her business and technologies degree, she took an HR course at Cornell University, and then got a job in the HR department of a non-profit organization. She arrived at NKI eager to put into practice what she has learned, as well as to learn new aspects of HR. Outside of work, Elizabeth enjoys live music, good food, roller skating, and ice skating. She adds, "I just want to say thank you to my HR department and to all the people that I have met so far for the warm welcome."

CDR "Under the Microscope"



Researchers at the control station for the microscope.

Due to the good condition we maintain the electron microscopy lab and our Talos L120C transmission electron microscope (TEM), the manufacturer ThermoFisher Scientific selected NKI over other sites on the east coast that have the same system (including Yale University), to showcase the TEM to University of Rochester scientists who are interested in purchasing the same microscope for their department. ThermoFisher compensated us for the use of the NKI TEM, and it proved to be a valuable experience meeting electron microscopists from another institution and a great opportunity to showcase the capabilities we have at NKI. We demonstrated the cryo- and standard room temperature sample imaging and the Rochester scientists were very pleased with the results.

Contributed by Chris Goulbourne, PhD



The recently published meta-analysis on mitral valve prolapse and panic disorder by Drs. **Umit Tural** and **Dan Iosifescu** (Clinical Research) was featured in a [Psychiatric News Alert](#).

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 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

nature human behaviour

Lila Davachi (Biomedical Imaging & Neuromodulation) and **Regina Sullivan** (Emotional Brain Institute) each have a new piece in *Nature Human Behaviour*.

Duncan K, Davachi L. [Disengagement with cognitive tasks decreases effect sizes](#). Nat Hum Behav. 2018 Sep; 2(9):606. PMID: 31346270.

Tottenham N, Shapiro M, Flannery J, Caldera C, Sullivan RM. [Parental presence switches avoidance to attraction learning in children](#). Nat Hum Behav. 2019 Jul 22. PMID: 31332302.

nature International journal of science

Elizabeth Phelps (Emotional Brain Institute) published this review in *Nature*. Dr. Phelps's Lab recently moved from NYU to Harvard, ending her 9-year affiliation with NKI.

Phelps EA, Hofmann SG. [Memory editing from science fiction to clinical practice](#). Nature. 2019 Aug; 572(7767):43-50. PMID: 31367027.

nature neuroscience

Joseph LeDoux (Emotional Brain Institute) participated with other leading scientists in this *Nature Neuroscience* Q & A piece on the study of fear.

Mobbs D, Adolphs R, Fanselow MS, Barrett LF, LeDoux JE, Ressler K, Tye KM. [Viewpoints: Approaches to defining and investigating fear](#). Nat Neurosci. 2019 Aug; 22(8):1205-1216. PMID: 31332374.

The Journal of Child Psychology and Psychiatry

Michael Milham (Biomedical Imaging & Neuromodulation) is the corresponding author of this open access article in the *Journal of Child Psychology and Psychiatry*.

Alexander LM, Salum GA, Swanson JM, Milham MP. [Measuring strengths and weaknesses in dimensional psychiatry](#). J Child Psychol Psychiatry. 2019 Aug 18. PMID: 31423596.

Neurodegenerative Disease Management

Nunzio Pomara (Geriatric Psychiatry) coauthored this commentary appearing in *Neurodegenerative Disease Management*. The piece addresses potential factors that might have contributed to the cognitive and behavioral worsening which has been observed in unimpaired older adults with successful reductions in brain amyloid levels. It was selected as a Paper of the Week on AlzForum.

Imbimbo BP, Pomara N. [Drug-induced reductions in brain amyloid- \$\beta\$ levels may adversely affect cognition and behavior by a disruption of functional connectivity homeostasis](#). *Neurodegener Dis Manag*. 2019 Aug; 9(4):189-191. PMID: 31337272.



SCIENTIFIC REPORTS

Efrat Levy (Dementia Research) and members of her lab published this open access paper in *Scientific Reports*.

