Mengyu Zhang

Tel：+86 18811077696 E-mail：zmy21@mails.tsinghua.edu.cn

EDUCATION

Tsinghua University **Beijing, China**

Master of Environmental Engineering, School of Environment 2021.9-2024.6(Excepted)

- MA thesis "Efficiency and mechanism of UV/O3 disinfection in water treatment process on LPS toxicity removal"

Tsinghua University **Beijing, China**

Bachelor of Biology, School of Life Science 2017.9-2021.6

- GPA：3.59 out 4.0
- Academic Merit Scholarships of 2018
- Minor in Economic, School of Economics and Management, Tsinghua University

RESEARCH EXPERIENCE

Lingang Laboratory, Shanghai, Intern of research assistant **2023.1-2023.8**

Advisor: Professor Yunlu, Sawyer, Xue

- Made a major contribution in establishing the multiplex qPCR method for mouse genotyping, which greatly reduced the work of genotyping;
- Screened a dozen of neurotransmitter as drugs by using muti-electrode array(MEA) on mouse retina in vitro, recorded retinal electrophysiological signal activity, and written a computer program in python for signal reading;
- Undertook laboratory maintenance work, including cell subculture, mouse genotype identification, and plasmid construction, etc.

Tsinghua University, Beijing, *Teaching Assistant of Environmental Microbiology* **2022 Spring**

Course Teacher: Yun Lu, Hongying Hu

- Organized experimental teaching part and helped students with their protocol design.
- Participated in compilation of new edition of textbook.

Tsinghua University, Beijing, *Student Research Training project* **2019.4-2020.1**

Advisor: Professor Yun Lu

- Participated in the DNA extraction of pathogenic microorganisms in environmental water, quantitatively determine the recovery efficiency, participated in the optimization of environmental bacterial DNA extraction protocol.
- Evaluated the risk of respiratory inflammation induced by inhalation exposure of environmental endotoxins, participated in mouse experiments, and measured the lung inflammation indicators by ELISA and cell staining.

PUBLICATIONS & CONFERENCES

- Liu, G., Shi L., **Zhang, M**., Chen, M., Lu, Y. (2022) Chlorine disinfection reduces the exposure risks of inhaled reclaimed water. Environmental Chemistry Letters. Volume 20, 3397–3403.
- Shi XJ, Liu G, **Zhang M**, Zhao J, Li H, Yang Z, Bai H, Liang P, Lu Y. (2020) Membrane-sensitive bacterial DNA extractions and absolute quantitation of recovery efficiencies. The Science of the Total Environment. Volume 708, 135125.

- Liu G, Lu Y, Shi L, Ren Y, Kong J, **Zhang M**, Chen M, Liu W. (2020) TLR4-MyD88 signaling pathway is responsible for acute lung inflammation induced by reclaimed water. Journal of Hazardous Materials. Volume 396, 122586.
- The 16th Annual Meeting of Chinese Neuroscience Society (CNS 2023)
- The 7th Symposium on Environmental Microbial Utilization And Risk Control (2022)
  Poster Presentation "Limiting factors of dPCR quantification accuracy of virulence genes of pathogenic microorganisms in water"

OTHER EXPERIENCE

Academic Salon in School of Environment, Tsinghua University **2022.4**

- Oral presentation "A possible source of high disinfection resistance of E. coli in the environment"

WeChat Official Account Operation *"State Environmental Protection Key Laboratory of Microorganism Application and Risk Control"* **2021.9-2022.10**

- Registered and operated the official account of the national laboratory, published 8 original articles, and reached 3000+ cumulative number of views.

Summer Volunteer Teaching Social Activities **2018.8**

- Carried out a one-month volunteer teaching in a poverty-stricken county in Shanxi Province, including daily cultural and sports courses, lectures, and organized an art performance.

Biology Field Practice Exhibition of the Capital University Association **2018.9**

- Presented the group research results of field practice in posters, and won awards by individual field photography.

SKILLS & INTERESTS

Skills

- Experienced in using multi-electrode array(MEA) equipment to record retina neural signals in vitro.
- Familiar with mouse experiments (retina separation / lung lavage / intragastric gavage) and tissue fixation / paraffin embedding / paraffin sectioning / immunofluorescence staining.
- Familiar with mouse genotyping by PCR and Quantitative Real-time PCR.
- Have experience in molecular, cellular and biochemistry experiment, including the subculture of mammalian tumor cells, plasmid construction, extraction of tissue DNA or RNA, PCR, multiplex qPCR, electrophoresis, ELISA, CCK8 and so on.
- Familiar with microbiology experiment, including bacteria culture, enrichment and identification by 16S rDNA.
- Can use python or C for simply computer program writing.

Software

MS Office, Origin Pro, STATA, Adobe Photoshop, Adobe Premiere Pro, ChemDraw.