

THE UNIVERSITY OF HONG KONG
LI KA SHING FACULTY OF MEDICINE

2017 Health and Medical Research Fund (HMRF) Funded Projects

Principal Applicant	Department/School/Centre	Project Title	Awarded Amount (HK\$)
Dr AJ Liu	Anaesthesiology	Investigating the therapeutic potential of human neural stem cells by suppressor of fused (SUFU) knockdown in a spinal cord injury model	1,365,224
Dr GTC Wong	Anaesthesiology	Investigating the use of a naturally occurring anti-inflammatory herbal, siegesbeckia herba in minimising postoperative cognitive dysfunction	1,179,656
Dr SCS Wong	Anaesthesiology	Effect of intraoperative total intravenous anaesthesia with propofol versus inhalational anaesthesia on postoperative pain after hepatectomy: a randomized controlled trial	93,968
Professor D Chan	Biomedical Sciences	Ligament and tendon repair using Lgr5+ interzone cells as progenitor	1,491,308
Dr WCW Chan	Biomedical Sciences	Oligonucleotide aptamers for the treatment of low bone mass disorders	1,489,264
Professor YS Chan	Biomedical Sciences	Surface hyaluronidase-4 derivatized oligodendrocyte precursor cells for repairing inflammation-induced impairment in the CNS	1,499,934
Professor KSE Cheah	Biomedical Sciences	Role(s) of TAGLN expressing cells in intervertebral disc development, homeostasis and degeneration	1,500,000
Dr YP Ching	Biomedical Sciences	The role of centrosomal protein CEP295 in chromosome instability and liver cancer progression	1,499,880
Dr B Gao	Biomedical Sciences	Identifying the genetic factors underlying congenital scoliosis in Hong Kong	1,499,752
Dr R Jauch	Biomedical Sciences	Generation of induced neural stem cells for pre-clinical studies through the directed evolution of reprogramming transcription factors by cell selection and sequencing (DERBY-seq)	1,459,080
Dr LJ Jia	Biomedical Sciences	To explore the functional significance of retinoid signaling in EBV infection-mediated de-differentiation of nasopharyngeal epithelial cells	100,000
Professor D Jin	Biomedical Sciences	Roles of caspase 3 activation in lytic replication of Epstein-Barr virus in nasopharyngeal epithelial cells	1,500,000
Dr KO Lai	Biomedical Sciences	Investigating the effect of Amyotrophic Lateral Sclerosis (ALS)-associated FUS mutations on connectivity of human induced pluripotent stem cell (iPSC)-derived cortical neuron	1,493,752
Dr MH Sy	Biomedical Sciences	Exploiting the placental imprinted gene Paternally Expressed 10 (PEG10) as a specific cancer biomarker	1,496,764

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Dr M Tong	Biomedical Sciences	Cancer-associated fibroblasts derived follistatin-like 1 (FSTL1) as a prognostic biomarker and therapeutic target for personalized treatment in hepatocellular carcinoma	1,499,764
Dr X Wang	Biomedical Sciences	The identification of protective epitopes of a protein vaccine Sta-C9 against Methicillin-resistant Staphylococcus aureus (MRSA) infection and design of a novel multi-epitope vaccine	1,399,832
Dr LK Wu	Biomedical Sciences	Fluoxetine-induced plasticity in combination with vestibular-specific stimulation corrects spatial cognition deficits after neonatal cannabinoid exposure	1,499,940
Dr KM Yao	Biomedical Sciences	PDZD2 and primary open-angle glaucoma: characterization of Pdzd2-deficient mice and human PDZD2 SNPs	1,499,628
Professor Z Zhou	Biomedical Sciences	The role of bone marrow adipose tissue in glucose tolerance and insulin sensitivity	1,499,900
Dr Y Feng	Chinese Medicine	Berberine suppresses metastasis and recurrence of hepatocellular carcinoma via targeting circulating tumour cells	999,832
Dr J Rong	Chinese Medicine	Pharmacological induction of pro-resolving macrophages for suppressing cardiac fibrosis in experimental myocardial infarction	1,432,278
Dr HYH Tan	Chinese Medicine	Evaluation of the pre-clinical efficacy of baicalin in reversing hypoxia-induced sorafenib resistance in hepatocellular carcinoma	94,800
Professor Z Zhang	Chinese Medicine	The effect of acupuncture for insomnia in breast cancer patients undergoing chemotherapy: a randomized, sham-controlled trial	1,500,000
Dr TYA Chang	Clinical Oncology	A multi-institutional study comparing clinical outcome and toxicities of novel image guided brachytherapy with conventional techniques for locally advanced cervical cancer in Hong Kong	388,624
Dr CL Chiang	Clinical Oncology	Radiosensitivity index (RSI) as predictive biomarker for radiotherapy de-intensification in nasopharyngeal carcinoma	1,499,916
Professor DLW Kwong	Clinical Oncology	The therapeutic effects of blocking galectin 9-mediated immuno-inhibition in a novel Adoptive T cell therapy for nasopharyngeal carcinoma	1,214,520
Dr VHF Lee	Clinical Oncology	PD-L1-positive circulating tumour cells (CTC) in predicting treatment response and survival after concurrent chemoradiation for locally advanced nasopharyngeal carcinoma (NPC)	1,480,000