Pérez-González R, Sahoo S, Gauthier SA, Kim Y, Li M, Kumar A, Pawlik M, Benussi L, Ghidoni R, Levy E. [Neuroprotection mediated by cystatin C-loaded extracellular vesicles](#). *Sci Rep*. 2019 Jul 31; 9(1):11104. PMID: 31367000.



Advances in Experimental Medicine and Biology

Raj Balapal (Analytical Psychopharmacology) contributed this chapter to an AEMB volume titled *Recent Advances in Cannabinoid Physiology and Pathology*.

Basavarajappa BS. [Endocannabinoid System and Alcohol Abuse Disorders](#). *Adv Exp Med Biol*. 2019; 1162:89-127. PMID: 31332736.

NeuroImage

Xavier Castellanos and **Michael Milham** (Biomedical Imaging & Neuromodulation) are coauthors of this new paper in *NeuroImage*.

Zhao Y, Klein A, Castellanos FX, Milham MP. [Brain age prediction: Cortical and subcortical shape covariation in the developing human brain](#). *Neuroimage*. 2019 Aug 30:116149. PMID: 31476430.



Biological Psychiatry

A Journal of Psychiatric Neuroscience and Therapeutics

Antigona Martinez (Schizophrenia Research) and NKI colleagues published this article recently in *Biological Psychiatry*.

Martínez A, Tobe R, Dias EC, Ardekani BA, Veenstra-VanderWeele J, Patel G, Breland M, Lieval A, Silipo G, Javitt DC. [Differential Patterns of Visual Sensory Alteration Underlying Face Emotion Recognition Impairment and Motion Perception Deficits in Schizophrenia and Autism Spectrum Disorder](#). *Biol Psychiatry*. 2019 May 29. PMID: 31301757.



Neural Plasticity

Hannah Bernstein, Helen Scharfman, and other members of the Scharfman Lab (Dementia Research) have a new paper in the open access journal *Neural Plasticity*.

Bernstein HL, Lu YL, Botterill JJ, Scharfman HE. [Novelty and Novel Objects Increase c-Fos Immunoreactivity in Mossy Cells in the Mouse Dentate Gyrus](#). *Neural Plast*. 2019 Aug 27; 2019:1815371. PubMed PMID: 31534449.

This article in the open access journal *eNeuro* was coauthored by **Jonas Olofsson**, **Brett East**, and **Donald Wilson** (Emotional Brain Institute).

Olofsson JK, Zhou G, East BS, Zelano C, Wilson DA. [Odor Identification in Rats: Behavioral and Electrophysiological Evidence of Learned Olfactory-Auditory Associations](#). *eNeuro*. 2019 Aug 8; 6(4). PMID: 31362955.



This open access paper by **Marcin Leszczynski** and **Charles Schroeder** (Biomedical Imaging & Neuromodulation) appears in *Frontiers in Integrated Neuroscience*.

Leszczynski M, Schroeder CE. [The Role of Neuronal Oscillations in Visual Active Sensing](#). *Front Integr Neurosci*. 2019 Jul 23; 13:32. PMID: 31396059.



Two papers with NKI coauthors were recently published in *Trends in Cognitive Sciences*. **Joseph LeDoux** (Emotional Brain Institute) is the corresponding author of an opinion piece and **Lila Davachi** (Biomedical Imaging & Neuromodulation) is the corresponding author of a review.

Brown R, Lau H, LeDoux JE. [Understanding the Higher-Order Approach to Consciousness](#). *Trends Cogn Sci*. 2019 Sep; 23(9):754-768. PMID: 31375408.

Tambini A, Davachi L. [Awake Reactivation of Prior Experiences Consolidates Memories and Biases Cognition](#). *Trends Cogn Sci*. 2019 Aug 22. PMID: 31445780.

Lisa Wang (Social Solutions & Services) is a coauthor of this article in *Obesity*. It is Lisa's first publication!

Mzayek F, Wang LE, Relyea G, Yu X, Terry JG, Carr J, Hundley GW, Hall ME, Correa A. [Impact of Abdominal Obesity on Proximal and Distal Aorta Wall Thickness in African Americans: The Jackson Heart Study](#). *Obesity*. 2019 Sep; 27(9):1527-1532. PMID: 31328900.

