Sarah R. Heilbronner
Curriculum Vitae

sarah.heilbronner@gmail.com
heilbronnerlab.umn.edu
2-164 Jackson Hall
321 Church St SE
Minneapolis, MN 55455

Academic History

University of Minnesota — **Assistant Professor**, Department of Neuroscience, November 2017-Present
McKnight Land-Grant Professor
MnDrive Brain Conditions Neuromodulation Researcher
Member, Center for Neuroengineering
Member, Medical Discovery Team on Addiction
Member, Institute for Engineering in Medicine

University of Rochester — **Postdoctoral Fellow**, laboratory of Suzanne Haber, Department of Pharmacology and Physiology, March 2012-August 2017.

Instructor, Department of Brain and Cognitive Sciences, Fall 2011

Duke University — **Ph.D., Neurobiology**, August 2007 - February 2012.
Advisor: Michael Platt. Thesis title: *Neurobiology of Learning and Valuation*

Harvard University — **A.B., Psychology**, Certificate in Cognitive Neuroscience (Mind/Brain/Behavior Initiative), June 2007.
Magna cum laude with highest honors (field).

Manuscripts in process

Foster, B.L., Koslov, S.R., Aponik-Gremillion, L., Monko, M.E., Hayden, B.Y., & **Heilbronner, S.R.** A tripartite view of posterior cingulate cortex. (*under revision*).

Empirical Publications

Grier, M.D., Yacoub, E., Adriany, G., Lagore, R.L., Harel, N., Zhang, R.Y., Lenglet, C. Ugurbil, K., *Zimmermann, J., & ***Heilbronner, S.R.** (2022). Ultra-high field (10.5T) diffusion-weighted MRI of the macaque brain. *NeuroImage,* 119200.
*Denotes equal contribution

Wang, M.Z., *Hayden, B.Y., & ***Heilbronner, S.R.** (*in press*). A structural and functional subdivision in central orbitofrontal cortex. *Nature Communications*.
*Denotes equal contribution

Banks, G.P., **Heilbronner, S.R.**, Goodman, W., & Sheth, S.A. (2022). A population normalized tractographic atlas of subcortical fibers of the anterior limb of the internal capsule: Relevance to surgical neuromodulation. *Journal of Neurosurgery, Apr 8,* 1-11.

Burkhart, J.C., Gupta, S., Borrego, N., ***Heilbronner, S.R.**, & *Packer, C. (2022). Oxytocin promotes social proximity and decreases vigilance in African lions. *iScience,* 104049.
*Denotes equal contribution
Press: Newsweek, Smithsonian Magazine, CBC

Manea, A.M.G., Zilverstand, A., Ugurbil, K., **Heilbronner, S.R.,** & Zimmermann, J. (2022). Intrinsic timescales as an organizational principle of neural processing across the whole rhesus macaque brain. *eLife, 11,* e75540.

Schilling, K.G., Rheault, F., Petit, L., Hansen, C.B.…[[many authors]]...**Heilbronner, S.R.**, Heuer, K., Anderson, A.W., Landman, B.A., & Descoteaux, M. (2021). Tractography dissection variability: what happens when 42 groups dissect 14 white matter bundles on the same dataset?" *NeuroImage, 243,* 118502.

Maisson, D.J.N., Cash-Padgett-T.V., Wang, M.Z., Hayden, B.Y., **Heilbronner, S.R.**, & Zimmermann, J. (2021). Choice-relevant information transformation along a ventrodorsal axis in the medial prefrontal cortex. *Nature Communications*, *12,* 1-14.

Monko, M.E. & **Heilbronner, S.R.** (2021). Retrosplenial cortical connectivity with frontal basal ganglia networks. *Journal of Cognitive Neuroscience, 33,* 1096-1105.

