

University of Pittsburgh, PA

Adjunct Assistant Professor
Psychology
CUNY Hunter College, NY

2019-2020,
2022

Behavioral
Neuroendocrinology

AWARDS & MEMBERSHIP

Membership:

2007 Women's Leadership Program – College of William and Mary
2008-2009; Society for Neuroscience (SfN)
2012-2016;
2020
2011-2015 American Association for the Advancement of Science – AAAS/Science Program for Excellence in Science
2015-2016 European Biological Rhythms Society (EBRS)
2019 – Present Hope for Depression Research Foundation (HDRF)
2020, 2023 Pavlovian Society
2021 International Behavioral Neuroscience Society (IBNS)
2021 European Behavioral Pharmacology Society (EBPS)

Honors:

2005 National Merit Scholarship Program Commended Scholar
2008 College of William and Mary Karen Johnson Scholarship
2012-2013 NIH Pre-doctoral Training Grant in Basic Neuroscience T32NS007433
2014-2016 NIH Pre-doctoral Training Grant in Psychiatry T32DA031111
2016 Western Psychiatric Institute and Clinic 16th Annual Research Day Outstanding Poster Presentation
2016 Biomedical Graduate Students Association Travel Award
2016 University of Pittsburgh Brain Institute Brain Day Top Poster Award
2019 – 2021 NIH Post-doctoral National Research Service Award (NRSA) F32MH117973
2020 American College of Neuropsychopharmacology (ACNP) Travel Award
2020 – 2021 Weill Cornell Medicine JumpStart Research Career Development Award
2020 Society for Neuroscience Trainee Professional Development Award
2021 Weill Cornell Medicine Postdoctoral Association Featured Postdoc
2021 International Behavioral Neuroscience Society (IBNS) Travel Award
2021 – 2024 NIH Pathway to Independence Award (K99/R00) 1K99MH127291
2022 Stress Neurobiology Workshop Travel Award

Invited Presentations:

2014 Society for Research on Biological Rhythms annual meeting (Datablitz) – Big Sky, MO
2014 Society for Neuroscience annual meeting (Nanosymposium) – Washington DC
2015 European Biological Rhythms Society meeting (Seminar) – Manchester, United Kingdom
2015 Center for Neuroscience annual retreat (Seminar) – Wheeling, WV
2016 Center for Neuroscience graduate recruitment (Seminar) – Pittsburgh, PA
2020 WCM Postdoctoral Association “Pub Talks” Series (Seminar) – New York, NY (postponed)
2021 Society for Neuroscience annual meeting (Minisymposium) – (declined)
2021 International Behavioral Neuroscience Society annual meeting (Datablitz) – Virtual
2021 Hope for Depression Research Foundation (Datablitz) – Virtual
2022 Stress Neurobiology Workshop Travel Award Session (Datablitz) – Columbia, SC
2022 FENS Forum Mini-Conference EBPS Symposium (Seminar) – Paris, France
2022 Yale University MAPS-BSTP Seminar Series (Seminar) – New Haven, CT

- 2023 WCM Brain and Mind Research Institute Work in Progress Seminar Series (Seminar) – New York, NY
- 2023 WCM Frontiers in Neuropsychiatry Seminar Series (Seminar) – New York, NY
- 2023 Modulation of Neural Circuits and Behavior Gordon Research Seminar (Seminar) – Les Diablerets, Switzerland
- 2023 Pavlovian Society Meeting Symposium (Session Chair; Seminar) – Austin, TX
- 2024 National Institute on Alcohol Abuse and Alcoholism – Rockville, MD

