

William J. Giardino, PhD

Assistant Professor

Department of Psychiatry and Behavioral Sciences

Wu Tsai Neurosciences Institute

Stanford University School of Medicine

willgiar@stanford.edu [Giardino Laboratory](#)**EDUCATION, TRAINING, EMPLOYMENT**

Dates	Institution	Degree/Position	Department (Field)
01/2021-present	Stanford University	Assistant Professor	Psychiatry (Neuroscience)
09/2018-12/2020	Stanford University	Instructor	Psychiatry (Neuroscience)
10/2013-08/2018	Stanford University	Postdoctoral Fellow	Psychiatry (Neuroscience)
06/2008-09/2013	Oregon Health & Sci. University	Ph.D.	Behavioral Neuroscience
09/2004-06/2008	University of Washington	B.Sc.	Psychology (Pharmacology)

CURRENT GRANT FUNDING

06/2023-05/2025: Brain Research Foundation Seed Grant (BRFSG-2023-02; PI: Giardino)

06/2022-05/2025: Whitehall Foundation Research Grant (2022-05-99; PI: Giardino)

COMPLETED GRANT FUNDING

09/2022-05/2024: NIH/NIAAA Research Supplement to Promote Diversity in Health-Related Research

06/2021-05/2024: NIH/NIAAA R00 Pathway to Independence Award (R00 AA025677; PI: Giardino)

02/2023-01/2024: Stanford Center for Sleep and Circadian Sciences (CSCS seed grant; PI: Giardino)

02/2023-01/2024: Stanford Clinical and Translational Science Award (SPECTRUM pilot; PI: Giardino)

01/2022-12/2022: Stanford Women's Health and Sex Differences in Medicine Seed Grant (PI: Giardino)

09/2020-08/2022: Stanford Department of Psychiatry & Behavioral Sciences Innovator Grant (PI: Giardino)

09/2018-01/2021: NIH/NIAAA K99 Pathway to Independence Award (K99 AA025677; PI: Giardino)

PUBLICATIONS (as First or Last Author)

Duncan LE, Li T, Salem M, Li W, Mortazavi L, Senturk H, Shargh N, Vesuna S, Shen H, Yoon J, Wang G, Ballon J, Tan L, Pruett BS, Knutson B, Deisseroth KA, **Giardino WJ**. Mapping the cellular etiology of schizophrenia and diverse brain phenotypes. In press, *Nature Neuroscience*, September 2024.

Sardar H, Goldstein-Piekarski AN, **Giardino WJ**. Amygdala neurocircuitry at the interface between emotional regulation and narcolepsy with cataplexy. *Frontiers in Neuroscience*. 2023 Apr 21;17:1152594

Ma Y, **Giardino WJ**. Neural circuit mechanisms of the cholecystokinin (CCK) neuropeptide system in addiction. *Addiction Neuroscience*. 2022 Sep;3:100024

Pomrenze MP, Walker LC, **Giardino WJ**. Gray areas: Neuropeptide circuits linking the Edinger-Westphal and Dorsal Raphe nuclei in addiction. *Neuropharmacology*. 2021 Oct 15;198:108769

Parrington BA, **Giardino WJ**. Zooming into the lab: Perspectives on maintaining undergraduate biological research through computationally-adapted remote learning in times of crisis. *Journal of Microbiology & Biology Education*. 2021 Mar 31;22(1):22.1.84

Giardino WJ, Pomrenze MB. Extended amygdala neuropeptide circuitry of emotional arousal: waking up on the wrong side of the bed nuclei of stria terminalis. *Frontiers in Behavioral Neuroscience*. 2021 Feb 9;15:613025

Giardino WJ, Eban-Rothschild A, Christoffel DJ, Li S-B, Malenka RC, de Lecea L. Parallel circuits from the bed nuclei of stria terminalis to the lateral hypothalamus drive opposing emotional states. *Nature Neuroscience*. 2018 Aug;21(8):1084-1095

