Vaibhav Konanur

950 S. Halsted St.
SEL Room 4103 (Office) and SEL Room 4104 (Lab)
Chicago, IL 60607
vkonanur@gmail.com

Education

Neuroscience Ph.D., University of Illinois at Chicago (UIC), 2016-present, (expected to graduate in Feb. 2023)

Biological Sciences, M.S., University of California, San Diego (UCSD), Sep. 2012

Biological Sciences, B.S., UCSD, Dec. 2010

Human Development, B.A., UCSD, Dec. 2010

Awards and Honors

New Investigator Travel Award, Society for the Study of Ingestive Behavior, 2022

Laboratory of Integrative Neuroscience Travel Award, UIC, 2018

Graduate Student Council Travel Award, UIC, 2018, 2019

Provost Honors, UCSD, academic year 2008-2009

Eugene and Ruth Roberts Summer Student Academy Fellowship, City of Hope, 2008

Leadership Activities

- New Investigator Advisory Board, Society for the Study of Ingestive Behavior, 2019-2022.
- External Relations Chair: Secured sponsorship and organized the biotechnology job fair, career development workshops, and biotech information panels. Biological Sciences Student Association in UCSD, 2008, 2009, 2010.

Research Experience

Graduate Student, Department of Psychology, UIC, 2016-present (Laboratory of Dr. Mitch Roitman). Investigating the neural basis of motivated ingestive behavior, including the involvement of the mesolimbic dopamine system in hunger/satiety. Using immunohistochemistry, pharmacology, behavior, and fiber photometry to characterize these mechanisms.

Laboratory Manager/Technician, Department of Human and Evolutionary Biology, USC, 2013-2016 (Laboratory of Dr. Scott Kanoski). Explored the neuronal control of "higher-order" aspects of eating behavior, including decisions about whether to feed or not to feed, what to consume, and how much of it to consume. Used immunohistochemistry, pharmacology, behavior, and gene expression to characterize these mechanisms.

Master's Student Researcher, Department of Biology, UCSD, 2010-2012 (Laboratory of Dr. Kathleen French). Identified novel inhibitory cell type in the central nervous system of the medicinal leech. Characterized the cell using immunohistochemistry and electrophysiology leading to further investigation of its role in leech behavior.

Undergraduate Research Assistant, Department of Virology, City of Hope, 2008 (research advisor: Dr. Aprille Seidel). Investigated a potential biomarker protein overexpressed in carcinogenic melanocytes. Used molecular biology and immunology to produce candidate melanoma vaccines.

Peer-reviewed Journal Publications (reverse chronological order)

1. Hsu TM, Bazzino P, Hurh SJ, **Konanur VR**, Roitman JD, Roitman MF. Thirst recruits phasic dopamine signaling through subfornical organ neurons. *PNAS*. 2020.
2. **Konanur VR**, Hsu TM, Kanoski SE, Hayes MR, Roitman MF. Phasic dopamine responses to a food-predictive cue are suppressed by the glucagon-like peptide-1 receptor agonist Exendin-4. *Phys & Behav*. 2020.

3. Noble EE, Hahn JD, **Konanur VR**, Hsu TM, Page SJ, Cortella AM, Liu CM, Song MY, Suarez AN, Szujewski CC, Rider D, Clarke JE, Darvas M, Appleyard SM, Kanoski SE. Control of Feeding Behavior by Cerebral Ventricular Volume Transmission of Melanin-Concentrating Hormone. *Cell Metab*. 2018.
4. Hsu TM, Noble EE, Liu CM, Cortella AM, **Konanur VR**, Suarez AN, Reiner DJ, Hahn JD, Hayes MR, Kanoski SE. A hippocampus to prefrontal cortex neural pathway inhibits food motivation through glucagon-like peptide-1 signaling. *Mol Psychiatry*. 2018.
5. Hsu TM, Noble EE, Reiner DJ, Liu CM, Suarez AN, **Konanur VR**, Hayes MR, Kanoski SE. Hippocampus ghrelin receptor signaling promotes socially-mediated learned food preference. *Neuropharmacology*. 2018.
6. Reiner DJ, Mietlicki-Baase EG, McGrath LE, Zimmer DJ, Bence KK, Sousa GL, **Konanur VR**, Krawczyk J, Burk DH, Kanoski SE, Hermann GE, Rogers RC, Hayes MR. Astrocytes Regulate GLP-1 Receptor-Mediated Effects on Energy *Balance. J Neurosci*. 2016.
7. Hsu TM, Hahn JD, **Konanur VR**, Noble EE, Suarez AN, Thai J, Nakamoto EM, Kanoski SE. Hippocampus ghrelin signaling mediates appetite through lateral hypothalamic orexin pathways. *eLife*. 2015.
8. Hsu TM, **Konanur VR**, Taing L, Usui R, Kayser BD, Goran MI, Kanoski SE. Effects of sucrose and high fructose corn syrup consumption on spatial memory function and hippocampal neuroinflammation in adolescent rats. *Hippocampus*. 2015.
9. Hsu TM, Hahn JD, **Konanur VR**, Lam A, Kanoski SE. Hippocampal GLP-1 receptors influence food intake, meal size, and effort-based responding for food through volume transmission. *Neuropyschopharmacology*. 2015.

