

## NMRC Awarded Projects Competitive Research Grants - January 2023 Grant Calls

### Clinician Scientist Individual Research Grant (CIRG) 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
CIRG23jan-0004	MOH-001353	Investigating effects of Roseburia intestinalis on colorectal carcinogenesis and its dietary modulation for cancer prevention	Wong Hei Sunny	Nanyang Technological University
CIRG23jan-0035	MOH-001354	Evaluation of biomarkers of tuberculosis treatment response, disease cure and relapse detection in the TRUNCATE-TB trial	Nicholas Paton	National University Hospital
CIRG23jan-0013	MOH-001355	Matrix metalloproteinase inhibition to improve neurological and mortality outcomes in Central Nervous System Tuberculosis	Catherine Ong	National University of Singapore
CIRG23jan-0015	MOH-001356	Therapeutic targeting of the pulmonary microbiome in chronic respiratory disease	Sanjay Haresh Chotirmall	Nanyang Technological University
CIRG23jan-0017	MOH-001357	A bioinspired and photoprotective scaffold for retinal stem cell therapy	Liu Zengping	National University of Singapore
CIRG23jan-0022	MOH-001358	Investigate the potential function of telomeric variant sequences in allele-specific telomere protection and cardiovascular aging	Shang Li	Duke-NUS Medical School
CIRG23jan-0028	MOH-001359	Brown Fat as Therapeutic Strategy for Obesity and Associated Metabolic Diseases via Functional Food/Nutraceutical Approach - Molecular Mechanisms of Pentacyclic Triterpenes (BRACE)	Leow Khee Shing Melvin	Tan Tock Seng Hospital
CIRG23jan-0026	MOH-001360	Detection and quantification of Na/K redistribution disorder in patients with primary aldosteronism	Jens Titze	Duke-NUS Medical School
CIRG23jan-0003	MOH-001361	A novel way to manage reperfusion injury in ischemic stroke	Liao Ping	National Neuroscience Institute
CIRG23jan-0027	MOH-001362	Identification and evaluation of novel PI3K-inhibitor based drug combinations using patient-derived organoids from refractory metastatic breast cancers	Lee Soo Chin	National University Hospital

### Clinician Scientist Individual Research Grant - New Investigator Grant (CNIG) 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
CNIG23jan-0012	MOH-001370	Risk of advanced fibrosis in first-degree relatives of patients with nonalcoholic fatty liver disease-related hepatocellular carcinoma	Daniel Huang	National University Hospital
CNIG23jan-0001	MOH-001371	Translating Mesenchymal Stromal Cell Exosomes into Therapeutics for Sarcopenia	Wang Chongyan	National University Hospital
CNIG23jan-0002	MOH-001372	An open label, single arm study of the efficacy of accelerated intermittent theta burst stimulation in schizophrenia patients with persistent negative symptoms	Tan Xiaowei	Institute of Mental Health
CNIG23jan-0006	MOH-001373	Pharmacogenomics of Immune Related Adverse Events from Immune Checkpoint Inhibitors in Asian Patients – Genomic Sequencing and Replication Study	Huang Yiqing	National University Hospital
CNIG23jan-0003	MOH-001374	Clinical validation of novel systemic lupus erythematosus (SLE) biomarkers for therapeutic and diagnostic development: nucleolar alarmins and their reactive B cells	Xu Chuanhui	Tan Tock Seng Hospital
CNIG23jan-0009	MOH-001375	Therapeutic Targeting of the Autotaxin-Lysophosphatidic Acid Axis as an Immunomodulatory Strategy in Ovarian Cancer	Natalie Ngoi Yan Li	National University Hospital
CNIG23jan-0010	MOH-001376	Deciphering cellular and molecular markers in diabetes polyneuropathy (DPN) and chronic inflammatory demyelinating polyradiculoneuropathy (CIDP) through corneal nerve imaging, serum and tear cytokines profiling	Koh Shimin Jasmine	National Neuroscience Institute
CNIG23jan-0015	MOH-001377	Dissecting in vitro the immunological mechanisms driving cutaneous adverse drug reactions	Lim Xin Rong	Tan Tock Seng Hospital
CNIG23jan-0008	MOH-001378	Imaging-transcriptomics of essential tremor brain phenotypes (ETIX)	Thomas Welton	National Neuroscience Institute
CNIG23jan-0004	MOH-001379	Gut microbiota communication with bone marrow in cardiometabolic disease	Kazuyuki Kasahara	Nanyang Technological University
CNIG23jan-0013	MOH-001380	Investigating the genomics of racial/ethnic disparities in toxicities and survival outcomes in Asian children with childhood acute lymphoblastic leukemia	Shawn Lee	National University Hospital