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Dr Z Yu	Clinical Oncology	Establishment of a patient-derived organoid in vivo drug testing model in esophageal squamous cell carcinoma and a pilot study for tumor-associated macrophage targeted therapy	1,484,832
Dr SK Hui	Diagnostic Radiology	Towards a plausible underpinning of cognitive impairment due to small vessel disease - from a brain wiring perspective	1,401,690
Dr EYP Lee	Diagnostic Radiology	Monitoring treatment response in advanced ovarian cancer by PET-CT following neo-adjuvant chemotherapy	1,381,916
Dr MY Ng	Diagnostic Radiology	Stress cardiac magnetic resonance of asymptomatic type 2 diabetics with cardiovascular high risk to measure empagliflozin impact on myocardial blood flow (CATCH-EM)	1,457,257
Dr W Wang	Dr. Li Dak-Sum Research Centre	Development of ultrasound-responsive polymeric nanoreactors for retinoblastoma therapy	1,499,628
Dr WCW Wong	Family Med & Primary Care	Preferences and cost-effectiveness of case detection and management strategies for chlamydia control in Hong Kong	1,139,266
Dr Q Lian	LKS Medical Faculty	Using pluripotent stem cells-derived neural cells and brain organoids to investigate Huntington's disease-provoked mitochondrial dysfunction	1,495,832
Professor DTM Chan	Medicine	Current treatments for lupus nephritis - Direct cellular effects that impact on chronic kidney failure	1,499,764
Dr KSM Cheung	Medicine	Epidemiology, prognosis, risk factors and chemopreventive agents of interval colorectal cancer in Hong Kong	619,520
Dr YY Cheung	Medicine	Exploring the role of microRNA in sight-threatening diabetic retinopathy in Chinese patients with type 2 diabetes	1,499,956
Professor SL Ho	Medicine	Defective autophagic clearance of damaged mitochondria (mitophagy) as potential therapeutic target of Parkinson's disease	1,469,224
Dr Z Huang	Medicine	Targeting G protein-coupled receptor 110 for the treatment of obesity and non-alcoholic fatty liver disease	1,399,248
Dr X Hui	Medicine	AMPK γ 2 as a master regulator of adipokine transcription: biological function, molecular mechanism and clinical implications	1,449,248
Dr GKK Lau	Medicine	Are stroke subtypes, severity and prognosis after stroke affected by air pollution?	896,764
Professor WCS Lau	Medicine	Dysregulation of interleukin-18 receptor accessory protein in neutrophils of lupus nephritis patients – a pilot study	100,000

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Dr YK Lee	Medicine	Precision medicine towards familial cardiac laminopathy	1,499,664
Professor AYH Leung	Medicine	Modelling TP53-mutated acute myeloid leukaemia in zebrafish - biological and therapeutic implications	1,498,688
Dr LY Mak	Medicine	Regression of liver fibrosis after HBsAg loss: a prospective matched case-control evaluation using transient elastography and serum Enhanced Liver Fibrosis (ELF) test	982,812.3
Dr CL Ng	Medicine	Apelin receptor agonist - a novel oral therapeutic agent to treat Alzheimer's disease	1,245,348
Dr L Shu	Medicine	Fatty acid binding protein 4 as a therapeutic target for atherosclerosis by regulating gut microbiota and immunity	1,433,996
Dr N Yang	Medicine	Identifying biomarkers predictive of treatment response to PEGylated recombinant human arginase I in AML and its therapeutic partners	1,208,688
Dr SSY Yung	Medicine	Decorin in inflammation, fibrosis, and repair of peritoneal membrane structure in peritoneal dialysis	1,499,864
Professor A Xu	Medicine	Autotaxin as a potential mediator of obesity-related metabolic complications	1,496,996
Professor Z Chen	Microbiology	HIV-1 mucosal prevention and immunotherapy by engineered tandem bi-specific IgA	1,499,940
Dr L Liu	Microbiology	Role of $\Delta 42$ PD-1 in memory B cells exhaustion in HIV-infected viremic individuals	1,499,936
Dr LL Teng	Microbiology	Development of an antigen capture assay for melioidosis, a fatal disease caused by <i>Burkholderia pseudomallei</i>	992,348
Dr MM Ho	Nursing	Translation and cultural adaption of an eating behaviour questionnaire for assessing the psychological aspects of eating behaviours in Chinese adults	99,804
Dr WHC Li	Nursing	Using information communication technology (WhatsApp/WeChat) to deliver Brief Motivational Interviewing (i-BMI) to promote smoking cessation among smokers with chronic diseases	100,000
Dr CKF Lee	Obstetrics & Gynaecology	Investigation on lactobacillus, lactate, and pH changes in regulating human endometrial receptivity and predicting pregnancy outcomes	1,382,680
Professor EHY Ng	Obstetrics & Gynaecology	Gonadotrophin releasing hormone agonist for dual trigger in in vitro fertilization and for luteal phase support in frozen-thawed embryo transfer	1,080,560
Professor JSM Lai	Ophthalmology	Evaluation of the accuracy of diagnostic and management decision by teleophthalmology in comparison with face-to-face consultation	613,848