Professional and Outreach Experience

- 2011 Panel member, University of Pittsburgh Neuroscience Club panel on neuroscience education – Pittsburgh, PA
- 2012 Participant, Carnegie Mellon University middle school outreach program – Pittsburgh, PA
- 2012 Participant, Center for Neuroscience Central Catholic High School outreach program – Pittsburgh, PA
- 2013 Participant, Winter Conference for Brain Research (WCBR) K-12 educational outreach program – Steamboat Springs, CO
- 2013 Student, International Chronobiology Summer School – Vanderbilt Univ, TN
- 2015-2017 Program Representative, Biomedical Graduate Students Association – Univ of Pittsburgh, PA
- 2015-2016 Committee Member, Center for Neural Basis of Cognition Colloquium Series – Pittsburgh, PA
- 2018 Lecturer, WCM Neuroscience Graduate Student Bootcamp – Weill Cornell Medicine, NY
- 2018 Poster judge, 38th Annual Vincent du Vigneaud Memorial Research Symposium – Weill Cornell Medicine, NY
- 2018 Moderator, “Open Cortex” Journal Club – Weill Cornell Medicine, NY
- 2019 – Present Ad-hoc reviewer, *Scientific Reports*, *Journal of Psychopharmacology*, *The International Journal of Neuropsychopharmacology*
- 2019, 2021, 2024 Abstract reviewer, Annual Biomedical Research Conference for Minority Students (ABRCMS)
- 2019 – 2020 Organizer, Sackler Institute for Developmental Psychobiology Seminar Series – Weill Cornell Medicine, NY
- 2020 – 2021 Committee member, Weill Cornell Postdoctoral Association Mental Health “Think Tank”
- 2020 Student, Summer SWIM: Sleep and Circadian Workshop on Indispensable Methods – University of Pittsburgh, PA (virtual)
- 2022 Organizer, Hope for Depression Research Foundation Annual Retreat – Ann Arbor, MI
- 2022 Interviewee, Weill Cornell Medicine Magazine – Weill Cornell Medicine, NY

Mentorship Experience

- 2014-2017 Neuroscience Undergraduate Honors Thesis Program – University of Pittsburgh, PA; Mentee: Poornima Sundaravelu (female and Asian American identifying)
- 2018 Gateways to the Laboratory Summer Program – Weill Cornell Medicine, NY; Mentee: Isabella Karabinas (female and Hispanic identifying)
- 2019 Brown University LINK Program – Weill Cornell Medicine, NY; Mentee: Jesse Raviv (female identifying)
- 2021 WCM-Qatar Medical Student Research Program – Weill Cornell Medicine, NY; Mentee: Manaal Sidiqqi (female and Arab identifying)
- 2023 Research Technician I position – Weill Cornell Medicine, NY; Mentee/Trainee: Jolin Chou, B.S. (female and Asian American identifying)

PEER-REVIEWED RESEARCH PUBLICATIONS

M. Xu, L. Sulkowski, P. **Parekh**, A. Khan, T. Chen, S. Midha, T. Iwasaki, N. Shimokawa, N. Koibuchi, A. M. Zavacki, and E. M. Sajdel-Sulkowska. **Effects of perinatal lipopolysaccharide (LPS) exposure on the developing rat brain; Modeling the effect of maternal infection on the developing human CNS.** *Cerebellum*. 2013. <http://doi.org/10.1007/s12311-013-0465-z>.

Yong Chen, Susan H. Williams, Amy L. McNulty, Ji Hee Hong, Suk Hee Lee, Nicole E. Rothfus, Puja K. **Parekh**, Carlene Moore, Robert Gereau IV, Andrea B. Taylor, Fan Wang, Farshid Guilak, Wolfgang Liedtke. **Temporomandibular joint pain: A critical role for Trpv4 in the trigeminal ganglion.** *PAIN*. 2013. (Cover image). <http://doi.org/0.1016/j.pain.2013.04.004>.

Carlene Moore, Ferda Cevikbas, H. Amalia Pasolli, Yong Chen, Wei Kong, Cordula Kempkes, Puja **Parekh**, Suk Hee Lee, Nelly-Ange Kontchou, Iwei Ye, Nan-Marie Jokerst, Elaine Fuchs, Martin Steinhoff, Wolfgang B. Liedtke. **UVB radiation generates sunburn pain and affects skin by activating epidermal TRPV4 and triggering endothelin-1 signaling.** *Proc Natl Acad Sci USA*. 2013. <http://doi.org/10.1073/pnas.1312933110>.

Amanda S. Lindy, Puja K. **Parekh**, Richard Zhu, Patrick Kanju, Sree V Chintapalli, Randen L. Patterson, Andriy Anishkin, Damian B. van Rossum, Wolfgang B. Liedtke. **TRPV-Channel-Mediated Calcium-Transients in Nociceptor Neurons are Dispensable for Avoidance Behavior.** *Nat. Commun.* 2014. <http://doi.org/10.1038/ncomms5734>.

Yong Chen, Patrick Kanju*, Quan Fang*, Suk Hee Lee, Puja K. **Parekh**, Whasil Lee, Carlene Moore, Daniel Brenner, Robert Gereau, Fan Wang, and Wolfgang Liedtke. **TRPV4 is necessary for trigeminal irritant pain and functions as a cellular formalin receptor.** *PAIN*. 2014. <http://doi.org/10.1016/j.pain.2014.09.033>.

