

University Surgical Cluster

RESEARCH

Grants (Year 2021)

No	Research Title	Principal Investigator (PI) / Co-Investigator (Co-I) / Collaborator	Actual Funding to USC	Funding Source
Breast & Trauma Surgery				
1	Breast Cancer Screening and Prevention Programme (BCSPP)	PI – Mikael Hartman	\$ 2 million	NUS Yong Loo Lin School of Medicine
2	Genetic Origin of Adverse Drug Reactions in Singaporean Breast Cancer Patients	PI – Mikael Hartman	\$ 100,000	NUS Yong Loo Lin School of Medicine
Cardiac, Thoracic & Vascular Surgery				
1	SingValve - First Naturally Designed, Personalised, Stentless, Heart Valve Bioprosthesis	PI – Theodoros Kofidis	\$ 4.9 million	NRF Central Gap Fund
2	A New (Heart Lung Machine) - Cannula for Cardiopulmonary Bypass, Featuring Inflatable Balloons for Flow Occlusion	PI – Theodoros Kofidis	\$ 1 million	NUHS Kickstart Initiative
3	Upgrading CV Animal Surgery to GLP animal studies demonstrating technical competence in the field of testing: On the way to a NUS-based MedTech Hub	PI – Theodoros Kofidis	\$ 500,000	NUSMed Dean's Office
4	Developing Advanced Imaging Technology for Endoscopic Heart Surgery	PI – Theodoros Kofidis	\$ 100,000	NUHS Innovation Grant 2020
5	Human Arterial Single Cell NGS to Evaluate VSMC Plasticity	PI – Sorokin Vitaly	\$ 185,581	NUS R&G Postdoc Fellowship Program
6	3D Vessel Modelling Using Patient's Specific Cells as a Platform to Evaluate Personalised Therapy of DM and	PI – Sorokin Vitaly	\$ 185,581	NUS R&G Postdoc Fellowship Program
7	SNCRNA & CRISPER As a Tool & Potential Therapeutic Method to Attenuate Inflammation in Atherosclerosis	PI – Sorokin Vitaly	\$ 185,581	NUS R&G Postdoc Fellowship Program
Colorectal Surgery				
1	Understanding the knowledge, perceptions, barriers and time-cost of patients towards teleconsultation in primary and tertiary healthcare setting in Singapore	PI – Tan Ker Kan	\$ 1.2 million	NMRC Health Services Research Grant
2	Understanding the longitudinal psycho-social impact of colorectal cancer on young patients and their spouses	PI – Tan Ker Kan	\$ 720,000	NMRC Health Services Research Grant
3	Tumor-Associated Microbiota and Related Gene Alterations in Causation and Treatment of Colorectal Cancer	PI – Law Jia Hao Co-Is – Tan Ker Kan , Zhang Yongliang	\$ 150,000	NUHS Seed Fund
4	Faecal Immunochemical Testing as an Alternative to Colonoscopy in Post-Polypectomy Surveillance: An Exploratory Study	PI – Lee Kai Yin Mentor – Tan Ker Kan Collaborator – Jerrald Lau	\$ 49,200	NUHS Family Medicine/Primary Care/Health Services Research Seed Grant (Sep 2020) Call
5	Identifying the Barriers to Limb Reconstructive Surgery in Stroke Survivors in Singapore	PI – Soumen Das De Co-Is – Ellen Lee, Renita Sirisena, Ruth Tan, Tan Ker Kan Collaborators – Lim Jeong Hoon, Aymeric Lim	-	NUHS Family Medicine/Primary Care/Health Services Research Seed Grant (Sep 2020) Call (\$ 50,000)

