

The NKI Informer



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

November – December 2021

Stuart Moss, MLS, Editor

NKI-Rockland Sample: The Next Generation

Contributed by the NKI-Rockland Sample Team

The NKI-Rockland Sample research program is getting ready to launch a newly funded ([NIMH 1R01MH124045](#)) next generation study with enrollment beginning this winter. The NKI-Rockland Sample (NKI-RS) has served as a beacon for lifespan connectomics research, providing a model for accelerating the pace of psychiatric discovery science. More than 200 publications have used NKI-RS data, generated largely by independent investigators and in major journals. Since 2011, NKI-RS has generated and publicly shared a large-scale ($N > 1400$), deeply phenotyped, community-ascertained, cross-sectional, lifespan sample (ages 6–85 years old) with advanced connectomics-focused neuroimaging (i.e., diffusion MRI [dMRI], resting state fMRI [R-fMRI]) and genetic samples.



Recently launched large-scale efforts, such as the HCP (Human Connectome Project) Lifespan Studies and the NIH ABCD (Adolescent Brain Cognitive Development) Study, are working to bring to scale human connectome mapping and brain function

across the lifespan using “battle-tested” imaging technologies and strategies. These ongoing studies are less focused on mental health. Moreover, technologies and ideas continue to evolve – often too rapidly to permit timely testing and inclusion in ongoing research.

The overarching goal of the current study, led by MPIs Mike Milham and Stan Colcombe, is to create the next generation NKI-RS initiative that will once again extend the vanguard in the study of lifespan connectomics by enriching and expanding the landscape for neuroscientific advancement and biomarker discovery. Three major themes have guided the design of this new NKI-RS-II lifespan resource: 1) multimodal measurement integration across functional domains (e.g., fMRI, EEG, mobile brain/body imaging [MoBI] framework); 2) ecological sampling (e.g., wearables, sensors, smartphones apps); and 3) enhanced physiological phenotyping for cardiovascular fitness and obesity.

Specifically, in a community-ascertained lifespan sample ($N = 600$; ages 9-75; M:F = 1:1; age range selected to maximize data yield and tolerability), this work aims to: 1) Generate and share large-scale multimodal MRI/EEG imaging data complemented

by comprehensive phenotyping of cognition, behavior, and psychiatric status, from human and sensor-based informants; 2) Optimize brain-age prediction across the lifespan using multimodal data (R-fMRI, Naturalistic Viewing fMRI [NV-fMRI], dMRI, T2/T1, R-EEG, NV-EEG) and relate deviations from chronological age to dimensions of psychopathology and cognitive performance; and 3) Identify the relationship of modifiable health risk factors (e.g., fitness, obesity, physical activity, substance use) to deviations between predicted brain age and chronological age across the lifespan.

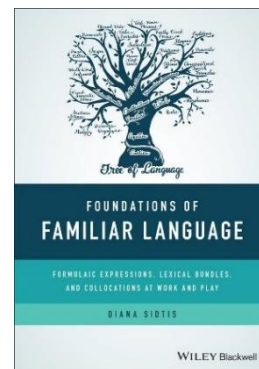
Consistent with the model established by the previously funded NKI-RS initiatives, all data will be shared prospectively, on a quarterly basis, via the International Neuroimaging Data-sharing Initiative (INDI) and the NIMH Data Archive (NDA). If you have any questions about the existing NKI-RS data resource or the new study and measures that will soon be available, please feel free to contact our research group at RocklandSample@nki.rfmh.org.

GRANTS RECEIVED



Dr. Ralph Nixon, Director of the Center for Dementia Research, has been selected as the first recipient of The Leonard Litwin Scholar Award that was introduced in 2021 as a means of supporting scientists who have demonstrated commitment to the advancement of research in Alzheimer's disease (AD). The award, funded through [New Vision Research](#), recognizes Dr. Nixon's significant contribution to the AD research field and provides funding for his research on ***the molecular basis of synapse failure in Alzheimer's disease and related dementias***, in order to foster continuing contributions in the future. There is no formal application required for The Leonard Litwin Scholar Award, as it is presented "ut visum fit" to individuals.

