

THE UNIVERSITY OF HONG KONG  
LI KA SHING FACULTY OF MEDICINE

ITF - Innovation and Technology Support Programme (ITSP)

**2021**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Dr SKY Ma	Biomedical Sciences	Development and Pre-clinical Evaluation of a Humanized ANXA3 Neutralizing Monoclonal Antibody for Hepatocellular Carcinoma Treatment	1,221,875
Professor LML Poon	Biomedical Sciences	Development of Vaccine against SARS-CoV-2 with Attenuated Influenza Virus by Codon Usage Bias	1,395,226
Dr WKW Seto	Medicine	Novel Lossless Medical Image Compression using Artificial Intelligence	1,378,249
Dr CX Fang	Orthopaedics and Traumatology	Pre-Clinical Validation of a Novel Tensegrity-Based Orthopaedic Implant Technology Platform for Elderly Osteoporotic Bone	1,398,427
Dr JWP Yam	Pathology	The Production, Optimization and Preclinical Efficacy of Monoclonal Antibody for Targeting Oncogenic NID-Enriched Extracellular Vesicles in Liver Cancer	1,370,409

**2019**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Dr HCC Chang	Diagnostic Radiology	Develop a Novel Self-Navigated 3D Diffusion-Weighted Magnetic Resonance Imaging Technology	1,234,884
Dr JPY Cheung	Orthopaedics and Traumatology	A Novel Mobile Application Enabling Automated Body Contour Comparison and Spine Alignment Examination Using Artificial Intelligence	1,448,324
Professor FKL Leung	Orthopaedics and Traumatology	The Anti-Migration Osteoporotic Thread: A Technology Platform for the Next Generation of Bone Implants for Elderly Patients with Fractures of the Hip, Shoulder, and Spine	2,939,641

Professor KWK Yeung	Orthopaedics and Traumatology	Development of Sponge-Like Monodisperse PLGA/Alginate Core-Shell Microsphere Delivery Device to Enable Precisely Controlled Release of Magnesium Ions for In-Situ Bone Regeneration	1,069,762
Professor YL Lau	Paediatrics and Adolescent Medicine	Development of a molecular diagnosis tool for Primary Immunodeficiency patients	1,388,487
Professor LML Poon	Public Health	Development of genetically stable codon bias influenza virus of live attenuated vaccine potential	1,398,712

**2018**

Principal Applicant	Department/School/Unit	Project Title	Approved Amount (HK\$)
Dr SL Wong	Biomedical Sciences	Advanced Platform for High-throughput Discovery of Three-way Combination Therapies	1,399,906
Dr WKW Seto	Medicine	An Artificial Intelligence System For The Detection And Characterization Of Early Liver Cancer	4,712,540
Professor KWK Yeung	Orthopaedics and Traumatology	Development of Magnesium Based Osteogenic Bionanocomposites for Bone Specific Bio-scaffold 3D Printing	1,299,985

**2017**

Principal Applicant	Department/School/Unit	Project Title	Approved Amount (HK\$)
Professor Y Feng	Chinese Medicine	Secondary Development of Classical Chinese Medicine Formula Huanglian Jiedu Decoction (HLJDD): HLJDD Reducing Chemotherapy-induced Diarrhoea and Improving Chemotherapy Response	1,194,684
Dr CWS Sze	Chinese Medicine	Research and Development of the Chinese Medicine Formula ZB and Its Bioactive Compounds as Adjuvant Therapy for Colon Cancer and for Alleviation of Chemotherapy-Induced Osteoporosis using Network and Systems Pharmacological Approaches	1,115,221
Professor Z Chen	Microbiology	A Novel Therapeutic AAV-vectored Bi-Specific Neutralizing Antibody against HIV/AIDS	1,399,550

Dr Y Hu	Orthopaedics and Traumatology	A Novel Measurement System of Hand Function	1,397,574
Dr TM Wong	Orthopaedics and Traumatology	A Novel Osteoporotic Bone Fracture Simulation System Enabling Safer and More Effective Fracture Fixation Surgery and Implant Design for Elderly Patients	1,398,114
Professor US Khoo	Pathology	Testing Ivabradine on Patient Derived Xenografts: A Novel Potential Targeted Treatment for Breast Cancer	1,329,925

### 2016

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Dr RCC Chang	Biomedical Sciences	Establishment of pre-clinical platform and a novel 3D tissue visualisation protocol for therapeutic drug development of Lewy Body Dementias	1,169,961
Professor FKL Leung	Orthopaedics and Traumatology	Development of Anti-Cutout Implants for Internal Fixation of Osteoporotic Femoral and Humeral Neck Fractures	1,966,569

### 2015

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor KR Boheler	LKS Medical Faculty	Establishing an internationally competitive Stem Cell Biotech Cluster in HK: Bioartificial Human Hearts	10,000,000
Dr Y Hu	Orthopaedics and Traumatology	Development of a wearable transcranial dc-stimulator for chronic pain management	1,248,904
Professor KWK Yeung	Orthopaedics and Traumatology	Development of a Degradable Hybrid Bioactive Coating for Osteoporotic Fracture Fixation Implants (Clustered Project #4)	1,369,932

**2014**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor HF Tse	Medicine	Development of Wireless Powered Miniature Pacing Devices for Cardiac Rhythm Management	1,399,993
Professor Z Chen	Microbiology	A New Therapeutic Vaccine for HIV/AIDS	1,391,408

**2013**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor HF Tse	Medicine	Viral-Vector Integration-Free Human Induced Pluripotent Stem Cells Platform Derived from Urine Samples for Disease Diagnosis and Drug Screening	993,031
Professor US Khoo	Pathology	Development of Antibody Specific to Splice Variant of NCOR2 for the Management of Breast Cancer	899,845

