

The NKInformer



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

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MY PATH TO NKI

By Katlyn Nemani, MD



It was an honor and privilege to join NKI this year as a research psychiatrist. When I reflect on the path that led me here, a few memorable experiences and influential people stand out.

I first discovered my passion for working with patients with severe and persistent mental illness as a college undergraduate at McGill University, when an “internship lottery” landed me at the Douglas Mental Health Institute. Shortly thereafter I had the good fortune of meeting E. Fuller Torrey, a pioneering researcher whose work has focused on possible infectious causes of schizophrenia. This sparked my interest in psychoneuroimmunology and influenced my decision to pursue combined training in psychiatry and neurology at NYU after medical school.

An exciting new field of research emerged during my training, with the discovery of brain-reactive antibodies in patients with psychiatric symptoms—

particularly psychosis. My clinical experience with these patients motivated me to pursue research in this area. I was interested in identifying immune mechanisms that may underlie glutamatergic dysfunction in patients with schizophrenia and reached out to Don Goff for guidance. He became an incredible mentor whose enthusiasm, insight, and encouragement inspired me. He created opportunities for me to pursue my research and offered me a position at NKI as I was finishing residency. Little did we know, this transition would coincide with the emergence of the Covid-19 pandemic. We conducted an analysis of over 7000 patients across the NYU system and found that Covid-positive patients with schizophrenia were 2-3x more likely to die after controlling for known risk factors (publication forthcoming in *JAMA Psychiatry*).

The Covid-19 pandemic has led to universal challenges and tragic consequences for people with severe mental illness. But my hope is that we can harness the unique opportunities that exist during this time to further our understanding of the interaction between the brain and immune system. I am currently working on projects focused on immune biomarkers in patients with psychosis and the effects of psychotropic medications on response to viral infection. I’m optimistic that discoveries in this field may lead to advances in precision diagnostics and novel therapeutics.

GRANTS RECEIVED



Dr. Maya Opendak (Emotional Brain Institute) received a second Young Investigator Award from Brain and Behavior Foundation for her project titled “Preventing Psychosocial Deficits After Adversity: Circuit Assessment During Repair”.



Dr. Louisa Steinberg (Clinical Research) received a Young Investigator Award from Brain and Behavior Foundation for her project titled “Auditory Cortex as a Model of Neural Dysfunction and Antidepressant Response in Major Depressive Disorder”.



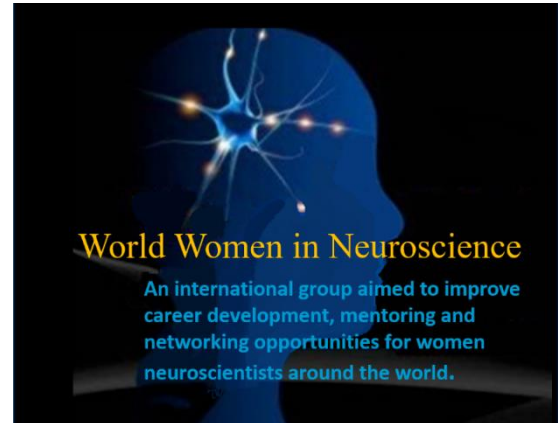
Dr. Chicora Oliver (Emotional Brain Institute) received a K00 for her project titled “Glial Integration of Survival Circuits”.

KUDOS



This press release from Albert Einstein College of Medicine highlights the R01 grant awarded this year to principal investigator **Vilma Gabbay** (Clinical Research) for the project titled “Biobehavioral Predictors of Illness Progression in Adolescent Depression”. Dr. Gabbay is also an Associate Professor and the Director of the Psychiatry Research Institute at Montefiore Einstein (PRIME).