- Giardino WJ**, Rodriguez ED, Smith ML, Ford MM, Galili D, Mitchell SH, Chen A, Ryabinin AE. Control of chronic excessive alcohol drinking by genetic manipulation of the Edinger-Westphal nucleus urocortin-1 neuropeptide system. *Translational Psychiatry*. 2017 Jan 31;7(1):e1021
- Ryabinin AE, **Giardino WJ**. Contribution of Urocortin to the development of excessive drinking. *International Review of Neurobiology*. 2017;136:275-291
- Ryabinin AE, **Giardino WJ**. The Corticotropin Releasing Factor System and Alcohol Consumption. *Molecular Aspects of Alcohol and Nutrition*. 2016;201-212
- Giardino WJ**, de Lecea L. Resting easy with a novel sleep regulator. *eLife*. 2015 Dec 10;4. pii: e12093
- Giardino WJ**, de Lecea L. Hypocretin (orexin) neuromodulation of stress and reward pathways. *Current Opinion in Neurobiology*. 2014 Jul 19;29C:103-108
- Giardino WJ**, Ryabinin AE. CRF1 receptor signaling regulates food and fluid intake in the drinking-in-the-dark model of binge alcohol consumption. *Alcoholism: Clinical & Experimental Research*. 2013 Jul;37(7):1161-107
- Giardino WJ**, Cote DM, Li J, Ryabinin AE. Characterization of genetic differences within the centrally-projecting Edinger-Westphal nucleus of C57BL/6J and DBA/2J mice by expression profiling. *Frontiers in Neuroanatomy*. 2012;6(5)
- Giardino WJ**, Mark GP, Stenzel-Poore MP, Ryabinin AE. Dissociation of corticotropin-releasing factor receptor subtype involvement in sensitivity to locomotor effects of methamphetamine and cocaine. *Psychopharmacology*. 2012 Feb;219(4):1055-63
- Giardino WJ**, Ryabinin AE. Corticotropin-releasing factor: innocent until proven guilty. *Nature Reviews Neuroscience*. 2012 Jan;13(1):70
- Giardino WJ**, Cocking DL, Kaur S, Cunningham CL, Ryabinin AE. Urocortin-1 within the Centrally Projecting Edinger-Westphal Nucleus is Critical for Ethanol Preference. *PLoS One*. 2011;6(10):e26997
- Giardino WJ**, Pastor R, Anacker AMJ, Spangler E, Cote DM, Li J, Stenzel-Poore M, Phillips TJ, Ryabinin AE. Dissection of corticotropin-releasing factor system involvement in locomotor sensitivity to methamphetamine. *Genes, Brain, and Behavior*. 2011 Feb;10(1):78-89
- PUBLICATIONS (as Co-Author)**
- Angelakos CC, Girven KS, Liu Y, Gonzalez OC, Murphy KR, Jennings KJ, **Giardino WJ**, Zweifel LS, Suko A, Palmiter RD, Clark SD, Krasnow MA, Bruchas MR, de Lecea L. A cluster of neuropeptide S neurons regulates breathing and arousal. *Curr Biol*. 2023 Dec 18;33(24):5439-5455.e7
- Kawai M, Schneider L, Linkovski O, Jordan JT, Karny R, Pirog S, Cotto I, **Giardino WJ**, O'Hara R. High-resolution spectral sleep analysis reveals a novel association between slow oscillations and memory retention in elderly adults. *Frontiers in Aging Neuroscience*. 2021 Jan 11;12:540424
- Eban-Rothschild A, Borniger JC, Rothschild G, **Giardino WJ**, Morrow JG, de Lecea L. Arousal state dependent alterations in VTA-GABAergic neural activity. *eNeuro*. 2020 Mar 30;7(2)
- Ho AL, Salib AN, Pendharkar AV, Sussman ES, **Giardino WJ**, Halpern CH. The Nucleus Accumbens and Alcoholism: A Target for Deep Brain Stimulation. *Neurosurg. Focus*. 2018 Aug;45(2):E12
- Li S-B, Nevárez N, **Giardino WJ**, de Lecea L. Optical Probing of Orexin/Hypocretin Receptor Antagonists. *Sleep*. 2018 Oct 1;41(10):zsy14
- Eban-Rothschild AD, **Giardino WJ**, de Lecea L. To sleep or not to sleep: neuronal and ecological insights. *Current Opinion in Neurobiology*. 2017 May 10;44:132-138
- Li S-B, **Giardino WJ**, de Lecea L. Hypocretins and arousal. *Curr. Top. Behav. Neurosci*. 2017;33:93-104

Eban-Rothschild AD, Rothschild GD, **Giardino WJ**, Jones JR, de Lecea L. VTA dopaminergic neurons regulate ethologically relevant sleep-wake behaviors. *Nature Neuroscience*. 2016 Oct;19(10):1356-66

Schank JR, Ryabinin AE, **Giardino WJ**, Ciccocioppo R, Heilig M. Stress-related neuropeptides and addictive behaviors: beyond the usual suspects. *Neuron*. 2012 Oct;76(4):192-208