New Book Examines Everyday Language



Diana Sidtis, PhD, CCC/SLP, (Brain & Behavior Laboratory) has published her second book. [*Foundations of Familiar Language*](#) is a new contribution to the study of conversational speech formulas, idioms, proverbs, expletives collocations, and an array of other conventional phrases, which make up nearly one fourth of our verbal communication together and are known to speakers of a language community. Examples from everyday talk, the media, and literature highlight the importance and constant presence of these familiar expressions. The book covers topics such as the role of fixed expressions in education, social sciences, cognitive psychology, and brain science. It also presents new research on the neurological and psychiatric foundations of familiar language drawn from clinical observations and experimental studies in stroke, dementia, schizophrenia, and Parkinson's disease.

Dr. Sidtis is a Research Scientist at NKI and Professor Emerita of Communicative Sciences and Disorders at New York University. She is the co-author of *Foundations of Voice Studies*, which won the 2011 Prose Award for Scholarly Excellence in Linguistics from the American Publishers Association. Her research examining voice, aphasia, motor speech, prosody, and formulaic language has been published in more than 130 peer-reviewed journals and other publications.

IN MEMORIAM



Maria Hui
1950 – 2021

*NKI mourns the passing of long-time employee **Maria Hui, PhD**. The following remembrance was contributed by Mariko Saito, whose lab Maria worked in most recently.*

Educated in Hong Kong, Maria came to the United States in 1977 with her husband Koon-Sea to work at the New York State Research Institute for Neurochemistry and Addiction, located on Wards Island in New York City. Later they moved to NKI from the Research Institute, which merged with NKI. At NKI, Maria mainly studied puromycin-sensitive aminopeptidase with Koon-Sea. Notably, they identified and purified neuron-specific puromycin-sensitive aminopeptidase. That work was very important, because later studies of theirs and others indicated that puromycin-sensitive aminopeptidase is a modifier of neurodegeneration, such as tau-induced neurodegeneration.

Since I met Maria in 1986 at NKI, she was my close friend for 35 years. Fortunately, I had opportunities to work with her including the last several years, during which Maria studied mechanisms of alcohol-induced toxicity in the developing brain. It was wonderful working with her, because she was

always “Maria”, sincere, unassuming, calm, and friendly to everybody. She was not only a skillful and a reliable researcher but also a person who can make people around her comfortable and happy. On a personal level, I learned a lot of things from her, even how to raise children, because she was wise and knowledgeable in every way. I always admired her conscientious and loving way to raise her children even when she was very busy. I am sure everybody who knew Maria will miss her very much.

KUDOS

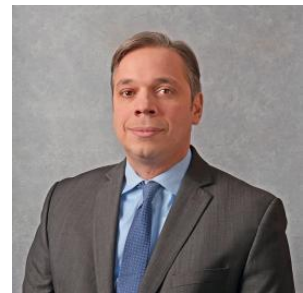


Two NKI investigators have once again been recognized for their high-impact research. **Drs. F. Xavier Castellanos** (Clinical Research) and **Michael Milham** (Center for Biomedical Imaging & Neuromodulation) both appear on the [2021 list of Highly Cited Researchers](#) compiled by Clarivate. Both have made the list every year since 2014, demonstrating their consistent output and influence.

The Highly Cited Researchers list recognizes the world's most influential researchers of the past decade, demonstrated by the production of multiple highly cited papers that rank in the top 1% by citations for field and year. This select group includes only 1 in 1,000 of the world's researchers.



Xavier Castellanos



Michael Milham

FROM AROUND THE INSTITUTE

Kuldeep Sachdeva, PhD, is a new postdoctoral fellow who joined Dr. Nixon's lab in October. Kuldeep completed his undergraduate studies in Biotechnology at the Kurukshetra University in India followed by a master's degree in Molecular Biology and Biotechnology at CCS Haryana Agriculture University (CCSHAU). In 2014, Kuldeep joined the National Centre for Biological Sciences (NCBS | TIFR) at Bengaluru, India for his PhD under the supervision of Dr. Varadharajan Sundaramurthy. There, he investigated modulations in the host Endo-Lysosomal network upon *Mycobacterium tuberculosis* (the tuberculosis disease-causing pathogen) infection in both *in vitro* and *in vivo* model systems.



Thank You



NKI's **Community Building Committee (CBC)** once again organized a Thanksgiving food drive to help feed the hungry in Rockland County. The CBC is pleased to announce that NKI donated over 290 pounds of food and over \$500 virtually during the food drive, with a total value estimated at well over \$1300!

