

XIAOXIAO LIN

CONTACT INFORMATION

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EDUCATION

Sep 2017- Current University of California Irvine -- Irvine, CA

PhD in Neuroscience in progress

My research focuses on learning and memory neural circuit organization and function. I study how specific neuron types are connected in local and global neural networks and how neuronal ensemble activities underlie learning behaviors using new viral genetic and imaging tools. I use mouse models including wild type and Alzheimer's Disease mouse models.

Aug 1 2015

B.A., University of California Irvine -- Irvine, CA
Major: Psychology and Social Behavior
Minor: Management

WORK EXPERIENCE

2015- present

Junior Specialist (2015-17) and Graduate Researcher (2017-)

Department of Anatomy and Neurobiology, UCI School of Medicine, Irvine, CA.

Supervisor: Dr. Xiangmin Xu (xiangmix@hs.uci.edu)

Lead a number of neural circuit mapping studies using genetic modified rabies and herpes viruses. Conduct miniscope imaging and animal behavior experiments, record EEG data, genotype mice and contribute to colony maintenance. Conduct experiments and track the progress of research experiments. Collaborate with other researchers at and outside UCI. Manage and mentor many undergraduate students including but not limited to interviewing, training, and overseeing their research activities.

Spring 2015

Editor Assistant

This Week in Global Health (TWiGH), <https://www.twigh.org/>

Supervisor: Dr. Terry L. Schmidt (terry@terryschmidt.com)

Assisted with panelists in preparation of scripts/topics for the weekly global health episodes. Collected and summarized current events related to global health. Coordinated with TWiGH team members and proposed solutions problems related to global health.

2014-2015

Mentor

Santa Ana Police Athletic and Activity League, Santa Ana, CA

Supervisor: Dario Gaitan (dgaitan@santa-ana.org)

Tutored students in an after school program for low income Hispanic families with an aim of keeping at-risk youths off the streets and out of jail. Helped students with homework, projects, and fitness activities to improve their fundamental knowledge and mental health.

MENTORING AND DEVELOPMENT OF TEACHING SKILL

2015-present

Research Mentor/Supervisor Roles

List below are students and fellows I have mentored, supervised, or trained in specific research projects at UCI.

2 high school research assistants

Joyce Liu
Megan Liu

17 undergraduate research assistants

Ming Hui Li; Kiro Sami; Ryan Chen; Stacey Tran Cao;
Lester Osmar Gopar; Tammy Nguyen; Adiel Diel; Kenson Lam;
Rita Khalil Tafla; Crisylle Blanton; Andrew Chen; Hung Tran;
Parsa Kamalipour; Yuting Wu; Yixiong Zhang; Hung Tran
Nikita Patel; Michelle Amalraj

3 Lab assistants

Ginny Wu
Bryan Tang
Nichole My-Linh Ha

2 graduate students

Qiao Ye
Pan Gao

ACADEMIC HONORS

Provost scholarship, Psychology and Social Behavior, Social Science, UCI, 2012-2015

PROFESSIONAL AFFILIATIONS

1. Society for Neuroscience member
2. International conference on learning and memory member
3. FRONTIERS reviewer

PROFESSIONAL SKILLS

1. **Animal surgery and viral injections** (mouse, rat)

2. **Techniques:** pressure/iontophoretic viral injection, GRIN lens implantation, Craniotomy surgery, EEG/EMG implantation, traumatic brain injury, *in vivo* calcium imaging in awake behaving animals, optogenetic modulation of neural firing *in vivo*, *in vivo* 2-photon recording in awake/anesthetized animals, tail-vein drug administration, retro-orbital injection, catheter surgery, confocal/fluorescence microscopy.
3. **Behavior analysis:** electrical foot shock, multimodal stress, open field, elevated plus maze, dryland, linear track, forced swimming test, T-maze, sleep test, dark-light box test, foot fault, rotarod, object location memory test, novel object recognition test, pattern separation test.
4. **Histological techniques:** Cryostat and microtome tissue slicing, immunostaining, mounting.
5. **Programs:** MatLab, SigmaPlot, Prism, Adobe Illustrator, Photoshop, Microsoft Office.
6. Proposal Writing and Project Design

CONFERENCES ATTENDED

1. **CNLM Learning and Memory Conferences**, CA, 2018-2019
2. **Society for Neuroscience**, 2016-2019
3. **UCI EpiCenter Symposia**, Irvine, CA, 2017-2018

PUBLICATIONS

1. **Lin X**, Itoga CA, Taha S, et al. c-Fos mapping of brain regions activated by multi-modal and electric foot shock stress. *Neurobiol Stress*. 2018;8:92-102. Published 2018 Feb 7. doi:10.1016/j.ynstr.2018.02.001.
2. Sun Y, Jin S, **Lin X**, et al. CA1-projecting subiculum neurons facilitate object-place learning. *Nat Neurosci*. 2019;22(11):1857-1870. doi:10.1038/s41593-019-0496-y
3. Guo Z, **Lin X**, Samaniego T, et al. Fos-CreER-based genetic mapping of forebrain regions activated by acupuncture. *J Comp Neurol*. 2020;528(6):953-971. doi:10.1002/cne.24789

POSTER PRESENTATIONS

1. **LIN X**, TAFLA R, BLANTON C, WU Y, NITZ D. A, XU X. New non-canonical circuit connections between the subicular complex and hippocampal CA3. Program No. 601.08. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019.
2. CHEN L, **LIN X**, JIN S, QING N, NITZ D. A, XU X. Hippocampus neural ensemble representations of spatial mapping and learning in freely behaving mice. Program No. 333.06. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019.

3. **LIN X**, CHEN L, ZHANG Y, WU Y, WOOD M. A, XU X. Epigenetic regulation of neuronal ensemble activity to enhance spatial learning and memory. Program No. 509.15. 2018 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2018.
4. UMORIN M, **LIN X**, XU X. Nociceptive neurons in the ventral posterolateral thalamic nucleus are predominantly modulated by synaptic input from the reticular thalamic nucleus revealed by viral genetic tracing. Program No. 215.13. 2018 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2018. O
5. **LIN X**, CHEN L, ZHANG Y, WU Y, WOOD M, XU X. Epigenetic regulation of neuroscience ensemble activity to enhance spatial learning and memory. Presentation No, 105.6.2 2018. Huntington Beach, CA: International Conference on learning and Memory Learning.
6. **LIN X**, GRIECO S, JIN S, ZHOU P, NIE Q, SHUMAN T, GOLSHANI P, KWAPIS J, WOOD M, BAGLIETTO-VARGAS D, LAFERLA F, XU X. In vivo calcium imaging of hippocampal neuronal network activity associated with memory behavior deficits in the Alzheimer's disease mouse model. Program No. 570.13.2017 Neuroscience Meeting Planner. Washington DC, CA: Society for Neuroscience, 2017.
7. **LIN X**, FRANCESCONI W, FRANCESCONI F, ITOGA C, LEE M, CHEN R, SAMI K, AND XU X. C-fos activation mapping of stress relevant brain regions in response to multimodal stress and electrical foot shocks. Presentation No. 455.20. 2016 Society of Neuroscience. San Diego, CA: Society for Neuroscience.