# Xiao LIANG 梁 潇

## Updated 14/11/2025

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## **EDUCATION**

Fudan University, PhD program at School of Basic Medical Sciences	09/2018 - 06/2023
Westlake University, Joint PhD program at School of Life Sciences	09/2018 - 06/2023
University of Helsinki, Exchange program at Department of Chemistry	08/2016 - 12/2016
Wuhan University, Undergraduate program at College of Chemistry and Molecular Science	09/2014 - 06/2018

## **CAREER**

#### Research assistant scientist at Center for Infectious Disease Research, School of Medicine, Westlake University

07/2023 -

Working with Professor Dr. Ren SUN, I perform on-demand mass spectrometry analysis of proteomics and metabolomics for the Center, and collaborate to develop new technologies for immunomics profiling and medical diagnosis. Additionally, I coordinate the establishment and maintenance of a core facility housing two advanced mass spectrometers at the Center.

### Ph.D. student at Laboratory for Proteomic Big Data, School of Life Sciences, Westlake University

09/2018 - 06/2023

I was supervised by Professor Dr. Tiannan GUO to investigate the molecular mechanisms of COVID-19 and long COVID, and also to develop a list of mass spectrometry technologies for protein analytics. I also intern at Westlake Omics Co., a spin-off of my research group, to provide consulting and informatics services of proteomics.

### SELECTED HONORS & AWARDS

Outstanding Graduate Certificate, Fudan University	03/2023
Dean's Award, Westlake University	01/2022
Best Posters From Asia, Human Proteome Organization Conference	11/2021 & 12/2022
National Scholarship for Postgraduates	10/2019
First prize at National Students Innovation and Entrepreneurship Training Competition	11/2017
Program Exchange Student Scholarship, Wuhan University	09/2016

### **MEMBERSHIPS**

Human Proteome Organization (HUPO) Early Career Researcher Initiative, member

12/2022 - 03/2025

## SELECTED PUBLICATIONS

13 publicated papers with over 1,800 citations in total. Please refer here for a complete list. #, first and co-first authors; \*, correspondence.

- 8. Xu, L.#, Liang, X.#, Zhen, W.#, Xue, Z., Zhang, F., et al., A common mechanism of temperature-sensing in thermoTRP channels. *EMBO Reports* 2025, In press. I collaborated on a biophysical research and applied a composite mass spec technology to profile membrane protein structures.
- 7. Wang, J.#; Liang, X.#; Zheng, Y.#; Zheng, Y.#; Zhou, K.#, et al., Pulmonary and Renal Long COVID at Two-year Revisit. iScience 2024, 110344. I led a translational medicine project to integrate high-dimensional clinical, imaging and multi-omics data of COVID-19 survivors for two years, and thereby predict the long COVID symptoms in lungs and kidneys with machine learning, achieving independently verifiable biomarker results with an accuracy of over 90%.
- 6. Liang, X.#; Sun, R.; Wang, J.; Zhou, K., Li, J., et al., Proteomics Investigation of Diverse Serological Patterns in COVID-19. *Molecular & Cellular Proteomics* 2023, 22(2): 100493. *I led a medical project to define and analyze the diversity of serum antibody titers in COVID-19.*
- 5. **Liang, X.**#\*, Wang, Y., & Guo, T. Proteomics approaches to long COVID: current status and outlooks. *Life Medicine* 2023, lnad023. *I wrote a technological review on proteomics methods for long COVID analytics*.
- 4. Gao, X.#, Sun, R.#, Jiao, N.#, **Liang, X.#**, *et al.*, Integrative multi-omics deciphers the spatial characteristics of host-gut microbiota interactions in Crohn's disease. *Cell Reports Medicine* 2023, 4(6), 101050. *I collaborated on a translational medicine project to profile the multi-omics host response landscape of Crohn's disease.*
- 3. Bao, J.#; Liu, S.#; Liang, X.#; Huang, W.#; Wang, C., et al., A simple prediction model for COVID-19 liver dysfunction in patients with normal hepatic biochemicals. *Life Science Alliance* 2022, 6(1): e202201576. 2022. *I collaborated on a translational medicine project to analyze liver injuries during COVID-19 based on clinical data and proteomics*.
- 2. Yan, H.#; Liang, X.#; Du, J.#; He, Z.; Wang, Y., et al., Proteomic and metabolomic investigation of serum lactate dehydrogenase elevation in COVID-19 patients. *Proteomics* 2021, 21 (15), 2100002. *I collaborated on a medical project to investigate lactate dehydrogenase overexpression in COVID-19 patients based on multi-omics*.
- 1. Ge, W.#; Liang, X.#; Zhang, F.#; Hu, Y.#; Xu, L., et al., Computational optimization of spectral library size improves DIA-MS proteome coverage and applications to 15 tumors. *Journal of Proteome Research* 2021, 20 (12), 5392-5401. *I collaborated on a mass spectrometry methodological project to develop a bioinformatics software with improved proteome identification performances*.

### **PATENTS**

- 3. Guo, T., Liang, X., Chen, C., Shi, Y. A analytical method to enhance body fluid proteome depth. ZL202210399034.7 [Chinese patent]
- 2. Guo, T., Liang, X., Shi, Y., Wang, Y. A method to eliminate peptide carry-overs in liquid chromatography. ZL202210103388.2 [Chinese patent]
- 1. Guo, T., Liang, X., Zhu, Y. Protein/peptide carriers enhances proteomics efficiency. ZL202010762585.6 [Chinese patent]