INFO UPDATE

PSYCHIATRY online

Two new editions are now available on PsychiatryOnline.

First published more than 30 years ago, [The American Psychiatric Publishing Textbook of Psychiatry](#) is a landmark text with a legacy of sound scholarship, expert knowledge, and effective pedagogy. The new, thoroughly revised 7th edition features new authors and content, and adds age-related, cultural, societal, and population considerations in the practice of psychiatry to this authoritative text.

[Schatzberg's Manual of Clinical Psychopharmacology](#) was first published in 1986. The 9th edition offers up-to-date information on current drugs, interactions, side effects, and dosing guidelines. The authors also include a new chapter on important developments in laboratory-guided pharmacotherapy, including pharmacogenomic testing, neurocognitive testing, quantitative EEG, and neuroimaging.

Full access to these books, and to [many other books](#) including the [DSM](#), is available at NKI.



An updated PubMed will be coming soon. On the [PubMed Labs](#) test site, you can try out new features and explore the revamped look and feel. Functionality has been added into the new PubMed gradually. Most recently, the [search filters](#) have been expanded. For more information about what to expect with the new PubMed, you can view an introductory video called "[An updated PubMed is on its way](#)".

My Bibliography

While the new PubMed is forthcoming, the redesigned My Bibliography is already here. To familiarize yourself with the new version, check out the helpful video, "[An insider's guide to the new My Bibliography](#)".

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.

NIMH Clinical Research Toolbox

The National Institute of Mental Health recently developed a [Clinical Research Toolbox](#) designed to assist clinical investigators with the development of clinical research studies. The Toolbox contains resources such as NIH and NIMH policy and guidance documents, templates, sample forms, links to additional resources, and other materials to assist clinical investigators in the development and conduct of high-quality clinical research studies. Use of these templates and forms is optional.

DEPARTMENT OF WONDER



National Institute
of Mental Health



If you enjoy podcasts and you're interested in neuroscience, check out [NIMH's Brain Experts podcast](#). Three episodes are available so far:

[Dr. Niko Kriegeskorte: How can computer models help us better understand the brain?](#)

[Francisco Pereira, Ph.D.: How can machine learning help brain imaging?](#)

[Danny Pine, M.D.: Can clinical fMRI research transfer to the clinic?](#)

You can also find this podcast on Spotify, Apple, and Google Play.



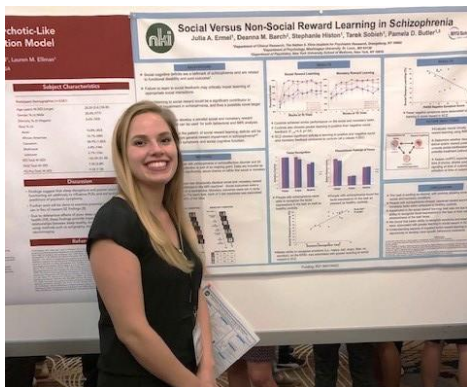
Meet [Snowball, the dancing cockatoo](#). I'd like to leave it at that, but if you're interested in the science you can [read about it in Current Biology](#).

NKI ON THE ROAD

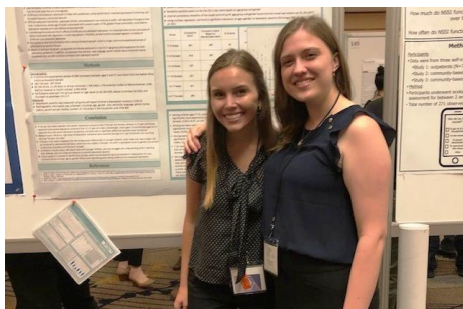


Julia Ermel, Danielle Rette, Erin McDonald, and Pamela Butler (Clinical Research) attended the 2019 [Society for Research in Psychopathology](#) conference, where they presented these posters:

