

Two postdoctoral fellow positions are available in the laboratory of Chen Liu, Ph.D. in the Center for Hypothalamic Research at UT Southwestern Medical Center.

Our group studies how the nervous system controls energy and glucose metabolism. Ongoing research focuses on addressing key issues in neuroscience, metabolism, and medicine:

- 1) We explore the **neural circuits** that regulate appetitive behaviors (e.g., Park et al., Nature Neuroscience, 2020; Yoo et al., Cell Reports, 2021; Li et al., Journal of Experimental Medicine, 2022) to develop new therapeutic strategies for treating obesity and diabetes.
- 2) We study **neurodevelopment** in the hypothalamus, identifying novel genetic deficits responsible for severe, early-onset obesity in children (e.g., Chen et al., Journal of Neuroscience, 2020; Xu et al., Science Translational Medicine, 2024).
- 3) Additionally, our group is one of the few labs that conduct NIH-sponsored research on antipsychotic drugs (APDs)-induced **metabolic syndrome** (e.g., Lord et al., Journal of Clinical Investigation, 2017-; Li et al., Journal of Experimental Medicine, 2021), a critical clinical problem currently affecting millions of patients.

The Liu Lab provides **training opportunities** in a wide array of laboratory skills. We excel in generating novel mouse genetic models using CRISPR-based genome editing, having developed more than 40 lines in the last 8 years. Our research spans diverse neuroscience techniques, such as stereotaxic surgeries, optogenetic and chemogenetic manipulations, *in vivo* calcium imaging, and multiple rodent behavioral paradigms. We conduct comprehensive metabolic phenotyping analyses, including metabolic chamber studies. Moreover, our lab pioneers the development and application of cutting-edge methods for next-generation sequencing experiments, including single-cell/nucleus multiome sequencing (e.g., Li & Xu et al., STAR Protocol, 2023), ChIP-Seq, CUT&RUN, and spatial transcriptomics.

More importantly, postdoctoral training in our lab emphasizes the development of **professional skills** essential for obtaining a faculty position. This includes specialized training in scientific communication and grant writing. Postdoctoral fellows in the lab participate in annual national or international meetings and are encouraged to present their work at various scientific venues and write their own fellowships. Consequently, fellows in the lab have a track record of winning multiple research awards at conferences (e.g., Keystone Symposia and Gordon Research Conference) and competitive fellowships (e.g., AHA Postdoctoral Fellowship Award and Career Development Award).

Candidates must hold a recent (within two years) Ph.D. degree. Experience in molecular biology, neuroscience, metabolism, or developmental biology is recommended. Interested individuals should send a CV to Chen Liu, Ph.D. Email: chen.liu@UTsouthwestern.edu
For additional information, please visit our lab website <https://chenliulab.us> or our Twitter account @ChenLiuLab.