Presentations / Abstracts (# presenting author, reverse chronological order)

1. #**Konanur VR**, Roitman MF. (Jul. 2022) Cytoglucopenia Potentiates Sucrose- and Sucrose Cue-Evoked Dopamine Signaling in the Ventral Tegmental Area. The Society for the Study of Ingestive Behavior (annual meeting). Porto, Portugal (**oral presentation; New Investigator Travel Award**).
2. **#Konanur VR**, Roitman MF. (May 2022) Cytoglucopenia Potentiates Sucrose Evoked Dopamine Signaling in the Ventral Tegmental Area. UIC Graduate Program in Neuroscience Annual Symposium. Chicago, IL (**poster**).
3. **#Konanur VR**, Roitman MF. (Oct. 2021) Glucose dynamics modulate dopamine signaling: implications for food-motivated behavior. Center for Alcohol Research in Epigenetics: Emerging techniques in Neuroscience. Chicago, IL (**oral presentation**).
4. **#Konanur VR**, Roitman MF. (Oct. 2021) Glucose dynamics modulate dopamine signaling: implications for food-motivated behavior. UIC Neuroscience Graduate Research Symposium (annual meeting). Chicago, IL (**oral presentation**).
5. **#Konanur VR**, Roitman MF. (Jul. 2021) Blocking Glucose Utilization via 5-thio-D-glucose Potentiates Sucrose-Evoked Dopamine Signaling in the Ventral Tegmental Area. The Society for the Study of Ingestive Behavior (annual meeting). Virtual meeting (**poster**).
6. **#Konanur VR**, Roitman MF. (Apr. 2021) Blocking glucose utilization via 5-thio-D-glucose enhances sucrose evoked dopamine signaling. UIC Graduate Program in Neuroscience Annual Symposium. Chicago, IL (**poster**).
7. **#Konanur VR**, Hsu TM, Roitman MF. (Dec 2020) Modulation of Food-Driven Phasic Dopamine Signaling by Glucagon-like Peptide 1. Center for Alcohol Research in Epigenetics Junior Scholar Seminar Series. Chicago, IL (**oral presentation**).
8. **#Konanur VR**, Hsu TM, Roitman MF. (Jan 2020) Modulation of Food-Driven Phasic Dopamine Signaling by Glucagon-like Peptide 1. UIC Neuroscience Graduate Research Symposium (annual meeting). Chicago, IL (**oral presentation**).
9. **#Konanur VR**, Hsu TM, Roitman MF. (Nov. 2019) Central Exendin-4 selectively suppresses cue-evoked phasic dopamine spikes and resultant behavior. The Society for Neuroscience (annual meeting). Chicago, IL (**poster**).
10. **#Konanur VR**, Hsu TM, Roitman MF. (Jul. 2019) Central Exendin-4 selectively suppresses cue-evoked phasic dopamine spikes and resultant behavior. The Society for the Study of Ingestive Behavior (annual meeting). Utrecht, Netherlands. (**poster**).
11. **#Konanur VR**, Hsu TM, Roitman MF. (May 2019) Central Exendin-4 Selectively Suppresses Cue-Evoked Phasic Dopamine Spikes and Resultant Behavior. Center for Alcohol Research in Epigenetics (annual meeting). Chicago, IL (**poster**).
12. **#Konanur VR**, Hsu TM, Roitman MF. (Apr. 2019) Central Exendin-4 Selectively Suppresses Cue-Evoked Phasic Dopamine Spikes and Resultant Behavior. The Society for Neuroscience Chicago Chapter (annual meeting). Chicago, IL (**poster**).
13. **#Konanur VR**, Hsu TM, Roitman MF. (Feb. 2019) The satiety factor GLP-1 modulates phasic dopamine signaling and behavior. UIC Neuroscience Graduate Student Symposium (annual meeting). Chicago, IL (**oral presentation**).
14. #Hsu TM, **Konanur VR**, Bazzino P, Roitman MF. (Nov. 2018) Homeostatic need states differentially recruit cue evoked VTA phasic dopamine signaling. The Obesity Society (annual meeting). Nashville, Tennessee (oral presentation).
15. #Hsu TM, **Konanur VR**, Roitman MF. (Jul. 2018) Thirst and the hormone Angiotensin II recruit VTA dopamine signaling to water availability. The Society for the Study of Ingestive Behavior (annual meeting). Bonita Springs, Florida (oral presentation).

