健 康 科 學 學 院
Faculdade de Ciências da Saúde
Faculty of Health Sciences

PhD in Biomedical Sciences
List of Potential Supervisors and Research Topic(s)

Supervisor	Research Topic(s)
Prof Wei GE	1) Genetic analysis of growth and reproduction in the zebrafish model 2) Impacts of environmental endocrine-disrupting chemicals (EDCs) on reproduction and public health 3) Zebrafish as a model for aging, human diseases and drug discovery
Prof Han-Ming SHEN	1) Autophagy: Regulatory mechanisms and biological functions in cancer 2) Mitophagy: Novel regulatory mechanisms 3) Cancer metabolism: Targeting glucose metabolism in lung cancer
Prof Ren-He XU	1) Chimerism for xenogenic organogenesis. 2) Developmental lineage tracking. 3) MSC-based therapy
Prof Guokai CHEN	1) Metabolic regulation in stem cell maintenance and differentiation 2) Novel mechanisms involved in cardiomyocyte differentiation and maturation 3) Skin cell differentiation for regenerative medicine 4) Endoderm differentiation for disease model
Prof Edwin Chong Wing CHEUNG	1) Mechanism of gene regulation in cancer 2) Single cell analysis
Prof Jianguang JI	1) Cancer Epidemiology 2) Pharmacoepidemiology 3) Evidence-based medicine
Prof Henry Hang Fai KWOK	1) Antibody / Venom-based peptide targeted therapy for anti-cancer prototype drug discovery & development (Novel multi-specific antibody platforms for immunotherapy; Novel protein expression system for large scale production of hard-to-express venom-based protein drugs) 2) AI-assisted biomarkers identification and validation based on the hallmarks of cancer 3) Tackling cancer metastasis and drug resistance: from mechanism to therapy (Glyco-engineering to improve antibody quality attibutes for cancer therapy)
Prof Elaine Lai Han LEUNG	1) Application of culturomic to investigate the anti-cancer treatment mechanism of TCM 2) Investigation of cancer drug resistance mechanism and response predictive markers 3) Role of gut microbiota in immunomodulation
Prof Garry WONG	Bioinformatics and Computational Biology of Aging related neurodegenerative diseases
Prof Yutao XIANG	1) Psychosomatic medicine 2) Public mental health 3) Evidence-based medicine
Prof Zhen YUAN	1) Neuroscience and neuroimaging 2) Biomedical Optics 3) Optical Molecular Imaging and Cancer Nanomedicine
Prof Xuanjun ZHANG	1) Molecular Probes and Nanosensors 2) Abiotic synthesis in living systems 3) Design of chemical tools for biomedical research
Prof Wenhua ZHENG	1) Foxo and neuronal differentiation or new drugs development like artemisinin and metformin 2) Drug development 3) Neurodegenerative diseases 4) The effect of Chinese medicine on tumor growth/metastasis and their underlying mechanisms
Prof Yunlu DAI	1) Cancer nanomedicine 2) Molecular imaging 3) Drug delivery
Prof Lijun DI	1) Cancer development, metastasis, cancer metabolism 2) Metabolic diseases including obesity, diabetes, insulin resistance, angiogenesis etc 3) Tissue microenvironment, inflammation and associated disease

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Prof Chris Koon Ho WONG	1) Transcription regulation of fungal metabolism and infection 2) Identification of novel fungal secondary metabolites with anti-cancer and antibiotic properties 3) Understanding the regulation of fungal spore dormancy and germination
Prof Gang LI	1) Cancer epigenetics: from mechanism to therapy 2) Signal transduction pathways in Epigenetics
Prof Gyeong Hun BAEG	1) Ageing 2) Obesity/Diabetes 3) Stem cell self-renewal and differentiation
Prof Hongjie ZHANG	1) Deciphering the mRNP code in epithelial morphogenesis 2) Post-translational modification in tubular organ formation 3) Sphingosine 1-phosphate signaling in lumenal membrane integrity
Prof Jinghua LI	1) Infectious disease modeling 2) Mental and behavioral health among vulnerable populations 3) Health economic evaluation
Prof Joong Sup SHIM	(1) Exploiting synthetic lethality for cancer precision medicine (2) Cancer target discovery and drug development
Prof Kai MIAO	1) Drivers and markers for tumor metastasis 2) Lineage tracing 3) DNA methylation drivers in tumorigenesis
Prof Kin Yip TAM	1) Development of small molecule inhibitors targeting cancer metabolism or Alzheimer's disease 2) Combined use of metabolic inhibitors in lung cancer models
Prof Leo Tsz On LEE	1) Explore the role of GPCR signaling in cancer metabolism 2) The using of RNA-dendrimer drugs in modulating cellular signaling
Prof Li WANG	1) Pathophysiology, mechanistic understanding, and interventions for metabolism-associated diseases, with a specific focus on obesity, diabetes, chronic inflammation, vascular disease, and cancer metabolism. 2) The developmental regulation of adipose tissue and the crosstalk between fat tissue and other metabolic regulatory tissues. 3) Regulation of tissue microenvironment homeostasis in diseases
Prof Ningyi SHAO	1) Study of changes of epigentic and transcriptome landscapes of iPSC and cardiovascular development and dieases 2) Integrated multi-omics analysis of tumor microevolution at the single cell level
Prof Peng WANG	1) Systems biology of cancer 2) Algorithms for bio-medical big data
Prof Qi ZHAO	1) Nanomedicine and target drug delivery 2) Antibody-based therapeutics against tumors

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Prof Ruiyu XIE	1) Develop transplantable platform for stem-cell based diabetic therapy 2) Molecular switches in endodermal lineage specification 3) Epigentic regulation shapping tumor immune microenvironment in pancreas
Prof Terence Chuen Wai POON	1) Proteomics/Protein/Biomarker-based research in medicine 2) Bioinformatics-based research in medicine
Prof Tzu-Ming LIU	1) In vivo microscopy and spectroscopy of tumor microenvironment 2) Develop serum fluoroscope for the diagnosis of organ function
Prof Vivien Ya-Fan WANG	Mechanism of gene regulation by NFkappaB and co-factors
Prof Wa Kam CHANG	1) How cells polarize during cell migration, with a focus on the cytoskeleton, the primary cilium and the nuclear envelope 2) How aging affects cell polarization and how cell polarization contributes to aging defects 3) Identification and mechanistic studies of blood cicrculating aging/youth factors
Prof William Chong Hang CHAO	Structure and Function of Epigenetic Regulators
Prof Xiaofan DING	1) Tumor hetereogeneity, evolution and immunity 2) Multiomic data analysis and single-cell analysis