Yacoub, E., Grier, MD., Auerbach, E.J., Lagore, R.L., Harel, N., Adriany, G., Zilverstand, A., Hayden, B.Y., **Heilbronner, S.R**., *Ugurbil, K., & *Zimmermann, J. (2020). Ultra-high field (10.5 T) resting state fMRI in the macaque. *NeuroImage, 223,* 117349.
*Denotes equal contribution

*Cushnie, A.K., *El-Nahal, H.G., Bohlen, M.O., May, P.J., Basso, M.A., Grimaldi, P., Wang, M.Z., de Velasco, E.M.F., Sommer, M.A., & **Heilbronner, S.R.** (2020). Using rAAV2-retro in rhesus macaques: Promise and caveats for circuit manipulation. *Journal of Neuroscience Methods, 345,* 108859.
*Denotes equal contribution

*White, J.K., *Bromberg-Martin, E., **Heilbronner, S.R.**, Zhang, K., Paj, J., Haber, S.N., & Monosov, I. (2019). A neural network for information seeking. *Nature Communications, 10,* 5168.
*Denotes equal contribution

Hirad, A.A., Bazarian, J.J., Merchant-Borna, K., Garcea, F.E., **Heilbronner, S.R.**, Paul, D., Hintz, E.B., van Wijngaarden, E., Schifitto, G., Wright, D.W., Espinoza, T.R., & Mahon, B.Z. (2019). A common neural signature of brain injury in concussion and sub-concussion. *Science Advances, 5(8),* 1-11.

Heilbronner, S.R., Meyer, M.A.A., Choi, E.Y, & Haber, S.N. (2018). How do cortico-striatal projections impact on downstream pallidal circuitry? *Brain Structure & Function, 223,* 2809-2821.

Safadi, Z., Grisot, G., Jbabdi, S., Behrens, T.E.J., **Heilbronner, S.R.**, McLaughlin, N.C.R., Mandeville, J., Versace, A., Phillips, M.L., Lehman, J.F., Yendiki, A., & Haber, S.N. (2018). Functional segmentation of the anterior limb of the internal capsule: linking white matter abnormalities to specific connections. *Journal of Neuroscience, 38,* 2106-2117.

*Coizet, V., ***Heilbronner, S.R.**, Carcenac, C., Mailly, P., Lehman, J., Savasta, M., David, O., Deniau, J.M., Groenewegen, H.J., & Haber, S.N. (2017) Organization of the anterior limb of the internal capsule in the rat. *Journal of Neuroscience, 37(10),* 2539-2554.
*Denotes equal contribution

Heilbronner, S.R., Rodriguez-Romaguera, J., Quirk, G.J., Groenewegen, H.J., & Haber, S.N. (2016). Circuit based cortico-striatal homologies between rat and primate. *Biological Psychiatry, 80,* 509-521.

Chosen as a Priority Communication, reflecting particularly high scientific priority.
Commentary by Lee & Sohal in the same issue, "Making the right connections."

Heilbronner, S.R. & Hayden, B.Y. (2016). The description-experience gap in risky choice in nonhuman primates. *Psychonomic Bulletin & Review, 23,* 593-600.
Recipient of the 2016 Psychonomic Society Best Article Award.

Heilbronner, S.R. & Haber, S.N. (2014). Frontal cortical and subcortical projections provide a basis for segmenting the cingulum bundle: Implications for neuroimaging and psychiatric disorders. *Journal of Neuroscience, 34(30),* 10041-10054.

Heilbronner, S.R. & Meck, W.H. (2014). Dissociations between interval timing and inter-temporal choice following administration of fluoxetine, cocaine, or methamphetamine. *Behavioural Processes, 101,* 123-134.

Heilbronner, S.R. & Platt, M.L. (2013). Causal evidence of performance monitoring by neurons in posterior cingulate cortex during learning. *Neuron*, *80(6),* 1384-1391.

Brent, L.J.N., **Heilbronner, S.R**., Horvath, J.E., Gonzalez-Martinez, J., Ruiz-Lambides, A., Robinson, A.G., Skene, J.H.P., and Platt, M.L. (2013). Genetic origins of social networks in rhesus macaques. *Scientific Reports, 3(1042),* 1-8.

Heilbronner, S.R., Hayden, B.Y., & Platt, M.L. (2011). Decision salience signals in posterior cingulate cortex. *Frontiers in Decision Neuroscience, 5(55),* 1-9.

Hayden, B.Y., **Heilbronner, S.R**., Pearson, J. M., & Platt, M.L. (2011). Surprise signals in anterior cingulate cortex: Neuronal encoding of unsigned reward prediction errors driving adjustment in behavior. *Journal of Neuroscience, 31(11),* 4178-4187.

