Stanford



Shaghayegh Navabpour

Postdoctoral Scholar, Psychiatry

Bio

BIO

I grew up in Tehran, Iran, and my fascination with genetics began in middle school when I learned that every living thing is made based on only four nucleotides. This realization sparked my curiosity about how such a simple code could create the diversity of life we see around us. As I delved deeper, I became intrigued by the field of epigenetics and the questions it posed about where the role of genetics ends and epigenetics begins, particularly in the context of developmental and childhood disorders.

My journey in science led me to explore the complex interplay between genetics and epigenetics, focusing on how these processes influence health and disease. Along the way, I also developed a background in neuroscience, which has provided me with a broader perspective on the biological mechanisms underlying human brain diseases and development.

HONORS AND AWARDS

- The Phil & Penny Knight Initiative for Brain Resilience Fellowship, The Wu Tsai Neurosciences Institute (2025)

PROFESSIONAL EDUCATION

- Bachelor of Science, University of Tehran , Biology (2014)
- Master of Science, University of Tehran , Physiology (2016)
- Doctoral of Philosophy, Virginia Tech , Neuroscience (2023)

STANFORD ADVISORS

- Laramie Duncan, Postdoctoral Faculty Sponsor

LINKS

- Google Scholar: https://scholar.google.com/citations?hl=en&user=MXvV7MkAAAAJ&view_op=list_works&sortby=pubdate

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research investigates how genetic, transcriptomic, and epigenomic mechanisms shape brain function and contribute to psychiatric disorders, with a special focus on PTSD. By combining large-scale human genomic data with molecular neuroscience approaches, I aim to identify cell-type-specific pathways and therapeutic targets that advance our understanding and treatment of mental health conditions.

Publications

PUBLICATIONS

- **MAPPING THE CELLULAR ETIOLOGY OF PSYCHIATRIC DISORDERS**
  Duncan, L., Shargh, N., Salem, M., Li, T., Stafford, C., Senturk, H., Segal-Gavish, H., Navabpour, S., Ye, G., Werwath, K., Shen, H., Sanchez-Roige, S.
  ELSEVIER.2025

- **Monoubiquitination of histone H2B is a crucial regulator of the transcriptome during memory formation** *LEARNING & MEMORY*
  Navabpour, S., Farrell, K., Kincaid, S. E., Omar, N., Musaus, M., Lin, Y., Xie, H., Jarome, T. J.
  2024; 31 (3)

- **Phosphorylation of RPT6 Controls Its Ability to Bind DNA and Regulate Gene Expression in the Hippocampus of Male Rats during Memory Formation.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Farrell, K., Auerbach, A., Musaus, M., Navabpour, S., Liu, C., Lin, Y., Xie, H., Jarome, T. J.
  2024; 44 (4)

- **Proteasome-independent K63 polyubiquitination selectively regulates ATP levels and proteasome activity during fear memory formation in the female amygdala.** *Molecular psychiatry*
  Farrell, K., Musaus, M., Auerbach, A., Navabpour, S., Ray, W. K., Helm, R. F., Jarome, T. J.
  2023; 28 (6): 2594-2605

- **Epigenetic Mechanisms in Memory and Cognitive Decline Associated with Aging and Alzheimer's Disease** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*
  Maity, S., Farrell, K., Navabpour, S., Narayanan, S., Jarome, T. J.
  2021; 22 (22)

- **Activation of VTA/CeA/mPFC cannabinoid CB1 receptors induced conditioned drug effects via interacting with hippocampal CAMKII-CREB-BDNF signaling pathway in rats** *EUROPEAN JOURNAL OF PHARMACOLOGY*
  Navabpour, S., Rezayof, A., Ghasemzadeh, Z.
  2021; 909: 174417

- **Ubiquitination of Histone H2B by Proteasome Subunit RPT6 Controls Histone Methylation Chromatin Dynamics During Memory Formation** *BIOLOGICAL PSYCHIATRY*
  Jarome, T. J., Perez, G. A., Webb, W. M., Hatch, K. M., Navabpour, S., Musaus, M., Farrell, K., Hauser, R. M., McFadden, T., Martin, K., Butler, A. A., Wang, J., Lubin, et al
  2021; 89 (12): 1176-1187

- **Males and females differ in the regulation and engagement of, but not requirement for, protein degradation in the amygdala during fear memory formation** *NEUROBIOLOGY OF LEARNING AND MEMORY*
  Devulapalli, R., Jones, N., Farrell, K., Musaus, M., Kugler, H., McFadden, T., Orsi, S. A., Martin, K., Nelsen, J., Navabpour, S., O'Donnell, M., McCoig, E., Jarome, et al
  2021; 180: 107404

- **DNA Double-Strand Breaks Are a Critical Regulator of Fear Memory Reconsolidation** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*
  Navabpour, S., Rogers, J., McFadden, T., Jarome, T. J.
  2020; 21 (23)

- **The diversity of linkage-specific polyubiquitin chains and their role in synaptic plasticity and memory formation** *NEUROBIOLOGY OF LEARNING AND MEMORY*
  Musaus, M., Navabpour, S., Jarome, T. J.
  2020; 174: 107286

- **AVPR1A variation is linked to gray matter covariation in the social brain network of chimpanzees** *GENES BRAIN AND BEHAVIOR*
  Mulholland, M. M., Navabpour, S., Mareno, M. C., Schapiro, S. J., Young, L. J., Hopkins, W. D.
  2020; 19 (4): e12631

- **A neuroscientist's guide to transgenic mice and other genetic tools** *NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS*
  Navabpour, S., Kwapis, J. L., Jarome, T. J.

2020; 108: 732-748

- **Males and Females Differ in the Subcellular and Brain Region Dependent Regulation of Proteasome Activity by CaMKII and Protein Kinase A** *NEUROSCIENCE*
  Devulapalli, R. K., Nelsen, J. L., Orsi, S. A., McFadden, T., Navabpour, S., Jones, N., Martin, K., O'Donnell, M., McCoig, E. L., Jarome, T. J.
  2019; 418: 1-14