- *Optical Coherence Tomography of The Retina In Schizophrenia: Inter-Device Agreement and Relations With Perceptual Function*
Margaret Vincent; Vance Zemon; Rachel Nolan-Kenney; Laura Balcer; Donald Goff; Michelle Worthington; Lisena Hasanaj; **Pamela Butler**
- *Social Versus Non-Social Reward Learning in Schizophrenia*
Julia Ermel; Deanna Barch; Stephanie Histon; Tarek Sobieh; Pamela Butler
- *Sociodemographic Correlates of Childhood and Adolescent Depression*
Erin McDonald; Danielle Rette; Matthew Hoptman; Kate Collins; Russell Tobe; Dan Iosifescu



Julia Ermel



Erin McDonald and Danielle Rette



Dr. Nunzio Pomara (Geriatric Psychiatry) presented this poster at the [2019 Alzheimer's Association International Conference](#) held in Los Angeles:

Are Plasma Amyloid- β Levels in Late-Life Major Depression a Marker of Heightened AD Risk?

Nunzio Pomara, MD, Davide Bruno, PhD, Eva Petkova, PhD, Chelsea Reichert, MS, MPhil, Henrik Zetterberg, MD PhD, Kaj Blennow, MD, PhD and Jay Nierenberg, MD/PhD



Drs. Diana and John Sidtis and members of their [Brain and Behavior Lab](#) will be presenting four talks at the upcoming [MAVEBA Workshop](#) on voice. The 2019 conference will be held in Florence, Italy in December. These are the presentation titles:

- *Vocal qualities of sarcastic utterances: cross-linguistic study of English and Korean*
S-Y. Yang
- *Emotionally expressed voices are retained in memory following a single exposure*
Y-J. Kim, J.J. Sidtis, D. Van Lancker Sidtis
- *Dissociation of spoken and sung vocal production*
D. Van Lancker Sidtis, Y-J. Kim, J.J. Sidtis
- *The effects of deep brain stimulation on speech articulation and vocalization in Parkinson's disease*
J.J. Sidtis, D. Van Lancker Sidtis, R. A., Ramdhani, & M. Tagliati

EVENTS AND SEMINARS

Center for Biomedical Imaging and Neuromodulation Seminar Series

Held on Mondays at 11 am

Salvador Durá-Bernal, PhD

SUNY Downstate Medical Center and NKI

Data-driven multiscale modeling of cortical circuits

October 7th



Center for Dementia Research Seminar Series

Held on Thursdays at 10 am

Michelle Ehrlich, MD

Icahn School of Medicine, Mount Sinai, NY

Experimental preclinical validation of targets derived from the NIA accelerating medicines partnership -Alzheimer's Disease project

October 31st



Statewide Grand Rounds

Twenty Years of AOT in NY: What Have We Learned?

Alexander Sasha Bardey, MD

Director of Forensic Psychiatry
Nassau County Department of Mental Health

Steven Huz, PhD

Research Scientist, NYS OMH
Office of Performance Measurement & Evaluation

Wendy Germond

Recipient of Services

Wednesday, October 16th

1:00 – 2:30 pm

Broadcast in the Director's conference room



2019 International Mental Health Research Symposium

This year's Symposium will feature a special keynote talk titled "***New Thoughts About Mental Illness: Implications for Discovery & Treatment***" by William T. Carpenter, Jr., M.D. along with updates on the leading research discoveries across brain and behavior disorders by the Foundation's 2019 Outstanding Achievement Prizewinners.

Friday, November 1st

9:00 am – 4:30 pm

Kaufman Music Center
129 West 67th Street, New York, NY 10023

[Click here](#) for more information.



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](#).

Alexander LM, Salum GA, Swanson JM, Milham MP. Measuring strengths and weaknesses in dimensional psychiatry. *J Child Psychol Psychiatry*. 2019 Aug 18. PMID: 31423596.

Basavarajappa BS. Endocannabinoid System and Alcohol Abuse Disorders. *Adv Exp Med Biol*. 2019; 1162:89-127. PMID: 31332736.

Blessing EM, Murty VP, Zeng B, Wang J, Davachi L, Goff DC. Anterior Hippocampal-Cortical Functional Connectivity Distinguishes Antipsychotic Naïve First-Episode Psychosis Patients from Controls and May Predict Response to Second-Generation Antipsychotic Treatment. *Schizophr Bull*. 2019 Aug 21. PMID: 31433843.

