Jialin Ye

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EDUCATION

Katholieke Universiteit Leuven, Neuro-Electronics Research Flanders Leuven, Belgium

PhD Student. Neuroscience, Nov 2024 – Present

- The mechanism of the subcortical attractor network balances the output of flexible defensive behavior

University of Chinese Academy of Sciences,

Brain Cognition and Brain Disease Institute, Shenzhen Institute of Advanced Technology Shenzhen, China

MSc. Neuroscience, GPA: 3.84/4.00 Sep 2019 – May 2022

- Cellular-specific neuronal circuits of visually-evoked innate fear behavior
- Applying a machine learning framework to clarify the spatiotemporal behavior pattern at the movement level
- *Thesis: Cell type-specific endocannabinoid system superior colliculus modulates visual innate fear behavior*

South Normal China University, College of Life Sciences Guangzhou, China

BSc, Biology and Biotechnology, GPA: 4.02/5.00 Sep 2015 –June 2019

- Molecular biology skills, including DNA purification, primer design, PCR, Westen blot, and ELISA
- Basic biology knowledge: Bioinformatics, Genetic biology, Molecular biology, Biochemistry

Thesis: The characteristic SNPs of various evolutionary lineages of human papillomavirus type 16

EMPLOYMENT

Brain Cognition and Brain Disease Institute, Shenzhen Institute of Advanced Technology Shenzhen, China

Research Assistant June 2022 – Nov. 2024

- Expanding the 3D elaborate animal behavior analysis to more behavior paradigms and disease models
- Applying dual-labeled systems to record and manipulate the cell-type-specific neural circuit
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PUBLICATIONS

1. ***Jialin Ye***, Yang Xu, Kang Huang, Xinyu Wang, Liping Wang*, Feng Wang*. Hierarchical Behavioral Analysis Framework (HBAF) as a platform for standardized quantitative identification of behaviors. ***Cell Reports*** **(Independent first author)**
2. Jingjing Liu, ***Jialin Ye***, Chunyuan Ji, Wenting Ren, Youwei He, Fuqiang Xu, Feng Wang. Mapping the behavioral signatures of Shank3b mice in both sexes. Neurosci Bull. 2023. DOI: 10.1007/s12264-024-01237-8 **(The second author participated in data analysis and visualization)**
3. Yu-Ting Tseng#, Binghao Zhao#, Shanping Chen#, ***Jialin Ye***, Jingjing Liu, Lisha Liang, Hui Ding, Bernhard Schaefke, Qin Yang, Feng Wang, and Liping Wang*. The subthalamic corticotropin-releasing hormone neurons mediate adaptive REM sleep responses to threat. ***Neuron.*** DOI: 10.1016/j.neuron.2021.12.033. **(The fourth author participated in data collection, analysis, and visualization)**
4. Xulin Li#, Gaoyang Zhao#, Hongren Huang, ***Jialin Ye***, Junfeng Xu, Yuan Zhou, Xiaojuan Zhu, Liping Wang, Feng Wang*. Lifespan changes in cannabinoid 1 receptor mRNA expression in the female C57BL/6J mouse brain. *J Compar Neurol.* DOI: 10.1002/cne.25427. **(The fourth author participated in the FISH experiment and data analysis)**
5. Yu-Ting Tseng#, Lisha Liang#, Binghao Zhao*, ***Jialin Ye***, Liping Wang*. Connectivity map of subthalamic corticotropin-releasing hormone neurons in the mouse brain. *Neurosci Bull*. DOI: 10.1007/s12264-022-00939-1. **(The fourth author participated in data analysis and visualization)**

SKILLS

Languages:

- Chinese, English

Programming skills:

- Python, R language and MATLAB
- Data visualization
- Computer vision

Neural circuit investigation:

- Familiar with stereotaxic injection apparatus
- Skillfully using multiple virus tools for neural circuit tracing, recording (GCaMPs and fluorescent sensors), and manipulation (optogenetic, chemogenetic).
- Familiar with electroencephalogram (EEG) operation, recording, and data analysis
- Familiar with frozen brain section, staining (including immunofluorescent, e.g. cFos Immunofluorescence (IF) and Fluorescent, RNA *in situ* hybridization (FISH)), and brain slide imaging (Olympus VS200 and Zeiss LSM 980)

Animal management:

- Rich experience in animal breeding, propagating, and genotype identification (PCR)
- Animal anatomy, including perfusion and collecting blood, brain, spinal cord, and other tissues

RESEARCH EXPERIENCE

Brain Cognition and Brain Disease Institute, Shenzhen Institute of Advanced Technology Shenzhen, China

Research Assistant and BSc graduate study May 2019 – Nov 2024

- Studying the behavior patterns of spontaneous behaviors of mice under different conditions and building up the analytical pipeline for 3D elaborate animal behavior data (Cell Reports)
- Processing 3D elaborate animal behavior analysis of different animal disease models (ongoing, team support)
- Investigated the cell-type-specific neural circuit of visually-evoked innate fear in both sex mice (ongoing, team support)
- Assisted in programming to analyze different types of data and visualization for the whole team (team support)
- Participated in a senior's subject about a neural hub that controls both innate fear and sleep (published on *Neuron*)

AWARD

- Oct. 2023, Best Poster Award of academic annual conference in Chinese Association for Physiological Sciences (10/500)
- Mar. 2023, Second prize of the annual academic conference in **Brain Cognition and Brain Disease Institute** (5/74)
- 2019 and 2021, Merit Student Award of the University of Chinese Academy of Sciences, twice. (9/60)
- Mar. 2018, Academic Excellence Award Scholarship at SCNU (3/25)
- Oct. 2017, DBD Encouragement Scholarship and Grants at Beijing DBN Science&Technology Group (1/200)
- Mar. 2017, Comprehensive Scholarship at SCNU (3/25)