PRESENTED BY:

NMRC National Medical Research Council Singapore

MINISTRY OF HEALTH SINGAPORE

ORGANISED BY:

MOHH Making Our Healthcare Happen

NMRC AWARDS CEREMONY AND RESEARCH SYMPOSIUM 2025

RESEARCH FOR A BETTER FUTURE

28 - 29 MAY 2025

ABOUT NATIONAL MEDICAL RESEARCH COUNCIL

The NMRC was established in 1994 to oversee research funding from the Ministry of Health and support the development and advancement of biomedical research in Singapore, particularly in the public healthcare clusters and medical schools. NMRC engages in research strategy and planning, provides funding to support competitive research grants and core research enablers, and is responsible for the development of clinician scientists through awards and fellowships. The council's work is supported by the NMRC Office which is part of MOH Holdings Pte Ltd. Through its management of the various funding initiatives, NMRC promotes healthcare research in Singapore, for better health and economic outcomes.

In 2006, MOH established a new mandate to support translational and clinical research (TCR) in areas where Singapore had the potential to do well in research. Following this development, the Council's role became even more key in leading, promoting, coordinating, and funding TCR in Singapore. Research supported by the Council has led to interdisciplinary partnerships and international collaborations, helping to boost the role played by Singapore's biomedical sector on the global stage.

The Research, Innovation and Enterprise 2015 (RIE2015) Plan aimed for greater integration of activities across the entire Biomedical Sciences (BMS) community, including private- and public-sector performers, hospitals and government agencies. The Council spearheaded these investments to realise long-term health and wealth outcomes.

Under the RIE2020 Plan, Singapore saw continued support for research, with an increase in investment from $16 billion in the previous tranche to $19 billion. Funding was prioritised in four strategic technology domains where Singapore had competitive advantages and/or represented important national needs, including Health and Biomedical Sciences (HBMS). The Council's mandate as the champion for TCR in Singapore was reinforced as one of the beneficiaries of this boost in funding. It spearheaded MOH's vision for healthcare research to deliver better health and wealth outcomes for Singaporeans, and complemented the top-down directed strategic research by funding research proposals received by the various competitive grants and awards administered.

In the current RIE2025 Plan, the overall funding allocation across all domains has been increased to $25 billion, with continued support for basic research, a strengthening of technology translation and enterprise innovation capabilities and an expanded scope to better drive economic growth and address our national needs. The HBMS domain has been reconstituted into the Human Health and Potential (HHP) domain, where it continues the good progress made under HBMS but additionally also explicitly seeks to support research which enables Singaporeans to enjoy good health and to realise their full potential.

In alignment with the RIE2025 vision and changing health priorities, there are key shifts to MOH's strategic thrusts towards transforming and protecting health. The Council, through NMRC Office, continues to administer RIE funding to support and realise the goals of HHP and MOH. Through its management of the various funding initiatives, the NMRC promotes healthcare research in Singapore, for better health and economic outcomes.

SPECIAL THANKS TO

2025 PROGRAMME COMMITTEE

Professor Tan Say Beng
Executive Director, National Medical Research Council

Professor Johan Gunnar Eriksson
Yong Loo Lin School of Medicine, National University of Singapore
Institute for Human Development and Potential, Agency for Science, Technology and Research

Professor Derek Hausenloy
National Heart Centre Singapore
Cardiovascular & Metabolic Disorders, Duke-NUS Medical School

Associate Professor Henry Ho
Singapore General Hospital

Professor Koh Woon Puay
Yong Loo Lin School of Medicine, National University of Singapore

Professor David Lye
Communicable Diseases Agency

Professor Lee Soo Chin
Yong Loo Lin School of Medicine, National University of Singapore

Associate Professor Ng Kok Pin
National Neuroscience Institute

Adjunct Associate Professor Danny Soon
Consortium for Clinical Research and Innovation, Singapore

Professor Teo Yik Ying
Saw Swee Hock School of Public Health, National University of Singapore

Professor Wong Tien Yin
Tsinghua Medicine, Tsinghua University
Singapore National Eye Centre, SingHealth

