

The NKInformer



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

September – October 2022

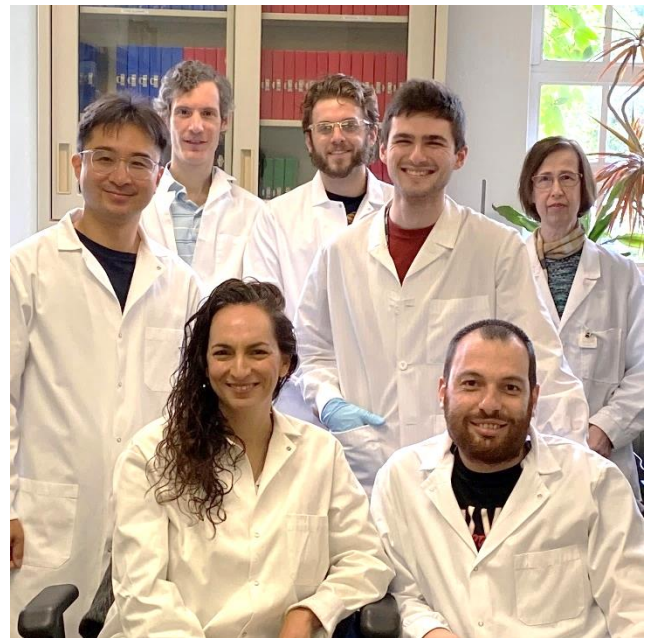
Stuart Moss, MLS, Editor

LEVY LAB INVESTIGATES THE ROLE OF EXTRACELLULAR VESICLES IN AGING AND NEURODEGENERATION

Contributed by Efrat Levy, PhD, and Pasquale D'Acunzo, PhD

For over ten years, **Dr. Efrat Levy** and members of her laboratory in the Center for Dementia Research have been studying vesicular transport as it relates to neurodegenerative disorders such as Alzheimer's disease. In particular, they have been investigating the role of extracellular vesicles (EVs) and over time they have developed increasingly powerful methods of isolating and analyzing these minute particles. Papers published in 2012 ([Pérez-González et al., 2012](#)) and in 2017 ([Pérez-González et al., 2017](#)) described a novel method to isolate EVs from the interstitial fluid of the brain. The lab has used this method for the analyses of brain EVs during aging ([Kim et al., 2022](#)), in patients with neurodegenerative diseases such as Alzheimer's disease ([Pérez-González*, Kim* et al., 2020](#)), in individuals with Down syndrome ([Gauthier*, Pérez-González* et al., 2017](#); [D'Acunzo et al., 2019](#); [D'Acunzo et al., 2021](#)), in murine models of spinocerebellar ataxia ([Zhang et al., 2021](#)) and chronic cocaine exposure ([Barreto*, D'Acunzo* et al., 2022](#)), and in subjects carrying the apolipoprotein E4 allele, the greatest genetic risk factor for Alzheimer's disease ([Peng et al., 2019](#)).

[* denotes equal contribution]



Members of the Levy Lab

Standing, L to R: Yohan Kim, Steve DeRosa, Jonathan M. Ungania, Giorgio R. Zaghen, Monika Pawlik

Sitting, L to R: Lital Rachmany, Pasquale D'Acunzo

EVs are heterogeneous and encompass vesicles with different intracellular origins, functions, and molecular markers. Therefore, the Levy lab continuously worked to improve the original protocol to better fractionate known and novel brain EVs. The latest milestone on their journey is a recent publication in *Nature Protocols* ([D'Acunzo et al., 2022](#)) which details a high-resolution fractionation technique that better separates subpopulations of the known extracellular vesicles, the plasma membrane derived microvesicles and the late endosome-derived exosomes. Most importantly, the improved protocol revealed the existence of a different, previously unidentified type of EV that derives from mitochondria and that the authors named mitovesicles. The *Nature Protocols* article is accompanied by an online "[Behind the Paper](#)" feature authored by **Dr. Pasquale D'Acunzo**.

Dr. Levy's laboratory is currently studying the pathways involved in mitovesicle exocytosis and the effects of their internalization, investigating the physiological and pathogenic roles of mitovesicles in the brain. The discovery of mitovesicles paves the way to study novel mechanisms that are relevant for neurodegenerative diseases and that likely have a contributive role in the development of dementia. Accordingly, mitovesicle research may suggest in the future novel and unexplored therapeutic directions and be useful to identify new diagnostic/prognostic markers in the blood.

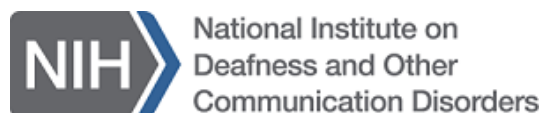
GRANTS RECEIVED



Drs. Kerstin Pahl and Crystal Fuller Lewis (Social Solutions & Services) received an R01 from the National Institute on Aging for a project titled "[Structural Adversity and Life-Course Social Determinants of Stress Regulation and Epigenetic Aging in Midlife Adults.](#)"



Dr. Brian Russ (Translational Neuroscience Laboratories) received an S10 equipment grant from the National Institute of Mental Health titled "[Transcranial focused ultrasound platform for noninvasive neuromodulation.](#)"



Drs. Charles Schroeder, Sam Neymotin, and Stephan Bickel (Translational Neuroscience Laboratories) received an R01 titled "[Dynamic circuit motifs underlying multimodal interactions in primate auditory cortex](#)" from the National Institute on Deafness and Other Communication Disorders.



