

Potential Supervisor list of the UM-Institute of Basic Medicine and Cancer, CAS PhD Joint Programme for AY 2024/2025  
2024/2025學年澳門大學-中國科學院基礎醫學與腫瘤研究所博士生聯合培養課程導師名單

University of Macau 澳門大學		Institute of Basic Medicine and Cancer, CAS 中國科學院基礎醫學與腫瘤研究所			
Academic Unit 學術單位	Specialization 專業範疇	Supervisor 導師	Research Area 研究方向	Supervisor 導師	Research Area 研究方向
Faculty of Health Sciences 健康科學學院	Biomedical Sciences 生物醫藥	Prof. Chuxia DENG 鄧初夏	1) Oncogenes and tumor suppressor genes 2) Stem cells, Cancer metastasis and Drug development	Prof. Ji ZHU 朱驥	消化道腫瘤生物標記物的篩選和鑒定；類器官研究平台的構建和腫瘤體外類器官藥敏試驗；重離子生物效應模型的構建及其它放射生物學相關研究。
		Prof. Hanming SHEN 沈漢明	Cancer Cell Biology, Autophagy and Mitophagy and Cancer metabolism	Prof. Xiaojia WANG 王曉稼	Correlation between cell autophagy or mitochondrial function related biomarkers and tumor treatment response, drug resistance, etc.
		Prof. Guokai CHEN 陳國凱	Lineage-specific differentiation from human embryonic stem cells, Metabolic regulation in stem cells, Biotechnology development in stem cells	Prof. Pei GUO 郭沛	Molecular mechanism and drug development for neurodegenerative diseases; Bioinformatics; Cancer; Liquid biopsy
		Prof. Kin Yip TAM 譚建榮	Small Molecule Inhibitors Development, Cancer Metabolism, Alzheimer's disease	Prof. Yuanyuan DU 杜媛媛	stem cell differentiation, cell fate determination, cell replacement therapy
		Prof. Yunlu DAI 代雲路	Biomaterials, nanomedicine	Prof. Weihong TAN 譚蔚泓	功能核酸藥物、靶向核素成像、智慧藥物等研究和臨床應用；腦腫瘤靶向藥物、納米藥物研發等；生物治療、細胞分子免疫學等相關研究
		Prof. Qi ZHAO 趙琦	Antibody-based Cancer Therapeutics, Cell Immunotherapy, Antibody Display, Nanomedicine	Prof. Xiaolin LI 李曉林	machine learning, deep learning, reinforcement learning, generative AI, large language model, NLP, CV AI for life science, multiomics/proteomics/single cell, drug discovery (small molecules, aptamer, mRNA, antibody), biomarker discovery, AI-empowered wet lab.
		Prof. Ruiyu XIE 謝瑞瑜	Chromatin-modifying Enzymes, Pancreatic, Epigenetics, High-throughput Sequencing and Genome-editing Technologies	Prof. Yuan LIU 劉遠	納米材料生物學效應、核酸檢測與機器學習、納米醫學等基於納米技術的智慧分子診斷和癌症治療
		Prof. Zhen YUAN 袁振	Neurosciences, Neuroimaging, Psychiatric Disorders, Biomedical Optics and Optical Molecular Imaging, Nanomedicine	Prof. Jie SONG 宋杰	DNA nanotechnology and gene therapy
		Prof. Kai MIAO 苗凱	High-throughput functional driver screening in tumor metastasis and drug resistance, Gene therapy for cancer.	Prof. Yajun WANG 王雅俊	Non-natural nucleic acid enzymes (also referred to as Xeno Nucleic Acid Enzymes/XNA enzymes/XNAzymes) for allele-specific RNA silencing; XNA based ASO and siRNA drug discovery by molecular design; Chemically modified aptamers with enhanced specificity and affinity
		Prof. Xiaofan DING 丁尚凡	1) Cancer biology; Precision medicine; Xenograft model; Immune cell isolation; 2) AI in cancer; Epigenomic data analysis; Genomic data analysis;	Prof. Jie SONG 宋杰	DNA結構設計與通信、基因檢測與藥物遞送，以及智慧診療儀器的開發與應用
				Prof. Jingkui TIAN 田景奎	癌症疾病的生物標誌物發現，民間中草藥中抗腫瘤藥物開發及其抗腫瘤作用機制研究
				Prof. Huacheng LUO 羅華程	Chromatin Modifying Enzymes, RNA Modifying Enzymes, IncRNA, High-throughput Sequencing, Epigenetics, Carcinogenesis
				Dr. Chulin SHA 沙維淋	Machine Learning Methods in Cancer Multiomics integration, single cell analysis tools, multimodal fusion deep learning networks
				Prof. Penghui ZHANG 張鵬暉	環境回應智慧分子藥物、納米藥物和生物材料
				Prof. Run XIAO 肖潤	心理因素如何影響疾病發生發展，組織透明化三維成像，基因治療
				Prof. Dan HAN 韓達	DNA computation, Liquid biopsy, Cancer, Neurodegenerative diseases
				Prof. Peng GUO 郭鵬	惡性腫瘤新靶點的發現和新型靶向藥物的研發
				Prof. Xiangsheng LIU 劉湘聖	抗腫瘤核酸適應體靶向藥物、核酸疫苗、納米藥物、免疫治療、納米表界面生物效應等研究。
				Prof. Jiang-Jiang QIN 覃江江	上消化道惡性腫瘤分子標誌物與藥物靶標發現，及小分子藥物研發；臨床研究藥物的耐藥機制與聯合用藥策略研究
				Prof. Jingkui TIAN 田景奎	癌症疾病的生物標誌物發現，民間中草藥中抗腫瘤藥物開發及其抗腫瘤作用機制研究。
				Prof. Xiaojia WANG 王曉稼	Individualized treatment of breast cancer, Novel anti-tumor drugs and their resistance mechanisms.
				Prof. Qinglin LI 李清林	惡性腫瘤新靶點的發現和新型靶向藥物的研發
				Prof. Yun FAN 范雲	Research on the precise treatment of lung cancer, Resistance mechanisms of immunotherapy and targeted drugs,
		Dr. Chulin SHA 沙維淋	腫瘤多組學大資料智慧挖掘，基因組、轉錄組、蛋白質整合分析的人工智能新型演算法研究，輔助腫瘤精準分型和個性化精準診療。		
		Prof. Xiaolin LI 李曉林	腫瘤多組學大資料智慧挖掘，基因組、轉錄組、蛋白質整合分析的人工智能新型演算法研究，輔助腫瘤精準分型和個性化精準診療。大資料採擷、雲計算、人工智慧輔助創新藥物新靶點識別、結構設計、智慧生成、虛擬篩選、ADMET藥效和毒性分析、蛋白質組學、多組學、多模態、智慧診斷等研究。		
		Prof. Haibo WANG 王海波	Cancer biology, Precision medicine, Genomic data analysis, AI in cancer, structure biology		
		Prof. Lei SHI 石磊	腫瘤影像與人工智能		