### NMRC CTG-Investigator-Initiated Trials (CTG-IIT) 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
CTGIIT23jan-0006	MOH-001417	treatment Individualisation By eBy stratificatiON in Locoregionally Advanced Nasopharyngeal carcinoma: A multi-arm platform study (RIBBON-LA-01)	Melvin Lee Kiang Chua	National Cancer Centre Singapore
CTGIIT23jan-0001	MOH-001419	A novel individualized connectome-guided approach for precision intermittent theta burst stimulation for depression: a double blind, randomized controlled trial	Tor Phern Chern	Institute of Mental Health
CTGIIT23jan-0007	MOH-001418	Singapore-Malaysia Renal Trials in Nephrotic Syndrome (SMaRT-NS): Dupilumab maintenance therapy in steroid idiopathic nephrotic syndrome	Yap Hui Kim	National University of Singapore

### Population Health Research Grant (PHRG) Open Category 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
PHRGOC23Jan-0002	MOH-001427	How Do We Scale Up Hospital-at-Home Successfully? A Prospective, Multi-method, Multi-phase Investigation	Stephanie Ko	National University Hospital
PHRGOC23Jan-0005	MOH-001426	360-degrees Video Virtual Reality for Nursing Job Shadowing to Improve Perceptions of Nursing as a Career	Liaw Sok Ying	National University of Singapore
PHRGOC23Jan-0013	MOH-001436	Singapore Knee Osteoarthritis Cohort Study (SKETCH)	Tan Yijia Bryan	Woodlands Health Pte Ltd

### Population Health Research Grant - New Investigator Grant (PHRG-NIG) 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
PHRGNIG23jan-0008	MOH-001428	Improving the Mental Health of Patients with Comorbid Chronic Diseases: A Randomized Controlled Evaluation of the Feasibility and Preliminary Effectiveness of a Single-Session Solution-Focused Consultation (SSC) in a Primary Care Setting	Jacqueline Lee Tilley	Nanyang Technological University
PHRGNIG23jan-0012	MOH-001429	Improving weight loss in healthy adults with overweight and obesity: An artificial intelligence-assisted dietary prediction and prevention system with continuous glucose monitoring	Jocelyn Chew	National University of Singapore
PHRGNIG23Jan-0013	MOH-001424	Robust Polygenic Risk Score for Metabolic Syndrome of Asian Women	Hong Pan	Singapore Institute for Clinical Sciences
PHRGNIG23jan-0014	MOH-001430	Modelling cost-effective lung cancer screening strategies	Borame Sue Lee Dickens	National University of Singapore

PHRGNIG23jan-0015	MOH-001431	Trends and cost models of general anaesthesia in children due to dental reasons: using Artificial Intelligence-based interpretable clinical score (GA-AI triage) to reduce the intervention	Lai Wen Pui Bien	National Dental Centre Singapore
-------------------	------------	---	------------------	----------------------------------

