

THE UNIVERSITY OF HONG KONG  
LI KA SHING FACULTY OF MEDICINE

2019 Health and Medical Research Fund (HMRF) Funded Projects

<b>Principal Applicant</b>	<b>Department/School/Centre</b>	<b>Project Title</b>	<b>Awarded Amount (HK\$)</b>
Dr WCW Chan	School of Biomedical Sciences	Mimicking in vivo enthesis formation to reinforce ligament/tendon-to-bone interface for repair	1,485,160
Dr MCH Cheung	School of Biomedical Sciences	Determination of CHL1 as a gene therapy for the treatment of spinal muscular atrophy	1,500,000
Dr B Gao	School of Biomedical Sciences	The role of ECM mutations as predisposing factors for Carpal Tunnel Syndrome	1,499,848
Dr R Jauch	School of Biomedical Sciences	Transdifferentiation towards expandable neural progenitors without rejuvenation as authentic cell model for age-associated neurodegenerative diseases	1,477,032
Professor D Jin	School of Biomedical Sciences	Roles of a novel CREB-H-regulated phospholipid-binding endosomal protein (PLBEP) in cholesterol homeostasis	1,500,000
Dr Y Song	School of Biomedical Sciences	Functional interrogation of non-coding regulatory regions identified from Hirschsprung disease patients	1,424,140
Professor R Sun	School of Biomedical Sciences	Developing ACE2 variants with increased stability and higher affinity targeting severe acute respiratory syndrome Coronavirus 2 spike protein	1,253,870
Dr M Tong	School of Biomedical Sciences	Molecular basis and therapeutic potential of ketogenic diet as an adjuvant to receptor tyrosine kinase inhibitor (TKi) targeted therapy in hepatocellular carcinoma	1,452,160
Dr YB Feng	School of Chinese Medicine	Elucidation of the reversal effect of baicalin on hepatocellular carcinoma-associated cachexia	986,440
Professor Z Zhang	School of Chinese Medicine	Transcutaneous electrical acupoint stimulation and dense cranial electroacupuncture stimulation for psychiatric sequelae and related biomarkers in women victims of domestic violence: a randomized controlled trial	1,494,520
Dr W Dai	Department of Clinical Oncology, School of Clinical Medicine	Understanding NPC Molecular Subtypes Associated with Clinical Outcome and Their Impact on Tumor Microenvironment	1,499,988
Dr JMY Ko	Department of Clinical Oncology, School of Clinical Medicine	Clinical significance of real-time longitudinal monitoring of liquid biopsies for advanced colorectal cancer	1,500,000

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Dr EYP Lee	Department of Diagnostic Radiology, School of Clinical Medicine	Predictive value of CT texture analysis in indeterminate ovarian mass- a multi-centre validation study.	996,760
Dr MY Ng	Department of Diagnostic Radiology, School of Clinical Medicine	Clinical significance of subclinical myocardial involvement in recovered COVID-19 patients using cardiovascular magnetic resonance	1,499,640
Professor CLK Lam	Department of Family Medicine and Primary Care, School of Clinical Medicine	What are the family barriers and facilitators of healthy eating habits among adolescents?	440,650
Dr EYF Wan	Department of Family Medicine and Primary Care, School of Clinical Medicine	What is optimal blood pressure target for antihypertensive treatment? A target randomised controlled trial emulation using big data	925,260
Dr EYT Yu	Department of Family Medicine and Primary Care, School of Clinical Medicine	Improving T2DM detection among at-Risk individuals -Effectiveness of Active Opportunistic Screening using spot Capillary-HbA1c test - A cluster randomized controlled trial (DM-REACH)	1,500,000
Dr KH Chan	Department of Medicine, School of Clinical Medicine	Potential therapeutic effect of pioglitazone on neuromyelitis optica spectrum disorders	1,372,840
Dr K Chen	Department of Medicine, School of Clinical Medicine	Treatment of obesity by selectively delivery of thyroid hormone to white adipose tissue	1,499,516
Dr MKS Cheung	Department of Medicine, School of Clinical Medicine	Epidemiology and risk factors of major osteoporotic fracture after Helicobacter pylori eradication and the interaction between Helicobacter pylori and proton pump inhibitors on fracture risk	958,936
Dr CYC Cheung	Department of Medicine, School of Clinical Medicine	Metabolomics signature for the prediction of diabetic kidney disease in Chinese patients with type 2 diabetes	1,493,820
Dr JJSH Hai	Department of Medicine, School of Clinical Medicine	Dabigatran for stroke prevention in atrial fibrillation in moderate or severe mitral stenosis (DAVID-MS) study	1,285,000
Dr GKK Lau	Department of Medicine, School of Clinical Medicine	What is the effect of intensive blood pressure control on cerebral blood flow and cognition in ischaemic stroke patients with severe cerebral small vessel disease?	566,885
Professor AYH Leung	Department of Medicine, School of Clinical Medicine	Develop a zebrafish model of human chronic myelomonocytic leukaemia (CMML) based on recurrent mutation combinations	1,499,916
Dr CH Man	Department of Medicine, School of Clinical Medicine	Targeting proton shifting by a novel MCT4 inhibitor in treating acute myeloid leukemia	1,493,888