Stevens, J.R., Rosati, A.G., **Heilbronner, S.R**., & Schmucking, N.S. (2011). Waiting for grapes: Expectancy and delayed gratification in bonobos. *International Journal of Comparative Psychology*, *24,* 99-111.

Hayden, B.Y., **Heilbronner, S.R**., & Platt, M.L. (2010). Ambiguity aversion in rhesus macaques. *Frontiers in Decision Neuroscience*, *30*, 3339-3346.

Hayden, B.Y., **Heilbronner, S.R**., Nair, A., & Platt, M.L. (2008). Cognitive influences on risk-seeking by rhesus macaques. *Judgment and Decision Making, 3(5),* 389-395.

Heilbronner, S.R., Rosati, A.G., Stevens, J.R., Hare, B., & Hauser, M.D. (2008). A fruit in the hand or two in the bush? Divergent risk preferences in chimpanzees and bonobos. *Biology Letters, 4(3),* 246-249.
Press: http://www.cbc.ca/quirks/archives/07-08/mar29.html

Chapters, Reviews, & Commentaries

Chafee, M.V. & **Heilbronner, S.R.** (*in press)* Primer: Prefrontal Cortex. *Current Biology*.

Bullock, D.N., Hayday, E.A., Grier, M.D., *Tang, W., *Pestilli, F., ***Heilbronner, S.R.** (2022). A taxonomy of the brain's white matter: Twenty-one tracts for the twenty-first century. *Cerebral Cortex,* bhab500.
*Denotes equal contribution

Redish, A.D., Kepec, A., Anderson, L.M., Calvin, O., Grissom, N., Haynos, A.F., **Heilbronner, S.R.,** Herman, A.B., Jacob, S., Ma, S., Vilares, I., Vinogradov, S., Walters, C.J., Widge, A.S., Zick, J.L., & Zilverstand, A. (2021*)*. Computational validity: Using computation to translate behaviors across species. *Philosophical Transactions of the Royal Society B*. 377:20200525.

Tang, W., Choi, E.Y., **Heilbronner, S.R.,** & Haber, S.N. (2021). Nonhuman primate meso-circuitry data: A translational tool to understand brain networks across species. *Brain Structure and Function, 226,* 1-11.

Monko, M.E. & **Heilbronner, S.R.** (2020). Some animal models are more equal than others: Cortico-striatal circuits for translation. *Lab Animal, 49(8),* 225-226.

Grier, M.D., Zimmermann, J., & **Heilbronner, S.R.** (2020). Estimating brain connectivity with diffusion-weighted MRI: Promise and peril. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 5,* 846-854.
Commentary by Shen in the same issue, "Reconstructing the brain's wiring diagram is no monkey business."

Burkhart, J.C. & **Heilbronner, S.R.** (2019). Cracking down on complexity in the evolving brain. *Trends in Cognitive Sciences* (Spotlight format), *23,* 908-910.

Widge, A.S., **Heilbonner, S.R.**, & Hayden, B.Y. (2019). Prefrontal cortex and cognitive control: New insights from human electrophysiology. *F1000 Faculty Reviews, 8,* 1696:1705.

Heilbronner, S.R. & Chafee, M.V. (2019). Learning how neurons fail inside of networks: Nonhuman primates provide critical data for psychiatry. *Neuron* (NeuroView format), *102,* 21-26.

Heilbronner, S.R. (2017). Modeling risky decision-making in nonhuman animals: shared core features. *Current Opinion in Behavioral Sciences*. *16,* 23-29.

Heilbronner, S.R. & Hayden, B.Y. (2016). Dorsal anterior cingulate cortex: A bottom-up view. *Annual Reviews in Neuroscience, 39,* 149-170.

***Heilbronner, S.R.,** *Safadi, Z., & Haber, S.N. (2016). Neurocircuits commonly involved in psychiatric disorders and their stimulation and lesion therapies. In *Neuromodulation in Psychiatry*. Eds. C. Hamani, A. Lozano, P. Holtzheimer, & H. Mayberg.
*Denotes equal contribution

Hayden, B.Y. & **Heilbronner, S.R.** (2014). All that glitters is not reward signal. *Nature Neuroscience, 17,* 1142-1144.

Haber, S.N. & **Heilbronner, S.R.** (2013). Translational research in OCD: Circuitry and mechanisms. *Neuropsychopharmacology Reviews, 38,* 252-253.