Joanna Urban-Ciecko*, Jing A. Wen*, Puja K. **Parekh**, and Alison L. Barth. **Experience-dependent Regulation of Non-postsynaptic NMDARs Enhances Neurotransmitter Release at Neocortical Synapses.** *Learn Mem.* 2014. <http://doi.org/10.1101/lm.035741.114>.

Michelle M. Sidor, Sade Spencer, Kafui Dzirasa, Puja K. **Parekh**, Rachel Arey, John F. Enwright III, Kay M. Tye, Melissa Warden, Jacob PR Jacobsen, Sunil Kumar, Erin M. Remillard, Marc G. Caron, Karl Deisseroth, Colleen A. McClung. **Daytime Spikes in Dopaminergic Activity Underlie Rapid Mood-Cycling.** *Mol Psychiatry*. 2015. <http://doi.org/10.1038/mp.2014.167>.

Angela Ozburn*, Kush Purohit*, Puja **Parekh**, Gabrielle Kaplan, Edgardo Falcon, Shibani Mukherjee, Hannah Cates, Colleen A. McClung. **Functional implications of the CLOCK 311T/C single-nucleotide polymorphism.** *Front Psychiatry*. 2016. <http://doi.org/10.3389/fpsyt.2016.00067>.

Puja K. **Parekh**, Darius Becker-Krail, Poornima Sundaravelu, Shinsuke Ishigaki, Haruo Okado, Gen Sobue, Yanhua H. Huang, Colleen A. McClung. **Altered GluA1 function and accumbal synaptic plasticity in the ClockΔ19 model of bipolar mania.** *Biol Psychiatry*. 2017. (Editor's Choice). <http://doi.org/10.1016/j.biopsych.2017.06.022>.

Puja K. **Parekh***, Michelle M. Sidor*, Andrea G. Gillman, Darius Becker-Krail, Letizia Bettelini, Roberto Arban, Giuseppe S. Alvaro, Yanhua Huang, Charles H. Large, Colleen A. McClung. **Anti-manic efficacy of a novel Kv3 potassium channel modulator.** *Neuropsychopharmacology*. 2017. <http://doi.org/10.1038/npp.2017.155>.

Angela R. Ozburn, Joseph Kern, Puja K. **Parekh**, Ryan W. Logan, Zheng Liu, Dairus Becker-Krail, Kush Purohit, Nicole M. Edgar, Yanhua Huang, Colleen A. McClung. **Npas2 regulation of anxiety-like behavior and GABAA receptors.** *Front Mol Neurosci*. 2017. <http://doi.org/10.3389/fnmol.2017.00360>.

Kush Purohit, Puja K. **Parekh**, Joseph Kern, Ryan W. Logan, Zheng Liu, Yanhua Huang, Colleen A. McClung, John Crabbe, Angela R. Ozburn. **Pharmacogenetic manipulation of the nucleus accumbens alters binge-like alcohol drinking in mice.** *Alcohol Clin Exp Res*. 2018. <http://doi.org/10.1111/acer.13626>.

Ryan W. Logan, Puja K. **Parekh**, Wilbur P. Williams III, Gabrielle Kaplan, Darius Becker-Krail, Shintaro Yamaguchi, Jun Yoshino, Micah Shelton, Xiyu Zhu, Hui Zhang, Spencer Waplinger, Ethan Fitzgerald, Jeffery

Oliver-Smith, Poornima Sundaravelu, John Enwright, Yanhua Huang, Colleen A. McClung. **NAD⁺ cellular redox and SIRT1 regulate the diurnal rhythms of tyrosine hydroxylase and conditioned cocaine reward.** *Mol Psychiatry*. 2018. <http://doi.org/10.1038/s41380-018-0061-1>.

Rachel N. Moda-Sava*, Mitchell H. Murdock*, Puja K. **Parekh***, Robert N. Fetcho, Ben S. Huang, Thu N. Huynh, Daniel C. Shaver, David L. Rosenthal, Emily Alway, Katherine Lopez, Yue Meng, Lara Nellissen, Francis S. Lee, Haruhiko Bito, Haruo Kasai, Conor Liston. **Sustained rescue of prefrontal circuit dysfunction by antidepressant-induced spine formation.** *Science*. 2019. <http://doi.org/10.1126/science.aat8078>.