PUBLICATIONS OF NOTE

ANNUAL REVIEW OF DEVELOPMENTAL PSYCHOLOGY

Michael Milham (Biomedical Imaging & Neuromodulation) coauthored this paper in the *Annual Review of Developmental Psychology*.

Fair DA, Dosenbach NU, Moore AH, Satterthwaite T, Milham MP. [Developmental Cognitive Neuroscience in the Era of Networks and Big Data: Strengths, Weaknesses, Opportunities, and Threats](#). *Annual Review of Developmental Psychology* 2021.

ANNUAL REVIEW OF PSYCHOLOGY

Lila Davachi (Biomedical Imaging & Neuromodulation) and colleagues published this review in the *Annual Review of Psychology*.

Buzsáki G, McKenzie S, Davachi L. [Neurophysiology of Remembering](#). *Annu Rev Psychol*. 2021 Sep 17. PMID: 34535061.

PNAS

Donald Wilson, Emotional Brain Institute Director, is a coauthor of this open access paper recently published in *PNAS*.

Iravani B, Schaefer M, Wilson DA, Arshamian A, Lundström JN. [The human olfactory bulb processes odor valence representation and cues motor avoidance behavior](#). *Proc Natl Acad Sci U S A*. 2021 Oct 19; 118(42):e2101209118. PMID: 34645711.

JAMA Psychiatry

Two papers by NKI authors were published recently in *JAMA Psychiatry*.

Katlyn Nemani (Clinical Research) and **Donald Goff** are the lead authors, with NYU colleagues, of this Research Letter published in the December issue. This study was highlighted in [Medscape Medical News](#) and in a [Psychiatric News Alert](#).

Nemani K, Conderino S, Marx J, Thorpe LE, Goff DC. [Association Between Antipsychotic Use and COVID-19 Mortality Among People with Serious Mental Illness](#). *JAMA Psychiatry*. 2021 Sep 22. PMID: 34550323.

The second *JAMA Psychiatry* paper was coauthored by **Panos Roussos** (Dementia Research).

Sealock JM, Lee YH, Moscati A, Venkatesh S, Voloudakis G, Straub P, Singh K, Feng YA, Ge T, Roussos P, Smoller JW, Chen G, Davis LK. [Use of the PsycheMERGE Network to Investigate the Association Between Depression Polygenic Scores and White Blood Cell Count](#). *JAMA Psychiatry*. 2021 Oct 20. PMID: 34668925.

Neuropsychopharmacology

Pejman Sehatpour, **Joshua Kantrowitz**, and **Daniel Javitt** (Schizophrenia Research) are coauthors of this article published in *Neuropsychopharmacology*.

Sehatpour P, Javitt DC, De Baun HM, Carlson M, Beloborodova A, Margolin DH, Carlton MBL, Brice NL, Kantrowitz JT. [Mismatch negativity as an index of target engagement for excitation/inhibition-based treatment development: a double-blind, placebo-controlled, randomized, single-dose cross-over study of the serotonin type-3 receptor antagonist CVN058](#). *Neuropsychopharmacology*. 2021 Oct 20. PMID: 34667294.

Neuron

Maya Opendak, **Regina Sullivan**, and Emotional Brain Institute colleagues have a new article in *Neuron*.

Opendak M, Raineke C, Perry RE, Rincón-Cortés M, Song SC, Zanca RM, Wood E, Packard K, Hu S, Woo J, Martinez K, Vinod KY, Brown RW, Deehan GA Jr, Froemke RC, Serrano PA, Wilson DA, Sullivan RM. [Bidirectional control of infant rat social behavior via dopaminergic innervation of the basolateral amygdala](#). *Neuron*. 2021 Oct 20. PMID: 34706218.

Also recently published in *Neuron* is this meeting report. **Michael Milham** is the corresponding author, and **Stan Colcombe**, **Henry Evrard**, **Alex Franco**, **Brian Russ**, and **Charles Schroeder** (Center for Biomedical Imaging & Neuromodulation) were all participants.

PRIMatE Data and Resource Exchange (PRIME-DRE) Global Collaboration Workshop and Consortium. [Toward next-generation primate neuroscience: A collaboration-based strategic plan for integrative neuroimaging](#). *Neuron*. 2021 Nov 2. PMID: 34731649.