Heilbronner, S.R. & Hayden, B.Y. (2013). Contextual factors explain risk-seeking preferences in rhesus monkeys. *Frontiers in Decision Neuroscience, 7(7),* 1-7.

Pearson, J.M., **Heilbronner, S.R**., Barack, D.L., Hayden, B.Y., & Platt, M.L. (2011). Posterior cingulate cortex: adapting behavior to a changing world. *Trends in Cognitive Sciences, 15(4),* 143-151.

McGinty, V.B., Hayden, B.Y., **Heilbronner, S.R**., Dumont, E.C., Graves, S.M., Mirrione, M.M., du Hoffman, J., Sartor, G.C., Espana, R.A., Millan, E.Z., DiFeliceantonio, A.G., Marchant, N.J., Napier, T.C., Root, D.H., Borgland, S.L., Treadway, M.T., Floresco, S.B., McGinty, J.F., Haber, S. (2011). Emerging, reemerging, and forgotten brain areas of the reward circuit: Notes from the 2010 Motivational Neural Networks Conference. *Behavioural Brain Research, 225(1),* 348-357.

Heilbronner, S.R., Hayden, B.Y., & Platt, M.L. (2009). Neuroeconomics of risk-sensitive decision making. In *Impulsivity: The Behavioral and Neurological Science of Discounting*. Eds. G. Madden & W. Bickel.

Heilbronner, S.R. & Platt, M.L. (2007). Animal cognition: Time flies when chimps are having fun. *Current Biology*, 17(23), R1008-R1010.

Awards and Fellowships Received

2021	McKnight Land-Grant Professorship
2019	Winter Conference on Brain Research Travel Fellowship
2017	NARSAD Young Investigator Grant from the Brain & Behavior Research Foundation
2016	University of Rochester School of Medicine and Dentistry's Outstanding Postdoctoral Researcher Award
2016	Psychonomic Society Best Article Award for "The description-experience gap in risky choice in nonhuman primates"
2014	American College of Neuropsychopharmacology (ACNP) Travel Award
2014-2017	Postdoctoral Ruth L. Kirschstein National Research Service Award (NRSA)
2014	Tourette Syndrome Association Postdoctoral Fellowship
2010-2012	Predoctoral Ruth L. Kirschstein National Research Service Award (NRSA)
2010	Motivational Neuronal Networks Conference Travel Award
2010	Best Oral Presentation, Duke Dept of Neurobiology Retreat
2009	Duke Primate Genomics Initiative Summer Graduate Fellowship
2009	Duke Primate Genomics Initiative Research Award (co-PI with Michael Platt)
2008-2011	Duke University Scholars Graduate Mentor Awards (3x)
2007-2012	Duke University Scholarship
2007-2011	James B. Duke Fellowship
2007	Duke Center for Neuroeconomics Travel Award
2007	Phi Beta Kappa
2007	Harvard Psychology Faculty Prize
2003-2005	Harvard College Scholar (2x)
2004-2006	Harvard College Research Fellowships (6x)

Research Support

Active

R01MH126923 Akkin/Heilbronner (PIs) 03/07/2022-01/31-2027
Label-free optical imaging for human mesoscale connectivity with a focus on deep brain stimulation targets
Role: mPI

UMN McKnight Land-Grant Professorship Heilbronner (PI) 07/01/2021-06/30/2023
Building a Wiring Diagram of the Brain
Role: PI

R01MH124687 Hayden/Widge (PIs) 09/01/2020-08/31-2025
Modeling circuit-specific psychiatric deep brain stimulation and its cognitive effects in macaques
Role: Co-Investigator

R01NS115180 Eryaman (PI) 08/01/2020-07/31-2025
Safe magnetic resonance imaging of patients with deep brain stimulation systems
Role: Co-Investigator

R01MH123661 Grissom (PI) 07/07/2020-06/30/2025
Sex-biased impacts of 16p11.2 variants on reward-guided choice
Role: Co-Investigator

P30DA048742 Thomas (PI) 07/01/2020-05/31/2025
Center for Neural Circuits in Addiction
Role: Core Lead