Puja K. **Parekh***, Ryan W. Logan*, Kyle D. Ketchesin, Darius Becker-Krail, Micah Shelton, Mariah Hildebrand, Kelly Barko, Yanhua Huang, Colleen A. McClung. **Cell-type specific regulation of nucleus accumbens excitatory transmission, structural plasticity and reward sensitivity by the circadian protein, NPAS2.** *J Neurosci*. 2019. <http://doi.org/10.1523/JNEUROSCI.2233-18.2019>.

Amanda Acosta-Ruiz, Vanessa Gutzeit, Mary-Jane Skelly, Samantha Meadows, Joon Lee, Puja **Parekh**, Anna Orr, Conor Liston, Kristen Pleil, Johannes Broichhagen, Joshua Levitz. **Branched photoswitchable tethered ligands enable ultra-efficient optical control and detection of G-protein coupled receptors in vivo.** *Neuron*. 2020. <http://doi.org/10.1016/j.neuron.2019.10.036>.

Ryan W. Logan, Angela R. Ozburn, Rachel N. Arey, Kyle D. Ketchesin, Alicia Winquist, Andrew Crain, Brian T. D. Tobe, Darius Becker-Krail, Matthew B. Jarpe, Xiangning Xue, Wei Zong, Zhiguang Huo, Puja K. **Parekh**, Xiyu Zhu, Ethan Fitzgerald, Hui Zhang, Jeffrey Oliver-Smith, Lauren M. DePoy, Mariah Hildebrand, Evan Y. Snyder, George C. Tseng, and Colleen A. McClung. **Valproate reverses mania-like behaviors in mice via preferential targeting of HDAC2.** *Mol. Psychiatry*. 2020. <http://doi.org/10.1038/s41380-020-00958-2>.

Darius Becker-Krail, Puja K. **Parekh**, Ryan W. Logan, Kyle D. Ketchesin, Jun Yoshino, and Colleen A. McClung. **Circadian transcription factor NPAS2 and NAD⁺-dependent deacetylase SIRT1 interact in the mouse nucleus accumbens to regulate cocaine preference.** *Eur J Neurosci*. 2022. <http://doi.org/10.1111/ejn.15596>.

Robert N. Fetcho*, Puja K. **Parekh***, Jolin Chou, Marguax Kenwood, Laura Chalencon, David J. Estrin, Megan Johnson, Conor Liston. **A stress-sensitive frontostriatal circuit supporting effortful reward-seeking behavior.** *Neuron*. 2023. <http://doi.org/10.1016/j.neuron.2023.10.020>.

* denotes equal contribution

REVIEWS AND COMMENTARY

Puja K. **Parekh***, Angela R. Ozburn*, and Colleen A. McClung. **Circadian Clock Genes: Effects on Dopamine, Reward and Addiction.** *Alcohol*. 2015. <http://doi.org/10.1016/j.alcohol.2014.09.034>.

Puja K. **Parekh** and Colleen A. McClung. **Circadian mechanisms underlying reward-related neurophysiology and synaptic plasticity.** *Front Psychiatry*. 2016. <http://doi.org/10.3389/fpsyt.2015.00187>.

Puja K. **Parekh**, Mitchell Murdock, Conor Liston. **Could new synapses lift spirits?** *The Science Breaker*. 2019. <http://doi.org/10.25250/thescbr.brk266>.

Puja K. **Parekh***, Shane B. Johnson*, Conor Liston. **Synaptic Mechanisms Regulating Mood State Transitions in Depression.** *Annual Review of Neuroscience*. 2022. <http://doi.org/10.1146/annurev-neuro-110920-040422>.

* denotes equal contribution

SELECT ABSTRACTS

Boschen, K, **Parekh, P.**, Mangini, D., Burk, J.A. **Effects of systemic administration of the orexin-1 receptor antagonist, SB-334867, on attentional performance in rats.** *Williamsburg, VA: College of William and Mary Fall Neuroscience Symposium. 2007.*

M. Xu, Z. Sulkowski, P. **Parekh**, B. Lipinski, N. Koibuchi, E. M. Sajdel-Sulkowska; **The Effect of Developmental LPS Exposure on Brain Neurotrophin Levels in Male and Female Rats.** *Washington DC: Society for Neuroscience annual meeting. 2008.*