Aidong Yuan and **Ralph Nixon** (Dementia Research) published this open access review in *Frontiers in Neuroscience*.

Yuan A, Nixon RA. [Neurofilament Proteins as Biomarkers to Monitor Neurological Diseases and the Efficacy of Therapies](#). *Front Neurosci*. 2021 Sep 27; 15:689938. PMID: 34646114.

Journal of Clinical Psychopharmacology

Jean-Pierre Lindenmayer and colleagues (Manhattan Psychiatric Center) published this case report in the *Journal of Clinical Psychopharmacology*.

Lindenmayer JP, Burke E, Tsuboyama G, Chahal Y, Grewal HK. [Valbenazine Treatment of Tardive Dyskinesia and of Positive Symptoms](#). *J Clin Psychopharmacol*. 2021 Oct 18. PMID: 34668876.

The American Journal of Psychotherapy

Vilma Gabbay (Clinical Research) coauthored this paper in *The American Journal of Psychotherapy* with colleagues at Albert Einstein College of Medicine.

Zayde A, Kilbride A, Kucer A, Willis HA, Nikitiades A, Alpert J, Gabbay V. [Connection During COVID-19: Pilot Study of a Telehealth Group Parenting Intervention](#). *Am J Psychother*. 2021 Sep 16. PMID: 34525847.

Journal of Neurochemistry JNC

Stephen Ginsberg (Dementia Research) is the first author of this open access review article appearing in *Journal of Neurochemistry*.

Ginsberg SD, Joshi S, Sharma S, Guzman G, Wang T, Arancio O, Chiosis G. [The penalty of stress – Epichaperomes negatively reshaping the brain in neurodegenerative disorders](#). *J Neurochem*. 2021 Oct 17. PMID: 34657288.

The American Journal of Psychiatry

Daniel Javitt, Schizophrenia Research Director, published this editorial in the October issue of *The American Journal of Psychiatry*.

Javitt DC. [Translational Mechanistic Biomarkers for the 21st Century](#). *Am J Psychiatry*. 2021 Oct 1;178(10):893-895. PMID: 34592844.



EUROPEAN RESPIRATORY journal

FLAGSHIP SCIENTIFIC JOURNAL OF ERS

Ricardo Osorio (Clinical Research) is a coauthor of this paper appearing in the *European Respiratory Journal*.

Osorio RS, Martínez-García MÁ, Rapoport DM. [Sleep apnoea in the elderly: a great challenge for the future](#). *Eur Respir J*. 2021 Sep 24:2101649. PMID: 34561285.

Journal of Medical Internet Research

Michael Milham (Biomedical Imaging & Neuromodulation) is the senior author of this article appearing in the open access *Journal of Medical Internet Research*.

Klein A, Clucas J, Krishnakumar A, Ghosh SS, Van Auken W, Thonet B, Sabram I, Acuna N, Keshavan A, Rossiter H, Xiao Y, Semenuta S, Badioli A, Konishcheva K, Abraham SA, Alexander LM, Merikangas KR, Swendsen J, Lindner AB, Milham MP. [Remote Digital Psychiatry for Mobile Mental Health Assessment and Therapy: MindLogger Platform Development Study](#). *J Med Internet Res*. 2021 Nov 11; 23(11):e22369. PMID: 34762054.

INFO UPDATE



All About Preprints

What are preprints, and how are they changing how biomedical research results are shared? Should you use information from preprints? Should you share your own research results in a preprint? If you have questions like these, [Preprints: Accelerating Research](#) is a one-hour, self-paced course from the National Library of Medicine (NLM) that explains the basics of preprints and explores the benefits and considerations of using and submitting them.



Happy Anniversary

[MEDLINE](#) was launched in 1971 and celebrated its 50th anniversary in October. MEDLINE is the NLM's premier bibliographic database that contains more than 28 million references to journal articles in life sciences with a concentration on biomedicine. With the launch of PubMed in 1997, MEDLINE data became available via the internet. In fiscal year 2021, there were 2.58 billion PubMed searches!



The American Psychiatric Association Foundation has launched the [Mentally Healthy Nation Podcast](#), which features “candid conversations that will focus on educating the public and providing tangible solutions to our mental health crisis. Each episode will focus on an aspect of mental health that impacts your community, where you live, learn, work, and worship.”