CONTENT PAGE

PROGRAMME

28 MAY 2025 (WEDNESDAY)

MORNING - AWARDS CEREMONY AND PLENARY SESSIONS

TIME	PROGRAMME	VENUE
08:00 – 09:00	**REGISTRATION AND BREAKFAST**	FOYER
09:00 – 09:20	**WELCOME ADDRESS** by Chairman, National Medical Research Council	GARDEN BALLROOM
	OPENING ADDRESS by Guest-of-Honour, Permanent Secretary (Policy and Development), Ministry of Health	
09:20 – 10:00	**AWARDS PRESENTATION**	GARDEN BALLROOM
	NMRC Talent Pipeline Programmes NMRC Research Training Fellowship (RTF) Transition Award (TA)	
	NMRC Human Capital Awards Clinician Innovator Award (CIA) HPHSR Clinician Scientist Award (HCSA) Clinician Scientist Award (CSA) Singapore Translational Research Investigator Award (STaR)	
	NMRC Distinguished Contributor Award 2025	
10:00 – 10:30	**PLENARY SESSION (I)** **From Research to Policy: Navigating the Critical Path to Health Impact** **Professor Steven Hoffman** Wellcome Trust	GARDEN BALLROOM
10:30 – 11:00	**TEABREAK & NETWORKING**	FOYER
11:00 – 12:00	**PLENARY SESSION (II)** **Ten Grand Challenges of Robotics** **Professor Guang-Zhong Yang** Institute of Medical Robotics, Shanghai Jiao Tong University **The Future of Global Health During Turbulent Times** **Professor Michael Merson** Duke University	GARDEN BALLROOM
12:00 – 13:30	**LUNCH & NETWORKING**	FOYER

* HPHSR stands for: Health Promotion, Preventive Health, Population Health & Health Services Research

PROGRAMME

28 MAY 2025 (WEDNESDAY)

AFTERNOON – CONCURRENT SESSIONS

TIME	PROGRAMME		VENUE
13:30 – 15:10	**CONCURRENT SESSION 1 (CLOVER 1)**	**CONCURRENT SESSION 2 (CLOVER 3)**	
	Enabling Research Translation for Better Health Session Chair: **Associate Professor Mythily Subramaniam** Institute of Mental Health, Singapore	**Journey of Clinician Scientists, Investigators and Innovators** Session Chair: **Professor Wong Tien Yin** Tsinghua Medicine, Tsinghua University	
	Presentations (I)	**Presentations (I)**	
	Antimicrobial Resistance: Bridging Evidence and Impact for Health **Professor Steven Hoffman** Wellcome Trust	**Comparison of Clinician Scientist Pathways: Singapore versus UK and Australia** **Professor Sir John Savill** Melbourne Academic Centre for Health	
	Making it Easier to Learn from Others Around the World: The Evidence Synthesis Infrastructure Collaborative **Professor John Lavis** McMaster University	**The Evolution of an (accidental) Surgeon Scientist** **Professor Pierce Chow Kah-Hoe** National Cancer Centre Singapore and Singapore General Hospital	
	Participatory Design of a Youth Mental Health Intervention: Use of the Common Elements Approach **Dr Cheryl Seah** Centre for Evidence and Implementation	**Fireside Chat (I): Translational and Clinical Research** **Moderator:** **Professor Pierce Chow Kah-Hoe** National Cancer Centre Singapore and Singapore General Hospital **Panelists:** **Professor Gemmy Cheung** Duke-NUS Medical School, National University of Singapore **Associate Professor Lim Su Chi** Admiralty Diabetes Centre, Khoo Teck Puat Hospital **Associate Professor Shefaly Shorey** Yong Loo Lin School of Medicine, National University of Singapore **Associate Professor Tham Huiwen Elizabeth** Yong Loo Lin School of Medicine, National University of Singapore	
15:10 – 15:40	**TEABREAK & NETWORKING**		**FOYER**

PROGRAMME

28 MAY 2025 (WEDNESDAY)

AFTERNOON – CONCURRENT SESSIONS

TIME	PROGRAMME		VENUE
15:40 – 16:40	**CONCURRENT SESSION 1 (CLOVER 1)**	**CONCURRENT SESSION 2 (CLOVER 3)**	
	Enabling Research Translation for Better Health	**Journey of Clinician Scientists, Investigators and Innovators**	
	Presentations (II)	**Fireside Chat (II): Innovations in Healthcare and Population Health** **Moderator:** **Professor Koh Woon Puay** Yong Loo Lin School of Medicine, National University of Singapore **Panelists:** **Clinical Associate Professor (Dr) Tan Ngiap Chuan** SingHealth Polyclinics **Dr Stephanie Ko** National University Hospital **Dr Sharon Sung** Duke-NUS Medical School **Mr Abel Ang** Advanced MedTech Investments	
	Leveraging Big Data to Improve Cardiovascular Care– The SingCLOUD Journey **Clinical Professor Yeo Khung Keong** National Heart Centre Singapore	**Presentations (II)**	
	Bridging Research and Communities: Advancing Mental Health Policy Through Epidemiological Studies **Associate Professor Mythily Subramaniam** Institute of Mental Health, Singapore	**The Best Advice from my Mentors** **Professor Wong Tien Yin** Tsinghua Medicine, Tsinghua University	
16:40 – 17:30	**WINE AND CHEESE RECEPTION**		**FOYER**