FROM AROUND THE INSTITUTE



Drs. Pamela Butler (Clinical Research) and **Elisa Dias** (Schizophrenia Research) are pleased to announce that the World Women in Neuroscience (WWN) website <<https://worldwomenneuro.org/>> was launched in November, 2020. Dr. Carol Mason, former president of the Society for Neuroscience, and Dr. Margaret Gnegy, president-elect of the American Society for Pharmacology and Experimental Therapeutics, were speakers at the launch. WWN is an organization that aims to improve career development, mentoring, and networking opportunities for female neuroscientists around the world, with special attention to women in disadvantaged regions. Dr. Butler serves on the Executive Committee and is Coordinator of the Outreach Committee. Dr. Dias serves on the Outreach Committee. We welcome you to visit the website and our Twitter ([@WorldWomenNeuro](https://twitter.com/WorldWomenNeuro)) and Facebook page ([World Women in Neuroscience](https://www.facebook.com/WorldWomenNeuro)) and invite new members (both women and men) from the NKI community. Please contact us if you would like additional information.



Abraham Goldring, MD (Manhattan Psychiatric Center) was elected to the NAMI-NYS Board of Directors for a three-year term.

Psychiatric Times

Joshua Kantrowitz, MD (Schizophrenia Research) posted a Psychiatric Times [Mental Health Minute video](#) discussing the results of a [clinical trial](#) of a new drug that may reduce cognitive impairment in schizophrenia.

Schizophrenia Research Director **Daniel Javitt** also comments on this clinical trial on the [European Pharmaceutical Review website](#).



Sandeep Malampati (Dementia Research) received his bachelor's degree in pharmacy and master's degree in pharmacology from The Tamilnadu Dr. M.G.R. Medical University in Chennai, India. Before starting to work in Hong Kong, he was employed in the drug discovery research wing of Orchid Chemicals & Pharmaceuticals Limited. Then, at Hong Kong Baptist University, he investigated the efficacy of medicinal compounds for their ability to induce proteasomal and autophagic degradation of different pathological proteins like α -synuclein, amyloid beta, and hyperphosphorylated tau. For his Ph.D. in Neuroscience – Translational Medicine, Sandeep examined the efficacy of a small molecule TFEB activator in Alzheimer's disease (AD) experimental models for the autophagic clearance of AD pathological proteins and also for restoring the behavioral impairment observed in AD. Sandeep joined Dr. Ralph Nixon's lab as a postdoctoral fellow in October, 2020.

medRxiv

THE PREPRINT SERVER FOR HEALTH SCIENCES

Michael Milham (Biomedical Imaging & Neuromodulation) coauthored this medRxiv preprint with colleagues at the Child Mind Institute: "[The Coronavirus Health and Impact Survey \(CRISIS\) reveals reproducible correlates of pandemic-related mood states across the Atlantic](#)". The paper discusses a newly developed survey and its use with international population samples.



Center for Dementia Research Director **Ralph Nixon** is quoted in a recent [Alzforum article](#). Dr. Nixon also contributed a [comment](#).



From the November OMH *Mental Notes* newsletter:

"The annual Visions art show has been a longstanding collaboration between Rockland Psychiatric Center (RPC), ArtsWestchester, Westchester Dept. of Community Mental Health, and community-based mental health providers.

The 39 artists participating in the "Visions 2020: Plug in Your Paintbrush" show this fall were pleasantly surprised to learn that, despite the pandemic, the show would go on!

The event provides a powerful demonstration of the role of the arts in recovery. Exhibits offer an opportunity for the public to see the creative side of people diagnosed with mental illness and to embrace their gifts and talents. It encourages the public to recognize that recipients of mental health services should not be viewed as having an illness but as contributing to the culture of their community."

You can view the Visions 2020 artwork [online here](#).