Drs. Crystal Lewis, Helen-Maria Leks, and Babak Tofghi (Social Solutions & Services) have received an R34 from the National Institute on Drug Abuse titled "[Feasibility of pharmacy-delivered patient navigation + virtual buprenorphine + HIV services.](#)"

Dr. Ayana Jordan (Social Solutions & Services) received an R01 titled "Culturally-Responsive Integrated Harm Reduction Services for Black and Latinx People Who Use Drugs," also from the National Institute on Drug Abuse.

KUDOS



Megan Gautier successfully defended her PhD thesis on September 2nd. Megan's thesis advisor was Dr. Stephen Ginsberg (Dementia Research). Her research topic was "Impact of Maternal Choline Supplementation on Endosomal Pathology and Septohippocampal Circuit Vulnerability in a Mouse Model of Down Syndrome and Alzheimer's Disease."

FROM AROUND THE INSTITUTE

Center for Dementia Research

The Center for Dementia Research (CDR) recently hosted renowned Alzheimer's researcher George Perry, PhD, for its [Neuroscience Seminar Series](#). The event marked a return to in-person gatherings in the NKI auditorium after a long hiatus due to the pandemic.



On September 22nd, **Dr. Abel Lajtha** celebrated his 100th birthday! One of the founders of the field of neurochemistry, Dr. Lajtha became Director of the Research Institute for Neurochemistry and Drug Addiction at Wards Island in 1963. This later became the Center for Neurochemistry at NKI, which Dr. Lajtha has directed for decades.

Over his remarkably long and productive career, Dr. Lajtha has held numerous leadership roles and received many honors and recognitions. He was President of the Research Foundation for Mental Hygiene, Inc. from 1977 to 2018. He was also the Founder and longtime Editor-in-Chief of the journal *Neurochemical Research* and Founding Editor-in-Chief of the *Handbook of Neurochemistry* (now in its third edition). He was President of the International Society of Neurochemistry (1975-77) and the American Society for Neurochemistry (1979-81). In addition, he was elected member of the Slovenian Academy of Sciences, the Hungarian Academy of Sciences, the Indian Academy of Neuroscience, and the Armenian National Academy of Sciences.

Dr. Henry Sershen, a decades-long colleague whose career was nurtured by Dr. Lajtha, notes that "Abel was always one to help support others ... He is a remarkable person and scientist; and beyond science, he was an avid skier and tennis player – still playing tennis well into his 90s!"

To mark this occasion at NKI, the Neurochemistry entrance at will be named in Dr. Lajtha's honor.

The FDA's approval of Auvelity, an extended-release tablet that combines dextromethorphan and bupropion for the treatment of major depressive disorder in adults, was [reported in this Psychiatric News Alert](#) from the American Psychiatric Association. NKI's Director of Clinical Research, **Dr. Dan Iosifescu**, is the senior author of two recent papers reporting the clinical trial results. This news was [also reported in Psychiatric Times](#).

NIH Director's Blog

The [laboratory](#) of **Salvador Dura-Bernal** (Biomedical Imaging & Neuromodulation at NKI and SUNY Downstate) was recently featured in the NIH Director's Blog ("[The Amazing Brain: Where Thoughts Trigger Body Movement](#)"). As noted in the blog, "In the Dura-Bernal lab, scientists develop software and highly detailed computational models of neural circuits to better understand how they give rise to different brain functions and behavior".

The NKI Community Building Committee's Sweet September BBQ 2022 was a big success!



RETIREMENTS

Paul O'Connor and **Dana Lam** recently retired from their positions at NKI. We wish Paul and Dana all the best as they begin the next chapters of their lives!



Paul O'Connor was 15 years into an enjoyable career at Pan Am Airways (he played on the company basketball team all around the world!). But after Pan Am ceased operations in 1991, Paul soon found himself at NKI, where he worked in the Information Sciences Division until his retirement last month. Paul sent this note to his NKI colleagues:

It's frightening to realize that 30 years have passed since I came to NKI. Among the memories I'll cherish, moving into the new state-of-the-art building in 1998 was certainly a highlight. More than that, I'm a lucky guy to have made so many friends here, and most of all I've been impressed by the marvelous group of dedicated researchers and scientists I've encountered. Happy trails to all of you!



Dana Lam recently retired from her position in the OMH Clinical Laboratory. The following tribute is from her colleague Shaona Fang.