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Dr CL Ng	Department of Medicine, School of Clinical Medicine	The role of adiponectin signalling in Tauopathy: implication of adiponectin receptor agonist as a therapeutic treatment for Tau-mediated neurodegeneration	1,493,388
Dr KL Ng	Department of Medicine, School of Clinical Medicine	Targeting complex/monosomy karyotype acute myeloid leukaemia carrying TP53 mutations with PLK4 inhibitor- a mechanistic and therapeutic study	1,397,780
Professor WWK Seto	Department of Medicine, School of Clinical Medicine	A prototype artificial intelligence algorithm versus Liver Imaging Reporting and Data System (LI-RADS) criteria in diagnosing hepatocellular carcinoma on computed tomography: a randomized trial	1,481,714
Dr GHH Singh	Department of Medicine, School of Clinical Medicine	The Acute Promyelocytic Leukaemia Asian Consortium (APL-AC) Project	1,009,872
Dr X Sun	Department of Medicine, School of Clinical Medicine	Modelling myeloproliferative neoplasms (MPNs) in a multi-colour transgenic zebrafish - mechanistic and therapeutic Insights	1,363,304
Professor A Xu	Department of Medicine, School of Clinical Medicine	Thrombospondin-2 as a potential diagnostic biomarker and therapeutic target of nonalcoholic fatty liver disease	1,496,160
Dr JFW Chan	Department of Microbiology, School of Clinical Medicine	In vitro, ex vivo, and in vivo evaluation of novel anti-SARS-CoV-2 nanobodies as safe and effective prophylactic and therapeutic options for Coronavirus Disease 2019	1,497,160
Dr H Chu	Department of Microbiology, School of Clinical Medicine	Investigation on the role of interferon and interferon-based treatment options against COVID-19	1,217,960
Dr KH Kok	Department of Microbiology, School of Clinical Medicine	Understanding the immunological responses against SARS-CcV-2 orf8 protein and its potential use as novel COVID-19 vaccine	1,200,000
Dr S Sridhar	Department of Microbiology, School of Clinical Medicine	A multi-cohort study of rat hepatitis E seroprevalence in Hong Kong using state-of-art serological tests	876,512
Dr JLL Teng	Department of Microbiology, School of Clinical Medicine	Discovery of a novel SARS-CoV-2 cell entry mechanism mediated by circulating soluble ACE2 (sACE2): potential therapeutic target and risk marker for COVID-19	1,113,540
Dr SF Yuan	Department of Microbiology, School of Clinical Medicine	Host PFKFB3-dependent glycolytic reprogramming as a broad-spectrum antiviral strategy	1,475,920

