

# Qingqing Li

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## EDUCATION

**Master of Medicine** Xuzhou Medical University, China **Sep 2020 - Jun 2023**

- GPA: 86.30/100
- Thesis: *Microglial Lysosomal Mechanisms for Major Depressive Disorder Alleviation*

**Bachelor of Medicine** North Sichuan Medical College, China **Sep 2015 - Jun 2020**

- GPA: 80.06/100 (range: 38/197)

## RESEARCH EXPERIENCE

### Research Assistant

*Shanghai Pudong New Area Mental Health Center, Tongji University School of Medicine, Shanghai, China* **Jun 2025 - Aug 2025**

*Supervisor: Dr. Weijie Xie*

- Conducted integrative genetic analyses by combining GWAS data with Mendelian Randomization, Transcriptome-Wide Association Study (TWAS), Proteome-Wide Association Study (PWAS), and Bayesian colocalization.
- Constructed a cross-disorder, cross-brain regional genetic causal map, elucidating the genetic underpinnings of comorbidity mechanisms in psychiatric disorders.

### Research Assistant

*Shanghai Pudong New Area Mental Health Center, Tongji University School of Medicine, Shanghai, China* **Aug 2024 - May 2025**

*Supervisor: Dr. Weijie Xie*

- Utilized single-cell RNA sequencing data analysis (e.g., CellChat, SCENIC, Monocle) integrated with Mendelian Randomization and Machine Learning models (e.g., random forest, SVM).
- Identified impaired microglia subtypes characterized by metabolic dysfunction and chronic neuroinflammation, which drive aberrant microglia-GABAergic neuron crosstalk in Major Depressive Disorder.

### Research Assistant

*Shanghai Mental Health Center, Shanghai, China* **Jul 2023 - Present**

*Supervisor: Dr. Jiaoqiong Guan*

- Performing integrative bioinformatics analyses (e.g., WGCNA, Machine Learning, single-cell analyses) and validation experiments using the Chronic Unpredictable Mild Stress model, with molecular techniques (Immunohistochemistry Staining and Western Blot).
- Aiming to identify an immune target that may underlie the shared immune pathogenesis which drives the comorbidity progression of Systemic Lupus Erythematosus and Major Depressive Disorder.

### Master's Student Researcher (Focused on Microglia in Depressive-like Behaviors)

*Xuzhou Medical University, Xuzhou, China* **Sep 2020 - Jun 2023**

*Supervisor: Prof. Dr. Wuyang Wang*

- Applied *in vivo* (LPS / Chronic Restraint Stress mouse model, stereotaxic surgery) and *in*

*vitro* (primary microglia isolation and culture) techniques.

- Characterized a novel microglial lysosomal molecular mechanism implicated in the pathophysiology of depressive-like models and proposed a potential targeted intervention.

## PUBLICATIONS

- **Qingqing Li, et al.** Mendelian Randomization Analysis of Multiregional Psychiatric Disorders. **(Submitted)**
- **Qingqing Li, et al.** Single-Cell Dissection of Microglial Heterogeneity Reveals Subtype-Driven Immune-Metabolic Crosstalk in Major Depressive Disorder. **(Submitted)**
- **Qingqing Li, et al.** Microglia sing the prelude of neuroinflammation-associated depression. *Molecular Neurobiology*. 2025 Apr;62(4):5311-5332. **(JCR Q1)**
- Yanhong Xing, Meng-Meng Wang, Feifei Zhang, Tianli Xin, Xinyan Wang, Rong Chen, Zhongheng Sui, Yawei Dong, Dongxue Xu, Xingyu Qian, Qixia Lu, **Qingqing Li, et al.** Lysosomes finely control macrophage inflammatory function via regulating the release of lysosomal Fe<sup>2+</sup> through TRPML1 channel. *Nature Communications*. 2025 Jan 24;16(1):985. **(JCR Q1)**
- Jiansong Qi, **Qingqing Li, et al.** MCOLN1/TRPML1 in the lysosome: a promising target for autophagy modulation in diverse diseases. *Autophagy*. 2024 Aug;20(8):1712-1722. **(JCR Q1)**

## SKILLS

- **Wet-Lab Techniques:** qPCR, Western Blot, Immunofluorescence/Immunohistochemistry, ELISA, Golgi Staining, Gel Electrophoresis, Cell Culture, Animal Models.
- **Bioinformatics Tools:** R (Bioconductor, Tidyverse), Python (Pandas, Numpy).
- **Genetic Association:** Mendelian Randomization (TwoSampleMR), TWAS/PWAS (FUSION), Colocalization (coloc).
- **Single-Cell Omics:** scRNA-seq analysis (Seurat), Trajectory Inference (Monocle), Cell-Cell Communication (CellChat), Regulatory Network (PySCENIC).
- **Software:** EndNote, GraphPad Prism, ImageJ, Imaris, **Adobe Illustrator & Photoshop**.
- **Languages:** Mandarin Chinese (Native), English (**IELTS 6.5**).

## ACADEMIC SERVICE

- Peer Reviewer for *Molecular Neurobiology* and *Cellular and Molecular Neurobiology*.  
**2024-Present**

## HONORS

- Postgraduate Scholarship, Xuzhou Medical University. **2020-2023**

## REFERENCES

- Prof. Dr. **Wuyang Wang** (Master's Thesis Supervisor) | wuyangwang80@gmail.com
- Prof. Dr. **Jiaoqiong Guan** (Research Supervisor) | guanjiaoqiong@kmmu.edu.cn
- Prof. Dr. **Weijie Xie** (Research Supervisor) | xwjginseng@126.com