### Open Fund - Individual Research Grant (OFIRG) 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
OFIRG23jan-0007	MOH-001384	Using a humanized antibody to manage cognitive decline during chronic hypoxia	Liao Ping	National Neuroscience Institute
OFIRG23jan-0008	MOH-001385	Splicing Regulation and Cancer-Related Cellular Functions of Antiviral ZAP Isoforms	Francesc Xavier Roca Castella	Nanyang Technological University
OFIRG23jan-0009	MOH-001386	NF1-derived extracellular vesicles as a therapeutic agent for glioma	Ho Ai-wei, Ivy	National Neuroscience Institute
OFIRG23jan-0011	MOH-001387	Characterization of DNA repair pathways in the regulation of H3K27ac-bound c-MYC, YY1 and CTCF-associated 3D genome organization loops in high-c-MYC myeloid leukemia	Melissa Fullwood	Nanyang Technological University
OFIRG23jan-0025	MOH-001388	In situ Therapeutic Nanovaccine for Personalized Cancer Immunotherapy	Xiaoyuan Chen	National University of Singapore
OFIRG23jan-0031	MOH-001389	Investigating the role of BRD4 isoforms in embryonal rhabdomyosarcoma	Reshma Taneja	National University of Singapore
OFIRG23jan-0033	MOH-001390	Investigating the relationship between lipid metabolism defects and astrocyte-mediated toxicity in neurodegeneration	Ng Shi Yan	IMCB - Institute of Molecular and Cell Biology
OFIRG23jan-0037	MOH-001391	Arf senses and prevents dysplastic changes during metaplasia and colonic epithelial regeneration	Nicholas Barker	IMCB - Institute of Molecular and Cell Biology
OFIRG23jan-0047	MOH-001392	AI-assisted wearable undergarment stethoscope for early detection of heart failure	Tural Khudiyev	National University of Singapore
OFIRG23jan-0052	MOH-001393	Investigating the circuitry underlying prosocial behaviors to gain insights into social disorders.	Jai S Polepalli	National University of Singapore
OFIRG23jan-0056	MOH-001394	Energizing Mitochondria in Heart Failure : Revving Taurine Metabolism with Microprotein CRISTA	Lena Ho	Duke-NUS Medical School
OFIRG23jan-0057	MOH-001395	Identify novel antimicrobial targets by high-throughput profiling of genetic interactions in human respiratory pathogens.	Sham Lok To	National University of Singapore
OFIRG23jan-0060	MOH-001396	Artificial intelligence (AI)-powered platform for discovery of novel FDA-approved drug combinations against multi-drug resistant <i>Enterobacteriaceae</i> species	Gan Yunn Hwen	National University of Singapore
OFIRG23jan-0061	MOH-001397	The network structure of the Fragile-X neuronal granule	Adam Claridge-Chang	Duke-NUS Medical School
OFIRG23jan-0070	MOH-001398	Capturing the role of SATB2 in cortical neuron development and mental health with advanced human in vivo cellular models.	Vincenzo De Paola	Duke-NUS Medical School
OFIRG23jan-0074	MOH-001349	Investigating the function of $\beta$ -cat-TCF4 responsive transcription (CRT) in promoting an immune tolerant microenvironment in colorectal cancers (CRC)	Dasgupta Ramanuj	Genome Institute of Singapore

OFIRG23jan-0079	MOH-001399	Oncogenic non-V600 BRAF Mutants and Their Precise Targeting for Cancer Therapy	Hu Jiancheng	National Cancer Centre Singapore
OFIRG23jan-0081	MOH-001400	Elucidation of the mechanisms and functions of lipid diversity in clinical antimicrobial resistant <i>Klebsiella pneumoniae</i>	Guan Xue Li	Nanyang Technological University
OFIRG23jan-0086	MOH-001401	Protein-centric prioritising predictors for cancer antigen discovery	Wu Wei	Singapore Immunology Network
OFIRG23jan-0087	MOH-001402	Accounting for allosteric effects of mutations in diagnostics and personalised treatment within SG10K project	Igor Berezovsky	Bioinformatics Institute