P50MH119569 Vinogradov/Redish (PIs) 04/01/2020-03/31/2025
Dysfunctional State Representations in Psychosis: From Neurophysiology to Neuroplasticity-based Treatment
Role: Core Lead

UMN Academic Investment Research Program Thomas (PI) 10/01/2019-09/30/2022
Center for Neural Circuits in Addiction
Role: Co-Investigator, Co-Lead of the Structural Circuits Core

R01NS0811108 Johnson (PI) 07/01/2019-06/30-2024
Algorithms for programming DBS systems for essential tremor
Role: Co-Investigator

R01MH118257 Heilbronner (PI) 11/07/2018-10/31/2023
Revealing functional networks and circuits of the posteromedial cortex with anatomical connectivity
Role: PI

Completed
UMN Medical Discovery Team on Addiction Pilot Grant
Heilbronner/Hayden (multi-PI) 09/01/2018-08/31/2020
Prefrontal-striatal circuit manipulation during self-control in nonhuman primates

NARSAD Young Investigator Grant Heilbronner (PI) 01/15/2018-01/15/2020
Posteromedial cortex circuits in depression and schizophrenia

UMN Academic Health Center Seed Grant Heilbronner (PI) 09/01/2018-08/31/2019
The neural bases of species-level differences in social behavior in felids

F32 MH103931 Heilbronner (PI) 07/15/2014-07/15/2017
Anatomical connections subserving the default mode network

Tourette Syndrome Association Postdoctoral Fellowship Heilbronner (PI) 04/15/2014-07/15/2014
Anterior cingulate pathways through core Tourette Syndrome deep brain stimulation circuitry.

F31 DA028133 Heilbronner (PI) 02/01/2010-03/01/2012
The role of cingulate cortex in reward-based decision making

Professional Memberships

- *Society for Neuroscience* 2008-Present

Service

External

- Ad hoc reviewing for NIH:
  - March 2022: BRAIN Initiative Cell Atlas Network (BICAN) Study Section
  - June 2020, June 2021, October 2021: Emerging Imaging Technologies in Neuroscience (EITN) Study Section
  - October 2020: BRAIN exploratory Team BCP U01 Study Section
  - October 2019, February 2020: Neural Basis of Psychopathology, Addictions and Sleep Disorders (NPAS) Study Section
  - May 2018: AZNS 1 SRB-E (15) Brain Initiative – Exploratory Research U01 Awards Study Section
  - March 2018: ZMH1 ERB-M (06) S NIMH Pathway to Independence Awards & Dissertation Awards Study Section
- Ad hoc external reviewer: National Science Foundation, French National Research Agency, Leakey Foundation, Swiss National Science Foundation
- Journal reviewer: *Animal Cognition, Behavioural Processes, Brain and Neuroscience Advances, Brain Research*, *Cerebral Cortex, Cognition, Current Biology, eLife, Frontiers in Neuroscience, International Journal of Primatology, Journal of Affective Disorders, Journal of Comparative Psychology, Journal of Experimental Psychology, Journal of Neurophysiology, Journal of Neuroscience, Journal of Neuroscience Methods, Nature Communications, Nature Neuroscience, Neuron, PLoS Biology, PLoS One, Psychonomic Bulletin and Review*
- 2017: Co-chair, SfN Minisymposium on Functional Diversity of Prefrontal Cortical Regions and Networks
- 2016: Co-Chair, Gordon Research Seminar on the Neurobiology of Cognition

Internal

- 2022-present: Graduate Program in Neuroscience Awards Committee Chair
- 2021-present: Graduate Program in Neuroscience Diversity, Equity, and Inclusion Committee member
- 2021-present: Graduate Program in Neuroscience Steering Committee Faculty Representative
- 2020: Medical Discovery Team on Addiction Pilot Grant Review Committee Chair
- 2020-2021: MnDrive University of Minnesota Informatics Institute Graduate Assistantship Reviewer
- 2018-2020: MnDrive Neuromodulation Fellowship Selection Committee
- 2018-present: UMN College of Biological Sciences Honors Thesis Reader
- 2017-present: Reviewer, UMN Wallin Grant applications
- 2018-2020: UMN Graduate Program in Neuroscience Recruitment Committee
- 2014-2017: Postdoctoral Representative, Rochester Chapter of the Society for Neuroscience

Outreach

- 2020: Skype a Scientist

- 2020: Athena Women in STEM mentor
- 2019: Minnetonka High School Capstone Mentor
- 2019: Stand Up Science
- 2019: Women in STEM panelist Q&A at Minnetonka High School

Invited Talks

"Building a wiring diagram of the brain: Implications for translational neuroscience." University of Pennsylvania Perelman School of Medicine Center for Neuromodulation in Depression and Stress. Virtual, March 2022.

