

Jiayu Xiao

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Year 1 Biomedicine MSc

Education

Karolinska Institutet 09/2024–now
Biomedicine MSc

- Academic performance: VG for all assignments and examinations that have a VG grade level.

King's college London 09/2021–08/2024

Biomedical science BSc

- Degree classification: First class Honors.
- Prize: 2023/24 Hugh Davey Prize for contributing most to the BSc Biomedical Science programme.
- Core courses: Biochemistry, Cell Biology and Neuroscience, Skills for Biosciences, Animal Models of Disease and Injury, Physiology and Pharmacology of the CNS, Cell and Molecular Physiology, Biology of Ageing, Neuroendocrinology, Endocrinology of Diabetes, Pharmacology of Neurological and Psychiatric Disorders.

Research experience

Characterisation of the role of perivascular macrophages under homeostatic conditions and upon spinal cord injury 02/2025–06/2025 (ongoing)

Master's research project 1

- Study on the characteristics of perivascular macrophages at different timepoints upon spinal cord injury and ischemic stroke. Examine the effects of perivascular macrophages ablation on fibrotic scarring.
- Skills: mouse brain and spinal cord dissection, fixation and cryostat, immunohistochemical staining, Confocal microscope.

Brain structure and blood supply 05/2024–06/2024

Anatomy Summer Fellowship

- Performed human brain dissection to explore age-related structural changes and potential effects on brain functions. Dissected out the entire brain blood supply circuit.
- Skills: human dissection techniques.

A Comparative Study of Rat and Mouse Sugen-Hypoxia Models of Experimental Pulmonary Hypertension:

Characteristics, Similarities and Differences 09/2023–01/2024

Degree Dissertation

- Investigated the similarities and differences between animal models and evaluated the validity, reliability and translatability of findings to human.
- Skills: animal handling, Western Blot analysis, immunohistochemical staining, data analysis.

Regulation of beta cell mass in obesity and type 2 diabetes 01/2023–04/2023

Literature Review Project

- Studied on how obesity progresses to type 2 diabetes, the characteristics of each disease status, the risk factors and their possible mechanisms.
- Skills: literature research and analysis, critical evaluation.

Organisation, structure and functioning of the human body 09/2022–03/2023

Dissection Project

- Investigated the structural-functional relationships of human muscular skeleton and main body systems.
- Skills: human dissection techniques.

Exendin-4 lowers blood glucose concentration in male and female non-diabetic mice 01/2023–04/2023

Animal Research Project

- Investigated sex differences in the response to exendin-4 in mice and potential relevance to human.
- Skills: animal handling, dosing, data analysis.

Investigation of cell viability and toxicity of Chinese Hamster Ovary (CHO) cells exposed to hydrogen peroxide or puromycin 10/2022–11/2022

- Examined the viability of CHO cells under stress conditions to study the effects of oxidative stress on cells.
- Skills: BCA assay, MTT assay, cell incubation, data analysis.

Professional qualification and certificate:

UK Home Office Personal License 2023

- Animal research ethics, animal wellbeing and husbandry, experimental handling including anesthesia and injection.

Essential Digital Skills Programme 2021

- Covers necessary digital skills for academic study and research as defined by JISC.

Work experience

Research-related:

Product R&D assistant 07/2023-08/2023

Shenzhen Ruiping Health Tech Ltd.

- Conducted research and data analysis, developed novel therapeutic ingredients and undertook administrative duties.

Other:

Biomedicinstudenternas Riksorganisation Representative 10/2024-now

Library Frontline Assistant 01/2024-06/2024

Programme Student Representative 09/2022-06/2024

King's 100 Project 01/2023-07/2023

Student Content Creator 01/2024-06/2024

Library frontline assistance 01/2024-06/2024

Deputy Director of the department of Planning of King's College London Alumni Association 09/2021-06/2022