

Department of Biomedical Sciences

presents seminar



香港城市大學  
City University of Hong Kong

## Clinical functional proteomic exploration of the pancreatic tumor microenvironment

Prof TIAN Ruijun

Southern University of Science and Technology

**Date :** 18 August 2023

**Time :** 2:30pm – 4:00pm

**Venue :** LT-6 Chan Kei Bui Lecture Theatre, 4/F, Yeung King Man Academic Building

### Abstract

Cell-cell interactions in tumor microenvironment are often mediated by ligand proteins secreted by one cell that are recognized by specific receptors presenting on neighboring cells. This intercellular communication activates signaling pathways through the induction of dynamic posttranslational modifications such as phosphorylation and protein-protein interactions. Mass spectrometry-based proteomics have been proven to be a robust approach for characterizing these signaling events on a global scale. However, proteomic studies of intercellular signaling directly from limited clinical tissue samples have been challenging. In this talk, I will present our recent development of a series of clinical functional proteomic approaches toward this end. Beside our recent discovery of LIF as the new drug target and potential biomarker for pancreatic cancer, our work explored many new secreted ligand-membrane receptor pairs and provided valuable resources for systematically understanding dysfunctional signaling networks in pancreatic tumor microenvironment in a context closer to physiological condition than was previously possible.

### About the Speaker

Dr. Ruijun Tian is a tenured professor in the Department of Chemistry at the Southern University of Science and Technology (SUSTech). He serves as the vice president of the Guangming Advanced Research Institute of SUSTech, director of the Research Center for Chemical Biology and Omics Analysis. He also serves as the vice president for CNHUPO and chromatography division, Chinese Chemistry Society. He received the National Science Fund for Distinguished Young Scholars. In 2008, Dr. Tian obtained his Ph.D. in

Analytical Chemistry from the Dalian Institute of Chemical Physics, Chinese Academy of Sciences, under the supervision of Professor Hanfa Zou. In the same year, he joined the Institute for Systems Biology in Ottawa, Canada, for postdoctoral research under the supervision of Professor Daniel Figeys. In 2010, he continued his postdoctoral research at the University of Toronto and Mount Sinai Hospital in Canada, under the guidance of Professor Tony Pawson, supported by the Canadian Institutes of Health Research (CIHR) Postdoctoral Fellowship. In 2014, he was appointed as an Associate Professor in the Department of Chemistry at SUSTech and was promoted to a tenured Full Professor in 2020. His research focuses on proteomics related method development, as well as their applications in biomedical fields such as cell signaling and tumor microenvironment. He has published over a hundred papers in internationally renowned academic journals, including Nature, Cell Chem. Biol., Nat. Commun., PNAS, Mol. Cell. Proteomics, Anal. Chem. Dr. Tian serves as an editorial board member for Chinese Journal of Chromatography, and guest editor for Current Opinion in Chemical Biology.



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**All are welcome!**