Dana Lam worked in the OMH Clinical Laboratory for about 14 years. She is well loved not only by her colleagues in the clinical laboratory but also by the personnel of the NY State psychiatric facilities, who she directly interacted with during her daily work. Dana is knowledgeable and competent in her assigned duties and beyond. It became a habit that we often went to Dana to resolve issues because problems are always solved beautifully with her help. In addition to her excellent services in our laboratory, Dana demonstrated her professional skills by solving problems over the phone with psychiatric facilities, patiently and friendly, which earned her the recognition of top-ranking employee during a customer satisfaction survey.

It was wonderful working with Dana. She promoted a positive culture in our laboratory and was admired by her colleagues. People around her are influenced by her warm, caring, friendly and diligent character. As a close friend of Dana, I feel comfortable and happy with her. Dana always brings me special dishes when she has a chance to go to Chinatown in NYC – such as chicken feet, duck wings, and other dry food that are not easy to get around our area. My family always enjoys her Moon Cakes for Moon festivals. Her fresh-picked bitter melon with shrimp is my favorite meal. Many thanks to Dana and I wish her a happy and healthy retirement!



PUBLICATIONS OF NOTE

nature protocols

Efrat Levy and members of her lab and the Center for Dementia Research **Pasquale D'Acunzo, Yohan Kim, Jonathan Ungania, Rocio Perez-Gonzalez, Chris Goulbourne** recently published this powerful new technique for isolating a variety of extracellular vesicles from brain tissue in *Nature Protocols*. The article is accompanied by an online "[Behind the Paper](#)" feature. To read more about this research, see page 1 above.

D'Acunzo P, Kim Y, Ungania JM, Pérez-González R, Goulbourne CN, Levy E. [Isolation of mitochondria-derived mitovesicles and subpopulations of microvesicles and exosomes from brain tissues](#). Nat Protoc. 2022 Aug 12. PMID: 35962195.

eNeuro

Samuel Neymotin and numerous NKI colleagues in the Center for Biomedical Imaging & Neuromodulation published their latest research in the Society of Neuroscience open access journal *eNeuro*.

Neymotin SA, Tal I, Barczak A, O'Connell MN, McGinnis T, Markowitz N, Espinal E, Griffith E, Anwar H, Dura-Bernal S, Schroeder CE, Lytton WW, Jones SR, Bickel S, Lakatos P. [Detecting Spontaneous Neural Oscillation Events in Primate Auditory Cortex](#). eNeuro. 2022 Aug 19;9(4):ENEURO.0281-21.2022. PMID: 35906065.

Neuron

Helen Scharfman (Center for Dementia Research) is the senior author of this paper in *Neuron* with lab members **John LaFrancois** and **Swati Jain**, and other coauthors.

Whitebirch AC, LaFrancois JJ, Jain S, Leary P, Santoro B, Siegelbaum SA, Scharfman HE. [Enhanced excitability of the hippocampal CA2 region and its contribution to seizure activity in a mouse model of temporal lobe epilepsy](#). Neuron. 2022 Aug 10:S0896-6273(22)00665-1. PMID: 35987207.

Autophagy

Ralph Nixon, Director of the Center for Dementia Research, and colleagues in his laboratory have two new articles in the journal *Autophagy*. The first of these is a short piece highlighting the *Nature Neuroscience* paper recently published by [Ju-Hyun Lee et al.](#)

Lee JH, Nixon RA. [Autolysosomal acidification failure as a primary driver of Alzheimer disease pathogenesis](#). Autophagy. 2022 Aug 23:1-2. PMID: 35947489.

Mala (Venkat) Rao is the corresponding author of this new research paper.

Rao MV, Darji S, Stavrides PH, Goulbourne CN, Kumar A, Yang DS, Yoo L, Peddy J, Lee JH, Yuan A, Nixon RA. [Autophagy is a novel pathway for neurofilament protein degradation in vivo](#). Autophagy. 2022 Sep 21:1-16. PMID: 36131358.



**JOURNAL OF
COMMUNITY
HEALTH**

Sharifa Williams, Kerstin Pahl, Crystal Fuller Lewis, and **Daniele Martino** (Social Solutions & Services; Center for Research on Cultural and Structural Equity in Behavioral Health) recently published this new research in the *Journal of Community Health*.

Williams SZ, Lewis CF, Muennig P, Martino D, Pahl K. [Self-reported anxiety and depression problems and suicide ideation among black and latinx adults and the moderating role of social support](#). J Community Health. 2022 Aug 3. PMID: 35921053.



**JOURNAL OF
RACIAL AND ETHNIC
HEALTH DISPARITIES**

Kerstin Pahl, Helen-Maria Lekas, Navin Sanichar, Sharifa Williams, and **Gilbert Nick** (Social Solutions & Services) are coauthors of this recent article in the *Journal of Racial and Ethnic Health Disparities*.

Pahl K, Wang J, Sanichar N, Williams S, Nick GA, Wang L, Lekas HM. [Anti-Asian Attitudes in the Context of the COVID-19 Pandemic: an Exploratory Study](#). J Racial Ethn Health Disparities. 2022 Aug 1:1–8. PMID: 35913546.



PNAS

Brian Russ (Biomedical Imaging & Neuromodulation) coauthored this open access article appearing in *PNAS*.

