Stanford

Jason Tucciarone, MD, PhD

Instructor, Psychiatry and Behavioral Sciences

CLINICAL OFFICES

- **Psychiatry**

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Bio

BIO

Jason Tucciarone MD, PhD is an Instructor with Stanford School of Medicine's Department of Psychiatry and Behavioral Sciences. He works collaboratively in the department's Neuropsychiatry clinic and his clinical focus includes treating patients with diverse and complex presentations at the interface of psychiatry and neurology with particular interest in functional neurological disorders. He sees a small cohort of psychotherapy patients in Individual Psychotherapy Clinic. He also works weekend shifts on Stanford's inpatient psychiatry units.

As a neuroscientist, he is interested in preclinical models of mental illness and investigating new therapies for mood disorders and addiction. In particular, he is interested in defining new cell types and evolutionary conserved circuits in emotional processing centers of the brain with the hope of finding new entry points for novel therapeutics. Currently under the mentorship Dr Robert Malenka, he is using optogenetic, chemogenetic, neuroimaging and behavioral approaches in mouse models of addiction to uncover vulnerable brain circuitry in opioid use disorder. Under the mentorship of Dr Alan Schatzberg he is investigating the efficacy of buprenorphine augmentation to IV ketamine infusion at reducing suicidality in treatment resistant depression.

Prior to training in psychiatry at Stanford's research residency track Jason received his bachelor's degree in biology and philosophy from Union College. He spent three years as a Post-Baccalaureate IRTA fellow at the National Institute of Neurological Disorders and Stroke investigating and developing MRI reportable contrast agents to map neuronal connectivity. Following this he entered the Medical Scientist Training Program (MD/PhD) at the State University of NY Stony Brook University. There he completed a doctoral dissertation in neuroscience under the mentorship Dr. Josh Huang at Cold Spring Harbor Laboratory. His thesis work employed mouse genetic dissections of excitatory and inhibitory cortical circuits with a focus on the circuitry of chandelier inhibitory interneurons in prefrontal cortex.

In addition to his research and clinical work, Jason is passionate about teaching, mentorship, and resident clinical supervision. He joined a working group early in his clinical residency to restructure trainee's neuroscience education. He teaches introductory lectures in the neuroscience of addiction, PTSD, psychosis, and mood disorders. He also leads resident group supervision in their introductory psychodynamic psychotherapy clinical experience. He supervises medical students, residents, and clinical fellows in Neuropsychiatry clinic. Finally, to contribute to the Stanford clinical community, he leads a support group for Internal Medicine interns and residents.

CLINICAL FOCUS

- Psychiatry
- Neuropsychiatry
- Psychotherapy

ACADEMIC APPOINTMENTS

- Instructor, Psychiatry and Behavioral Sciences
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- NIH K08 Mentored Clinical Scientist Research Career Development Award, National Institute on Drug Abuse (NIDA) (2023-2028)
- NARSAD Young Investigator Award, Brain & Behavior Research Foundation (2023-2025)
- Career Development Institute for Psychiatry, Stanford University and the University of Pittsburgh (2022)
- Alpha Omega Alpha Medical Honor Society, Alpha Omega Alpha (2021)
- Marnell Award for Psychotherapy, Stanford Department of Psychiatry (2021)
- T32 Postdoctoral Fellowship, Stanford University, NIMH (2020-2022)
- Psychotherapy Fellowship, American Psychoanalytic Association (2020-2021)

PROFESSIONAL EDUCATION

- Board Certification: Psychiatry, American Board of Psychiatry and Neurology (2021)
- Residency: Stanford University Adult Psychiatry Residency (2021) CA
- Medical Education: State University of New York at Stony Brook Office of the Registrar (2017) NY

Research & Scholarship

CLINICAL TRIALS

- Opiate Suicide Study in Patients With Major Depression, Recruiting
- Tianeptine for Treatment Resistant Depression, Recruiting
- Pre-post Evaluation of the Safety and Efficacy of Ibogaine-Magnesium Therapy in Veterans With Repeated Blast Exposure, Not Recruiting

Publications

PUBLICATIONS

- **Striatal dopamine integrates cost, benefit, and motivation.** *Neuron*
  Eshel, N., Touponse, G. C., Wang, A. R., Osterman, A. K., Shank, A. N., Groome, A. M., Taniguchi, L., Cardozo Pinto, D. F., Tucciarone, J., Bentzley, B. S., Malenka, R. C.
  2023

- **Collaboratively Designed Neuroscience Curriculum for Psychiatry Residents.** *Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry*
  Tucciarone, J., Willard, D., Kleinman, R., Bentzley, B. S., Hayward, C., Raj, K. S.
  2023

- **Modulation of 5-HT release by dynorphin mediates social deficits during opioid withdrawal.** *Neuron*
  Pomrenze, M. B., Cardozo Pinto, D. F., Neumann, P. A., Llorach, P., Tucciarone, J. M., Morishita, W., Eshel, N., Heifets, B. D., Malenka, R. C.
  2022