PROGRAMME

29 MAY 2025 (THURSDAY)

MORNING – CONCURRENT SESSIONS

TIME	PROGRAMME		VENUE
08:00 – 09:00	REGISTRATION AND BREAKFAST		
09:00 – 10:30	**CONCURRENT SESSION 3 (CLOVER 1)**	**CONCURRENT SESSION 4 (CLOVER 3)**	
	Advancing Population Health Research Session Chair: Professor Johan Gunnar Eriksson Yong Loo Lin School of Medicine, National University of Singapore	**Innovative Technologies and Medical Entrepreneurship** Session Chair: Adjunct Assistant Professor Gao Yujia National University Hospital	
	Presentations (I)	**Presentations (I)**	
	Shifting the Patient Paradigm: Involving Family Caregivers for Healthy Societies Dr Chan Ee Yuee Tan Tock Seng Hospital	**Medical Robotics – the 5th Generation** Professor Guang-Zhong Yang Institute of Medical Robotics, Shanghai Jiao Tong University	
	Population Health Research and Translation: Policy Perspectives Adjunct Professor Derrick Heng Ministry of Health	**3D Printing for Tissue Engineering Application** Professor Paulo Bartolo Nanyang Technological University	
	Addressing Systemic Disconnects in Musculoskeletal Health Across the Care Continuum: The Role of Population and Health Services Researchg Assistant Professor Bryan Tan Yijia Woodlands Health	**Innovations in Surgical Imaging – From Mixed Reality to Spatial AI** Adjunct Assistant Professor Gao Yujia National University Hospital	
10:30 – 11:00	TEABREAK & NETWORKING		FOYER

PROGRAMME

29 MAY 2025 (THURSDAY)

MORNING – CONCURRENT SESSIONS

TIME	PROGRAMME		VENUE
11:00 – 12:00	**CONCURRENT SESSION 3 (CLOVER 1)**	**CONCURRENT SESSION 4 (CLOVER 3)**	
	Advancing Population Health Research	**Innovative Technologies and Medical Entrepreneurship**	
	Presentations (II)	**Presentations (II)**	
	Maternal Mental Health Matters for Our Children – Getting It Right for SG **Clinical Associate Professor Helen Chen** KK Women's and Children's Hospital	**On the evolution of Translational Medicine from Reductionist to High Dimensionality-driven** **Professor Salvatore Albani** Duke-NUS Medical School	
	The Power of Cohorts – in Population Health **Professor Johan Gunnar Eriksson** Yong Loo Lin School of Medicine, National University of Singapore	**Redefining Endoscopes as Surgical Robots: A New Clinical Paradigm** **Dr Kevin Koh** Vivo Surgical	
12:00 – 13:00	**LUNCH & NETWORKING**		**FOYER**