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Dr ACY Lo	Ophthalmology	Terminable cell-encapsulating collagen-alginate composite device for sustained intraocular drug delivery as a therapy for retinal degenerative diseases	1,499,918
Dr KYH Kwan	Orthopaedics & Traumatology	Enhancing neurological recovery after surgical decompression in cervical spondylotic myelopathy by Wolfberry (<i>Lycium barbarum polysaccharides</i>) supplementation	1,043,074
Dr GKH Shea	Orthopaedics & Traumatology	Towards cellular therapy with human bone marrow stromal cell-derived motor neurons in a mouse model of amyotrophic lateral sclerosis	1,499,914
Dr Y Sun	Orthopaedics & Traumatology	Alleviation of low back pain behavior phenotype by a novel small molecule in an experimental disc puncture model	99,556
Dr AKS Chiang	Paediatrics & Adolescent Med	Longitudinal analysis of Epstein-Barr virus-specific T cells and NK cell responses in paediatric patients with infectious mononucleosis and post-transplant lymphoproliferative disorder	1,197,176
Dr BHY Chung	Paediatrics & Adolescent Med	Evaluating the diagnostic impact and cost-effectiveness of rapid whole-exome sequencing for critically ill neonates and infants in Hong Kong	1,237,144
Dr APY Liu	Paediatrics & Adolescent Med	Genome-wide DNA-methylation profiling as frontline diagnostic test for central nervous system embryonal tumors in children	1,327,220
Dr LK Chan	Pathology	The functional significance of RalA: regulations and therapeutic implication in liver cancer	1,491,040
Mr KC Chiu	Pathology	Delineating the immunoregulatory role of PVRL1/TIGIT interaction in hepatocellular carcinoma and its resistance to PD-1 blockade	1,500,000
Professor US Khoo	Pathology	Targeting androgen receptor in BQ323636.1 overexpressing ER+ breast cancer to overcome aromatase inhibitor resistance	1,230,094
Professor CW Lam	Pathology	The chemokine and cytokine network and signature of a novel prognostic immune-metabotype of lung adenocarcinomas: a proteo-metabonomic study of malignant pleural effusions	1,497,218
Dr J Liu	Pathology	Targeting lactate dehydrogenase A for extranodal NK/T-cell lymphoma therapy	1,163,176
Dr CLR Lo	Pathology	Study of STC1 as a functional serum biomarker and therapeutic target for liver fibrosis	1,179,830
Professor JM Nicholls	Pathology	Evaluation of disease severity of seasonal influenza viruses using human respiratory tract explant cultures, lung injury models, and correlation with glycosylation status	1,189,520
Dr H Tsoi	Pathology	Targeting interleukin-6 receptor in BQ323636.1 overexpressing ER+ breast cancer to reverse tamoxifen resistance	674,718