Zaldivar D, Koyano KW, Ye FQ, Godlove DC, Park SH, Russ BE, Bhik-Ghanie R, Leopold DA. [Brain-wide functional connectivity of face patch neurons during rest](#). Proc Natl Acad Sci U S A. 2022 Sep 6;119(36):e2206559119. PMID: 36044550.



**THE JOURNAL OF
CLINICAL PSYCHIATRY**

Director of Clinical Research **Dan Iosifescu** is the first author of this clinical trial report in the *Journal of Clinical Psychiatry*. NKI coauthors are **Umit Tural, Katherine Collins,** and **Erin McDonald**.

Iosifescu DV, Norton RJ, Tural U, Mischoulon D, Collins K, McDonald E, De Taboada L, Foster S, Cusin C, Yeung A, Clain A, Schoenfeld D, Hamblin MR, Cassano P. [Very Low-Level Transcranial Photobiomodulation for Major Depressive Disorder: The ELATED-3 Multicenter, Randomized, Sham-Controlled Trial](#). J Clin Psychiatry. 2022 Aug 8;83(5):21m14226. PMID: 35950904.



hv
photonics

Dr. Iosifescu is the senior author of another recent paper on photobiomodulation, this one appearing in the open access journal *Photonics*. This research was [highlighted in a post](#) by the Brain & Behavior Research Foundation (BBRF), from which Dr. Iosifescu received funding earlier in his career.

Cassano P, Norton R, Caldieraro MA, Vahedifard F, Vizcaino F, McEachern KM et al. [Tolerability and Safety of Transcranial Photobiomodulation for Mood and Anxiety Disorders](#). Photonics 2022;9(8):507.

Translational Psychiatry

Nunzio Pomara (Geriatric Psychiatry) and NKI colleagues **Chelsea Reichert Plaska** and **Ricardo Osorio** coauthored this open access paper published in *Translational Psychiatry*.

Pomara N, Bruno D, Plaska CR, Ramos-Cejudo J, Osorio RS, Pillai A, Imbimbo BP, Zetterberg H, Blennow K. [Plasma Amyloid- \$\beta\$ dynamics in late-life major depression: a longitudinal study](#). *Transl Psychiatry*. 2022 Jul 28;12(1):301. PMID: 35902554.



Robert Smith, Henry Sershen, Abel Lajtha, and Matthew Grieco are NKI coauthors of this article recently published in *Frontiers in Psychiatry*.

Smith RC, Sershen H, Janowsky DS, Lajtha A, Grieco M, Gangoiti JA, Gertsman I, Johnson WS, Marcotte TD, Davis JM. [Changes in Expression of DNA- Methyltransferase and Cannabinoid Receptor mRNAs in Blood Lymphocytes After Acute Cannabis Smoking](#). *Front Psychiatry*. 2022 Jul 4;13:887700. PMID: 35859599.



Lila Davachi (Clinical Research) is the corresponding author of this recent paper in the *Journal of Neuroscience*.

Thorp JN, Gasser C, Blessing E, Davachi L. [Data-driven clustering of functional signals reveals gradients in processing both within the anterior hippocampus and across its long axis](#). *J Neurosci*. 2022 Aug 22:JN-RM-0269-22. PMID: 36002264.

LEARNING & MEMORY

Christopher Cain (Emotional Brain Institute) coauthored this open access paper appearing in *Learning & Memory*.

Ostroff LE, Cain CK. [Persistent up-regulation of polyribosomes at synapses during long-term memory, reconsolidation, and extinction of associative memory](#). *Learn Mem*. 2022 Jul 26;29(8):192-202. PMID: 35882501.



Panos Roussos (Dementia Research) is a corresponding author of this article published recently in *Nature Genetics*.

Kosoy R, Fullard JF, Zeng B, Bendl J, Dong P, Rahman S, Kleopoulos SP, Shao Z, Girdhar K, Humphrey J, de Paiva Lopes K, Charney AW, Kopell BH, Raj T, Bennett D, Kellner CP, Haroutunian V, Hoffman GE, Roussos P. [Genetics of the human microglia regulome refines Alzheimer's disease risk loci](#). *Nat Genet*. 2022 Aug;54(8):1145-1154. PMID: 35931864.



Karl-Heinz Nennung (Biomedical Imaging & Neuromodulation) coauthored this open access article in *Die Radiologie*.

Nennung KH, Langs G. [Machine learning in neuroimaging: from research to clinical practice](#). *Radiologie (Heidelb)*. 2022 Aug 31. English. PMID: 36044070.

INFO UPDATE



National Library
of Medicine

Network of the National
Library of Medicine

These free upcoming webinars from the Network of the National Library of Medicine may be of interest.

On October 20th, you can learn tips for self-promotion, self-marketing, and self-branding for advancing your career in "[Science-Self-Fandom: How to promote your science and your worth](#)".