Boeke EA, Holmes AJ, Phelps EA. Toward Robust Anxiety Biomarkers: A Machine Learning Approach in a Large-Scale Sample. *Biol Psychiatry Cogn Neurosci Neuroimaging*. 2019 Jun 21. PMID: 31447329.

Bordi M, Darji S, Sato Y, Mellén M, Berg MJ, Kumar A, Jiang Y, Nixon RA. mTOR hyperactivation in Down Syndrome underlies deficits in autophagy induction, autophagosome formation, and mitophagy. *Cell Death Dis*. 2019 Jul 22; 10(8):563. PMID: 31332166.

Brown R, Lau H, LeDoux JE. Understanding the Higher-Order Approach to Consciousness. *Trends Cogn Sci*. 2019 Sep; 23(9):754-768. PMID: 31375408.

Campese VD, Kim IT, Hou M, Gupta S, Draus C, Kurpas B, Burke K, LeDoux JE. Chemogenetic inhibition reveals that processing relative but not absolute threat requires basal amygdala. *J Neurosci*. 2019 Sep 6. PMID: 31492771.

Dondé C, Martínez A, Kantrowitz JT, Silipo G, Dias EC, Patel GH, Sanchez-Peña J, Corcoran CM, Medalia A, Saperstein A, Vail B, Javitt DC. Bimodal distribution of tone-matching deficits indicates discrete pathophysiological entities within the syndrome of schizophrenia. *Transl Psychiatry*. 2019 Sep 6; 9(1):221. PMID: 31492832.

Duncan K, Davachi L. Disengagement with cognitive tasks decreases effect sizes. *Nat Hum Behav*. 2018 Sep; 2(9):606. PMID: 31346270.

East BS, Wilson DA. A hunger for odour: Leptin modulation of olfaction. *Acta Physiol (Oxf)*. 2019 Aug 19:e13363. PMID: 31423725.

Ellman LM, Murphy SK, Maxwell SD, Calvo EM, Cooper T, Schaefer CA, Bresnahan MA, Susser ES, Brown AS. Maternal cortisol during pregnancy and offspring schizophrenia: Influence of fetal sex and timing of exposure. *Schizophr Res*. 2019 Jul 22. PMID: 31345704.

FeldmanHall O, Glimcher P, Baker AL; NYU PROSPEC Collaboration, Phelps EA. The Functional Roles of the Amygdala and Prefrontal Cortex in Processing Uncertainty. *J Cogn Neurosci*. 2019 Jul 12:1-13. PMID: 31298634.

Ginsberg SD, Malek-Ahmadi MH, Alldred MJ, Chen Y, Chen K, Chao MV, Counts SE, Mufson EJ. Brain-derived neurotrophic factor (BDNF) and TrkB hippocampal gene expression are putative predictors of neuritic plaque and neurofibrillary tangle pathology. *Neurobiol Dis*. 2019 Jul 23: 104540. PMID: 31349032.

Gopaldas M, Zanderigo F, Zhan S, Ogden RT, Miller JM, Rubin-Falcone H, Cooper TB, Oquendo MA, Sullivan G, Mann JJ, Sublette ME. Brain serotonin transporter binding, plasma arachidonic acid and depression severity: A positron emission tomography study of major depression. *J Affect Disord*. 2019 Oct 1; 257:495-503. PMID: 31319341.

Grunebaum MF, Galfalvy HC, Choo TH, Parris MS, Burke AK, Suckow RF, Cooper TB, Mann JJ. Ketamine metabolite pilot study in a suicidal depression trial. *J Psychiatr Res*. 2019 Oct; 117:129-134. PMID: 31415914.

Imbimbo BP, Pomara N. Drug-induced reductions in brain amyloid- β levels may adversely affect cognition and behavior by a disruption of functional connectivity homeostasis. *Neurodegener Dis Manag*. 2019 Aug; 9(4):189-191. PMID: 31337272.

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