PUBLICATIONS OF NOTE

medical hypotheses

Nunzio Pomara (Geriatric Psychiatry) comments: This letter to the editor in *Medical Hypotheses* stems from work that my colleagues and I conducted in elderly depressives. Elevations in peripheral pro-inflammatory cytokines such as IL-6, which have been described in depression, have also been implicated in the so called “cytokine storm” which may develop in a subgroup of COVID-19 patients, especially elderly with co-morbid medical illnesses. The marked elevations in circulating IL-6 and other inflammatory markers may cause extensive tissue damage, especially in the lungs, leading to respiratory failure and death. Our preliminary work as described in a manuscript currently in review for the *Journal of Affective Disorders* and a large body of preclinical data suggest that an increase in peripheral inflammation and higher circulating IL-6 levels may activate a brain reflex known as the cholinergic anti-inflammatory pathway (CAP). This results in increased activity of vagal efferents and suppression of cytokine production in inflammatory cells – especially macrophages, but also neutrophils and lymphocytes. We hypothesize that age- and disease-related reduction in cholinergic function and decreased activation of this anti-inflammatory reflex in response to systemic inflammation may be a contributing factor for the development of severe COVID-19 in the elderly with co-morbidities. Importantly, the use of currently marketed cholinergic agents and vagal stimulation may have a role in the treatment of these patients. Future studies should test this hypothesis by examining cholinergic indices in older individuals with COVID-19 and their relationship to inflammatory markers.

Pomara N, Imbimbo BP. [Impairment of the cholinergic anti-inflammatory pathway in older subjects with severe COVID-19](#). *Med Hypotheses*. 2020 Nov; 144:110274. PMID: 33254578.

Biological Psychiatry

Two reviews by **Regina Sullivan** and **Maya Opendak** (Emotional Brain Institute) were recently published, in *Biological Psychiatry* and *Current Opinion in Behavioral Sciences*.

Sullivan RM, Opendak M. [Neurobiology of Infant Fear and Anxiety: Impacts of Delayed Amygdala Development and Attachment Figure Quality](#). *Biol Psychiatry*. 2020 Aug 30. PMID: 33109337.

NeuroImage

Zhen Yang, **Michael Milham**, and colleagues in the Center for Biomedical Imaging and Neuromodulation (C-BIN) published this open access article in *NeuroImage*.

Yang Z, Telesford QK, Franco AR, Lim R, Gu S, Xu T, Ai L, Castellanos FX, Yan CG, Colcombe S, Milham MP. [Measurement Reliability for Individual Differences in Multilayer Network Dynamics: Cautions and Considerations](#). *Neuroimage*. 2020 Oct 24:117489. PMID: 33130272.

Journal of Obsessive-Compulsive and Related Disorders

This paper on interoception in OCD was recently published by **Goi Khai Eng**, **Emily Stern**, and Clinical Research colleagues at NKI.

Eng GK, Collins KA, Brown C, Ludlow M, Tobe RH, Iosifescu DV, Stern ER. [Dimensions of interoception in obsessive-compulsive disorder](#). *Journal of Obsessive-Compulsive and Related Disorders* 2020; 27:100584.

These two systematic reviews appear in the Journal of the American Academy of Child & Adolescent Psychiatry. NKI coauthors are **Xavier Castellanos** (Clinical Research), **Michael Milham**, and **Alexandre Franco** (Biomedical Imaging and Neuromodulation).

Pereira-Sanchez V, Franco AR, Vieira D, de Castro-Manglano P, Soutullo C, Milham MP, Castellanos FX. [Systematic Review: Medication Effects on Brain Intrinsic Functional Connectivity in Patients with Attention-Deficit/Hyperactivity Disorder](#). J Am Acad Child Adolesc Psychiatry. 2020 Oct 27. PMID: 33137412.

Cortese S, Aoki YY, Itahashi T, Castellanos FX, Eickhoff SB. [Systematic Review and Meta-analysis: Resting State Functional Magnetic Resonance Imaging Studies of Attention-Deficit/Hyperactivity Disorder](#). J Am Acad Child Adolesc Psychiatry. 2020 Sep 15. PMID: 32946973.

