

## NMRC Awarded Projects Competitive Research Grants - July 2024 Grant Calls

Clinician Scientist Individual Research Grant (CIRG) 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
CIRG24jul-0008	MOH-001698	Effect of innate immune reprogramming by primary dengue on host response to secondary dengue	Ooi Eng Eong	Duke-NUS Medical School
CIRG24jul-0009	MOH-001705	Histological Validation and Etiological Markers of Small Fiber Neuropathy	Amanda Chee Yun Chan	National University Hospital
CIRG24jul-0010	MOH-001709	The Role of Peroxisome Proliferator-activated Receptors-α Agonists in Promoting Corneal Nerve Trophic Function and Nerve Regeneration	Yu-Chi Liu	Singapore Eye Research Institute
CIRG24jul-0015	MOH-001708	Metabolic biomarkers for dietary intake and health outcomes in multi-ethnic Asian populations	John Chambers	Nanyang Technological University
CIRG24jul-0021	MOH-001706	Leveraging artificial intelligence and whole genome sequencing to unravel transmission dynamics of carbapenemase-producing Enterobacterales in Singapore hospitals (CaPES-AI)	Kalisvar Marimuthu	Tan Tock Seng Hospital
CIRG24jul-0022	MOH-001699	The pathobiology of tRNA modifications in cardiac development and diseased cell states	Roger Foo	National University of Singapore
CIRG24jul-0023	MOH-001700	Spexin as a novel metabo-inflammation treatment target for heart failure with preserved ejection fraction	Derek Hausenloy	National Heart Centre Singapore
CIRG24jul-0028	MOH-001703	Investigating the role of UBOX5 in Primary Angle Closure Glaucoma.	Aung Tin	Singapore Eye Research Institute
CIRG24jul-0034	MOH-001702	An Evaluation of the Mechanisms of Allergy to Galacto-oligosacharide, a Supplemental Prebiotic in Food and Beverage	Lee Bee Wah	National University of Singapore
CIRG24jul-0037	MOH-001707	Lean diabetic heart failure: Validation and Mechanistic Insights of Treatment Targets	Jasper Tromp	National University of Singapore
CIRG24jul-0045	MOH-001701	Extent and extending tumor-targeting immune repertoire in locally advanced head and neck cancer	Narayanan Gopalakrishna Iyer	National Cancer Centre Singapore



CIRG24jul-0048	MOH-001704	Large prospective cohort to study adiposopathy,	Lim Su Chi	Alexandra Health Pte Ltd
		sarcopenia and cardiorenal failure among Asians		
		with type 2 diabetes		

Clinician Scientist Individual Research Grant - New Investigator Grant (CNIG) 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
CNIG24jul-0004	MOH-001759	Novel Non-Invasive Imaging to quantify blood brain barrier dysfunction in vascular mild cognitive impairment	Ashwati Vipin	Nanyang Technological University
CNIG24jul-0005	MOH-001755	Investigating the Underlying Disease Mechanism of PURA Syndrome: Modelling Cortical Dysfunction for Therapeutic Target Discovery	Jeannette Goh Lay Kuan	KK Women's & Children's Hospital
CNIG24jul-0006	MOH-001762	Integrating Artificial Intelligence, Phenotypic Analysis, and Genomics to Elucidate the Systemic and Genetic Foundations of Drusen Subtypes in our Population	Ngo Wei Kiong	Tan Tock Seng Hospital
CNIG24jul-0011	MOH-001757	Cortical connectivity, EEG and Gait Analysis in motor complete paraplegic patients post epidural spinal stimulator implantation	Zhi-Yan Valerie Ng	Tan Tock Seng Hospital
CNIG24jul-0012	MOH-001758	GENEKIDS-PRO: Genomic Enhancement and Patient Engagement in NEphrology through Multidisciplinary KIDney Genetics Clinic Implementation and Integration in Singapore – using PROcess Evaluation Framework.	Lim Ru Sin	Tan Tock Seng Hospital
CNIG24jul-0013	MOH-001760	Al-Enhanced Smart Toilet System for Optimal Bowel Preparation in Colonoscopy Patients	Yew Kuo Chao	Tan Tock Seng Hospital
CNIG24jul-0015	MOH-001756	Impact of a personalized, multidimensional & adaptive exercise intervention on endothelial function in type 2 diabetes mellitus	Chee Ying Jie	Tan Tock Seng Hospital
CNIG24jul-0018	MOH-001761	Developing a Multidisciplinary Intervention Program for prevention of dementia	Deng Xiao	National Neuroscience Institute
CNIG24jul-0022	MOH-001681	A multilineage dependency mapping of the tumour ecosystem in EGFR-mutated Non-small Cell Lung Cancer	Regina Hoo	National Cancer Centre Singapore