"[How PubMed Works](#)" is a series of four 90-minute classes on the following topics:

1. How PubMed Works: Introduction
2. How PubMed Works: Selection
3. How PubMed Works: MeSH (Medical Subject Headings)
4. How PubMed Works: ATM (Automatic Term Mapping)

The first class is on November 2nd. Click the links for more information and to register for any of these webinars.



Health, United States, 2020–2021

The [Health, United States](#) program, which brings together many sources of federal and external data, has launched a redesigned website which makes it easier to find and use accurate and reliable trend data on a variety of topics.

The *Health, United States* report is transitioning to an interactive, user-friendly product with web content. The updated product includes a redesigned topic-based website as well as the traditional report (forthcoming), now called the Annual Perspective. The new user-friendly website includes the data finder to access trend tables, a revamped structure, and a new look. The topic pages bring together key findings, featured figures, and new trend analyses.

PubChem

[PubChem](#) is an open chemistry database at the NIH and is the world's largest collection of freely accessible chemical information.

Starting in December 2022, PubChem will serve as the National Library of Medicine's single source for chemical information. NLM is retiring ChemIDplus and the Drug Information Portal, two other chemical property information sites. All of the data found in ChemIDplus and the Drug Information Portal is currently available and will continue to be available in PubChem.

For more information about using PubChem, see [About PubChem](#).

DEPARTMENT OF WONDER

Medscape

"[Would You Like to Live to a 'Ripe Old Age'?](#)" A former editor of *JAMA* has some advice for doing so. But perhaps Dr. Lajtha (see p. 3) could also teach us a thing or two in that department.

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.

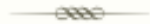
You can [link to the NKI Library's website](#) from myNKI. The Library site includes quick links to the NYU Health Sciences Library and to the New York State Library, as well as links to NKI's own library resources ([journal finder](#), [online catalog](#), etc.).

EVENTS AND SEMINARS

NKI Virtual Town Hall Meeting

2022 Virtual Town Hall Meeting and Employee Recognition Event

will be held on Tuesday,
December 13th at 11 am



Center for Biomedical Imaging and Neuromodulation Science Series

Held on Mondays at 11 am via Zoom

<https://childmind.zoom.us/j/2142826575?pwd=dXlSeDRCaW9RNWRpZ2R5Y0dPQkw4UT09>

Theresa Desrochers, PhD

Brown University
October 31st

Wenhao Zhang, PhD

UT Southwestern
November 7th



Center for Dementia Research Neuroscience Seminar Series

Held on Thursdays in the NKI conference room

Frederick Maxfield, PhD

Weill Cornell Medical College

Interaction of microglia with amyloid plaques

November 10th

D. Allan Butterfield, PhD

University of Kentucky

Amyloid beta-peptide, brain lipid peroxidation and Alzheimer disease: Focus on the intersection of HNE-bound proteins, glucose dysmetabolism, altered proteostasis network, and neuronal death

December 15th



Statewide Grand Rounds

COVID-19 & Schizophrenia: Updates on a Systemic Immune Challenge

Presenter

Katlyn Nemani, MD

Clinical Research Psychiatrist, NKI
Research Assistant Professor, Department of
Psychiatry, NYU Grossman School of Medicine

Moderator

Jay Carruthers, MD

Medical Director, Bureau of Psychiatric Services,
NYS OMH

Wednesday, October 19th
1:00 – 2:15 pm

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](#).



2022 International Mental Health Research Symposium (Virtual & In-Person)

The Brain & Behavior Research Foundation (BBRF)'s annual research symposium will be held on Friday, October 28th. Join to watch presentations on leading research discoveries across brain and behavior disorders by the Foundation's 2022 Outstanding Achievement Prizewinners.

For more information and to register, go to:

<https://www.bbrfoundation.org/event/international-mental-health-research-symposium>

Friday, October 28th
9:00 am – 12:30 pm



On the Shoulders of Giants Scientific Symposium

The On the Shoulders of Giants Scientific Symposium is the Child Mind Institute's annual celebration of scientific achievement in child and adolescent psychiatry, psychology, and developmental neuroscience. This year's symposium will explore the impact of gender on brain development and mental health disorders with talks by pioneering neuroscientist Margaret McCarthy, PhD, and her proteges. The presentation will be followed by an expert roundtable.

For more information and to register, go to:

<https://childmind.org/science/initiatives/on-the-shoulders-of-giants-science-symposium/>

Thursday, October 20th
5:00 – 8:00 pm

Registration is free. This virtual event will be recorded and shared with all registrants.

NKI ON THE ROAD



Department of Psychiatry Grand Rounds

Ayana Jordan, MD, PhD (Social Solutions & Services) presented the NYU Department of Psychiatry Grand Rounds on September 22nd. Dr. Jordan's topic was "Cultural Considerations for Addiction Research: Looking to the Past to Inform the Future".



brain sciences



Dr. Balopal S. Basavarajappa (Dementia Research) served as Chair and was a presenter in the [Brain Sciences 2022 World Mental Health Day Webinar](#) held on October 10th. The topic of his talk was "CDK5 in the Pathogenesis of FASD-like Phenotypes".

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 7,000 items dating back to 1995 and can be searched from the [myNKI website](#).