28 MAY (WEDNESDAY):

AWARDS CEREMONY

NMRC TALENT PIPELINE PROGRAMMES

NMRC RESEARCH TRAINING FELLOWSHIP

Dr Angelina Ang Su Yin
KK Women's and Children's Hospital

Dr Chee Ying Jie
Tan Tock Seng Hospital

Dr Clement Chia Luck Khng
Khoo Teck Puat Hospital

Dr Choi Ci En Ellie
National University Hospital

Dr Fan Bingwen Eugene
Tan Tock Seng Hospital

Dr Ho Quan Yao
Singapore General Hospital

Dr Sharlene Ho
Tan Tock Seng Hospital

Dr Hoe Hui Min Rebecca
National Neuroscience Institute

Dr Sarah Joy Huan Khian Wan
National University Hospital

Dr Sky Koh Wei Chee
National University Polyclinics

Dr Lee Hsien Xiong Raphael
Woodlands Health

Dr Joycelyn Lee Jie Xin
National Cancer Centre Singapore

Dr Li Weiling Sarah
National University Hospital

Dr Mervyn Lim Jun Rui
National University Hospital

Dr Lim Kim Wei
Singapore General Hospital

Dr Lim Ru Sin
Tan Tock Seng Hospital

Dr Lim Sheng Jie Christen
National Neuroscience Institute

Mr Lim Shi Zong Nigel
Ng Teng Fong General Hospital

Dr Loh Wann Jia
Changi General Hospital

Ms Azizah Binte Mohamed Afif
Singapore General Hospital

Dr Roderica Ng
Singapore General Hospital

Dr Sooi Wei Xiong Kenneth
National University Hospital

Dr Tan Yi Hern
Singapore General Hospital

Dr Tay Rong Hao John
National Dental Centre Singapore

Dr Woon Tian Kai
KK Women's and Children's Hospital

NMRC TALENT PIPELINE PROGRAMMES

TRANSITION AWARD

Dr Chan Kok Hong Dedrick
National University Hospital

Dr Nicholas Chew Wen Sheng
National University Hospital

Dr Deng Xiao
National Neuroscience Institute

Dr Huang Qingyao Daniel
National University Hospital

Dr Ku Chee Wai
KK Women's and Children's Hospital

Dr Lee Hsien Ren Shawn
National University Hospital

Dr Low Kiat Mun Serena
Khoo Teck Puat Hospital

Dr Loy See Ling
KK Women's and Children's Hospital

Dr Ong Hon Shing
Singapore Eye Research Institute

Dr Aishworiya Ramkumar
National University Hospital

Dr Saw Pei Li Stephanie
National Cancer Centre Singapore

Dr Aaron Chia-Ken Tan
National Cancer Centre Singapore

Dr Tay Sen Hee Frank
National University Hospital

Dr Zhong Youjia
National University of Singapore

NMRC HUMAN CAPITAL AWARDS

CLINICIAN INNOVATOR AWARD (SENIOR INVESTIGATOR)

Associate Professor Zhong Liang
National Heart Centre Singapore

CLINICIAN INNOVATOR AWARD (INVESTIGATOR)

Dr Trevor Brian Binedell
Tan Tock Seng Hospital

Dr Philip Cheong Kwok Chee
Singapore General Hospital

Dr Shariq Ali Khan
Singapore General Hospital

Dr Fiona Lim Pin Miao
Singapore National Eye Centre

Dr Ling Ji Min
National Neuroscience Institute

Dr Clara Ngoh Lee Ying
National University Hospital

Dr Ong Poo Lee
Tan Tock Seng Hospital

HPHSR CLINICIAN SCIENTIST AWARD (SENIOR INVESTIGATOR)

Professor Julian Thumboo
Singapore General Hospital

NMRC HUMAN CAPITAL AWARDS

HPHSR CLINICIAN SCIENTIST AWARD (INVESTIGATOR)

Dr Chen Wenjia
National University of Singapore

Dr Stephanie Ko Qianwen
National University Hospital

Dr Evelyn Law Chung Ning
National University of Singapore

Dr Joseph Lo Zhiwen
Woodlands Health

Dr Seow Wei Jie
National University of Singapore

Dr Bryan Tan Yijia
Woodlands Health

Dr Sabrina Wong Kay Wye
National Healthcare Group Polyclinics

Dr Vivien Wu Xi
National University of Singapore

Adjunct Associate Professor Yeo See Cheng
Tan Tock Seng Hospital

CLINICIAN SCIENTIST AWARD (SENIOR INVESTIGATOR)

Associate Professor Chan Shiao Yng
National University of Singapore

Professor Roger Foo
National University of Singapore

Dr Anand Devaprasath Jeyasekharan
National University of Singapore

Associate Professor Nagaendran Kandiah
Nanyang Technological University

Professor Carolyn Lam
National Heart Centre Singapore

Associate Professor Lim Su Chi
Khoo Teck Puat Hospital

Associate Professor Ng Oon Tek
Tan Tock Seng Hospital

Associate Professor Catherine Ong
National University of Singapore

Associate Professor Vijay Kumar Sharma
National University Hospital

Associate Professor Daniel Tan Shao Weng
National Cancer Centre Singapore

Associate Professor Tey Hong Liang
National Skin Centre

Associate Professor Daniel Ting Shu Wei
Singapore Eye Research Institute

Professor Yong Eu Leong
National University of Singapore

NMRC HUMAN CAPITAL AWARDS

CLINICIAN SCIENTIST AWARD (INVESTIGATOR)