NMRC CTG-Investigator-Initiated Trials (CTG-IIT) 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
CTGIIT24jul-0004	MOH-001753	Phase I/Ib, open label, dose-escalation study of	Chen Yunxin	Singapore General Hospital
		CD5-directed CAR γδT-cells (COGADE-C5) in		
		patients with relapsed/refractory CD5+		
		haematological malignancies		
CTGIIT24jul-0010	MOH-001754	A Randomized Controlled Clinical Trial to Assess	Angela Yee-Moon Wang	Singapore General Hospital
		the Effect of Dapagliflozin on Renal and		
		Cardiovascular Outcomes in Patients with Severe		
		Chronic Kidney Disease (Renal Life Cycle Trial)		

## Population Health Research Grant (PHRG) Open Category 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
PHRGOC24jul-0008	MOH-001789	Effectiveness of An Integrated Palliative Surgical	Jolene Wong	Singapore General Hospital
		Oncology and Rehabilitation Care Model in		
		Patients with Advanced Cancer Undergoing		
		Major Surgery: A Cluster Randomized Controlled		
		Trial		
PHRGOC24jul-0017	MOH-001787	Population level estimation for chronic kidney	Borame Sue Lee Dickens	National University of Singapore
		disease and end stage renal disease; costs and		
		drivers for effective screening		
PHRGOC24jul-0022	MOH-001788	Developing and Testing a Patient Decision Aid for	Eric A. Finkelstein	Duke-NUS Medical School
		Treatment Resistant Depression		
PHRGOC24jul-0024	MOH-001786	From Exposome to Health Outcomes: A	Kothandaraman Narasimhan	Institute for Human Development and Potential
		Population-Based Approach to Understanding		
		and Mitigating Early Menopause in Singapore's		
		Diverse Communities		
PHRGOC24jul-0026	MOH-001785	Multimodal speech parameters for mental	Wilson Wen Bin Goh	Nanyang Technological University
		health		
PHRGOC24jul-0030	MOH-001767	An AI weight management program in type 2	Sabrina Wong Kay Wye	National Healthcare Group Polyclinics
		diabetes: development, validation and		
		evaluation of the Wabi program		



## Population Health Research Grant - New Investigator Grant (PHRG-NIG) 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
PHRGNIG24jul-0002	MOH-001782	Implementing PROMs in routine clinical care	Kwan Yu Heng	Singapore General Hospital
		(IPROMs)		
PHRGNIG24jul-0003	MOH-001765	Development of preference weights for the 10-	Lee Chun Fan	Duke-NUS Medical School
		item Singapore Caregiver Quality Of Life Scale		
PHRGNIG24jul-0004	MOH-001766	Navigating feeding decisions in dementia:	Helen Andres	Duke-NUS Medical School
		development of a caregiver decision aid		
PHRGNIG24jul-0012	MOH-001808	Prospective Validation of a Real Time	Goh Chun Peng	Ng Teng Fong General Hospital
		Neurological Deterioration Risk Score for		
		Management of Spontaneous Intracranial		
		Haemorrhage		
PHRGNIG24jul-0018	MOH-001783	A model-based economic evaluation of a	Karen Keziah Arulsamy	Duke-NUS Medical School
		screening and stepped care intervention for the		
		treatment of common mental health conditions		
		among employees		