- **Genetic dissection of the glutamatergic neuron system in cerebral cortex.** *Nature*

Matho, K. S., Huilgol, D., Galbavy, W., He, M., Kim, G., An, X., Lu, J., Wu, P., Di Bella, D. J., Shetty, A. S., Palaniswamy, R., Hatfield, J., Raudales, et al
2021; 598 (7879): 182-187

- **A Genetically Defined Compartmentalized Striatal Direct Pathway for Negative Reinforcement** *CELL*
  Xiao, X., Deng, H., Furlan, A., Yang, T., Zhang, X., Hwang, G., Tucciarone, J., Wu, P., He, M., Palaniswamy, R., Ramakrishnan, C., Ritola, K., Hantman, et al
  2020; 183 (1): 211-+

- **Genetic Single Neuron Anatomy Reveals Fine Granularity of Cortical Axo-Axonic Cells.** *Cell reports*
  Wang, X., Tucciarone, J., Jiang, S., Yin, F., Wang, B. S., Wang, D., Jia, Y., Jia, X., Li, Y., Yang, T., Xu, Z., Akram, M. A., Wang, et al
  2019; 26 (11): 3145-3159.e5

- **Evaluation of the appropriate use of a CIWA-Ar alcohol withdrawal protocol in the general hospital setting.** *The American journal of drug and alcohol abuse*
  Eloma, A. S., Tucciarone, J. M., Hayes, E. M., Bronson, B. D.
  2017: 1-8

- **Selective inhibitory control of pyramidal neuron ensembles and cortical subnetworks by chandelier cells.** *Nature neuroscience*
  Lu, J., Tucciarone, J., Padilla-Coreano, N., He, M., Gordon, J. A., Huang, Z. J.
  2017

- **A basal ganglia circuit for evaluating action outcomes** *NATURE*
  Stephenson-Jones, M., Yu, K., Ahrens, S., Tucciarone, J. M., van Huijstee, A. N., Mejia, L. A., Penzo, M. A., Tai, L., Wilbrecht, L., Li, B.
  2016; 539 (7628): 289-?

- **Strategies and Tools for Combinatorial Targeting of GABAergic Neurons in Mouse Cerebral Cortex** *NEURON*
  He, M., Tucciarone, J., Lee, S., Nigro, M. J., Kim, Y., Levine, J. M., Kelly, S. M., Krugikov, I., Wu, P., Chen, Y., Gong, L., Hou, Y., Osten, et al
  2016; 91 (6): 1228-1243

- **Cooperative Subnetworks of Molecularly Similar Interneurons in Mouse Neocortex** *NEURON*
  Karnani, M. M., Jackson, J., Ayzenshtat, I., Tucciarone, J., Manoocheri, K., Snider, W. G., Yuste, R.
  2016; 90 (1): 86-100

- **The Mediodorsal Thalamus Drives Feedforward Inhibition in the Anterior Cingulate Cortex via Parvalbumin Interneurons** *JOURNAL OF NEUROSCIENCE*
  Delevich, K., Tucciarone, J., Huang, Z. J., Li, B.
  2015; 35 (14): 5743-5753

- **The paraventricular thalamus controls a central amygdala fear circuit** *NATURE*
  Penzo, M. A., Robert, V., Tucciarone, J., De Bundel, D., Wang, M., Van Aelst, L., Darvas, M., Parada, L. F., Palmiter, R. D., He, M., Huang, Z. J., Li, B.
  2015; 519 (7544): 455-?

- **Input-specific maturation of synaptic dynamics of parvalbumin interneurons in primary visual cortex** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Lu, J., Tucciarone, J., Lin, Y., Huang, Z. J.
  2014; 111 (47): 16895-16900

- **Targeting cells with single vectors using multiple-feature Boolean logic.** *Nature methods*
  Fenno, L. E., Mattis, J., Ramakrishnan, C., Hyun, M., Lee, S. Y., He, M., Tucciarone, J., Selimbeyoglu, A., Berndt, A., Grosenick, L., Zalocusky, K. A., Bernstein, H., Swanson, et al
  2014; 11 (7): 763-772

- **A Cortical Circuit for Gain Control by Behavioral State** *CELL*
  Fu, Y., Tucciarone, J. M., Espinosa, J. S., Sheng, N., Darcy, D. P., NiColl, R. A., Huang, Z. J., Stryker, M. P.
  2014; 156 (6): 1139-1152

- **Layer specific tracing of corticocortical and thalamocortical connectivity in the rodent using manganese enhanced MRI** *NEUROIMAGE*
  Tucciarone, J., Chuang, K., Dodd, S. J., Silva, A., Pelled, G., Koretsky, A. P.
  2009; 44 (3): 923-931

- **Detection of cortical laminar architecture using manganese-enhanced MRI** *JOURNAL OF NEUROSCIENCE METHODS*
  Silva, A. C., Lee, J. H., Wu, C. W., Tucciarone, J., Pelled, G., Aoki, L., Koretsky, A. P.

2008; 167 (2): 246-257