

## LIST OF FUNDED PROJECTS - RGC COLLABORATIVE RESEARCH FUND (CRF)

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Exercise	Ref. No.	Project Title		Name of Project Coordinator (Affiliation)	Awarded Amount from RGC (HK\$)	1-page Summary	Preliminary Proposal	Full Proposal	Presentation File for RGC Interview
2009/10	CUHK5/CRF/09	TGF-β Signaling in End-Stage Organ Diseases: Molecular Mechanisms and Therapeutic Implications	<a href="#">Abstract</a>	Lan Hui-yao (Medicine and Therapeutics / Li Ka Shing Institute of Health Sciences)	6,900,000	✓	NA	✓	✓
2010/11	CUHK3/CRF/10	High Precision Measurement of Neutrino Oscillation at Daya Bay	<a href="#">Abstract</a>	Chu Ming-chung (Physics)	6,990,000	✓	NA	✓	✓
2011/12	CUHK2/CRF/11G	EXPO (Exocyst-positive Organelle): Dynamics, Biogenesis and Function in Plants	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	7,356,000	Please contact Prof. Jiang at <a href="mailto:lijang@cuhk.edu.hk">lijang@cuhk.edu.hk</a> for details			
2011/12	CUHK3/CRF/11G	Genomic and Molecular Studies of a Salinity Tolerance Locus in the Wild Soybean Genome	<a href="#">Abstract</a>	Lam Hon-ming (Life Sciences)	6,987,000	✓	NA	✓	✓
2011/12	CUHK5/CRF/11G	Memories and Monuments: Migration from South China to "Chinese Cities" in Different Colonial Settings, 1830-1930s	<a href="#">Abstract</a>	Leung Yuen-sang (History)	3,606,000		NA		
2012/13	CUHK1/CRF/12G	Functional Plasmonics with Energy Localization for Sensing, Nano-Actuation and Optoelectronics	<a href="#">Abstract</a>	Ho Aaron Ho-pui (Electronic Engineering)	5,000,000	✓	NA	✓	✓
2012/13	CUHK3/CRF/12R	Macrophage-Myofibroblast-Transition in Organ Fibrosis: Molecular Mechanisms and Clinical Implications	<a href="#">Abstract</a>	Lan Hui-yao (Medicine and Therapeutics / Li Ka Shing Institute of Health Sciences)	8,800,000	✓	NA	✓	✓
2012/13	CUHK4/CRF/12G	Multifunctional Ultrasensitive Sensing with Hybrid Gold-Diamond Nano-Systems	<a href="#">Abstract</a>	Liu Ren-bao (Physics)	5,000,000	Please contact Prof. Liu at <a href="mailto:rblu@phy.cuhk.edu.hk">rblu@phy.cuhk.edu.hk</a> for details			
2012/13	CUHK7/CRF/12G	Development of New Methodologies for New Carborane Materials	<a href="#">Abstract</a>	Xie Zuowei (Chemistry)	8,000,000	✓	NA	✓	✓
2013/14	CUHK1/CRF/13G	Targeting RNA and Protein Toxicities of Polyglutamine Diseases Using Peptidylc Inhibitors	<a href="#">Abstract</a>	Chan Edwin Ho-yin (Life Sciences)	7,044,220	✓	NA	✓	✓
2013/14	CUHK4/CRF/13G	Searching for New Physics with the Large Hadron Collider	<a href="#">Abstract</a>	Chu Ming-chung (Physics)	8,661,000	✓	NA	✓	✓
2013/14	CUHK6/CRF/13G	Assistive Surgical Robots	<a href="#">Abstract</a>	Liu Yunhui (Mechanical and Automation Engineering)	9,896,000	✓	NA	✓	✓
2013/14	CUHK8/CRF/13G	Reading Development in Chinese and in English: Genetic and Neuroscience Correlates	<a href="#">Abstract</a>	McBride Catherine (Psychology)	7,511,385	✓	NA	✓	✓
2014/15	C4011-14R	EXPO and Autophagosome in Plants	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	8,360,000	Please contact Prof. Jiang at <a href="mailto:lijang@cuhk.edu.hk">lijang@cuhk.edu.hk</a> for details			
2014/15	C4014-14G	Elucidating the Molecular Defects Associated with PTEN Mutations in Autism Spectrum Disorders	<a href="#">Abstract</a>	Chan Andrew Man-lok (Biomedical Sciences)	5,330,831	NA	✓	✓	✓
2014/15	C4017-14G	Functional Liver Cancer Epigenomics: Exploiting Epigenetic Vulnerabilities for Therapeutics	<a href="#">Abstract</a>	Cheng Alfred Sze-lok (Biomedical Sciences)	7,418,375	NA	✓	✓	✓