## Open Fund - Large Collaborative Grant (OFLCG) 24 May Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
OFLCG24may-0020	MOH-001791	Mechanistic Investigation and Clinical Innovation	Corresponding PI: Yibin Wang	Duke-NUS Medical School
		for Sarcopenia Diagnosis and Therapy (MAGNET)	Theme Pls: Teh Bin Tean, Chen	
			Jinmiao, Han Weiping, Veronique	
			Angeli, Yibin Wang, Hong Jing	
			Han, Frederick Koh, Laura Tay,	
			Samuel Chew, Justin Linghui	
			Chew	
OFLCG24may-0022	MOH-001792	Advancing precision medicine for cardiovascular	Corresponding PI: John	Nanyang Technological University
		disease and diabetes in Asian populations	Chambers	
			Theme PIs: John Chambers,	
			Marie Loh, Cheng Ching-Yu, Sim	
			Xueling	
OFLCG24may-0025	MOH-001793	Singapore Gastric Cancer Consortium –	Corresponding PI: So Bok Yan	National University of Singapore
		Therapeutic Interception of Gastric Cancer	Jimmy	
			Theme Pls: Jonathan Lee, Yeoh	
			Khay Guan, Wong Hei Sunny,	
			Joseph Sung, Jimmy So, Johnny	
			Ong, Yong Wei Peng, Patrick Tan	
OFLCG24may-0026	MOH-001794	Singapore Parkinson's Disease Programme	Corresponding PI: Tan Eng King	National Neuroscience Institute
		(SPARKLE)	Theme PIs: Tan Eng King, Louis	
			Tan, Lim Kah Leong, Zhang	
			Suchun, Prakash Kumar	
OFLCG24may-0028	MOH-001795	Conquering Lung cancer Across all stages with	Corresponding PI: Daniel Tan	National Cancer Centre Singapore
		Research and InnovatiON (CLARION)	Theme PIs: Daniel Tan, Huang	
			Yiqing, Amit Jain, Joe Yeong,	
			Anders Skanderup, Liu Yong, Tam	
			Wai Leong, Tee Wee Wei, Darren	
			Lim, Gillianne Lai	



Open Fund - Individual Research Grant (OFIRG) 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
OFIRG24jul-0024	MOH-001738	Recombinant Singapore Mistletoe Lectin (rSML):	Liu Xuewei	Nanyang Technological University
		An Anti-Tumor Protein Agent Rendered by a		
		Sialoglycan-Targeting Chitosan Scaffold		
OFIRG24jul-0025	MOH-001739	Harnessing the power of p53 for cancer	Kanaga Sabapathy	Nanyang Technological University
		prophylaxis		
OFIRG24jul-0039	MOH-001740	Polymeric Nanogel Delivering mRNA to Lesional	Xiaoyuan Chen	National University of Singapore
		Macrophages for Synergistic Anti-oxidative and		
		Anti-inflammatory Treatment of Atherosclerosis		
OFIRG24jul-0041	MOH-001741	Mouse and non-human primate model	Chu Jang Hann Justin	National University of Singapore
		evaluation of a single dose live attenuated Zika		
		virus vaccine developed using a novel genome		
		recoding approach		
OFIRG24jul-0049	MOH-001742	Deep learning-based neurodegeneration and	Juan Zhou	National University of Singapore
		cerebrovascular-related brain age to predict long-	-	
		term outcomes of a multidomain lifestyle		
		intervention in community-dwelling seniors - the		
		SINGER study		
OFIRG24jul-0053	MOH-001743	Designer natriuretic peptides as precision	Koh Cho Yeow	National University of Singapore
		therapeutics against heart failure		
OFIRG24jul-0055	MOH-001744	A new reticulocyte population: unravelling its	Renia Laurent Claude Stephane	Nanyang Technological University
		origin and role in malaria infection and		
		erythropoietic stress responses		
OFIRG24jul-0073	MOH-001745	Addressing barriers to data in ophthalmology	Wong Wing Kee Damon	Singapore Eye Research Institute
		with generative artificial intelligence		
OFIRG24jul-0076	MOH-001746	Senescent cell depletion to improve outcomes of	Andy Tay Kah Ping	National University of Singapore
		chimeric antigen receptor immune cell		
		manufacturing and therapies		
OFIRG24jul-0078	MOH-001696	Deciphering advanced colorectal cancer using	Nicholas Barker	Institute of Molecular and Cell Biology
		new region-specific stem cell-driven mouse		
		models		
OFIRG24jul-0086	MOH-001747	Exploring host innate immune system during	Peter Rainer Preiser	Nanyang Technological University
		human Plasmodium blood stage infection		