Vance Zemon (Yeshiva University), **Gail Silipo** (Schizophrenia Research), and **Pamela Butler** (Clinical Research) are coauthors of this paper in the *European Journal of Neuroscience* on contrast sensitivity deficits in schizophrenia.

Zemon V, Herrera S, Gordon J, Revheim N, Silipo G, Butler PD. [Contrast sensitivity deficits in schizophrenia: A psychophysical investigation](#). Eur J Neurosci. 2020 Oct 28. PMID: 33118212.

Sharifa Williams (Social Solutions & Services) is a coauthor of this open access paper appearing in *PLoS One*.

Zafari Z, Keyes KM, Jiao B, Williams SZ, Muennig PA. [Differences between blacks and whites in well-being, beliefs, emotional states, behaviors and survival, 1978-2014](#). PLoS One. 2020 Sep 14; 15(9):e0238919. PMID: 32925952.

Abraham Goldring, **Jean-Pierre Lindenmayer**, and colleagues at NKI and Manhattan Psychiatric Center published their latest work on psychometric assessment in schizophrenia in *Schizophrenia Research*.

Goldring A, Borne S, Hefner A, Thanju A, Khan A, Lindenmayer JP. [The psychometric properties of the Self-Evaluation of Negative Symptoms Scale \(SNS\) in treatment-resistant schizophrenia \(TRS\)](#). Schizophr Res. 2020 Oct 15. PMID: 33071071.

Alvin Bachman and **Babak Ardekani** (Biomedical Imaging & Neuromodulation) have a new paper in the open access journal *Biomarkers in Neuropsychiatry*.

Bachman AH, Ardekani BA. [Change point analyses in prodromal Alzheimer's disease](#). Biomarkers in Neuropsychiatry 2020; 3:100028.

Alzheimer's & Dementia

Ricardo Osorio (Clinical Research) is the senior author of this paper published recently in *Alzheimer's & Dementia*.

Bubu OM, Umasabor-Bubu OQ, Turner AD, Parekh A, Mullins AE, Kam K, Birckbichler MK, Mukhtar F, Mbah AK, Williams NJ, Rapoport DM, de Leon M, Jean- Louis G, Ayappa I, Varga AW, Osorio RS; and Alzheimer's Disease Neuroimaging Initiative. [Self-reported obstructive sleep apnea, amyloid and tau burden, and Alzheimer's disease time-dependent progression](#). *Alzheimers Dement*. 2020 Oct 8. PMID: 33090679.

Journal of Behavioral Medicine

Kerstin Pahl (first author) and **Helen-Maria Lekas** (Social Solutions & Services) are coauthors of this publication in the *Journal of Behavioral Medicine*.

Pahl K, Capasso A, Lekas HM, Lee JY, Winters J, Pérez-Figueroa RE. [Longitudinal predictors of male sexual partner risk among Black and Latina women in their late thirties: ethnic/racial identity commitment as a protective factor](#). *J Behav Med*. 2020 Sep 23. PMID: 32965619.

Current Opinion in Behavioral Sciences

Sullivan RM, Opendak M. [Defining Immediate Effects of Sensitive Periods on Infant Neurobehavioral Function](#). *Curr Opin Behav Sci*. 2020 Dec; 36:106-114. PMID: 33043102.

INFO UPDATE

Library services continue uninterrupted. As always, if you need documents, assistance with literature searching, or have reference questions, the [NKI librarian](#) is at your service.



NKI employees are eligible to register with the New York State Library in order to access the Library's substantial [electronic resources](#). (Note that all New York residents can register, but NYS government employees have access to a lot more.) Instructions to register are [here](#):

<http://www.nysl.nysed.gov/apply.htm>

(If you need assistance verifying your agency employment while at home, the NKI librarian can do that for you.)