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.).

DEPARTMENT OF WONDER

October saw the publication of a number of papers reporting on monumental brain mapping projects.



BRAIN Initiative Cell Census Network (BICCN)

First is the output of the BRAIN Initiative Cell Census Network (BICCN), part of the NIH's Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. The aim of the BICCN is to identify and catalog the diverse cell types in human, monkey, and mouse brain. The first products of this endeavor – a comprehensive mapping of the cell types in the mammalian motor cortex on a molecular level – have now been published in [a series of papers](#) in the *Nature* family of journals. You can read more about this landmark achievement in posts from the NIMH Director ([“A Milestone in Mapping the Brain”](#)) and from the NIH Director ([“First Comprehensive Census of Cell Types in Brain Area Controlling Movement”](#)).

The New York Times

The second notable publication pertains to the fruit fly brain – specifically, an ongoing project to map its connectome. The new publication (more like a book at 360 pages) reports on the connectome of the fly brain central complex, which plays an important role in navigation. You can read more about this milestone in *The New York Times* (“[Why Scientists Have Spent Years Mapping This Creature’s Brain](#)”) and see the publication [online in eLife](#).

EVENTS AND SEMINARS

Statewide Grand Rounds

The archived recording of October’s Grand Rounds program on ***Addressing Cognitive Health to Improve Quality of Life*** presented by **Alice Medalia, PhD**, along with NKI Director **Donald Goff, MD**, is now available for viewing at <https://omh.ny.gov/omhweb/bps/>.

Neuroimaging to Real-Time Monitoring: Improving the Prediction of Adolescent Suicide

Presenter

Randy Auerbach, PhD

Associate Professor, Columbia University

Wednesday, December 15th, 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](#).

NKI ON THE (VIRTUAL) ROAD



Center for Dementia Research Director **Ralph Nixon** co-chaired a virtual symposium on “Emerging Roles of the Lysosome in Neurodegenerative Disease” at the 2021 Society for Neuroscience meeting in November. During the symposium session, Dr. Nixon gave a pre-recorded presentation titled “Genetic basis for lysosomal dysregulation in Alzheimer’s disease and related disorders”. He also participated in a live Q&A.



Dr. Nixon also presented virtually at the 14th [Clinical Trials on Alzheimer’s Disease](#) hybrid meeting held in November. In a symposium titled “Back to the Future: Emerging Opportunities to Treat Basal Forebrain Cholinergic Neuron (BFCN) Dysfunction in Alzheimer’s Disease (AD)”, Dr. Nixon gave a talk on “Mechanisms of, and Preclinical Results with Novel Approaches to Treating, BFCN Dysfunction and Degeneration”.



Office of
Mental Health



Clinical Research Director **Dan Iosifescu, MD, MMSc**, gave the OMH Statewide Grand Rounds presentation on November 17th, along with Anne Smith, MD. The topic was “Difficult to Treat Bipolar Disorder”.

In addition, **Dr. Iosifescu** gave the September 17th grand rounds presentation for the NYU Department of Child and Adolescent Psychiatry on “Novel Treatments in Depression: Ketamine and Photobiomodulation”. A recording of that presentation can be found [here](#).

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 6,700 items dating back to 1995 and can be searched from the [myNKI website](#).

Allred MJ, Martini AC, Patterson D, Hendrix J, Granholm AC. Aging with Down Syndrome-Where Are We Now and Where Are We Going? *J Clin Med*. 2021 Oct 13;10(20):4687. PMID: 34682809.

Bein O, Plotkin NA, Davachi L. Mnemonic prediction errors promote detailed memories. *Learn Mem*. 2021 Oct 18;28(11):422-434. PMID: 34663695.

Blaudin de Thé FX, Lassus B, Schaler AW, Fowler SL, Goulbourne CN, Jeggo R, Mannoury la Cour C, Millan MJ, Duff KE. P62 accumulates through neuroanatomical circuits in response to tauopathy propagation. *Acta Neuropathol Commun*. 2021 Nov 2;9(1):177. PMID: 34727983.

Bordi M, De Cegli R, Testa B, Nixon RA, Ballabio A, Cecconi F. A gene toolbox for monitoring autophagy transcription. *Cell Death Dis*. 2021 Nov 2;12(11):1044. PMID: 34728604.