Amanda S. Lindy, Puja **Parekh**, Richard Zhu, Patrick Kanju, Yoojin Hong, Sree V Chintapalli, Randen L. Patterson, Damian van Rossum, Wolfgang B. Liedtke. **Amino Acids Adjacent to the Pore Helix of OSM-9, a *C. elegans* TRPV Channel, Contribute to Calcium Permeation of the Predicted Ca²⁺ Selectivity Filter.** *Heidelberg, Germany: EMBL C. elegans Meeting. 2010 – Award winner.*

Carlene Moore, Wei Kong, Puja **Parekh**, Elaine Fuchs, Nan Jokerst, Wolfgang B. Liedtke. **TRPV4 in epidermal keratinocytes: A role in UV-induced hyperalgesia.** *Leuven, Belgium: 2nd TRP Channel Meeting. 2010; Durham, NC: Duke University Neurobiology Dept. Annual Retreat. 2010 – Best poster.*

Puja **Parekh**, Michelle M. Sidor, and Colleen A. McClung. **Use of DREADDs technology to modulate mesolimbic dopaminergic neurocircuitry *in Vivo*.** *Wheeling, WV: Center for Neuroscience University of Pittsburgh Annual Retreat. 2012.*

Michelle M. Sidor, Puja K. **Parekh**, Kafui Dzirasa, Kay M. Tye, Melissa R. Warden, Karl Deisseroth and Colleen A. McClung. **Impact of optogenetic and pharmacogenetic modulation of mesolimbic dopamine activity on the ClockΔ19 mouse manic-like behavioral phenotype.** *New Orleans, LA: Society for Neuroscience annual meeting. 2012.*

Michelle M. Sidor, Andrea Gillman, Puja **Parekh** and Colleen McClung. **An optogenetic approach to the direct manipulation of SCN neural firing and circadian rhythms.** *Viareggio, Italy: International Scientific Group of Circadian Rhythm Experts (INSPIRE) meeting. 2013.*

Michelle M. Sidor, Kafui Dzirasa, Puja **Parekh**, Kay M. Tye, Melissa R. Warden, Karl Deisseroth, and Colleen A. McClung. **Chronic optogenetic stimulation of ventral tegmental area dopamine neurons drives distinct and separable features of manic-like behavior.** *Toronto, Canada: Canadian College of Neuropsychopharmacology. 2013.*

Puja K. **Parekh**, Michelle M. Sidor, Sade Spencer, and Colleen A. McClung. **Nucleus accumbens synaptic dysfunction in a genetic mouse model of bipolar mania.** *Nashville, TN: International Chronobiology Summer School. 2013.*

Puja K. **Parekh**, Michelle M. Sidor, Sade Spencer, Yanhua Huang and Colleen A. McClung, **Nucleus accumbens synaptic plasticity in a genetic mouse model of bipolar mania.** *Steamboat Springs, CO: Winter Conference on Brain Research (WCBR). 2014.*

A.R. Ozburn, R. Logan, P. **Parekh**, Y. Huang, J. Kern, K. Purohit, C.A. McClung. **Effects of pharmacogenetic manipulation of the nucleus accumbens on neuronal activity and alcohol-related behaviors.** *Galveston, TX: Gordon Research Conference: Alcohol & the Nervous System. 2014*

Puja K. **Parekh**, Michelle M. Sidor, Kafui Dzirasa, Sade Spencer, Yanhua Huang, and Colleen A. McClung. **Reduced excitatory synaptic strength of nucleus accumbens neurons in the ClockΔ19 mouse.** *Big Sky, MO: Society for Research on Biological Rhythms (SRBR) annual meeting. 2014.*

P.K. Parekh, A. Ozburn, M. Sidor, S. Spencer, R. Logan, J. Kern, Z. Liu, Y. Huang, C. McClung. **Circadian gene disruptions alter excitatory synaptic plasticity and mood-related behavior in rodents.** *Washington DC: Nanosymposium 767. Society for Neuroscience annual meeting. 2014.*

P. Parekh, R. Logan, Z. Liu, Y. Huang, CA McClung, JC Crabbe, AR Ozburn. **Effects of pharmacogenetic manipulation of the nucleus accumbens on neuronal activity and alcohol-related behaviors.** *Uppsala, Sweden: International Behavioural and Neural Genetics Society (IBANGS): Genes, Brain and Behavior. 2015.*

Puja K. Parekh, Angela R. Ozburn, Edgardo Falcon, Michelle M. Sidor, Sade M. Spencer, Yanhua Huang, and Colleen A. McClung. **Differential roles of CLOCK and NPAS2 in synaptic plasticity and reward-related behavior.** *Manchester, UK: European Biological Rhythms Society (EBRS) World Congress of Chronobiology (WCC) meeting. 2015.*