Associate Professor Marcus Ang Han Nian
Singapore Eye Research Institute

Associate Professor Audrey Chia Wei Lin
Singapore Eye Research Institute

Dr Rachel Chong Shujuan
Singapore Eye Research Institute

Dr Dong Yanhong
National University of Singapore

Associate Professor Saumya Shekhar Jamuar
KK Women's and Children's Hospital

Associate Professor Leung Ying Ying
Singapore General Hospital

Associate Professor Liu Yu-Chi
Singapore Eye Research Institute

Adjunct Associate Professor Mark Dhinesh Muthiah
National University Hospital

Dr Tay Kai Xun Joshua
National University of Singapore

Dr Yeo Tianrong
National Neuroscience Institute

SINGAPORE TRANSLATIONAL RESEARCH INVESTIGATOR AWARD

Professor Antonio Bertoletti
Duke-NUS Medical School

Professor Gemmy Cheung
Singapore Eye Research Institute

Professor Pierce Chow Kah-Hoe
National Cancer Centre Singapore

Professor Narayanan Gopalakrishna Iyer
National Cancer Centre Singapore

NMRC DISTINGUISHED CONTRIBUTOR AWARD 2025

PROFESSOR K. RANGA RAMA KRISHNAN

For his visionary leadership in fostering healthcare innovation and enterprise, and dedication to advancing Singapore's biomedical research ecosystem.

PROFESSOR EDWARD W HOLMES

For his pioneering role in shaping translational and clinical research, and outstanding contributions in fostering biomedical research collaborations in Singapore.

28 MAY (WEDNESDAY):

PLENARY SESSIONS

PLENARY SESSIONS

28 MAY 2025 (WEDNESDAY)

TIME	PROGRAMME	VENUE
10:00 – 10:30	**PLENARY SESSION (I)** **From Research to Policy: Navigating the Critical Path to Health Impact** **Professor Steven Hoffman** Wellcome Trust	GARDEN BALLROOM
10:30 – 11:00	**TEABREAK & NETWORKING**	FOYER
11:00 – 12:00	**PLENARY SESSION (II)** **Ten Grand Challenges of Robotics** **Professor Guang-Zhong Yang** Institute of Medical Robotics, Shanghai Jiao Tong University **The Future of Global Health During Turbulent Times** **Professor Michael Merson** Duke University	GARDEN BALLROOM
12:00 – 13:30	**LUNCH & NETWORKING**	FOYER

From Research to Policy: Navigating the Critical Path to Health Impact

Professor Steven Hoffman
Wellcome Trust

DESIGNATION & ORGANISATION

Chief of Staff and Executive Director, Strategy, Wellcome Trust

Founder, Global Strategy Lab

Dahdaleh Distinguished Chair in Global Governance & Legal Epidemiology and Professor of Global Health, Law, and Political Science, York University

BIOGRAPHY

Professor Steven J. Hoffman is Chief of Staff and Executive Director of Strategy at Wellcome Trust, where he is focused on day-to-day management of the organisation, charting the organisation's future, and driving integration across the £1.6 billion that Wellcome invests annually in science to solve the urgent health challenges facing everyone. He is also the Dahdaleh Distinguished Chair in Global Governance & Legal Epidemiology and a Professor of Global Health, Law, and Political Science at York University, founder of the Global Strategy Lab, and Co-Director of the World Health Organisation Collaborating Centre on Global Governance of Antimicrobial Resistance. Professor Hoffman is an international lawyer who regularly advises governments and international agencies on legal, policy and political matters. He previously served as Scientific Director of the Canadian Institutes of Health Research's Institute of Population & Public Health, as Assistant Deputy Minister for Data, Surveillance & Foresight at the Public Health Agency of Canada, and as lead of the United Nations Research Roadmap for the COVID-19 Recovery. He is an elected Fellow of the Canadian Academy of Health Sciences and the Royal Society of Canada.

Ten Grand Challenges of Robotics

Professor Guang-Zhong Yang
Institute of Medical Robotics, Shanghai Jiao Tong University

DESIGNATION & ORGANISATION

Founder, Chief Scientist, and Distinguished Professor
Institute of Medical Robotics, Shanghai Jiao Tong University

BIOGRAPHY

Professor Guang-Zhong Yang (CBE, FREng, FIEEE, FIET, FAIMBE, FIAMBE, FMICCAI, FCGI) is the founder and chief scientist of the Institute of Medical Robotics at Shanghai Jiao Tong University. He was the founder and director of the Hamlyn Centre for Robotic Surgery, Imperial College London, UK. Professor Yang's main research interests are in medical imaging, sensing and robotics. He is a Fellow of the Royal Academy of Engineering, fellow of IEEE, IET, AIMBE, IAMBE, MICCAI, CGI and a recipient of the Royal Society Research Merit Award and listed in The Times Eureka 'Top 100' in British Science. Professor Yang is the founding editor of Science Robotics – a journal of the Science family dedicated to the latest advances in robotics and how it enables or underpins new scientific discoveries. He was awarded a CBE in the Queen's 2017 New Year Honour for his contribution to biomedical engineering.