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Dr CM Wong	Pathology	Genome-scale CRISPR/Cas9 knockout library screening identified druggable targets to overcome Lenvatinib resistance in liver cancer	1,499,996
Dr MP Wong	Pathology	Galectin-9 is a potential dual treatment target for tumor cells and the immune micro-environment of lung adenocarcinoma	1,321,176
Dr S Zhang	Pathology	Targeting hepatocellular carcinoma metabolism through blockade of BRD4-associated super-enhancers	1,497,998
Dr CL Cheung	Pharmacology & Pharmacy	GREM2: A novel regulator and marker of bone metabolism?	1,414,186
Dr RLC Hoo	Pharmacology & Pharmacy	Mitochondrial protein coiled-coil-helix-coiled-coil-helix domain 10 (Chchd10) as a novel factor for the treatment of obesity and its related diseases	982,396
Dr JKW Lam	Pharmacology & Pharmacy	Novel inhalable powder formulations of synergistic combinations of antimicrobial peptides and antitubercular drugs to combat both drug-sensitive and multidrug-resistant tuberculosis	1,452,264
Dr X Li	Pharmacology & Pharmacy	The impact of childhood pneumococcal conjugate vaccine (PCV) immunisation on pneumonia admissions in Hong Kong: a population-based interrupted time series analysis from 2004-2017	551,706
Dr ST Ali	Public Health	Forecasting influenza epidemics in Hong Kong using multiple streams of syndromic and laboratory surveillance data	930,760
Dr SLR Au Yeung	Public Health	The role of birth weight in ischemic heart disease and type 2 diabetes: a Mendelian randomization study	565,420
Dr HT Bui	Public Health	Investigation of the reassortment between canine H3N2 influenza virus and human/avian influenza A viruses in canine and human respiratory tract explant cultures	1,491,780
Dr MCW Chan	Public Health	Tropism and pathogenesis of the highly pathogenic avian influenza A/H7N9 virus in human respiratory tract and potential therapeutic effect of interferon and cyclophilin inhibitors	1,299,520
Dr PY Hui	Public Health	The role of PDGFR and the therapeutic potential of its inhibitor in MERS-CoV infection	1,499,220
Dr DKM Ip	Public Health	Centre-based network-targeted engagement programme to improve influenza vaccination uptake among community-dwelling elderly in	1,494,150

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		Hong Kong – a cluster randomised controlled trial	
Dr TY Lam	Public Health	Exploring the arbovirus diversity among the Aedes and Culex mosquitoes in Hong Kong	1,439,146
Dr SMK Leung	Public Health	Maximizing the cost-effectiveness of human papillomavirus (HPV) testing for cervical screening in the context of routine HPV vaccination in Hong Kong	930,734
Dr Q Liao	Public Health	Climate change beliefs, perceived risk of heat stress and responses to heat health warnings among the general public of Hong Kong: a mixed-methods study	852,940
Dr HMH Pang	Public Health	Translational meta-analysis of immunotherapy studies in lung and liver cancer	387,512
Professor LML Poon	Public Health	Go beyond consensus sequences: use of next generation sequencing to reveal influenza viral sequence diversity in different respiratory samples	1,495,830
Dr OL Wong	Public Health	Revealing epidemiological and demographic contributions to future cancer burden through exploring and projecting recent trends in important cancers in Hong Kong	758,548
Professor JTK Wu	Public Health	Inferring assortativity of sexual mixing from age-specific human papillomavirus (HPV) prevalence data: Phase 1	930,734
Dr P Wu	Public Health	Cost-effectiveness of prophylaxis with palivizumab in high-risk children in Hong Kong	804,278
Dr J Zhao	Public Health	L-carnitine, a friend or foe for cardiovascular disease? a mendelian randomization study	369,378
Dr YW Chan	Surgery	The use of EBV-encoded microRNA in the prediction of local recurrence for recurrent nasopharyngeal carcinoma patients	1,396,280
Dr W Gao	Surgery	The role of GFPT2 in head and neck squamous cell carcinoma	1,426,240
Professor HHB Lang	Surgery	A randomized, open-label, parallel-group study to determine the efficacy of sequential high-intensity focused ultrasound (HIFU) ablation versus fixed-dose radioiodine-131 therapy in moderate-sized non-toxic multinodular goiter	770,940
Professor WL Law	Surgery	MicroRNA expression in Normal tissue Adjacent to the Tumor (NAT) and its prognostic and predictive value for development of colorectal cancer relapse or metastasis	951,020
Dr VCH Lui	Surgery	Functional evaluation of ADD3 in the pathogenesis of biliary atresia	1,289,924

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Dr ESW Ngan	Surgery	Establishment of experiment paradigm for defining functional genetic variants and their epistasis contributing to Hirschsprung (HSCR) disease using human pluripotent stem cells (hPSC)	1,500,000
Dr SM Tang	Surgery	A sensitized genetic screen to identify and functionally characterize genetic modifiers for hirschsprung disease	840,510
Dr KP Wong	Surgery	Should radioactive iodine therapy (RAI) or surgery be the definite treatment after failure of anti-thyroid drug? A open-labeled randomized study in quality of life perspective	792,650
Dr TS Wong	Surgery	Nerve growth factor (NGF)-driven superoxide production in head and neck cancers	1,279,150