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General Surgery				
1	Predicting Future Hospital Bed States Using Length of Stay Predictor Based on Admission Text	PI – Ngiam Kee Yuan	\$ 190,000	NMRC Clinician Innovator Development Award
2	Developing A Hybrid Robotic Surgical Retractor For Atraumatic Tissue Retraction	PI – Kaan Hung Leng	\$ 50,000	MOE Tier 1 - Engineering in Medicine Call
3	Magnetic Modulation of Microbiome for Treatment of Obesity and Muscle Maintenance	PI – Alfredo Franco-Obregón	\$ 5,000	NUS IHealthTech
4	AI Driven National Platform for CT Coronary angiography for clinical and industrial applications (APOLLO)	Lead PI - Zhong Liang Team PIs - Lohendran Baskaran, Mark Chan Yan Yee, Lynette Teo Li San, Ngiam Kee Yuan , Yew Min Sen, John Allen, Huang Weimin, Lee Hwee Kuan	-	A*Star RIE2020 Health and Biomedical Sciences (HBMS) Industry Alignment Fund Pre-Positioning (IAF-PP) (\$ 7.2 million)
5	Modulation of Cellular Behaviour of Ageing Cardiomyocytes using Amniotic Stem Cell Secretome	PI – Rufaihah Abdul Jalil Co-I – Wang Jiongwei , Citra Nurfarah Zaini Mattar, Brian K. Kennedy Collaborators – John Cooke	-	NUHS Seed Fund Mar 2021 (\$ 149,000)
Hepatobiliary & Pancreatic Surgery				
1	Interrogating the Proteogenomic Landscape of Pancreatic Cancer for Therapeutic Biomarker Discovery	PI – Glenn Bonney	\$ 675,000	NMRC Transition Award
2	PASS-IT (Patient Safety as Inter-Professional Training) – Endoscopy Module	PI – Alfred Kow Co-Is – Calvin Koh, Mark Muthiah	\$ 65,000	NUS Medical Education Technologies Enterprise (METE)
3	Feasibility, Barriers and Cost-effectiveness of Teleconsultation for Post-Colonoscopy Patients	PI – Pang Ning Qi Mentor – Tan Ker Kan Co-Is – Gao Yujia, Jerrad Lau	\$ 50,000	NUHS Family Medicine/Primary Care/Health Services Research Seed Grant (Mar 2021) Call
4	Near Real-time Rendering and Auto-Segmentation of Ultrasound Volumes and Position on Mixed Reality Devices	PI – Gao Yujia Co-I – Khoo Eng Tat Collaborators – Ngiam Kee Yuan, Iyer Shridhar Ganpathi	\$ 50,000	NUHS Engineering in Medicine – 2nd Grant Call
5	HEALING: Healthcare Economics Awareness Learning (HEALING 2.0)	PI – Lau Tang Ching Co-Is – Gosavi Arundhati Tushar, Zheng Jye Ling, Alfred Kow , Xinghan Fu, Gao Yujia , Ze Ying Tan, Nicholas Beng Hui Ng	-	NUS Medical Education Technologies Enterprise (METE) (\$ 70,000)



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Neurosurgery				
1	AI-SICH: Artificial Intelligence Solutions for Prognostication and Development of a Clinician-Decision Support System in Spontaneous Intracerebral Hemorrhage	PI – Mervyn Lim	\$ 50,000	NUHS Engineering in Medicine - 3rd Grant Call
2	Quality of life, cognition and employment in spontaneous intracerebral haemorrhage	PI – Mervyn Lim Co-Is – Yeo Tseng Tsai , Saima Hilal, Vincent Nga , Luo Nan Collaborators – Mehul Motani, Miho Asano	\$ 50,000	NUHS Family Medicine/Primary Care/Health Services Research Seed Grant (Sep 2020) Call
3	Predicting Risk of Expansion of Hematoma and Outcomes of Spontaneous Intracerebral Hemorrhage (SICH) from CT Brain and Angiogram DICOM Images Using Artificial Intelligence	PI – Mervyn Lim Supervisors – Vincent Nga , Mehul Motani	\$ 3,500	NUHS Junior Pitch for Funds
Urology				
1	Deep Learning-Guided Fiberoptic Raman Technique for In Vivo Detection of Bladder Cancer	PI – Edmund Chiong Co-Is – Wang Ziting , Wu Qing Hui , Huang Zhiwei, Thomas Paurraj Thamboo	\$ 50,000	MOE Tier 1 - Engineering in Medicine Call
2	Bioengineered Nanogel Carrying FDA-Approved Dye for Prostate Cancer Therapy	PI – Li Jun Co-Is – Edmund Chiong , Wu Qing Hui , Ratha Mahendran	-	MOE ARF Tier grant (\$ 180,000)
3	Detection of Bladder Cancer Using Urine cfDNA Methylome	PI – Ding Ling-Wen, Edmund Chiong Co-Is – Wu Qing Hui , Zang Zhijiang	-	MOE Tier 1/NUHS Seed Fund Mar 2021 Grant Call (\$ 150,000)