The Future of Global Health During Turbulent Times

Professor Michael Merson
Duke University

DESIGNATION & ORGANISATION

William Joklik Distinguished Emeritus Professor of Medicine and Global Health, Duke University

Professor of Global and Environmental Health, New York University School of Global Public Health

BIOGRAPHY

Michael Merson is the William Joklik Distinguished Emeritus Professor of Medicine and Global Health at Duke University, where he served as the founding director of the Duke Global Health Institute, Vice President and Vice Provost for Global Affairs and Vice Chancellor for Duke-National University of Singapore Affairs. He was the inaugural Director of the SingHealth Duke-NUS Global Health Institute. Prior to this he was the Anna Lauder Professor of Public Health at Yale University and its first Dean of Public Health. Before entering academia, between 1980 and 1995, Dr Merson served as director of the World Health Organisation (WHO) programs on Diarrheal Diseases and Acute Respiratory Infections, and subsequently the WHO Global Program on AIDS. He is currently Professor of Global and Environmental Health at New York University School of Global Public Health.

Dr Merson has authored over 170 articles, is the senior editor of the leading global health textbook "Global Health: Disease, Programs, Systems, and Policies" and lead author of The AIDS Pandemic: Searching for a Global Response which describes the history of the global response to the AIDS pandemic. His current research interests are identifying ways to increase access to new vaccines and treatments in low and middle countries, designing new approaches to global health governance and financing, and restoring trust in global public health worldwide.

Dr Merson has served in advisory capacities for UNAIDS, WHO, the Global Fund to Fight AIDS, Tuberculosis and Malaria, World Bank, World Economic Forum, Bill & Melinda Gates Foundation, and various private sector entities. He has two honorary degrees and is a member of the US National Academy of Medicine.

28 MAY (WEDNESDAY):

CONCURRENT SESSIONS 1 AND 2

CONCURRENT SESSION 1:
Enabling Research Translation for Better Health

28 MAY 2025 (WEDNESDAY)

TIME	PROGRAMME	VENUE
13:30 – 15:10	Session Chair: **Associate Professor Mythily Subramaniam** Institute of Mental Health, Singapore	CLOVER 1
	Presentations (I)	
	Antimicrobial Resistance: **Bridging Evidence and Impact for Health** **Professor Steven Hoffman** Wellcome Trust	
	Making it Easier to Learn from Others Around the World: **The Evidence Synthesis Infrastructure Collaborative** **Professor John Lavis** McMaster University	
	Participatory Design of a Youth Mental Health Intervention: **Use of the Common Elements Approach** **Dr Cheryl Seah** Centre for Evidence and Implementation	
15:10 – 15:40	TEABREAK & NETWORKING	FOYER
15:40 – 16:40	**Presentations (II)**	CLOVER 1
	Leveraging Big Data to Improve Cardiovascular Care– The SingCLOUD Journey **Clinical Professor Yeo Khung Keong** National Heart Centre Singapore	
	Bridging Research and Communities: Advancing Mental Health Policy Through Epidemiological Studies **Associate Professor Mythily Subramaniam** Institute of Mental Health, Singapore	
16:40 – 17:30	WINE AND CHEESE RECEPTION	FOYER

Chairperson (Concurrent Session 1)

Enabling Research Translation for Better Health

Bridging Research and Communities: Advancing Mental Health Policy Through Epidemiological Studies

Associate Professor Mythily Subramaniam
Institute of Mental Health, Singapore

DESIGNATION & ORGANISATION

Assistant Chairman Medical Board Research, Institute of Mental Health, Singapore

Associate Professor Saw Swee Hock School of Public Health, National University of Singapore

Associate Professor Lee Kong Chian School of Medicine, Nanyang Technological University

BIOGRAPHY

Dr Mythily Subramaniam is a leading mental health researcher with extensive expertise in psychiatric epidemiology, psychosis, and addictions. She is the Director of the Research Division at Singapore's Institute of Mental Health (IMH) and the Lead Investigator of the Mental Health Policy Studies Program. She holds academic appointments at the Saw Swee Hock School of Public Health at the National University of Singapore and the Lee Kong Chian School of Medicine.

Her research focuses on understanding the prevalence, risk factors, and impacts of mental disorders, contributing to evidence-based policy and intervention development. Dr Subramaniam has played a key role in large-scale national studies, including the Singapore Mental Health Study and the Well-being of the Singapore Elderly study, which have led to a nuanced perspective of the Singapore mental health landscape.