Abrams MP, Lett E, Jackson DS, Kohler AE, Jordan A. Evaluating ACGME- accredited addiction psychiatry fellowship online content: A critical analysis of addiction psychiatry fellowship program websites in the US. *Subst Abus.* 2022;43(1):1346-1352. PMID: 36044555.

Alphs L, Fu DJ, Williamson D, Jamieson C, Greist J, Harrington M, Lindenmayer JP, McCullumsmith C, Sheehan DV, Shelton RC, Wicks P, Canuso CM. SIBAT-A Computerized Assessment Tool for Suicide Ideation and Behavior: Development and Psychometric Properties. *Innov Clin Neurosci.* 2022 Apr-Jun;19(4-6):36-47. PMID: 35958973.

Alreja A, Ward MJ, Ma Q, Russ BE, Bickel S, Van Wouwe NC, González-Martínez JA, Neimat JS, Abel TJ, Bagić A, Parker LS, Richardson RM, Schroeder CE, Morency LP, Ghuman AS. A new paradigm for investigating real-world social behavior and its neural underpinnings. *Behav Res Methods*. 2022 Jul 25. PMID: 35877024.

Bigdeli T, Voloudakis G, Gorman B, Genovese G, CSP #572, Million Veteran Program (MVP) et al. New Biological Insights from Multi-Ancestry Genomic Analyses of Schizophrenia and Bipolar Disorder: A Cooperative Studies Program #572 and Million Veteran Program (MVP) Study. *Biological Psychiatry* 91[9 Suppl.], S296. 2022. [Abstract]

Cassano P, Norton R, Caldieraro MA, Vahedifard F, Vizcaino F, McEachern KM et al. Tolerability and Safety of Transcranial Photobiomodulation for Mood and Anxiety Disorders. *Photonics* 2022;9(8):507.

Cochran JM, Fang H, Le Gallo C, Peters-Strickland T, Lindenmayer JP, Reuteman-Fowler JC. Participant Engagement and Symptom Improvement: Aripiprazole Tablets with Sensor for the Treatment of Schizophrenia. *Patient Prefer Adherence*. 2022 Jul 28; 16:1805-1817. PMID: 35923658.

Cochran JM, Fang H, Sonnenberg JG, Cohen EA, Lindenmayer JP, Reuteman-Fowler JC. Healthcare Provider Engagement with a Novel Dashboard for Tracking Medication Ingestion: Impact on Treatment Decisions and Clinical Assessments for Adults with Schizophrenia. *Neuropsychiatr Dis Treat*. 2022 Jul 28; 18:1521-1534. PMID: 35928793.

Covitz S, Tapera TM, Adebimpe A, Alexander-Bloch A, Bertolero MA, Feczko E, Franco AR, Gur RE, Gur RC, Hendrickson T, Houghton A, Mehta K, Murtha K, Perrone AJ, Robert-Fitzgerald T, Schabdach JM, Shinohara RT, Vogel JW, Zhao C, Fair DA, Milham MP, Cieslak M, Satterthwaite TD. Curation of BIDS (CuBIDS): a workflow and software package for streamlining reproducible curation of large BIDS datasets. *Neuroimage*. 2022 Sep 2:119609. PMID: 36064140.

D'Acunzo P, Kim Y, Ungania JM, Pérez-González R, Goulbourne CN, Levy E. Isolation of mitochondria-derived mitovesicles and subpopulations of microvesicles and exosomes from brain tissues. *Nat Protoc*. 2022 Aug 12. PMID: 35962195.

Deckler E, Ferland M, Brazis S, Mayer MR, Carlson M, Kantrowitz JT. Challenges and strategies for the recruitment of schizophrenia patients in a research setting. *Int J Neuropsychopharmacol*. 2022 Aug 29:pyac058. PMID: 36037521.

Elmaghrabi SE, Castellanos FX. The Spectrum of Neurobehavioral Outcomes in Attention-Deficit/Hyperactivity Disorder. In: Hauptman AJ, Salpekar JA, editors. *Pediatric Neuropsychiatry: A Case-Based Approach*. Springer; 2019. p. 3-12.

González BJ, Zhao H, Niu J, Williams DJ, Lee J, Goulbourne CN, Xing Y, Wang Y, Oberholzer J, Blumenkrantz MH, Chen X, LeDuc CA, Chung WK, Colecraft HM, Gromada J, Shen Y, Goland RS, Leibel RL, Egli D. Reduced calcium levels and accumulation of abnormal insulin granules in stem cell models of HNF1A deficiency. *Commun Biol*. 2022 Aug 2;5(1):779. PMID: 35918471.

Iosifescu DV, Norton RJ, Tural U, Mischoulon D, Collins K, McDonald E, De Taboada L, Foster S, Cusin C, Yeung A, Clain A, Schoenfeld D, Hamblin MR, Cassano P. Very Low-Level Transcranial Photobiomodulation for Major Depressive Disorder: The ELATED-3 Multicenter, Randomized, Sham-Controlled Trial. *J Clin Psychiatry*. 2022 Aug 8;83(5):21m14226. PMID: 35950904.

