

BOWEN TAN

Mobile: (1)347-387-1316 E-mail: bowen.tan@alleninstitute.org

Address: 708 6th Ave, Unit 423, Seattle, WA 98109

EMPLOYMENT

2024/02-Present *Scientist*, Allen Institute, Seattle, WA

Allen Institute for Neural Dynamics, advised by Karel Svoboda

EDUCATION

2017/09-2023/11 *PhD in Neuroscience*, Rockefeller University, New York, NY

Laboratory of Molecular Genetics, mentored by Jeffrey M. Friedman

Thesis Committee Members: Cori Bargmann, Nathaniel Heintz

2018/02-2021/05 *Visiting Graduate Student in Computer Science*, Cornell Tech, New York, NY

- Core course: Natural language processing, Applied Machine Learning, Deep Learning, Modeling Under Uncertainty, Algorithms and Data Structures for Applications

2013/09-2017/06 *B.E. in Food Science and Engineering*, Chukochen Honors College, Zhejiang University, Hangzhou

PUBLICATIONS

1. **Tan, B.***, Hedbacker, K.* , Kelly, L., Zhang, Z., Luo, J.-D., Rabinowitz, J. D., & Friedman, J. M. (2025). Cellular and molecular basis of leptin resistance. *Cell Metabolism*
2. **Tan, B.***, Browne, C. J.* , Nobauer, T.* , Vaziri, A., Friedman, J. M., & Nestler, E. J. (2024). Drugs of abuse hijack a mesolimbic pathway that processes homeostatic need. *Science*
3. **Tan, B.***, Nobauer, T.* , Browne, C. J., Nestler, E. J., Vaziri, A., & Friedman, J. M. (2022). Dynamic processing of hunger and thirst by common mesolimbic neural ensembles. *PNAS*
4. Zhang, C., Li, W., Li, X., Wan, D., Mack, S., Zhang, J., Wagner, K., Wang, C., **Tan, B.**, Chen, J., Wu, C. W., Tsuji, K., Takeuchi, M., Chen, Z., Hammock, B. D., Pinkerton, K. E., & Yang, J. (2022). Novel aerosol treatment of airway hyper-reactivity and inflammation in a murine model of asthma with a soluble epoxide hydrolase inhibitor. *PLoS One*
5. Azevedo, E. P., **Tan, B.**, Pomeranz, L. E., Ivan, V., Fetcho, R., Schneeberger, M., Doerig, K. R., Liston, C., Friedman, J. M., & Stern, S. A. (2020). A limbic circuit selectively links active escape to food suppression. *Elife*
6. Kieuvongngam, V., **Tan, B.**, & Niu, Y. (2020). Automatic text summarization of covid-19 medical research articles using bert and gpt-2. *arXiv preprint* (<https://doi.org/https://doi.org/10.48550/arXiv.2006.01997>).
7. Azevedo, E. P., Pomeranz, L., Cheng, J., Schneeberger, M., Vaughan, R., Stern, S. A., **Tan, B.**, Doerig, K., Greengard, P., & Friedman, J. M. (2019). A Role of Drd2 Hippocampal Neurons in Context-Dependent Food Intake. *Neuron*
8. Wang, W., Yang, J., Qi, W., Yang, H., Wang, C., **Tan, B.**, Hammock, B. D., Park, Y., Kim, D., & Zhang, G. (2017). Lipidomic profiling of high-fat diet-induced obesity in mice: Importance of cytochrome P450-derived fatty acid epoxides. *Obesity*
9. **Bowen, T.**, Fanghuan, Z., Jiaming, X., Zhang, X., & Duo, L. (2017). Understanding motives for food choice of Chinese young people in mainland China. *Journal of Zhejiang University (Agriculture & Life Sciences)*

PATENT

1. Compositions comprising an mTOR inhibitor for use in treating diseases and disorders associated with leptin resistance and obesity. Jeffrey M. Friedman, **Bowen Tan**, Kristina Hedbacker. *Filed*, 2023

SELECTED TALKS / POSTERS

1. Cellular and Molecular Mechanisms of Leptin Resistance. Poster presentation (selected from abstracts) at the *4D Cellular Physiology Conference*, Janelia Research Campus, 2024, VA.
2. Linking Homeostatic Need to Reward and Addiction. Invited talk at the *JPB foundation*, 2024, NY.
3. Drugs of abuse hijack a mesolimbic pathway that processes homeostatic need. Invited talk at the *Winter Conference on Brain Research*, 2024, CO.

4. Cellular and Molecular Basis of Leptin Resistance. Invited talk at the *Keystone Symposia on Circulating Metabolic Intermediates as Fuels and Signals*, 2023, UT.
5. Linking Homeostatic Need to Reward and Addiction. Invited talk at the *Allen Institute for Neural Dynamics*, 2023, WA.
6. Cellular and Molecular Basis of Leptin Resistance. Poster presentation at the *Cell Symposium: Conceptual Power of Single-Cell Biology*, 2023, CA.
7. Cellular and Molecular Basis of Leptin Resistance. Invited talk at the *Kavli Neural Systems Institute of the Rockefeller University*, 2023, NY.
8. Neural Mechanisms of Homeostatic Need and Reward. Invited talk at the *Friedman Brain Institute of the Icahn School of Medicine at Mount Sinai*, 2023, NY.
9. Mechanism of Leptin Resistance. Invited talk at the *JPB foundation*, 2023, NY.
10. Behavioral analysis reveals a coordinated control between feeding and drinking drives. Poster presentation (selected from abstracts) at the *Hypothalamus, Gordon Research Conference*, 2022, CA.

GRANTS / AWARDS

2025-2028, Helen Hay Whitney Fellowship, Allen Institute

2023-2024, Robertson Therapeutic Development Fund (Principal Investigator), \$50,000, Rockefeller University

2023-2024, CTSA Pilot Project (Principal Investigator), \$12,500, Rockefeller University

2022-2023, Robertson Therapeutic Development Fund (Principal Investigator), \$50,000, Rockefeller University

2022-2023, CTSA Pilot Project (Principal Investigator), \$25,000, Rockefeller University

2021-2022, CTSA Pilot Project (Principal Investigator), \$25,000, Rockefeller University

2019-2020, HHMI Transformative Technology Award 2019 (Key personnel), ~\$1 million, Rockefeller University

2013-2014, 2014-2015, 2015-2016 the Top Prize of Natural Sciences, *The first prize at the university level*, Zhejiang University

2015-2016 the Academic Prize, *The second prize at the university level*, Zhejiang University

2015-2016 the Outstanding Student Prize, *The second prize at the university level*, Zhejiang University

REVIEWING

Biological Psychiatry

OTHER RESEARCH EXPERIENCE

2016/09-2017/01 The Laboratory of John Flanagan Undergraduate researcher Harvard university

- Participated in a project on discovering a noncanonical trafficking pathway of nuclear-located insulin receptor.

2016/02-2017/08 The Laboratory of Liming Wang Undergraduate researcher Zhejiang university

- Led a project on understanding how energy balance regulates courtship behaviors in *Drosophila*.

2015/10-2016/01 The Laboratory of Bruce D. Hammock Undergraduate researcher UC Davis

- Solid phase extraction (SPE) and LC/MS/MS analysis of lipid mediators.

FORMER TRAINEES

Liza Reizis, current position: Graduate student at MIT

Talia Halaas, current position: Undergraduate student at University of Chicago

Max Halaas, current position: Premed

Abide Balli, current position: Premed

Aidan Aug, current position: Undergraduate student at the John Hopkins University