OFIRG24jul-0089	MOH-001748	Compact and Cost-effective Optoretinography	Ling Tong	Nanyang Technological University
		for High-throughput Assessment of Outer Retinal		
		Dysfunctions		
OFIRG24jul-0093	MOH-001749	Elucidating the detrimental roles of astrocytic	Zeng Li	National Neuroscience Institute
		lipid dysregulation in Alzheimer's disease		
		pathogenesis		
OFIRG24jul-0094	MOH-001750	Investigating XAGE1B as a novel LLPS and	Tee Wee Wei	Institute of Molecular and Cell Biology
		transcriptional regulator in lung cancer		
OFIRG24jul-0096	MOH-001697	Interrogating Immunogenicity of Adeno-	Chew Wei Leong	Genome Institute of Singapore
		Associated Viruses (AAVs) and CRISPR-Cas for		
		Safer Therapeutics		
OFIRG24jul-0097	MOH-001751	Targeting Vascular Dysfunction in Non-Small Cell	Wanjin Hong	Institute of Molecular and Cell Biology
		Lung Cancer (NSCLC): Unraveling the Pivotal Role		
		of Endothelial STARD8 in Tumor Progression and		
		Therapeutic Prospects		
OFIRG24jul-0101	MOH-001710	Novel long noncoding RNA interactions with	Li Yinghui	Nanyang Technological University
		EZH2 as a new strategy to target drug resistance		
		in multiple myeloma		
OFIRG24jul-0103	MOH-001752	Biomanufacturing an allogeneic-hMSCs-derived	Deepak Choudhury	Bioprocessing Technology Institute
		Cartilage membrane and Investigating using		
		Transcriptomic and Proteomic Approaches and		
		Validating via Clinically Relevant Animal Models		