Ivanov I, Boedhoe PSW, Abe Y, Alonso P, Ameis SH, Arnold PD, ... Stern ER, ...; ENIGMA-OCD Working Group. Associations of medication with subcortical morphology across the lifespan in OCD: Results from the international ENIGMA Consortium. *J Affect Disord*. 2022 Aug 27:S0165-0327(22)00940-5. PMID: 36041582.

Kim Y, Pérez-González R, Miller C, Kurz M, D'Acunzo P, Goulbourne CN, Levy E. Sex Differentially Alters Secretion of Brain Extracellular Vesicles During Aging: A Potential Mechanism for Maintaining Brain Homeostasis. *Neurochem Res*. 2022 Jul 29. PMID: 35904699.

Kosoy R, Fullard JF, Zeng B, Bendl J, Dong P, Rahman S, Kleopoulos SP, Shao Z, Girdhar K, Humphrey J, de Paiva Lopes K, Charney AW, Kopell BH, Raj T, Bennett D, Kellner CP, Haroutunian V, Hoffman GE, Roussos P. Genetics of the human microglia regulome refines Alzheimer's disease risk loci. *Nat Genet.* 2022 Aug;54(8):1145-1154. PMID: 35931864.

Lal C, Ayappa I, Ayas N, Beaudin AE, Hoyos C, Kushida CA, Kaminska M, Mullins A, Naismith SL, Osorio RS, Phillips CL, Parekh A, Stone KL, Turner AD, Varga AW. The Link between Obstructive Sleep Apnea and Neurocognitive Impairment: An Official American Thoracic Society Workshop Report. *Ann Am Thorac Soc.* 2022 Aug;19(8):1245-1256. PMID: 35913462.

Lee JH, Nixon RA. Autolysosomal acidification failure as a primary driver of Alzheimer disease pathogenesis. *Autophagy.* 2022 Aug 23:1-2. PMID: 35947489.

Lekas HM, Feeney SB, Samaranayake D, Martino D, Pahl K, Lewis CF. A Paradigm Shift: Addressing Two Misrecognitions About the Stigma of Mental Illness. *Behavioral Health News* 2022;29,45.

Liu C, Zhu N, Sun H, Zhang J, Feng X, Gjerswold-Selleck S, Sikka D, Zhu X, Liu X, Nuriel T, Wei HJ, Wu CC, Vaughan JT, Laine AF, Provenzano FA, Small SA, Guo J. Deep learning of MRI contrast enhancement for mapping cerebral blood volume from single-modal non-contrast scans of aging and Alzheimer's disease brains. *Front Aging Neurosci.* 2022 Aug 11; 14:923673. PMID: 36034139.

Mahony BW, Tu D, Rau S, Liu S, Lalonde FM, Alexander-Bloch AF, Satterthwaite TD, Shinohara RT, Bassett DS, Milham MP, Raznahan A. IQ Modulates Coupling Between Diverse Dimensions of Psychopathology in Children and Adolescents. *J Am Acad Child Adolesc Psychiatry.* 2022 Jul 19:S0890-8567(22)00360-4. PMID: 35868430.

Naeem N, Zanca RM, Weinstein S, Urquieta A, Sosa A, Yu B, Sullivan RM. The Neurobiology of Infant Attachment-Trauma and Disruption of Parent-Infant Interactions. *Front Behav Neurosci.* 2022 Jul 22; 16:882464. PMID: 35935109.

Nenning KH, Langs G. Machine learning in neuroimaging: from research to clinical practice. *Radiologie (Heidelb).* 2022 Aug 31. English. PMID: 36044070.

Neymotin SA, Tal I, Barczak A, O'Connell MN, McGinnis T, Markowitz N, Espinal E, Griffith E, Anwar H, Dura-Bernal S, Schroeder CE, Lytton WW, Jones SR, Bickel S, Lakatos P. Detecting Spontaneous Neural Oscillation Events in Primate Auditory Cortex. *eNeuro.* 2022 Aug 19;9(4):ENEURO.0281-21.2022. PMID: 35906065.

Nguyen TNB, Ely BA, Pick D, Patel M, Xie H, Kim-Schulze S, Gabbay V. Clenbuterol attenuates immune reaction to lipopolysaccharide and its relationship to anhedonia in adolescents. *Brain Behav Immun.* 2022 Jul 29; 106:89-99. PMID: 35914697.

Noori S, Jordan A, Bromage W, Fineberg S, Cahill J, Mathis WS. Navigating the digital divide: providing services to people with serious mental illness in a community setting during COVID-19. *SN Soc Sci.* 2022;2(8):160. PMID: 35971454.

Oberlin LE, Victoria LW, Ilieva I, Dunlop K, Hoptman MJ, Avari J, Alexopoulos GS, Gunning FM. Comparison of Functional and Structural Neural Network Features in Older Adults with Depression With vs Without Apathy and Association with Response to Escitalopram: Secondary Analysis of a Nonrandomized Clinical Trial. *JAMA Netw Open.* 2022 Jul 1;5(7):e2224142. PMID: 35895056.