Botterill JJ, Khlaifia A, Walters BJ, Brimble MA, Scharfman HE, Arruda-Carvalho M. Off-Target Expression of Cre-Dependent Adeno-Associated Viruses in Wild-Type C57BL/6J Mice. *eNeuro*. 2021 Nov 10. PMID: 34785571.

Bridgeford EW, Wang S, Wang Z, Xu T, Craddock C, Dey J, Kiar G, Gray-Roncal W, Colantuoni C, Douville C, Noble S, Priebe CE, Caffo B, Milham M, Zuo XN; Consortium for Reliability and Reproducibility, Vogelstein JT. Eliminating accidental deviations to minimize generalization error and maximize replicability: Applications in connectomics and genomics. *PLoS Comput Biol*. 2021 Sep 16; 17(9):e1009279. PMID: 34529652.

Brown R, Sharafi A, Slade JM, Convit A, Davis N, Baete S, Milton H, Mroczek KJ, Kluding PM, Regatte RR, Parasoglou P, Rao S. Lower extremity MRI following 10-week supervised exercise intervention in patients with diabetic peripheral neuropathy. *BMJ Open Diabetes Res Care*. 2021 Sep; 9(1):e002312. PMID: 34518157.

Buzsáki G, McKenzie S, Davachi L. Neurophysiology of Remembering. *Annu Rev Psychol*. 2021 Sep 17. PMID: 34535061.

Campese VD, Brannigan LA, LeDoux JE. Conditional Control of Instrumental Avoidance by Context Following Extinction. *Front Behav Neurosci*. 2021 Sep 28; 15:730113. PMID: 34650411.

Cirnaru MD, Song S, Tshilenge KT, Corwin C, Mleczo J, Galicia Aguirre C, Benhabib H, Bendl J, Apontes P, Fullard J, Creus-Muncunill J, Reyahi A, Nik AM, Carlsson P, Roussos P, Mooney SD, Ellerby LM, Ehrlich ME. Unbiased identification of novel transcription factors in striatal compartmentation and striosome maturation. *Elife*. 2021 Oct 5. PMID: 34609283.

Costi S, Morris LS, Collins A, Fernandez NF, Patel M, Xie H, Kim-Schulze S, Stern ER, Collins KA, Cathomas F, Parides MK, Whitton AE, Pizzagalli DA, Russo SJ, Murrough JW. Peripheral immune cell reactivity and neural response to reward in patients with depression and anhedonia. *Transl Psychiatry*. 2021 Nov 5;11(1):565. PMID: 34741019.

East BS, Fleming G, Vervoordt S, Shah P, Sullivan RM, Wilson DA. Basolateral amygdala to posterior piriform cortex connectivity ensures precision in learned odor threat. *Sci Rep*. 2021 Nov 5; 11(1):21746. PMID: 34741138.

Fair DA, Dosenbach NU, Moore AH, Satterthwaite T, Milham MP. Developmental Cognitive Neuroscience in the Era of Networks and Big Data: Strengths, Weaknesses, Opportunities, and Threats. *Annual Review of Developmental Psychology* 2021.

Garakani A, Murrough JW, Freire RC, Thom RP, Larkin K, Buono FD, Iosifescu DV. Pharmacotherapy of Anxiety Disorders: Current and Emerging Treatment Options. *Focus (Am Psychiatr Publ)*. 2021 Jun;19(2):222-242. PMID: 34690588.

Ginsberg SD, Joshi S, Sharma S, Guzman G, Wang T, Arancio O, Chiosis G. The penalty of stress - Epichaperomes negatively reshaping the brain in neurodegenerative disorders. *J Neurochem*. 2021 Oct 17. PMID: 34657288.

Gordon MN, Beck JS, Kanaan NM, Kamath S, Nash K, Ginsberg SD et al. Expression of Genes Associated with Cellular Senescence in Alzheimer's Disease and Transgenic Mouse Models with Amyloid Deposition or Tauopathy. *Cell Transplantation* 30, 6-7. 2021. [Abstract]

Harrewijn A, Cardinale EM, Groenewold NA, Bas-Hoogendam JM, Aghajani M, Hilbert K, Cardoner N, Porta-Casteràs D, Gosnell S, Salas R, Jackowski AP, Pan PM, Salum GA, Blair KS, Blair JR, Hammoud MZ, Milad MR, et al. Cortical and subcortical brain structure in generalized anxiety disorder: findings from 28 research sites in the ENIGMA- Anxiety Working Group. *Transl Psychiatry*. 2021 Oct 1;11(1):502. PMID: 34599145.