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Dr KKL Chan	Department of Obstetrics and Gynaecology, School of Clinical Medicine	Delineation of reactive oxygen species (ROS)-mediated signaling pathways involved in developing chemoresistance in ovarian cancer	1,365,184
Dr RHW Li	Department of Obstetrics and Gynaecology, School of Clinical Medicine	Prediction of metabolic and cardiovascular complications in women with polycystic ovary syndrome: a longitudinal study	1,113,100
Professor EHY Ng	Department of Obstetrics and Gynaecology, School of Clinical Medicine	A double blind randomized controlled trial of non-invasive preimplantation genetic testing for aneuploidy in in vitro fertilisation	1,361,728
Dr BNK Choy	Department of Ophthalmology, School of Clinical Medicine	Randomized control trial on the efficacy of a smartphone application (Glaucomapp) on monitoring and promoting disease awareness and medication adherence on Chinese glaucoma patients	1,160,611
Dr A Lee	Department of Ophthalmology, School of Clinical Medicine	Air-puff tonometry as a potential route of transmission during COVID-19 and other epidemics and the epidemiology of common respiratory viruses in acute conjunctivitis	972,750
Professor CKS Leung	Department of Ophthalmology, School of Clinical Medicine	Applying Virtual Reality Simulations to Determine the Development of Vision-related Disability in Patients with Glaucoma – A 3-year Prospective Study	1,500,000
Dr JPY Cheung	Department of Orthopaedics and Traumatology, School of Clinical Medicine	Randomized, Controlled, Single-blinded Trial to Evaluate the Efficacy and Safety of Intra-wound Vancomycin Powder as Add-on Prophylactic Intraoperative Antibiotic for High-risk Open Posterior Spinal Surgery	1,492,928
Dr CX Fang	Department of Orthopaedics and Traumatology, School of Clinical Medicine	Sterilized 3D PRINTed bone models versus conventional CT imaging for operative visualization for complex intraarticular fracture repair – A single blinded randomized multicentre study	1,289,876
Dr KYH Kwan	Department of Orthopaedics and Traumatology, School of Clinical Medicine	Towards reducing repeated hospital attendance and admissions for patients with low back pain using a machine learning approach	1,062,880
Professor KWK Yeung	Department of Orthopaedics and Traumatology, School of Clinical Medicine	Investigation of photothermally responsive multi-layered graphene oxide coating for controlled release of antibacterial reagents to act against orthopaedic implant-related infection	1,377,620
Dr T Zhang	Department of Orthopaedics and Traumatology, School of Clinical Medicine	Clinical validation of a novel system enabling non-radiation spinal deformity prediction using a combination of artificial intelligence and depth sensing technologies	100,000
Professor YF Cheung	Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine	Resting and Dynamic Right Ventricular-Pulmonary Arterial Coupling in Childhood Cancer Survivors	854,760

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Dr AKS Chiang	Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine	Characterisation of pathogenetic mechanisms of Epstein-Barr virus-associated T and natural killer cell lymphoproliferative diseases in children	1,000,000
Dr BHY Chung	Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine	Socio-Economic Burden and Health-Related Quality of Life in Patients with Rare Diseases in Hong Kong and in the Asia Pacific Region	892,720
Dr HW Tsang	Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine	Identification of risk interaction of hypovitaminosis D genetic and environmental factors among Hong Kong infants and toddlers	1,152,500
Professor WW Tu	Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine	Therapeutic effect of human $\delta$ -T-cell-derived-exosomes on nasopharyngeal carcinoma in preclinical models	1,498,180
Professor W Yang	Department of Paediatrics and Adolescent Medicine, School of Clinical Medicine	Translating genetic susceptibility to clinical application: SYNGR1--an Asian-specific biomarker and drug target for systemic lupus erythematosus (SLE)	1,482,597
Dr PCP Ip	Department of Pathology, School of Clinical Medicine	Therapeutic Potentials of Polo-like kinase 4 inhibitor in Leiomyosarcoma	1,499,488
Dr D Lee	Department of Pathology, School of Clinical Medicine	Anti-mitotic agents elicit cytosolic DNA sensing STING pathway to improve efficiency of immune checkpoint inhibitors in liver cancer	1,500,000
Dr CLR Lo	Department of Pathology, School of Clinical Medicine	Evaluation of lumican as a serum prognostic biomarker and actionable target for liver cancer	1,458,016
Dr CCL Wong	Department of Pathology, School of Clinical Medicine	Inhibition of hypoxia-induced hyaluronan synthase 3 (HAS3) to subvert the immune suppressive microenvironment in liver cancer	1,500,000
Dr CM Wong	Department of Pathology, School of Clinical Medicine	BRD9 deregulation in liver cancer: Pathological significance and therapeutic potentials	1,500,000
Dr EWY Chan	Department of Pharmacology and Pharmacy, School of Clinical Medicine	Understanding preferences for low-dose aspirin use in primary prevention of colorectal cancer among clinicians and the general public in Hong Kong: A discrete choice experiment	797,676
Dr SF Chow	Department of Pharmacology and Pharmacy, School of Clinical Medicine	Feasibility of next-generation inhalable nanoagglomerated microparticles to improve the therapeutic outcomes of non-small cell lung cancer: A pilot study	309,000