Ostroff LE, Cain CK. Persistent up-regulation of polyribosomes at synapses during long-term memory, reconsolidation, and extinction of associative memory. *Learn Mem.* 2022 Jul 26;29(8):192-202. PMID: 35882501.

Pahl K, Wang J, Sanichar N, Williams S, Nick GA, Wang L, Lekas HM. Anti-Asian Attitudes in the Context of the COVID-19 Pandemic: an Exploratory Study. *J Racial Ethn Health Disparities.* 2022 Aug 1:1-8. PMID: 35913546.

Pan J, Hofmanninger J, Nenning KH, Prayer F, Röhrich S, Sverzellati N, Poletti V, Tomassetti S, Weber M, Prosch H, Langs G. Unsupervised machine learning identifies predictive progression markers of IPF. *Eur Radiol*. 2022 Sep 6. PMID: 36066734.

Park H, Petkova E, Tarpey T, Ogden RT. A single-index model with a surface-link for optimizing individualized dose rules. *J Comput Graph Stat*. 2022;31(2):553-562. PMID: 35873662.

Pedrollo GR, Franco AR, Bagesteiro LB, Balbinot A. Spiking Neural Networks Diagnosis of ADHD subtypes through EEG Signals Evaluation. 2022 44th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 3166-3169. 2022. [Abstract]

Pomara N, Bruno D, Plaska CR, Ramos-Cejudo J, Osorio RS, Pillai A, Imbimbo BP, Zetterberg H, Blennow K. Plasma Amyloid- β dynamics in late-life major depression: a longitudinal study. *Transl Psychiatry*. 2022 Jul 28;12(1):301. PMID: 35902554.

Smith RC, Sershen H, Janowsky DS, Lajtha A, Grieco M, Gangoiti JA, Gertsman I, Johnson WS, Marcotte TD, Davis JM. Changes in Expression of DNA-Methyltransferase and Cannabinoid Receptor mRNAs in Blood Lymphocytes After Acute Cannabis Smoking. *Front Psychiatry*. 2022 Jul 4;13:887700. PMID: 35859599.

Stevenson TJ, Peng KY, Rouse ML Jr, Alward BA, Ball GF. Social regulation of immediate early gene induction in gonadotropin releasing-hormone 1 neurons and singing behavior in canaries (*Serinus canaria*). *Physiol Behav*. 2022 Sep 8:113959. PMID: 36088981.

Sui YV, McKenna F, Bertisch H, Storey P, Anthopoulos R, Goff DC, Samsonov A, Lazar M. Decreased basal ganglia and thalamic iron in early psychotic spectrum disorders are associated with increased psychotic and schizotypal symptoms. *Mol Psychiatry*. 2022 Sep 7. PMID: 36071113.

Svalina MN, Rio CC, Kushner JK, Levy A, Baca SM, Guthman EM, Opendak M, Sullivan R, Restrepo D,

Huntsman MM. Basolateral amygdala hyperexcitability is associated with precocious developmental emergence of fear-learning in Fragile X Syndrome. *J Neurosci*. 2022 Aug 12:JN-RM-1776-21. PMID: 35970562.

Thorp JN, Gasser C, Blessing E, Davachi L. Data-driven clustering of functional signals reveals gradients in processing both within the anterior hippocampus and across its long axis. *J Neurosci*. 2022 Aug 22:JN-RM-0269-22. PMID: 36002264.

Tortorelli M, Trigo TR, Bolibio R, de Freitas CCS, Ribeiro FG, de Lucia MCS, Iosifescu DV, Fráguas R. The Association of Life Events Outside the Workplace and Burnout: A Cross-Sectional Study on Nursing Assistants. *Int J Environ Res Public Health*. 2022 Jul 30;19(15):9342. PMID: 35954702.

Voloudakis G, Vicari JM, Venkatesh S, Hoffman GE, ... Roussos P. A translational genomics approach identifies IL10RB as the top candidate gene target for COVID-19 susceptibility. *NPJ Genom Med*. 2022 Sep 5;7(1):52. PMID: 36064543.

Whitebirch AC, LaFrancois JJ, Jain S, Leary P, Santoro B, Siegelbaum SA, Scharfman HE. Enhanced excitability of the hippocampal CA2 region and its contribution to seizure activity in a mouse model of temporal lobe epilepsy. *Neuron*. 2022 Aug 10:S0896-6273(22)00665-1. PMID: 35987207.

Williams SZ, Lewis CF, Muennig P, Martino D, Pahl K. Self-reported anxiety and depression problems and suicide ideation among black and latinx adults and the moderating role of social support. *J Community Health*. 2022 Aug 3. PMID: 35921053.

Zaldivar D, Koyano KW, Ye FQ, Godlove DC, Park SH, Russ BE, Bhik-Ghanie R, Leopold DA. Brain-wide functional connectivity of face patch neurons during rest. *Proc Natl Acad Sci U S A*. 2022 Sep 6;119(36):e2206559119. PMID: 36044550.