

Professor Lai Hei-ming

**Assistant Professor (Clinical), Department of Chemical Pathology, Faculty of Medicine,
The Chinese University of Hong Kong**

Professor Lai Hei-ming is a clinical assistant professor of the Department of Chemical Pathology in the Faculty of Medicine at CUHK. He studied for the Bachelor of Medicine and Bachelor of Surgery at the University of Hong Kong from 2012 to 2018. In 2015, he engaged in research work in the laboratory, which ignited his interest in tissue clearing, 3D imaging and spatial biology, shaping the subsequent direction of his research. Before graduating, he published 10 papers and obtained a patent on technology related to 3D tissue imaging.

Following the completion of his internship with the Hospital Authority in 2019, he joined CUHK as a clinical lecturer in the Department of Psychiatry while pursuing specialist training in psychiatry. In 2020, he established the first neuroscience-psychiatry laboratory in Hong Kong and assumed leadership of an independent research team.

Currently, he is a clinical assistant professor in the Department of Chemical Pathology at CUHK. From 2021 to 2023, he served as a clinical assistant professor in the Department of Psychiatry at CUHK. The collaborative efforts of his team have played a pivotal role in refining their 3D tissue mapping technologies. This interdisciplinary endeavour encompasses fields including protein engineering, nanotechnology, biomedical engineering, biophysics, cluster chemistry, computational workflows and clinical medicine.

In 2023, they culminated in the innovation of the first scalable 3D tissue multiplexed molecular mapping pipeline, a patented technology that led to the establishment of a spin-off company focusing on the advancement of precision diagnostics in oncology and rheumatology through 3D digital pathology. Their groundbreaking work has garnered recognition, with several of their publications gracing the covers of esteemed journals and multiple awards.

Awards and Honours

2018 and 2022 Three gold medals at the International Exhibition of Inventions of Geneva