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Faculty of Health Sciences 健康科學學院	Biomedical Sciences 生物醫藥	Prof. Xiaofan DING 丁肖凡	1) Cancer biology; Precision medicine; Xenograft model; Immune cell isolation; 2) AI in cancer; Epigenomic data analysis; Genomic data analysis;	Prof. Kui WU 吳達	Comprehensive molecular characterization of different cancers through multi-omics procedure. Investigate tumor heterogeneity and evolution, tumor microenvironment and immune evasion through single cell and spatiotemporal omics.
				Prof. Hai HU 胡海	Cancer metabolism and transformation
				Prof. Qinglin LI 李清林	惡性腫瘤的中西醫結合精準治療
				Prof. Min HE 何敏	深度學習和強化學習等前沿方法對醫學影像組學進行量化、智慧化研究，及多模態醫療影像大資料結合基因組研究，更好的應用於早期癌症的智慧辨識、病理分析和臨床輔助決策。
				Prof. Dong XU 徐棟	基於影響醫學大數據的多組學研究
		Prof. Elaine Lai Han LEUNG 梁麗嫻	Cancer, drug discovery, gut microbiota, TCM	Prof. Jiangjiang QIN 覃江江	Cancer Pharmacology ; New Targets ; Drug Discovery ; Targeted Protein Degradation ; TCM
				Prof. Kui WU 吳達	Comprehensive molecular characterization of different cancers through multi-omics procedure. Investigate tumor heterogeneity and evolution, tumor microenvironment and immune evasion through single cell and spatiotemporal omics.
				Prof. Zhengbo SONG 宋正波	Precision treatment of oncology, Cancer Biomarkers and New Drug Targets, Immunotherapy, Antibody-drug conjugates
		Prof. Lijun DI 狄利俊	Mammary tumor development using genetic mice model; Co-repressor complex function in cancer development; GSK3 function in obesity and insulin resistance; Autophagy in Cancer, crosstalk between adipose tissue and cancer cell	Prof. Haibo WANG 王海波	Mammary tumor development using genetic mice model; Co-repressor complex function in cancer development; crosstalk between adipose tissue and cancer cell
				Prof. Chenping ZHANG 張陳平	口腔頰面頸部腫瘤的基礎和臨床研究，頰面缺損修復重建及功能康復
		Prof. Hang Fai KWOK 郭昕輝	Novel Therapeutic Antibodies Development, Venom-based Peptide & Natural Biomolecule Prototype Drugs Development, Cancer Biomarkers & Immunotherapy Markers Discovery for Prognostic and Therapeutic Validation	Prof. Xiaolin LI 李曉林	machine learning, deep learning, reinforcement learning, generative AI, large language model, NLP, CV AI for life science, multiomics/proteomics/single cell, drug discovery (small molecules, aptamer, mRNA, antibody), biomarker discovery, AI-empowered wet lab.
				Prof. Chenping ZHANG 張陳平	口腔頰面頸部腫瘤的基礎和臨床研究，頰面缺損修復重建及功能康復
		Prof. Gang LI 李剛	Cancer Epigenetics, Cell-based High Throughput Screening Systems, Signal Transduction Pathways, Posttranslational Modification of Epigenetic Regulators and PeG Proteins	Prof. Haibo WANG 王海波	Cancer Epigenetics, Cell-based High Throughput Screening Systems
		Prof. Tzu-Ming LIU 劉子銘	Medical Devices Development, Embryonic Development, Tumor Microenvironment, Pharmacokinetics of Nanomedicines and In Vivo Cytometry of Leukocytes	Prof. Jinzhao SONG 宋金召	Medical Device Development; Internet of Things (IoT)-based Intelligent Molecular Diagnostics; Liquid Biopsy Biomarker Discovery and Diagnostic Development
		Prof. Peng WANG 王鵬	Deep learning for single cell data analysis; Tumor heterogeneity; Drug discovery.	Prof. Jie SONG 宋杰	DNA nanotechnology and gene therapy
				Dr. Chulin SHA 沙維琳	Machine Learning Methods in Cancer Multiomics integration, single cell analysis tools, multimodal fusion deep learning networks