Antimicrobial Resistance: Bridging Evidence and Impact for Health

Professor Steven Hoffman
Wellcome Trust

DESIGNATION & ORGANISATION

Chief of Staff and Executive Director, Strategy, Wellcome Trust

Founder, Global Strategy Lab

Dahdaleh Distinguished Chair in Global Governance & Legal Epidemiology and Professor of Global Health, Law, and Political Science, York University

BIOGRAPHY

Professor Steven J. Hoffman is Chief of Staff and Executive Director of Strategy at Wellcome Trust, where he is focused on day-to-day management of the organisation, charting the organisation's future, and driving integration across the £1.6 billion that Wellcome invests annually in science to solve the urgent health challenges facing everyone. He is also the Dahdaleh Distinguished Chair in Global Governance & Legal Epidemiology and a Professor of Global Health, Law, and Political Science at York University, founder of the Global Strategy Lab, and Co-Director of the World Health Organisation Collaborating Centre on Global Governance of Antimicrobial Resistance. Professor Hoffman is an international lawyer who regularly advises governments and international agencies on legal, policy and political matters. He previously served as Scientific Director of the Canadian Institutes of Health Research's Institute of Population & Public Health, as Assistant Deputy Minister for Data, Surveillance & Foresight at the Public Health Agency of Canada, and as lead of the United Nations Research Roadmap for the COVID-19 Recovery. He is an elected Fellow of the Canadian Academy of Health Sciences and the Royal Society of Canada.

Making it Easier to Learn from Others Around the World: The Evidence Synthesis Infrastructure Collaborative

Professor John Lavis
McMaster University

DESIGNATION & ORGANISATION

Director, McMaster Health Forum

Advisor, Evidence Synthesis Infrastructure Collaborative, Wellcome Trust

Tier 1 Canada Research Chair in Evidence-Support Systems

Professor, Department of Health Research Methods, Evidence and Impact, McMaster University

BIOGRAPHY

John supports efforts to address health and broader societal challenges using the best-available research evidence and experiences and insights from citizens, professionals, organisational leaders, and government policymakers. He is an advisor to the Wellcome Trust on its Evidence Synthesis Infrastructure Collaborative. He is the Director of the McMaster Health Forum, Director of the World Health Organisation (WHO) Collaborating Centre for Evidence-Informed Policy, and co-lead of Rapid-Improvement Support and Exchange (RISE). He is a Professor in the Department of Health Evidence and Impact at McMaster University and the Tier 1 Canada Research Chair in Evidence-Support Systems. He led the development of the 'SHOW ME the evidence' features of an approach to reliably deliver research evidence to those who need it, he was co-lead of and lead report writer for the Global Commission on Evidence to Address Societal Challenges, and he was co-lead of the COVID-19 Evidence Network to support Decision-making (COVID-END). He holds an MD from Queen's University, an MSc from the London School of Economics, and a PhD (in Health Policy) from Harvard University.

Participatory Design of a Youth Mental Health Intervention: Use of the Common Elements Approach

Dr Cheryl Seah
Centre for Evidence and Implementation

DESIGNATION & ORGANISATION

Director, Centre for Evidence and Implementation

Adjunct Assistant Professor, Yong Loo Lin School of Medicine, National University of Singapore

BIOGRAPHY

Cheryl Seah, PhD, is a developmental psychologist and a researcher with expertise in the area of mental health, child development, disabilities, early intervention, intervention development and implementation science.

She has over 20 years' experience gained in clinical practice and research that aims to improve the quality of lives for vulnerable children and families. Cheryl has worked with teachers, practitioners and teams from government, social service agencies, foundations, hospital and university settings in skills building and to enhance interventions for families and children. She is trained in the diagnosis of children with special needs and conducted research on attachment and responsive parenting in the early years for her PhD dissertation. Cheryl was commissioned by Ministry of Social and Family Development (MSF) and led the Centre for Evidence and Implementation (CEI) team in the outcome evaluation of the KidSTART programme. She is involved in projects relating to child protection, preschool inclusion, grandparents' and domestic helpers' responsive caregiving and youth mental health. She is an Adjunct Associate Professor at the National University of Singapore (NUS), working closely with the Behavioural and Implementation Science Interventions (BISI) team and supports the evaluation and implementation work at the Centre for Holistic Initiatives for Learning and Development (CHILD). She teaches early childhood educators on inclusion at Singapore University of Social Science (SUSS).