Ryabinin AE, Tsoory MM, Kozicz T, Thiele T, Neufeld-Cohen A, Chen A, Lowery-Gionta E, **Giardino WJ**, Kaur S. Urocortins: CRF's siblings and their potential role in anxiety, depression, and alcohol drinking behavior. *Alcohol*. 2012 Jun;46(4):349-57

Land BB, Bruchas MR, Schattauer S, **Giardino WJ**, Aita M, Messinger D, Hnasko TS, Palmiter RD, Chavkin C. Activation of the kappa opioid receptor in the dorsal raphe nucleus mediates the aversive effects of stress and reinstates drug seeking. *Proc. Natl. Acad. Sci. USA*. 2009 Nov 10;106(45):19168-73

MANUSCRIPTS IN PROGRESS

Ma Y, Sardar H, Benabou ME, Yu AC, Morningstar AR, Fajardo RN, Kandil IF, Rogers ET, Vassalli A, Kauer JA, **Giardino WJ***. Sex-specific roles of hypocretin receptor signaling in CRF neurons on alcohol drinking, anxiety, and BNST neuronal excitability. Submitted, August 2024. *Corresponding author.

Dhungana A, McCalley DM, Heath AM, Karybill E, Mojabi F, Morales JM, Morningstar AR, Padula CB, **Giardino WJ***, McNerney MW*. Developing a reverse translational model of TMS in AUD: the influence of theta burst stimulation protocols on binge alcohol drinking in mice. In revision, August 2024.

*Co-corresponding author.

Pearl A, Pinares-Garcia P, Shesham A, Maddern X, Anversa RG, Reed FM, **Giardino WJ**, Lawrence AJ, Walker LC. Edinger-Westphal nucleus ghrelin receptor signaling regulates binge alcohol consumption in a sex specific manner. In revision, August 2024 ([bioRxiv preprint](#)).

SELECTED TALKS

- 2024 International Society for Biomedical Research on Alcohol. Melbourne, Australia
Hypothalamic Neuroscience and Appetitive Motivation Joint Symposia. Melbourne, Australia
Research Society on Alcohol. Minneapolis, MN
Columbia University, Center of Excellence for Sleep and Circadian Research (virtual presentation)
- 2023 European Brain and Behaviour Society. Amsterdam, Netherlands
College on Problems of Drug Dependence. Denver, CO
Alcoholism and Stress: A Framework for Future Treatment Strategies. Volterra, Italy
- 2022 Society for Neuroscience, Minisymposium (Chair). San Diego, CA
University of San Diego, Department of Psychological Sciences. San Diego, CA
- 2021 International Regulatory Peptides Society. (virtual presentation)
- 2020 Boston University, Department of Psychological & Brain Sciences. Boston, MA
University of California - Los Angeles, Department of Physiology. Los Angeles, CA
University of Minnesota, Medical Discovery Team on Addiction. Minneapolis, MN
Winter Conference on Brain Research. Big Sky, MT
- 2019 University of Maryland - Baltimore, Department of Pharmacology. Baltimore, MD
University of Illinois - Chicago, Department of Psychiatry & Center for Alcohol Research. Chicago, IL
University of California - Davis, Department of Psychology. Davis, CA
NIAAA/NIDA Frontiers in Addiction conference (SfN pre-meeting). Chicago, IL
Winter Conference on Brain Research. Snowmass, CO
Vanderbilt University, Vanderbilt Brain Institute. Nashville, TN
Einstein Medical College, Department of Psychiatry. New York City, NY
- 2018 The Scripps Research Institute, Department of Neuroscience. Jupiter, FL
University of Texas, Division of Pharmacology & Toxicology. Austin, TX
University of Alabama, Department of Neurobiology. Birmingham, AL

- University of Illinois, School of Molecular and Cellular Biology. Champaign-Urbana, IL
- Oregon Health & Sci. Univ., Dept. of Beh. Neurosci. retreat (alumni speaker). Cannon Beach, OR
- Gordon Research Conference on Alcohol & the Nervous System. Galveston, TX
- 2016 Research Society on Alcoholism. New Orleans, LA
- 2015 International Behavioral and Neural Genetics Society. Uppsala, Sweden
- 2012 International Society for Biomedical Research on Alcoholism. Sapporo, Hokkaido, Japan
- 2011 Behavior, Biology and Chemistry: Translational Research in Addiction. San Antonio, TX
- 2010 International Behavioral and Neural Genetics Society. Halifax, Nova Scotia, Canada