"How and why should we build a wiring diagram of the brain?" The 7th CiNet Conference: New Horizons in Brain Mapping. Virtual, February 2022.

"Connectivity of the posterior cingulate cortex: A translational bridge." Minisymposium on Progress in Posterior Cingulate Cortex Anatomy and Physiology at the Annual Meeting of the Society for Neuroscience. Virtual, November 2021.

"Translational neuroscience needs connectomics." University of Montreal Department of Neuroscience Seminar Series. Virtual, September 2021.

"What the wiring diagram of the brain can teach us about function and disease." College of St. Benedict/St. John's University Biology Seminar Series. Virtual, March 2021.

"Translational neuroscience needs connectomics." Baylor College of Medicine Neuroscience Seminar. Virtual, September 2020.

"Translational neuroscience needs connectomics." Duke University Center for Cognitive Neuroscience Colloquium Series. Durham, NC, October 2019.

"Connectivity reveals prefrontal cortical circuit homologies between rodents and primates" 13th Gottingen Meeting of the German Neuroscience Society. Gottingen, Germany, March 2019.

"Cross-species connectivity of the cingulate cortex" Winter Conference on Brain Research. Snowmass, CO, February 2019.

"Comparative connectomics of the prefrontal cortex." Computational Properties of the Prefrontal Cortex Workshop. Nashville, TN, October 2018.

"Comparative connectomics: Promise and peril." Gordon Research Conference on Neurobiology of Cognition. Newry, ME, July 2018.

"Connectivity reveals PFC homologies across rodents and nonhuman primates." Minisymposium on Functional Diversity of Prefrontal Cortical Regions and Networks at the Annual Meeting of the Society for Neuroscience. Washington, DC, November 2017.

"Anatomical connectivity as a translational tool for addiction research." Keynote presentation, University of Minnesota PharmacoNeuroImmunology Annual Retreat. St. Paul, MN, September 2017.

“Bridging networks and circuits: A systems neuroscience perspective on the default mode network.” Dartmouth College, Cognition, Brain, & Behavior Seminar. Hanover, NH, July 2017.

“Linking networks and circuits: A systems neuroscience perspective on the default mode network.” Rochester Institute of Technology, Origins of Cognition Symposium. Rochester, NY, May 2017.

“Using nonhuman primates to perform translational studies of reward circuitry.” Walter Reed Army Institute of Research. Silver Spring, MD, April 2017.

“The biology of the default mode network: Connectivity and homologies across species.” York University, Neuroscience Seminar Series. Toronto, ON, Canada, January 2017.

“Connectivity reveals the neural circuits underpinning the default mode network across species.” University of Minnesota. Minneapolis, MN, January 2017.

“Connectivity reveals the neural circuits underpinning the default mode network across species.” University of Pennsylvania. Philadelphia, PA, December 2016.

"Leveraging anatomical connectivity to understand homologies and neuroimaging of the default mode network." Motivation and Cognitive Control Conference. St Andrews, Scotland, August 2016.

"Leveraging anatomical connectivity to understand homologies and neuroimaging of the default mode network." Princeton University, Princeton Neuroscience Institute. Princeton, NJ, July 2016.

“A systems neuroscience perspective on the default mode network.” Cornell University, Human Neuroscience Institute. Ithaca, NY, April 2016.

"Leveraging anatomical connectivity to understand homologies and neuroimaging of the default mode network." University of Pittsburgh, Department of Neurobiology. Pittsburgh, PA, September 2015.

"Anatomy for neuroeconomists." Shanghai Neuroeconomics Collective Summer School. Shanghai, China, July 2015.

"Leveraging anatomical connectivity to understand homologies and neuroimaging of the default mode network." Yale University School of Medicine, Department of Neurobiology. New Haven, CT, January 2015.