**2012**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Dr Y Zhang	Chinese Medicine	Investigation of Therapeutic Efficacy and Mechanisms of Polysaccharide of <i>Dendrobium officinale</i> in Alleviating Cigarette-Induced Pulmonary Inflammation	826,701
Dr Q Lian	Medicine	Platform of Human Pluripotent Stem Cell-derived Mesenchymal Stem Cells for Tissue Regeneration and Industrial Application	948,232
Dr Y Hu	Orthopaedics and Traumatology	A novel technology for objective low back pain rehabilitation assessment based on automatic dynamic topography analysis of lumbar muscular contraction	957,255
Dr KW Lee	Pathology	Therapeutic targeting of liver cancer by use of monoclonal antibodies against CD47	993,678

Professor SYK Law	Surgery	Development of a blood-based assay to quantitate the serum level of microRNA-16 and microRNA-193b for discriminating esophageal squamous cell carcinoma patients with response to chemoradiation	926,900
Dr NPY Lee	Surgery	An Investigation into the Pre-clinical Efficacy of Monoclonal Antibody against Cadherin-17 and its Combined Treatment with Chemotherapeutic Drugs using Live Imaging in an Orthotopic Tumor Xenograft Model	965,400

**2011**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor DKY Shum	Biochemistry	A Novel Nerve Conduit that Combines Schwann Cell-seeded Chitosan Nanofibres with Chondroitinase ABC-loaded Chitosan Microbeads for Post-traumatic Nerve Regeneration	999,373
Dr J Chen	Chinese Medicine	Development of Novel Anti-cancer Small Molecules from Natural Herbs Targeting on Lactate Dehydrogenase A	705,556
Professor RA Li	Medicine	Re-engineering Regenerative Medicine: Hong Kong as an Emerging Asian Hub for Biotech and Stem Cell-based Translations	996,981
Dr M Zhang	Microbiology	Development of a "Two-in-One" Dual Specific Antibody Therapeutics for Treatment of Breast Cancer	988,663
Professor IOL Ng	Pathology	The Use of Anti-DKK1 (anti-Dickkopf-1) Monoclonal Antibody for Treatment of Liver Cancer	999,948
Professor K Man	Surgery	Circulating protein marker for predicting and preventing tumor recurrence after liver transplantation for hepatocellular carcinoma patients	994,750

**2010**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor AHY Tong	Centre for Genomic Sciences	Next-Generation High-throughput and Targeted DNA Sequencing Platforms for Systematic Discovery of Novel Diagnostic Markers of Common Disease	5,856,986
Dr GR Li	Medicine	Study on the Natural Anti-Atrial Fibrillation Compound Acacetin and Its Analogues/Derivatives	999,626
Professor KWK Yeung	Orthopaedics and Traumatology	Prevention of Orthopaedic Implant Related Bacterial Infections by Using Novel Plasma Surface Treatments	760,000

**2009**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor J Huang	Biochemistry	Development of a Pan-organism Riboregulator Device	974,524
Professor D Jin	Biochemistry	Knockdown of miR-BART5 in Epstein-Barr Virus-infected Cells by RNA Decoys Delivered through Novel Adenoviral Vectors: a New Paradigm for Cancer Therapy	993,100
Dr CWS Sze	Chinese Medicine	A Novel Estrogenic Protein from Edible Chinese Yam ( <i>Dioscorea Opposita</i> Thunb.) as a Potential Drug Candidate for Relieving Menopausal Syndrome	771,758

**2008**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Dr Y Hu	Orthopaedics and Traumatology	Hardware oriented processor for evoked potential fast extraction and auto-detection	967,150

**2007**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor DKY Shum	Biochemistry	Heparan sulfate oligosaccharide preparations - novel therapeutics in chronic inflammation	921,210
Professor Z Zhou	Biochemistry	Screening anti-ageing substances in small chemical library using premature ageing animals	999,350
Dr SYW Shiu	Physiology	Molecular cloning of the cellular receptor for the autocrine tumor suppressor secreted PDZ Domain-containing Protein 2 (sPDZD2)	861,000
Professor JMC Luk	Surgery	Liver cancer biomarker test: diagnostic use of CDH17 monoclonal antibodies	935,318

**2006**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor KF So	Anatomy	Hemostasis and Hong Kong: The future hub of Nanomedicine	994,405
Professor KF So	Anatomy	Nanobiomedical manufacturing: the workforce of tomorrow	994,750
Professor WW Lu	Orthopaedics and Traumatology	Novel Strontium Hydroxyapatite Nanowhisker (Sr-HA-Nano) reinforced bioactive cement for bone fracture treatment	895,80
Professor L Lu	Pathology	Innovative development of a gene-targeted therapy for rheumatoid arthritis	982,744

**2003**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor D Jin	Biochemistry	Development of novel nucleic acid therapeutics for viral infection and cancer	2,313,472
Professor LC Tsui	Genome Research Centre	To construct a haplotype map (HapMap) of 2% of the human genome	10,000,000

Professor KSL Lam	Medicine	Adiponectin as a novel diagnostic marker and therapeutic target for the treatment of diabetes, steatohepatitis and other metabolic disorders	2,288,960
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**2002**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor C Lin	Surgery	Discovery and clinical evaluation of novel immunogenic peptides for immunotherapy of nasopharyngeal carcinoma	3,133,000

**2000**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Professor RYK Man	Pharmacology	Standardization and certification (S&C) of Chinese medicine	1,000,000

**1999**

<b>Principal Applicant</b>	<b>Department/School/Unit</b>	<b>Project Title</b>	<b>Approved Amount (HK\$)</b>
Dr JWO Tam	Biochemistry	Development of the SNP-based fingerprinting and disease pattern recognition using the patented DNA technology developed in Hong Kong	2,843,000