2014/15	C4028-14G	Joint R&D of Biomaterials as Orthopaedic Implants	<a href="#">Abstract</a>	Qin Ling (Orthopaedics and Traumatology)	6,190,010	NA	✓	✓	✓
2014/15	C4030-14G	Non-planar Polycyclic Arenes: From Molecules to Materials	<a href="#">Abstract</a>	Miao Qian (Chemistry)	6,300,000	NA	✓	✓	X
2014/15	C4042-14G	Marine Genomics: Crustacean Evolution and Aquaculture	<a href="#">Abstract</a>	Chu Ka-hou (Life Sciences)	7,200,000	NA	✓	✓	✓
2014/15	C4047-14E	A Tier-2 Computing Center for Fundamental Physics	<a href="#">Abstract</a>	Chu Ming-chung (Physics)	3,997,500	NA	✓	✓	✓
2016/17	C4012-16E	The First Integrated cryo-EM and cryo-ET Shared Facility for Life Sciences Research in Hong Kong	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	9,500,000	Please contact Prof. Jiang at <a href="mailto:lijang@cuhk.edu.hk">lijang@cuhk.edu.hk</a> for details			
2017/18	C4002-17G	Molecular Mechanisms of Autophagy and Autophagosome in Plants	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	7,209,550	Please contact Prof. Jiang at <a href="mailto:lijang@cuhk.edu.hk">lijang@cuhk.edu.hk</a> for details			
2017/18	C4026-17W	Joint R&D of Magnesium-based Orthopaedic Implants	<a href="#">Abstract</a>	Qin Ling (Orthopaedics and Traumatology)	5,545,807	NA	✓	✓	✓
2017/18	C4054-17W	Reading, Writing, and Mathematics: Behavioral Genetics, Molecular Genetics, and Neuro Markers of Early Academic Achievement in Hong Kong Chinese Children	<a href="#">Abstract</a>	McBride Catherine (Psychology)	6,716,587	NA	✓	✓	✓
2018/19	C4041-18E	A State-of-the-art X-ray Diffraction Facility for Structural Biology Research in Hong Kong	<a href="#">Abstract</a>	Wong Kam-bo (Life Sciences)	2,306,960	NA	✓	✓	✓
2018/19	C4045-18W	Deciphering Enhancer Regulation of Tumor Immune Evasion to Develop New Combination Immunotherapies	<a href="#">Abstract</a>	Cheng Alfred Sze-lok (Biomedical Sciences)	6,990,790	Please contact Prof. Cheng at <a href="mailto:alfredcheng@cuhk.edu.hk">alfredcheng@cuhk.edu.hk</a> for details			
2018/19	C4057-18E	A Nanochannel-based Next-generation Mapping System for the Study of Complex Genomic Feature and Variation for Biotechnological and Biomedical Applications	<a href="#">Abstract</a>	Chan Ting-fung (Life Sciences)	2,173,431	NA	✓	✓	✓
2019/20	C4033-19E	The First Integrated State-of-the-Art Sample Preparation System for Cryo-Electron Microscopy/Tomography Analysis to Promote Advanced Cellular and Structural Biology Research in Hong Kong	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	7,439,308	Please contact Prof. Jiang at <a href="mailto:lijang@cuhk.edu.hk">lijang@cuhk.edu.hk</a> for details			
2020/21	C4002-20W	Vacuole Dynamics, Biogenesis and Functions in Plants	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	6,400,000	Please contact Prof. Jiang at <a href="mailto:lijang@cuhk.edu.hk">lijang@cuhk.edu.hk</a> for details			

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2020/21	C4012-20E	Hong Kong's Window on the Universe: Building a Pioneering Submillimetre Astronomical Camera	<a href="#">Abstract</a>	Li Hua-bai (Physics)	3,100,000	NA	✓	✓	✓
2020/21	C4015-20E	Earth BioGenome Project: Hong Kong	<a href="#">Abstract</a>	Hui Jerome Ho-lam (Life Sciences)	3,250,000	NA	✓	✓	✓
One-off COVID-19 and NID (2020/21)	C4158-20G	(Mis)communication, Trust, and Information Environments : A Comparative Study of the COVID-19 "Infodemics" in Four Chinese Societies	<a href="#">Abstract</a>	Wei Ran (Journalism and Communication)	3,067,301	NA	✓	✓	✓