### Open Fund - Young Individual Research Grant (OFYIRG) 23 January Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
OFYIRG23jan-0002	MOH-001328	Rational design of broad-spectrum fusion inhibitors	Tianshu Xiao	Nanyang Technological University
OFYIRG23jan-0004	MOH-001329	Functional evaluation of Parkinson's disease-associated SMPD1 variants in substantia nigra cell types	Chew Guo Yan Elaine	Nanyang Technological University
OFYIRG23jan-0005	MOH-001330	Gut microbiota-derived metabolites: the link between gut microbiota and development of gestational diabetes	Xu Jia	Singapore Institute for Clinical Sciences
OFYIRG23jan-0011	MOH-001331	Real-time Quantitative Evaluation of Cancer Therapy Efficacy by NIR-IIb Luminescence Lifetime Imaging	Zhao Mengyao	National University of Singapore
OFYIRG23jan-0012	MOH-001350	Deploying omipalisib as an anti-cancer drug in head and neck cancer	Quah Shan	A*STAR Skin Research Labs
OFYIRG23jan-0014	MOH-001332	Generating an MS-CETSA footprint to capture the dynamic interactome of autophagy and dissect complex drug-induced cellular responses on a proteome-wide scale	Ying Yu Liang	Institute of Molecular and Cell Biology
OFYIRG23jan-0016	MOH-001333	Large DNA genome editing by "Prime-exchange" with Enhanced Efficiency and Safety	Chen Ying	Institute of Molecular and Cell Biology
OFYIRG23jan-0017	MOH-001334	Novel Gastrin-releasing peptide receptor (GRPR) and Integrin $\alpha\beta3$ Dual-targeting Probes for Radiotheranostics of Prostate Cancer	Jingjing Zhang	National University of Singapore
OFYIRG23jan-0020	MOH-001347	Development of temperature-responsive pseudorotaxane carriers for delivery of Camptothecin	TIAN Chong	National University of Singapore
OFYIRG23jan-0023	MOH-001335	Investigating the unknown molecular players in colitis driven inflammation.	Prativa Majee	Institute of Molecular and Cell Biology
OFYIRG23jan-0024	MOH-001336	Engineering CRISPR-associated transposons for precise RNA-guided DNA integration in gene therapy	Leslie Beh	Institute of Molecular and Cell Biology

OFYIRG23jan-0026	MOH-001337	Develop a Real-world Evidence-based, Flexible Decision-Making Evaluation Framework for Optimizing Precision Medicine in Severe Asthma	Chen Wenjia	National University of Singapore
OFYIRG23jan-0030	MOH-001351	Repurposing belinostat analogues as a novel therapeutic for atopic dermatitis	Gowtham Subramanian	A*STAR Skin Research Labs
OFYIRG23jan-0031	MOH-001338	Rebuild corticospinal tract by cell transplantation in Ischemic Stroke	Wang Zhifu	Duke-NUS Medical School
OFYIRG23jan-0032	MOH-001339	The functional contributions of tissue-specific viral variants in Zika virus disease pathogenesis	Chan Wing Ki, Kitti	Duke-NUS Medical School
OFYIRG23jan-0034	MOH-001340	Cancer-specific antigen discovery platform using Ribosome profiling	Sonia Pankaj Chothani	Duke-NUS Medical School
OFYIRG23jan-0036	MOH-001341	Functional Characterisation of Enhancers of ALX1 and Beyond in Human Craniofacial Enhanceropathies	Navin Brian Ramakrishna	Genome Institute of Singapore
OFYIRG23jan-0039	MOH-001342	Expanding the Toolbox for Therapeutic RNA Editing of Inherited Retinal Disease	Beverly Mok Yin Leng	Institute of Molecular and Cell Biology
OFYIRG23jan-0040	MOH-001343	Development of biomarker and epigenetic priming strategy to overcome CAR T cell therapy resistance in HER2+ breast tumor	Ong Li Teng	Genome Institute of Singapore
OFYIRG23jan-0044	MOH-001348	Functional identification of small molecule suppressors for deficient AMPK activity with cellular aging	Mohammad Alfatah	Bioinformatics Institute
OFYIRG23jan-0049	MOH-001344	AI deep learning approach for predicting cancer immunotherapy response in hepatocellular carcinoma using marker-free H&E images	Lau Mai Chan	Bioinformatics Institute
OFYIRG23jan-0054	MOH-001345	Investigating the role of COVID19 vaccine in regulating tumor associated macrophages and related trained immunity for re-invigorating their anti-tumor response	Romana Videgar	Singapore Immunology Network
OFYIRG23jan-0056	MOH-001346	Targeting Stress Granule-associated RNA Structure and Interaction in Cancers Cells	Bowen Zhu	Genome Institute of Singapore