PSYCHIATRY online

The free [Book of the Month](#) for December from Psychiatry Online is [Improving Mental Health: Four Secrets in Plain Sight](#) by Dr. Lloyd Sederer. The book aims to help clinicians improve the lives of their patients—and patients to improve their own lives—by identifying these secrets and taking action in ways that can work immediately, closing the science-to-practice gap.



[NOVELNY](#) is an online virtual library connecting New Yorkers to 21st century information via libraries and library systems statewide. The included databases, which you can view [here](#), provide free access to the full text of thousands of journals, newspapers, an encyclopedia, content for students, and other references.

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.).

DEPARTMENT OF WONDER



You probably hear the advice all the time – too much sitting is not good for you; get up and move! But the message bears repeating, and here are your latest reminders:

- From the *Harvard Heart Letter*: "[Why you should move — even just a little — throughout the day](#)".
- And from the *New York Times*: "[11 Minutes of Exercise a Day May Help Counter the Effects of Sitting](#)".

Stop the Spam

A recent Tip of the Week from the *New York Times's* personal technology columnist Brian X. Chen offers instructions for [blocking unsolicited text messages](#) (scroll down for the tip section). And if you're getting too many annoying robocalls, Mr. Chen also has a [tip for that](#).



Bellevue Literary Review

Recently featured in [New York State's Coronavirus Update](#), the [Bellevue Literary Review \(BLR\)](#) is a literary journal at the intersection of medicine and literature. Founded in 2000 at Bellevue Hospital, the *BLR* has been publishing fiction, nonfiction, and poetry about health and healing for twenty years. You can view a recent reading of pieces from the journal by New York actors [here](#), and previous Off the Page video readings can be found [here](#).



After 40 years of publishing in print, *The Journal of Neuroscience* will become [an online-only journal](#) beginning in January 2021.

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 ON THE (VIRTUAL) ROAD



Kerstin Pahl, Sharifa Williams, and Crystal Lewis (Social Solutions & Services), with colleagues at NYU, contributed to a well-attended presentation given at the American Public Health Association Annual Meeting in October. The session topic was “Intersecting experiences of socioeconomic disadvantage and racial discrimination over time: Relationships with self-reported health”.



On November 19, **Dr. Pahl** also gave an NYU Psychiatry Grand Rounds presentation on “Life Course Social Determinants of Stress and Health: Risk and Protective Factors”.

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 6,400 items dating back to 1995, and can be searched from the [myNKI website](#).

Apuzzo J, Saito M, Wilson DA. Post-exposure environment modulates long-term developmental ethanol effects on behavior, neuroanatomy, and cortical oscillations. *Brain Res.* 2020 Dec 1; 1748:147128. PMID: 32950485.

Awasthi S, Pan H, LeDoux JE, Cloitre M, Altemus M, McEwen B, Silbersweig D, Stern E. The bed nucleus of the stria terminalis and functionally linked neurocircuitry modulate emotion processing and HPA axis dysfunction in posttraumatic stress disorder. *Neuroimage Clin.* 2020 Sep 24; 28:102442. PMID: 33070099.

Axelrud LK, Simioni AR, Pine DS, Winkler AM, Pan PM, Sato JR, Zugman A, Parker N, Picon F, Jackowski A, Hoexter MQ; IMAGEN Consortium, Barker G, Martinot JL, Martinot MLP, Satterthwaite T, Rohde LA, Milham M, Barker ED, Salum GA. Neuroimaging Association Scores: reliability and validity of aggregate measures of brain structural features linked to mental disorders in youth. *Eur Child Adolesc Psychiatry.* 2020 Oct 8. PMID: 33030612.

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Gao PP, Graham JW, Zhou WL, Jang J, Angulo SL, Dura-Bernal S, Hines ML, Lytton W, Antic SD. Local Glutamate-Mediated Dendritic Plateau Potentials Change the State of the Cortical Pyramidal Neuron. *J Neurophysiol.* 2020 Oct 21. PMID: 33085562.

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