2021/22	C4032-21G	Dissecting the Therapeutic Mechanism of an Effective Combination Treatment Targeting Neuromuscular Junction Degeneration and Myosteatosis to Combat Sarcopenia	<a href="#">Abstract</a>	Cheung Louis Wing-hoi (Orthopaedics and Traumatology)	4,772,807	NA	✓	✓	✓
2021/22	C4044-21G	Multi-modal Approaches to Determine Digital Clinical Phenotyping, Novel Proteomic Biomarkers, and Microbiota-host Responses of REM Sleep Behavior Disorder, a Prodromal Stage of Alphasynucleinopathy Neurodegeneration, in a Prospective Family Cohort	<a href="#">Abstract</a>	Wing Yun-kwok (Psychiatry)	7,214,620	NA	✓	✓	✓
2021/22	C4062-21G	Recurrent First Trimester Miscarriage: Genetic Etiology, Diagnosis and Prevention	<a href="#">Abstract</a>	Choy Richard Kwong-wai (Obstetrics and Gynaecology)	8,021,650	NA	✓	✓	✓
2021/22	C4002-21E	The First Integrated State-of-the-Art Live Cell Imaging Platforms to Timely Promote Interdisciplinary and Advanced Life Sciences Research in Hong Kong and Beyond	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	10,000,000	Please contact Prof. Jiang at ljiang@cuhk.edu.hk for details			
Second Round One-off COVID-19 and NID (2021/22)	C4061-21G	Neuropsychiatric 'Long-COVID' in Adult Patients	<a href="#">Abstract</a>	Chau Steven Wai-ho (Psychiatry)	3,251,480	NA	✓	✓	✓
Second Round One-off COVID-19 and NID (2021/22)	C4072-21G	High-precision and Privacy-preserving Indoor Social Contact Tracking Technologies for Infectious Disease Transmission Modeling and Control	<a href="#">Abstract</a>	Xing Guoliang (Information Engineering)	7,775,600	NA	✓	✓	✓
Second Round One-off COVID-19 and NID (2021/22)	C6036-21G	From Structural to Genomic Biology: A Multi-scale Approach Tightly Integrating Structural Biology and Novel Genomics Platform to Quantitatively Analyze the Transcription and its Regulation of SARS-CoV-2 Viral RNA Polymerase	<a href="#">Abstract</a>	Cheung Peter Pak-hang (Chemical Pathology)	8,000,000	Please contact Prof. Cheung at ppcheung@cuhk.edu.hk for details			
2022/23	C4006-22G	Lingnan Culture and the World: Construction and Change in the Cultural Landscape of Cantonese Literati from the Late Qing to the Republican Era in China (1821–1949)	<a href="#">Abstract</a>	Lai Chi-tim (Cultural and Religious Studies)	4,070,718	NA	✓	✓	✓
2022/23	C4074-22G	Adaptive 3D Printing: Design, Manufacturing, Modeling and Optimization	<a href="#">Abstract</a>	Liao Wei-hsin (Mechanical and Automation Engineering)	7,338,893	NA	✓	✓	✓
2022/23	C4004-22Y	Artificial Intelligence (AI)-assisted Risk-based Prostate Cancer Detection: A Synergy of Novel Biomarkers, Advanced Imaging, and Robotic-assisted Diagnosis	<a href="#">Abstract</a>	Chiu Peter Ka-fung (Surgery)	1,661,542	NA	NA	✓	✓
2022/23	C4005-22Y	Fundamental-Studies-Guided Growing of High-Quality, Mechanically Stable, Reduced-Dimensional Perovskites for Scalable Flexible Optoelectronic Devices	<a href="#">Abstract</a>	Liu Xinhui (Physics)	4,169,826	NA	NA	✓	✓
2023/24	C4001-23G	Curved $\pi$ -Conjugated Systems: from Synthesis to Devices	<a href="#">Abstract</a>	Miao Qian (Chemistry)	8,204,162	NA	✓	NA	NA
2023/24	C4004-23G	Spatially Resolved in Operando Temperature Sensing in Electrochemical Devices by Nananodiamond Quantum Sensors	<a href="#">Abstract</a>	Li Quan (Physics)	6,054,634	NA	✓	✓	✓
2023/24	C4014-23G	Molecular Mechanisms of Vacuole Biogenesis and Vacuole Fission in Plants	<a href="#">Abstract</a>	Jiang Liwen (Life Sciences)	9,500,000	Please contact Prof. Jiang at ljiang@cuhk.edu.hk for details			