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Dr JKW Lam	Department of Pharmacology and Pharmacy, School of Clinical Medicine	Pulmonary and intranasal delivery of broad-spectrum antiviral agent for respiratory viral infections	1,500,000
Dr CW Sing	Department of Pharmacology and Pharmacy, School of Clinical Medicine	Do bisphosphonates reduce risk of dementia? A real-world pharmacoepidemiology study in Hong Kong and the United Kingdom	555,896
Professor Y Wang	Department of Pharmacology and Pharmacy, School of Clinical Medicine	SIRT1-mediated vasodilatation: from inside to outside	1,499,800
Dr WC Chan	Department of Psychiatry, School of Clinical Medicine	Mortality among older persons with schizophrenia in Hong Kong	732,624
Dr HY Chung	Department of Surgery, School of Clinical Medicine	Organoid systems to study the effect of steroid in modulating immune-mediated inflammation in biliary atresia: A bridge to therapeutic application	1,394,170
Dr CC Foo	Department of Surgery, School of Clinical Medicine	Identification of microbiota associated with colorectal cancer (CRC) metastasis and chemoresistance, and evaluation of their roles as predictive biomarker for response to chemotherapy.	1,498,248
Dr KMY Kiang	Department of Surgery, School of Clinical Medicine	Preclinical evaluation of albumin-encapsulated nanoparticles for the treatment of chemo-resistant glioblastoma through modulating ER stress response	98,000
Professor WL Law	Department of Surgery, School of Clinical Medicine	Therapeutic effect of DPP-4 inhibitors, which are approved to treat diabetes, on improving prognosis of post-operative colorectal cancer patients	977,000
Professor ESW Ngan	Department of Surgery, School of Clinical Medicine	Analysis of EZH2 mediated neurogenic-to-gliogenic switch in development of enteric neurons and gastrointestinal motility disorders	1,500,000
Professor PKH Tam	Department of Surgery, School of Clinical Medicine	To elucidate the role of 'niche' factors in the pathogenesis of Biliary Atresia using an advanced organoid system	1,269,582
Dr SM Tang	Department of Surgery, School of Clinical Medicine	Towards establishing a genetic risk profile for Hirschsprung disease: pathway-centric approach to model polygenic risk	1,148,904
Dr DYT Cheung	School of Nursing	Development and a pilot randomized controlled trial of a brief alcohol intervention during smoking cessation treatment delivered by healthcare professionals	100,000

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Dr ST Cheung	School of Nursing	Reversing frailty status among post-treatment older cancer survivors using Baduanjin Qigong: A randomized controlled trial	1,350,000
Dr AYK Lai	School of Nursing	A Smart Sleep Apnea Self-management Support Programme (4S) to improve apnea severity and cardiovascular health - A pragmatic randomized controlled trial with mixed-method evaluation	1,481,764
Dr KYW Lok	School of Nursing	A mixed methods observational study of human milk sharing in Hong Kong	100,000
Dr AYM Ng	School of Nursing	A study to understand goals of care communication with advanced heart failure patients, families, and healthcare providers in hospital setting: Establishing a clinically applicable framework	100,000
Dr X Weng	School of Nursing	COVID-19 online misinformation exposure in Hong Kong adults: a cross-sectional study	877,000
Dr ST Ali	School of Public Health	Real-time estimation of serial interval and epi-curve to improve the evaluation of effectiveness of non-pharmaceutical interventions for COVID-19 in Hong Kong and Mainland China	1,021,680
Dr HB Andres	School of Public Health	The health implications of extending statutory paid maternity leave in Hong Kong: A policy evaluation	729,540
Ms J Chan	School of Public Health	Trajectories of chemotherapy-induced peripheral neuropathy and the role of psychological factors among breast cancer patients	923,760
Dr MK Kwok	School of Public Health	Roles of insulin-like growth factor 1, lean mass and fat mass in type 2 diabetes mellitus: sex-specific Mendelian randomization studies in Western and Chinese populations	1,486,992
Dr WWT Lam	School of Public Health	Cancer survivors' attitudes to the feasibility and acceptability of a community-based multi-disciplinary cancer survivorship intervention: A qualitative study	545,367
Dr NHL Leung	School of Public Health	Transmissibility of respiratory viruses	1,500,000
Dr DWL Ng	School of Public Health	Managing fear of cancer recurrence: a qualitative comparison of coping process among Chinese cancer survivors with nonclinical, subclinical, and clinically-significant fear of cancer recurrence	522,083

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Dr CM Schooling	School of Public Health	Investigation of statins effects on diabetes by sex in Western and Chinese settings using Mendelian randomisation	453,496
Dr PMF Siu	School of Public Health	Tai Chi versus conventional exercise to improve cognitive performance in older adults with mild cognitive impairment (MCI): A comparative randomized controlled trial	1,500,000
Dr L Tian	School of Public Health	Environmental ozone and its pathophysiological effects in a panel study	1,499,664
Dr TKL Tsang	School of Public Health	How infection history shapes individual and population immunity against influenza in Hong Kong	916,992
Dr JYT Wong	School of Public Health	Assessing the impact of influenza epidemics in Hong Kong	529,420