Puja K. Parekh, Angela R. Ozburn, Edgardo Falcon, Michelle M. Sidor, Sade M. Spencer, Yanhua Huang, and Colleen A. McClung. **Differential roles of homologous circadian proteins in plasticity and reward behavior.** *Chicago, IL: Society for Neuroscience annual meeting. 2015.*

Puja K. Parekh, Angela Ozburn, Edgardo Falcon, Darius Becker-Krail, Michelle Sidor, Sade Spencer, Yanhua Huang, and Colleen McClung. **Differential roles of homologous circadian proteins in synaptic plasticity and reward behavior.** *Philadelphia, PA: University of Pennsylvania Sleep and Circadian Rhythms Symposium. 2015.*

Parekh P., Ozburn A., Becker-Krail D., Shelton M., Huang Y., and McClung C. **Differential regulation of nucleus accumbens synaptic activity and reward behavior by circadian proteins.** *Pittsburgh, PA: Department of Psychiatry 16th Annual Research Day. 2016. – Outstanding Poster award.*

P.K. Parekh, D. Becker-Krail, Y. Huang, C. McClung. **Altered excitatory synaptic activity of nucleus accumbens neurons in a genetic mouse model of mania.** *San Diego, CA: Society for Neuroscience annual meeting. 2016.*

D. D. Becker-Krail, P. K. Parekh, R. W. Logan, J. Yoshino, C. A. McClung. **Circadian transcription factor NPAS2 and metabolic redox sensor SIRT1 interact in the mouse nucleus accumbens (NAc) to regulate cocaine reward-related behavior.** *Washington DC: Society for Neuroscience annual meeting. 2017.*

Barko, K., Shelton, M.A., Becker-Krail, D.D., Parekh, P.K., Depoy, L.M., Moon-Kim, S., McClung, C.A., and Logan, R.W. **Circadian rhythms and opiates: The circadian transcription factor NPAS2 regulates morphine conditioned reward.** *Palm Springs, CA: American College of Neuropsychopharmacology annual meeting. 2017.*

Colleen McClung, Jennifer Burns, Puja Parekh, Kafui Dzirasa. **The Clock protein regulates neuronal maturation and function in the mPFC.** *New York City, NY: Society of Biological Psychiatry annual scientific meeting. 2018.*

Parekh P.K. Kaminsky J, Roshgadol J, Xia N, Karabinas I, Liston C. **Prefrontal circuit mechanisms underlying stress effects on effort-based decision making.** *American College of Neuropsychopharmacology annual meeting. 2020.*

Parekh P.K. Kaminsky J, Roshgadol J, Johnson S, Xia N, Liston C. **Stress effects on prefrontal cortical function and effortful reward-seeking behavior.** *Society for Neuroscience Global Connectome Virtual meeting. 2021.*

CURRENT FUNDING SUPPORT

K99 MH127291, PI: Parekh

09/01/2021-08/31/2024

“Corticostratial and Corticoinsular Circuit Mechanisms Underlying Stress Effects on Effort-Based Reward Processing”

The goal of this project is to integrate in vivo 2-photon calcium imaging and optogenetics to delineate the roles of two projection-defined ACC subtypes - corticostriatal and corticoinsular neurons – in encoding of task features including reward- and effort-predictive cues.

COMPLETED FUNDING SUPPORT

FY22 WCM JumpStart Research Career Development Award, PI: Parekh; \$100k/yr. 07/01/2020 - 08/31/2021

“Prefrontal Circuit Mechanisms Underlying Stress Effects on Effort-Based Decision Making”

The goal of this project is to investigate how individual differences in reward seeking behavior correlate with neurophysiological, structural, and transcriptomic changes in PFC circuits before and after chronic stress and following antidepressant-dose ketamine treatment.

Personnel supported: Jolin Chou, B.S.; Research Technician I

F32 MH117973, PI: Parekh

02/20/2019 - 08/31/2021

“Prefrontal circuit mechanisms underlying antidepressant effects of sleep deprivation: a role for metabotropic glutamate receptors”

The goal of this project is to uncover how acute sleep deprivation alters reward behavior and remodels neural activity, dendritic spine formation and glutamatergic signaling in the medial prefrontal cortex in animals exposed to chronic social stress.