2023/24	C4042-23G	Intelligent Surgical Robotic Assistant with Multimodal-AI Perception and Interaction	<a href="#">Abstract</a>	Li Zheng (Surgery)	7,778,633	Please contact Prof. Li at lizheng@cuhk.edu.hk for details			
2023/24	C4049-23E	A Long-read and High Throughput DNA Sequencing Platform for Studying Genomic Landscapes and Metagenomics Involvement in Human Diseases	<a href="#">Abstract</a>	Tsui Kwok-wing (Biomedical Sciences)	7,299,832	NA	✓	✓	✓
2023/24	C4050-23G	Investigating Long-range Many-body Physics with Ultracold Dipolar Gases in Optical Lattices	<a href="#">Abstract</a>	Wang Dajun (Physics)	6,759,707	NA	✓	✓	✓
2023/24	C4001-23Y	A Predictive Personalization Approach to Enhance Foreign Language Learning and Teaching	<a href="#">Abstract</a>	Feng Gangyi (Linguistics and Modern Languages)	4,845,992	Please contact Prof. Feng at g.feng@cuhk.edu.hk for details			

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2023/24	C4003-23Y	Uncovering the Whole Spectrum of Genetic Variations Underlying Schizophrenia and its Prognosis: A Whole-genome Sequencing (WGS) Study and Prediction Modeling with Machine Learning Approaches	<a href="#">Abstract</a>	So Hon-cheong (Biomedical Sciences)	4,673,639	Please contact Prof. So at hcso@cuhk.edu.hk for details			
2023/24	C4004-23Y	Intercepting the Mitochondrial-to-Nuclear Communication for Treatment of Vascular Inflammation and Atherosclerosis	<a href="#">Abstract</a>	Tian Xiaoyu (Biomedical Sciences)	3,661,367	Please contact Prof. Tian at xytian@cuhk.edu.hk for details			
2024/25	C4007-24E	Live Imaging of Early Embryonic Developmental Processes at Subcellular Level with a High[1]throughput Dual View Light Sheet Microscope	To be provided in due course	CHAN David Yiu-leung (Obstetrics and Gynaecology)	2,815,200	✓	✓	✓	✓
2024/25	C4028-24G	Transforming Chinese Agriculture and Food Systems to Mitigate Reactive Nitrogen Emissions and their Contribution to Air Pollution and Climate Change	To be provided in due course	TAI Amos Pui-kuen (Earth and Environmental Sciences)	3,395,284	✓	✓	✓	✓
2024/25	C4038-24G	Development of Modular Microrobots and the Image-guided Intervention for Minimally Invasive Anti-adhesion Treatment after Tubal Cannulation	To be provided in due course	ZHANG Li (Mechanical and Automation Engineering)	8,095,285	✓	✓	✓	✓
2024/25	C4042-24G	Targeting Metabolic Vulnerabilities to Overcome Chemotherapy and Immunotherapy Resistance in Colorectal Cancer	To be provided in due course	WONG Chi-chun (Medicine and Therapeutics)	6,000,000	✓	✓	✓	✓
2024/25	C4043-24E	C-FIST: Establishing World's Premier Environmental Organic Carbon Fingerprint Imaging Science & Technology Laboratory in Hong Kong	To be provided in due course	CHOW Alex Tat-shing (Earth and Environmental Sciences)	3,535,400	✓	✓	✓	✓
2024/25	C4002-24Y	Clinical and Mechanistic Investigation of the Cross Reactivity of Antibodies against Emerging Viral Variants to Facilitate Vaccine Design	To be provided in due course	CHEUNG Peter Pak-hang (Chemical Pathology)	4,500,000	✓	NA	Please contact Prof. Cheung at ppcheung@cuhk.edu.hk for details	
2024/25	C4004-24Y	3D Photonic-electronic Neural Network Enabling Versatile and Large-scale AI Computing	To be provided in due course	HUANG Chaoran (Electronic Engineering)	4,087,800	✓	NA	NA	✓
2024/25	C4005-24Y	Base Editing as an Intervention Strategy for Neurodevelopmental Disorders: Investigating Pathophysiological Mechanisms and Therapeutic Applications	To be provided in due course	IP Jacque Pak-kan (Biomedical Sciences)	4,494,600	Please contact Prof. IP at jacqueip@cuhk.edu.hk fro details			