"Posterior cingulate function and connectivity: Implications for the default mode network." Icahn School of Medicine at Mount Sinai, Neuroscience Department. NYC, NY, April 2014.

"Cingulate function and connectivity: Implications for the default mode network." NIMH Laboratory of Neuropsychology, Bethesda, MD, Oct 2013.

"Outcome signals in posterior cingulate cortex may guide associative learning and decision-making." RIKEN Brain Science Institute, Tokyo, Japan, Sept 2010.

Teaching

Course Director, University of Minnesota Neuroscience 2001: Human Neuroanatomy. Spring 2020, Spring 2022.

Guest lectures, “Cerebral Cortex I,” “Cerebral Cortex II,” and “Language and the Brain.” University of Minnesota Neuroscience 2100: Human Neuroanatomy. Fall 2018-Present.

Guest lectures, “Reward systems” and “Integrative functions of the basal ganglia.” University of Rochester Neuroscience 531: Integrative and Systems Neuroscience. Spring 2017.

Guest lecture, "Anatomy for cognitive neuroscientists." University of Rochester Brain & Cognitive Sciences 508: Cognitive Neuroscience. Spring 2017.

Guest facilitator, Ethics and Professional Integrity in Research Course, University of Rochester Medical Center, Fall 2016

Guest lecture, "Functional neuroanatomy of the reward system." University of Rochester Brain & Cognitive Sciences 248: Neuroeconomics. Spring 2016.

Teaching Assistant, Shanghai Neuroeconomics Collective Summer School, Summer 2015.

Guest lecture, "Functional neuroanatomy of the reward system." Duke Kunshan University Neuroeconomics in China. Summer 2015.

Guest lecture, "Functional neuroanatomy of the reward system." University of Rochester Brain & Cognitive Sciences 548: Neuroeconomics. Fall 2014.

Guest lecture, "Neurobiology review." University of Rochester Brain & Cognitive Sciences 508: Neural Plasticity in Learning & Development. Fall 2012.

Guest lecture, "Decision-making." University of Rochester Brain & Cognitive Sciences 153: Cognition. Spring 2012.

Instructor, University of Rochester Brain and Cognitive Sciences 110: Neural Foundations of Behavior. Fall 2011.

Teaching Assistant, Duke University Neuroscience 114: Fundamentals of Neuroscience. Fall 2009 & Fall 2010.

Teaching Assistant, Duke University GS310: Responsible Conduct of Research. Fall 2009.

Mentoring

Graduate students

Megan Monko: Spring 2018-present; Graduate Program in Neuroscience

Adriana Cushnie: Summer 2018-present; Graduate Program in Neuroscience. Recipient of NIDA T32 Predoctoral Training Fellowship slot

Maya Wang: Co-Advisor, Fall 2017-Summer 2020; Graduate Program in Neuroscience. Currently a postdoc at NIH.

Postdoctoral Fellows

Daniel Bullock, PhD: Fall 2021-present. Recipient of T32 Postdoctoral Training Fellowship slot

Mark Grier, PhD: Summer 2018-Spring 2022. Recipient of T32 Postdoctoral Training Fellowship slot

Undergraduates

Kelsey Person: LSSURP Summer 2019. Subsequent poster and travel award at 2019 Annual Biomedical Research Conference for Minority Students

Austin Werner: Spring 2019-present. UROP fellowship recipient Fall 2019.

Olivia Drake: LSSURP Summer 2018. Subsequent posters at Experimental Biology 2019 and 2018 Annual Biomedical Research Conference for Minority Students

Lensa Toka: Spring 2018-present; Directed CBS research course Fall 2018 and Spring 2019

Pooja Kandikonda: Spring 2018-Spring 2019; UROP fellowship recipient Spring 2019

Tenzin Sonam-Fall 2017-Fall 2018; Directed CBS research courses Spring and Fall 2018

Amera Hassan—Fall 2017-Fall 2019

Amanda Hassan—Fall 2017-Spring 2018

Thesis committee membership

Jessica Burkhart (UMN, Ecology, Evolution, & Behavior)

Mark Schonfeld (UMN, Pharmacology)

Bethany Stieve (UMN, Neuroscience)

MariPen Yeatts (UMN, Biomedical Engineering)

External examiner, Samson Chengetanai (University of Witwatersrand, Anatomical Sciences)