Open Fund - Young Individual Research Grant (OFYIRG) 24 July Grant Call

Application ID	Project ID	Project Title	PI name	Host institution
OFYIRG24jul-0002	MOH-001719	Molecular mapping of genomic factors in host-	Cheng Hong Sheng	Nanyang Technological University
		microbiome interplay during MASH onset		
OFYIRG24jul-0005	MOH-001720	Reprogramming a behavioural setpoint for	Chenchen Song	Nanyang Technological University
		neurodevelopmental disorder		
OFYIRG24jul-0006	MOH-001711	Constructing the organ-immune interface in a	Liu Meng	Nanyang Technological University
		human organoid model of kidney disease		
OFYIRG24jul-0013	MOH-001721	Precise functional measurements of synthetic	Stephen Chong Jun Fei	National University of Singapore
		lethal nodes in treatment-resistant non-small-		
		cell lung cancer		
OFYIRG24jul-0014	MOH-001712	Single-Cell Multiplex Assessment of Cardiac cell-	Lee Chang Jie Mick	National University of Singapore
		type specific Cis-Regulatory Elements in Human		
		Myocardial Infarction Heart Failure		
OFYIRG24jul-0016	MOH-001722	Dissecting the importance of cholesterol	Tomoki Naito	Nanyang Technological University
		transport machineries for brain health		
OFYIRG24jul-0020	MOH-001723	Targeting serotonin signalling to boost HCC	Tay Rong En	Singapore Immunology Network
		immunotherapy		
OFYIRG24jul-0022	MOH-001713	Designing LanCL1-Targeting Cyclic Peptides to	Liu Shi	National University of Singapore
		Potentially Improve Chemotherapy of		
		Hepatocellular Carcinoma		
OFYIRG24jul-0023	MOH-001724	Insights into Newborn Immune Response	Ta Le Duc Huy	National University of Singapore
		Signatures Conferring Susceptibility to Atopic		
		Dermatitis using Cord Blood Single Cell RNA		
		Sequencing		
OFYIRG24jul-0026	MOH-001725	Regulation of Cav1.2 channel by deubiquitinases	Hu Zhenyu	National Neuroscience Institute
		USP13 and USP5: Implications in vascular and		
		neuronal dysfunction		
OFYIRG24jul-0027	MOH-001726	Mitigating Colorectal Cancer Development by	Weili Xu	Singapore Immunology Network
		investigating the role of Helios in anti-tumor		
		intestinal tissue-resident Vg7 Gamma Delta		
		intraepithelial lymphocytes		
OFYIRG24jul-0029	MOH-001714	Harnessing LYVE1-expressing macrophages as a	Xie Liang	National University of Singapore
		novel cellular target to manage endometriosis		
OFYIRG24jul-0031	MOH-001727	Deciphering invasion factors involved in zoonotic	Adeline Chua Chiew Yen	A*STAR Infectious Disease Labs
		malaria.		
OFYIRG24jul-0032	MOH-001728	Unveiling genetic, epigenetic and environmental	Alvin Ng	Nanyang Technological University
		risk factors in early onset colorectal cancers		
		through computational approaches leveraging		
		on long read sequencing		
OFYIRG24jul-0034	MOH-001715	Nur77 agonism reinvigorates natural killer cells	Neo Shi Yong	Singapore Immunology Network
-		for superior anti-tumor immunity in		
		hepatocellular carcinoma		
OFYIRG24jul-0035	MOH-001729	Evaluating Lgr5/6-Expressing Cells as Prognostic	Lana Kostic	Institute of Molecular and Cell Biology
•		Markers and Therapeutic Targets in Esophageal		
		Squamous Cell Carcinoma (ESCC)		



OFYIRG24jul-0039	MOH-001716	Uncovering the role of complex structural	Tan Kar Tong	National University of Singapore
		variations in the subtelomere for cardiovascular		
		diseases and cancers.		
OFYIRG24jul-0044	MOH-001730	Towards rationale vaccine design: Elucidating	Zhang Biyan	Singapore Immunology Network
		the transcriptional regulation of memory B cells		
		and plasma cells differentiation		
OFYIRG24jul-0052	MOH-001717	NIT2 Promotes Liver Metabolic Adaptation to	Muhammad Idris Bin Kachi	Institute of Molecular and Cell Biology
		High Fat Diet by Enhancing Mitochondrial	Mydin	
		Activity to Protect Against Non-Alcoholic Fatty		
		Liver Disease		
OFYIRG24jul-0054	MOH-001731	Inducible CHO Display Expression System for	Loh Han Ping	Bioprocessing Technology Institute
		Accelerated Development of Bispecific Antibody		
		Producing Cell Lines		
OFYIRG24jul-0056	MOH-001732	Enhancing the efficacy of chemotherapy for	Kang Xing	Nanyang Technological University
		colorectal cancer through butyrate producing		
		bacteria consortia		
OFYIRG24jul-0063	MOH-001718	Investigating the role of NIK in chronic	Naveen Kumar	Institute of Molecular and Cell Biology
		inflammation.		
OFYIRG24jul-0065	MOH-001733	Identifying early determinants of childhood	Koh Wai Ling Hiromi	Institute of Molecular and Cell Biology
		obesity mediated through host-microbiome		
		interactions		

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