16. **#Konanur VR**, Roitman MF. (Mar. 2018) Using in vivo Fiber Photometry to Further Understand Mechanisms of Amphetamine Action. Monitoring Molecules in Neuroscience (Biannual meeting). Oxford, UK (**poster**).
17. #Hsu TM, **Konanur VR**, Roitman MF. (Mar. 2018) Thirst and the hormone Angiotensin II recruit VTA dopamine signalling to water consumption. Monitoring Molecules in Neuroscience (Biannual meeting). Oxford, UK (poster).
18. **#Konanur VR**, Roitman MF. (Oct. 2017) Using in vivo Fiber Photometry to Further Understand Mechanisms of Amphetamine Action. UIC Neuroscience Symposium (annual meeting). Chicago, IL (**poster**).
19. #Noble EE, Song MY, **Konanur VR**, Hsu TM, Suarez AN, Hahn JD, Kanoski SE. (Jul. 2016) Evidence for "bulk flow" neurohumoral transmission by the orexigenic neuropeptide, melanin-concentrating hormone. The Society for the Study of Ingestive Behavior (Annual Meeting) Porto, Portugal (oral presentation).
20. #Suarez AN, Hsu TM, **Konanur VR**, Noble EE, Kanoski SE. (Jul. 2016) The role of vagus nerve signaling in hippocampal-dependent memory function. The Society for the Study of Ingestive Behavior (annual meeting) Porto, Portugal (oral presentation).
21. **#Konanur VR**, Noble EE, Hsu TM, Kanoski SE, Hahn JD. (Nov. 2015) Neuroanatomical Evidence for Neurohumoral Transmission by Melanin-Concentrating Hormone Neurons in the Rat. The Society for Neuroscience (annual meeting) Chicago, IL (**poster**).
22. #Hsu TM, Hahn JD, **Konanur VR**, Kanoski SE. (Jul. 2015) A novel hippocampal-hypothalamic neural circuit mediating appetite through ghrelin receptor signaling. The Society for the Study of Ingestive Behavior (annual meeting). Denver, CO (poster).
23. #Hsu TM, **Konanur VR**, Kanoski SE. (Aug. 2014) Adolescent consumption of sugar-sweetened beverages impairs hippocampal-dependent learning. The Society for the Study of Ingestive Behavior (annual meeting). Seattle, WA (oral presentation).
24. **#Konanur VR**, Todd KL, Kristan WB, French K. (Nov. 2011) Identifying and characterizing leech neurons labeling for GABA. The Society for Neuroscience (annual meeting). San Diego, CA (**poster**).

Teaching Experience

Teaching Assistant:

Neuroanatomy – BIOS 483. Spring 2019, 20, 21, 22
Laboratory in Behavioral Neuroscience – PSCH 363. Fall 2018, 2019, 2020, 2021; Spring 2018
Laboratory in Cognitive Neuroscience – PSCH 367. Fall 2017
Biological Techniques – BIBC 103. Fall 2011; Winter 2011, 2012; Spring 2011, 2012
Metabolic Biochemistry – BIBC 102. Fall 2009, 2010, 2012; Winter 2010; Spring 2010

Guest Lecturer:

Neuroanatomy – BIOS 483. Spring 2022
Seminal on Neurobiology – BIOS 386. Fall 2017

Mentored Undergraduate Research Students:

University of Illinois at Chicago:

• Paula Bazzino (2018-2019); Post-baccalaureate researcher
• Beto Araiza (2021-2022); Post-baccalaureate researcher

University of Southern California:

• Lilly Taing (2013-2016); Health and Humanity/ Health care studies.
• Joanna Liang (2013-2015); Psychology/Natural Science.
• Mehul Trivedi (2013-2015); Biological Sciences/ Psychology.
• Ryan Usui (2013-2015); Human Biology.
• Emily Nakamoto (2013-2016); Neuroscience/ Art.
• Jessica Thai (2013-2016); Biological Sciences.
• Agustina Kim (2013-2016); Human Biology.
• Allison Apfel (2014-2016); Health Promotion and Disease Prevention.
• Natalie Demirjian (2014-2016); Neuroscience.
• Kaitlin Sontag (2014-2016); Human Biology.

Affiliations/Memberships

• The Society for the Study of Ingestive Behavior (2019, 2021, 2022)
• The Society for Neuroscience Chicago Chapter (2019)
• The Society for Neuroscience (2011, 2015, 2019)
• Monitoring Molecules in Neuroscience (2018)