SELECTED AWARDS & HONORS

- 2023 McCormick and Gabilan Faculty Award. Office of Faculty Diversity and Development. Stanford, CA
- 2020 Winter Conference on Brain Research, Travel Award. Big Sky, MT
- 2019 NIAAA/NIDA Frontiers in Addiction, Early Career Investigator Showcase Travel Award. Chicago, IL
- Gordon Research Conference on the Amygdala, Poster Presentation Award. Easton, MA
- 2018 American College of Neuropsychopharmacology (ACNP), Travel Award: Hollywood, FL
- Gordon Research Seminar on Alcohol & Nervous System: Oral Presentation Award. Galveston, TX
- 2015 International Behavioral and Neural Genetics Society, Travel Award: Uppsala, Sweden
- 2014 Research Society on Alcoholism, Junior Investigator Award
- 2013 Oregon Health & Science University, Research Week: Oral Presentation Award
- 2012 Intl. Soc. for Biomedical Research on Alcoholism, Young Investigator & Travel Awards: Sapporo, Japan
- The Jackson Laboratory, Short Course on the Genetics of Addiction (scholarship funds)
- Oregon Health & Science University, Research Week: Oral Presentation Award
- 2011 American Psychological Association, Dissertation Research Award
- Cold Spring Harbor Laboratory, Cellular Biology of Addiction (scholarship funds)

CURRENT TRAINEES

- Irene Yan – Undergraduate researcher (MCHRI DRIVE Fellowship), 2024-
Current position: Data Science BS & Psychology BS expected 2026, Stanford University
- Olivia Ledbury – Undergraduate researcher (NeURO Fellowship), 2024-
Current position: Biology BS with Honors expected 2026, Stanford University
- Ethan Rogers, BS – Research staff, 2023-
Current position: Life Sciences Research Professional 1, Giardino Lab, Stanford University
- Brittany Bush, BS, MS, PhD – Postdoc researcher (Stanford Propel Scholar), 2023-
Current position: Postdoctoral scholar, Giardino Lab, Stanford University
- Allison Morningstar, BS – Graduate student, Neurosciences IDP (Stanford Graduate Fellowship), 2022-
Current position: Neurosciences PhD expected 2027, Stanford University
- Angeline Yu – Undergraduate researcher (MCHRI DRIVE Fellowship), 2022-
Current position: STS BS, CHPR MS expected 2025, Stanford University
- Max Benabou – Undergraduate researcher (Intro Seminar Plus, Bio-X USRP Fellowship), 2022-
Current position: Biomedical Computation BS expected 2025, Stanford University
- Yihe Ma, BS, PhD – Postdoc researcher, 2021-
Current position: Postdoctoral scholar, Giardino and Kauer Labs, Stanford University
- Haniyyah Sardar, BS – Lab manager and research staff (NIH Diversity Supplement Awardee), 2021-
Current position: Life Sciences Research Professional 2, Giardino Lab, Stanford University

SELECTED FORMER TRAINEES

- Isaac Kandil, BS – Undergraduate researcher (Bio-X USRP, VPUE, and Biology Honors thesis), 2021-24
Current position: Research Technologist, Northwestern University (S. Patel lab)
- Malia Belnap, BS – Post-baccalaureate researcher, 2021-22
Current position: Neuroscience PhD student, UCLA (Lara Ray lab)
- Brianna Parrington, BS – Undergraduate researcher (SSRP), 2020

Current position: Molecular & Cellular Biology PhD student, University of California - Berkeley
 Tasneem Sadok, BS – Undergraduate researcher, 2019
 Current position: MD/PhD student, University of California - Los Angeles
 Javier Correa Vasquez, MA, MS – Post-baccalaureate researcher, 2018-19
 Current position: Health Psychology doctoral student, Open University of Catalonia - Spain
 Danny Hoang, BS, MD – Post-baccalaureate researcher, 2016-18
 Current position: Psychiatry residency, UT-Austin
 Neelima Valluru, BS – High school student researcher (AAR-Gunn), 2016-17
 Current position: Research associate, Jazayeri Lab, MIT
 Crystal Liang, BS – Undergraduate researcher, 2016-17
 Current position: MD expected 2027, University of California – San Diego
 Natalia Rodriguez-Sosa, BS, PhD – Undergraduate researcher (SSRP), 2016
 Current position: Postdoc researcher, University of Texas – Southwestern (Shabel lab)
 Karen Malacon, BA – High school student researcher (SIMR), 2015
 Current position: MD/PhD Neurosciences student, Stanford University (Monje lab)
 Danny Rodriguez, BS, MD – Undergraduate researcher, 2012-13
 Current position: Resident physician in Pathology, UCLA

