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| **Jingcheng (Carl) Shi** | | |
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| **EDUCATION** | | |
| * **Columbia University in the City of New York** GPA:4.0/4.0 | 08/2022 - Present | |
| Ph.D. in Neurobiology and Behavior - expected 06/2027  M.Ph. in Neurobiology and Behavior – 05/2025  M.A. in Neurobiology and Behavior – 10/2024 | | |
| * **University of California, Berkeley** GPA: 3.658/4.0 | 08/2017 - 05/2020 | |
| Bachelor of Arts, Major: Molecular and Cell Biology, Neurobiology | | |
| Honors in Molecular and Cell Biology, Neurobiology | | |
| **PUBLICATIONS** | | |
| * **Jingcheng Shi** et al. 2P-NucTag: on-demand phototagging for molecular analysis of functionally identified cortical neurons. bioRxiv 2024.03.21.586118 (2024) doi:10.1101/2024.03.21.586118. **In Review at Nature**. * Cho, K. K. A., **Shi, J.**, Phensy, A. J., Turner, M. L. & Sohal, V. S. Long-range inhibition synchronizes and updates prefrontal task activity. **Nature** 1–7 (2023) doi:10.1038/s41586-023-06012-9. * **Jingcheng Shi**, Aarron J. Phensy, & Vikaas S. Sohal. Rhythmic auditory stimulation rescues cognitive flexibility in mutant mice with impaired gamma synchrony. bioRxiv 2021.11.15.468681 (2021) doi:10.1101/2021.11.15.468681. | | |
| **POSTER PRESENTATION** | | |
| * **Jingcheng Shi**, Boaz Nutkovich et al., (2024). 2p-NucTag: on-demand phototagging for molecular analysis of functionally identified cortical neurons. PSTR425.03. Chicago, IL:Society for Neuroscience, 2024. | | |
| * **Jingcheng Shi**, Aarron J. Phensy, and Vikaas S. Sohal., (2021). *Gamma-frequency auditory stimulation improves rule shifting in Dlx5/6+/- mice.* Program No. 794.05. Chicago, IL: Society for Neuroscience, 2021. | | |
| **RESEARCH EXPERIENCE** | | |
| **Graduate Research Assistant (Full Time) with Dr. Attila Losonczy, Columbia University** | | 01/2023 - Present |
| * Developed and implemented 2P-NucTag approach the transcriptomic signatures of functional-relevant neuronal population in mouse hippocampus. | | |
| **Rotation Student with Dr. Larry Abbott,**  **Columbia University** | | 05/2023 – 07/2023 |
| * Investigated dendritic dynamics of a single neuron with varies stages of inputs using computational approaches. | | |
| **Rotation Student with Dr. Christoph Kellendonk,**  **Columbia University** | | 08/2022 – 12/2022 |
| * Investigated role of midbrain dopamine and acetylcholine signaling in mouse engaged in reversal learning. | | |
| **Research Technician/Junior Specialist/Lab Manager with Dr. Vikaas Sohal, University of California, San Francisco** | | 07/2020 – 06/2022 |
| * Discovered the rescuing effect of gamma entrainment using sensory stimuli (GENUS) on schizophrenia mouse model with impairment in cognitive flexibility. * Collaborated with Dr. Kathleen Cho to study the effect of long-range prefrontal PV inhibition on cognitive flexibility. | | |
| **Undergraduate Research Assistant with Dr. Daniel Feldman,**  **University of California, Berkeley** | | 06/2018 – 05/2020 |
| * Developed and implemented behavior essay to study sensory hypersensitivity in mouse models of autism spectrum disorders. * Designed a new method to localize silicon probe recording sites using immunohistochemistry approaches. | | |
| **Research Intern, Visolis Inc** | | 06/2019 - 08/2019 |
| * Improved and optimized plasmids for Mevalonic acid in engineered strains of E. coli. * Investigated possible genomic integration using CRISPR for better titer of MVA. | | |
| **FIELD OF SPECIALIZATION** | | |
| System Neuroscience  Behavioral Neuroscience  Neurobiology of Disease  Therapeutic Approaches of Neuropsychiatric Disorders  Prefrontal Cortex  Hippocampus  Midbrain  Cognition  Spatial Navigation  Reward Processing  One-Photon Miniscope Imaging  Two-Photon Imaging  Calcium Imaging  Voltage Imaging  Fiber Photometry  Cortical Interneuron  Sequencing of Neuronal Cells  Neuronal Ensembles  Neuronal Engrams | | |