Herrera SN, Zemon V, Revheim N, Silipo G, Gordon J, Butler PD. Cognitive function mediates the relationship between visual contrast sensitivity and functional outcome in schizophrenia. *J Psychiatr Res*. 2021 Oct 1; 144:138-145. PMID: 34624619.

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Kantrowitz JT. Trace Amine-Associated Receptor 1 as a Target for the Development of New Antipsychotics: Current Status of Research and Future Directions. *CNS Drugs*. 2021 Nov;35(11):1153-1161. PMID: 34655036.

Katsel P, Fam P, Tan W, Khan S, Gama-Sosa M, De Gasperi R, Roussos P, Robinson A, Cooper I, Schnaider-Beeri M, Haroutunian V. Engagement of vascular early response genes typifies mild cognitive impairment. *Alzheimers Dement*. 2021 Nov 10. PMID: 34758195.

Klein A, Clucas J, Krishnakumar A, Ghosh SS, Van Auken W, Thonet B, Sabram I, Acuna N, Keshavan A, Rossiter H, Xiao Y, Semenuta S, Badioli A, Konishcheva K, Abraham SA, Alexander LM, Merikangas KR, Swendsen J, Lindner AB, Milham MP. Remote Digital Psychiatry for Mobile Mental Health Assessment and Therapy: MindLogger Platform Development Study. *J Med Internet Res*. 2021 Nov 11; 23(11):e22369. PMID: 34762054.

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Li HX, Lu B, Chen X, Li XY, Castellanos FX, Yan CG. Exploring self-generated thoughts in a resting state with natural language processing. *Behav Res Methods*. 2021 Oct 13. PMID: 34647279.

Martini AC, Alldred MJ, Granholm AC. Aging in Down Syndrome: Latest Clinical Advances and Prospects. *J Clin Med*. 2021 Oct 28;10(21):5037. PMID: 34768560.

Milad M. NEUROBIOLOGY OF CONDITIONED FEAR AND ITS EXTINCTION: RELEVANCE TO ADHD AND PTSD. *Journal of the American Academy of Child & Adolescent Psychiatry* 60[10 Suppl.], S264. 2021. [Abstract]

Mucellini AB, Miguel PM, Dalle Molle R, Rodrigues DM, Machado TD, Reis RS, Toazza R, Salum GA, Bortoluzzi A, Franco AR, Buchweitz A, Barth B, Agranonik M, Nassim M, Meaney MJ, Manfro GG, Silveira PP. Diminished insulin sensitivity is associated with altered brain activation to food cues and with risk for obesity - Implications for individuals born small for gestational age. *Appetite*. 2021 Nov 9:105799. PMID: 34767841.

Nemani K, Conderino S, Marx J, Thorpe LE, Goff DC. Association Between Antipsychotic Use and COVID-19 Mortality Among People with Serious Mental Illness. *JAMA Psychiatry*. 2021 Sep 22. PMID: 34550323.

Opendak M, Rainekei C, Perry RE, Rincón-Cortés M, Song SC, Zanca RM, Wood E, Packard K, Hu S, Woo J, Martinez K, Vinod KY, Brown RW, Deehan GA Jr, Froemke RC, Serrano PA, Wilson DA, Sullivan RM. Bidirectional control of infant rat social behavior via dopaminergic innervation of the basolateral amygdala. *Neuron*. 2021 Oct 20. PMID: 34706218.

Osorio RS, Martínez-García MÁ, Rapoport DM. Sleep apnoea in the elderly: a great challenge for the future. *Eur Respir J*. 2021 Sep 24:2101649. PMID: 34561285.

Pagni G, Tagliarini C, Carbone MG, Imbimbo BP, Marazziti D, Pomara N. Different Sides of Depression in the Elderly: An In-depth View on the Role of A β Peptides. *Curr Med Chem*. 2021 Sep 21. PMID: 34547994.

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