STUDY SECTION

2024 NIH - BRAIN Initiative Special Emphasis Panel (K99)
 2024 NIH - Mechanistic Studies to Investigate the Interrelationship Between Sleep and/or Circadian Rhythms and Substance Use Disorders (NIDA, R01)
 2022 NIH - Exploratory Studies on Mechanisms of Sleep and Substance Use Disorders (NIDA, R61/R33)
 2020 NIH - Biobehavioral Regulation, Learning and Ethology (BRLE) - Early Career Reviewer (ECR)

SERVICE

University - Community

2023- DEI Advisory Committee - Stanford Department of Psychiatry and Behavioral Sciences
 2022- Neurosciences IDP representative, Biosciences Faculty Liaisons Committee
 2022- Faculty Chair, Diversity Committee (DEIB) - Stanford Neurosciences PhD program
 2022- Community Seminar Committee - Stanford Center for Sleep and Circadian Sciences (CSCS)
 2022- Faculty mentor, Pathways to Neurosciences program - Stanford Wu Tsai Neuro Institute

University – Qualifying Exam, Dissertation Advisory, Thesis Oral Exam Committees

2022-24 Stanford Neurosciences PhD program
 Sedona Ewbank, Lavonna Mark, Samantha Golf, Emma Follman, Kieramarie Robertson

University - Review and Evaluation

2023- Admissions Committee - Stanford Neurosciences PhD program
 2023- MD/PhD prospective student researcher evaluation - Stanford MSTP
 2022-23 Application reviewer, Stanford Prism Baker Postdoctoral Fellowship
 2021-24 Postdoc Grant Review Committee - Stanford Maternal Child & Health Research Institute

Outreach and Science Communication

2023 Speaker, [Growing Up In Science](#), Stanford University
 2023 Panelist, HHMI Leading Edge Fellows (“Starting a Lab”)
 2022 Guest speaker - Stanford Neuroscience Undergraduate Research Opportunity (NeURO)
 2022 Guest speaker - Stanford Bio-X Undergraduate Summer Research Program (USRP)
 2016 Contributor, [Interstellate Magazine, Vol. 1](#)

Conference Service

2022-23 Program Committee member - Research Society on Alcoholism
 2021-24 Faculty Mentor - Research Society on Alcoholism

CAREER DEVELOPMENT / CONTINUING EDUCATION

2022	Teaching Advancement Grant, Stanford Center for Teaching and Learning
2022	Tools for Effective Teaching Workshop: Basic Science, Stanford Faculty Development Center
2022	Leadership Academy, Stanford Department of Psychiatry and Behavioral Sciences
2021-23	Enhancing Skills in Mentor Training workshop series, Stanford Neurosciences PhD program
2021	IDEAL Pedagogy course, Stanford Center for Teaching and Learning
2021	Research career accelerator program (ReCAP), Stanford School of Medicine
2020-22	Starting Up Your Research Group (SURGE), Stanford School of Medicine

TEACHING

2021-23	Co-Instructor, NEPR 212: <i>Responsible Conduct of Neuroscience Research</i> ; Stanford University
2021-24	Co-Instructor, Clinical Neuroscience Immersion Experience: <i>Neurocircuitry</i> ; Stanford Psychiatry
2021-22	Instructor, IntroSeminar PSYC 52N: <i>Neuroscience of Stress and Reward</i> ; Stanford University
2022	Guest Lecturer, HumBio 4B: <i>Behavior, Health, and Development</i> ; Stanford University

JOURNAL PEER REVIEW

Nature Neuroscience, Neuron, Molecular Psychiatry, Biological Psychiatry, Cell Reports, Science Advances, Neuropsychopharmacology, Journal of Neuroscience, Addiction Biology, Sleep, Psychopharmacology, eLife, Neuropharmacology, European Journal of Neuroscience, Neurobiology of Learning & Memory, Frontiers in Behavioral Neuroscience, Communications Biology, Behavioural Brain Research, PLoS One, Journal of Neuroscience Research, Frontiers in Psychiatry, International Journal of Neuropsychopharmacology, Genes Brain and Behavior, Cellular and Molecular Neurobiology, Pharmacological Reports, Frontiers in Neural Circuits, Molecular Metabolism, Alcohol: Clinical & Experimental Research, Peptides, Neuroscience, Molecular Systems Biology, Medicine in Drug Discovery, Journal of Integrative Neuroscience, Alcohol

PROFESSIONAL AFFILIATIONS

- *Society for Research on Biological Rhythms* (2024-)
- *American College of Neuropsychopharmacology* (travel awardee, 2018)
- *International Society for Biomedical Research on Alcoholism* (2012-)
- *Research Society on Alcoholism* (2009-)
- *Society for Neuroscience* (2009-)

MEETING ABSTRACTS (64 total)