				Prof. Xiaolin LI 李曉林	machine learning, deep learning, reinforcement learning, generative AI, large language model, NLP, CV AI for life science, multiomics/proteomics/single cell, drug discovery (small molecules, aptamer, mRNA, antibody), biomarker discovery, AI-empowered wet lab.
				Prof. Yingdi ZHU 朱瑩娣	Mass spectrometry and proteomic analytical techniques, combined with data analysis using machine learning algorithms, for cancer diagnosis
		Prof. Qiang CHEN 陳強	Oncogenes, Tumor Suppressor Genes, Cancer Metabolism, Metabolic diseases, Inflammatory diseases	Dr. Chulin SHA 沙維琳	Machine Learning Methods in Cancer Multiomics integration, single cell analysis tools, multimodal fusion deep learning networks
				Prof. Kui WU 吳達	Comprehensive molecular characterization of different cancers through multi-omics procedure. Investigate tumor heterogeneity and evolution, tumor microenvironment and immune evasion through single cell and spatiotemporal omics.
		Prof. Jiajie HOU 侯嘉杰	Post-therapeutic Inflammation and Cancer Immunity, Liver Cancer Immunobiology, Combinatorial Immunotherapy	Prof. Kui WU 吳達	Comprehensive molecular characterization of different cancers through multi-omics procedure. Investigate tumor heterogeneity and evolution, tumor microenvironment and immune evasion through single cell and spatiotemporal omics.
				Prof. Hai HU 胡海	Cancer metabolism and transformation
				Prof. Qinglin LI 李清林	惡性腫瘤的中西醫結合精準治療
				Prof. Liang DONG 董良	Functional Biomaterials, Nanomedicine, Cancer therapy, Immunomodulation
Prof. Chen MING 明晨	Bioinformatics, Detection of genetic variants affecting neurodegenerative diseases, especially Alzheimer's disease; Multi-omics integration of neurodegenerative diseases; Novel mechanisms of neurodegenerative diseases in the single cell and spatial transcriptomic levels	Prof. Xiaolin LI 李曉林	machine learning, deep learning, reinforcement learning, generative AI, large language model, NLP, CV AI for life science, multiomics/proteomics, drug discovery (small molecules, aptamer, mRNA, antibody), biomarker discovery, AI-empowered wet lab.		
Prof. Ningyi SHAO 邵寧一	Cardiovascular development and diseases, Bioinformatics, Computational biology, Multi-omics Integration Analysis, Genome Research, Epigenetics and Transcriptome Research	Prof. Pengfei ZHANG 張鵬飛	核酸生物學，惡性腫瘤和神經退行性病症等衰老相關疾病的發病機制，用於疾病診療的核酸-蛋白分子機器的開發和生物學表征		
Prof. Aifang CHENG 程愛芳	Pathogenesis of Neurodegenerative Diseases; Neuroprotective Lead Compounds Discovery and Drug Repurposing; Aging	Prof. Pei GUO 郭沛	Molecular mechanism and drug development for neurodegenerative diseases; Bioinformatics; Cancer; Liquid biopsy		

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Academic Unit 學術單位	Specialization 專業範疇	Supervisor 導師	Research Area 研究方向	Supervisor 導師	Research Area 研究方向
Faculty of Health Sciences 健康科學學院	Biomedical Sciences 生物醫藥	Prof. Xuanjun ZHANG 張宜軍	Synthetic Chemistry, Nanoscience, Semiconducting Polymers, Luminescent Probes and Bioimaging	Prof. Zhao PAN 潘劍	Functional Biomaterials, Nanomedicine, Cancer therapy, Immunomodulation
Institute of Chinese Medical Sciences 中華醫藥研究院	Biomedical Sciences 生物醫藥	Prof. Ligen LIN 林理根	代謝性疾病小分子藥物發現	Prof. Luo FANG 方羅	基於代謝的抗腫瘤藥物研究

\* Applicants can only apply for the PhD Joint Programme with the institute of Chinese Academy of Sciences through the online application system of UM. Applicants should choose their designated joint programmes and the pair of supervisors in their applications.