Leveraging Big Data to Improve Cardiovascular Care – The SingCLOUD Journey

Clinical Professor Yeo Khung Keong
National Heart Centre Singapore

DESIGNATION & ORGANISATION

Chief Executive Officer, National Heart Centre Singapore

BIOGRAPHY

Clinical Professor Yeo Khung Keong is the Chief Executive Officer and Senior Consultant with the Department of Cardiology at the National Heart Centre Singapore (NHCS). He is also the Academic Chair for the SingHealth Duke-NUS Cardiovascular Sciences Academic Clinical Programme and the Deputy Co-Chair and Lead (Emerging Technologies and Data) at the SingHealth Duke-NUS Academic Medicine Innovation Institute. His expertise lies in mitral and tricuspid valve transcatheter interventions and in the treatment of calcific coronary artery disease.

Prof Yeo is the Principal Investigator of the SingCLOUD registry, Singapore's national registry of patients with coronary artery disease and heart failure, as well as the SingHEART study, a prospective observational cohort study focusing on normal individuals with in-depth phenotyping and whole genome sequencing. He has also worked on various service transformation programmes such as the Future Outpatient Journey project.

Prof Yeo is the Past-Chair of the Scientific Advisory Board for the Asian Pacific Society of Cardiology (APSC), is a past Chair of the Chapter of Cardiologists, Academy of Medicine Singapore, is a board member for the College of Physicians, Academy of Medicine Singapore, and council member of the Singapore Cardiac Society. He is founding and current Editor-in-Chief of the Journal of the APSC.

Prof Yeo graduated in 1997 from the National University of Singapore where he obtained his Bachelor of Medicine and Surgery. He subsequently trained in the United States of America and obtained his American Board of Internal Medicine Certifications in Internal Medicine, Cardiovascular Medicine and Interventional Cardiology. Prof Yeo also obtained his Executive Master of Business Administration from INSEAD in 2018.

CONCURRENT SESSION 2:
Journey of Clinician Scientists, Investigators and Innovators

28 MAY 2025 (WEDNESDAY)

TIME	PROGRAMME	VENUE
13:30 – 15:10	Session Chair: **Professor Wong Tien Yin** Tsinghua Medicine, Tsinghua University	CLOVER 3
	Presentations (I)	
	Comparison of Clinician Scientist Pathways: Singapore versus UK and Australia **Professor Sir John Savill** Melbourne Academic Centre for Health	
	The Evolution of an (accidental) Surgeon Scientist **Professor Pierce Chow Kah-Hoe** National Cancer Centre Singapore and Singapore General Hospital	
	Fireside Chat (I): Translational and Clinical Research **Moderator:** **Professor Pierce Chow Kah-Hoe** National Cancer Centre Singapore and Singapore General Hospital **Panelists:** **Professor Gemmy Cheung** Duke-NUS Medical School, National University of Singapore **Associate Professor Lim Su Chi** Admiralty Diabetes Centre, Khoo Teck Puat Hospital **Associate Professor Shefaly Shorey** Yong Loo Lin School of Medicine, National University of Singapore **Associate Professor Tham Huiwen Elizabeth** Yong Loo Lin School of Medicine, National University of Singapore	
15:10 – 15:40	**TEABREAK & NETWORKING**	FOYER

CONCURRENT SESSION 2: Journey of Clinician Scientists, Investigators and Innovators

28 MAY 2025 (WEDNESDAY)

TIME	PROGRAMME	VENUE
15:40 – 16:40	**Fireside Chat (II): Innovations in Healthcare and Population Health** **Moderator:** **Professor Koh Woon Puay** Yong Loo Lin School of Medicine, National University of Singapore **Panelists:** **Clinical Associate Professor (Dr) Tan Ngiap Chuan** SingHealth Polyclinics **Dr Stephanie Ko** National University Hospital **Dr Sharon Sung** Duke-NUS Medical School **Mr Abel Ang** Advanced MedTech Investments	CLOVER 3
	Presentations (II)	
	The Best Advice from my Mentors **Professor Wong Tien Yin** Tsinghua Medicine, Tsinghua University	
16:40 – 17:30	**WINE AND CHEESE RECEPTION**	FOYER

Chairperson (Concurrent Session 2)

Journey of Clinician Scientists, Investigators and Innovators

The Best Advice from my Mentors

Professor Wong Tien Yin
Tsinghua Medicine, Tsinghua University

DESIGNATION & ORGANISATION

Vice Provost, Tsinghua University, Beijing, China

Chair Professor and Senior Vice-Chancellor, Tsinghua Medicine, Tsinghua University

Senior Advisor, SingHealth & Singapore National Eye Center, Singapore

BIOGRAPHY

Prof Wong is an academic leader, innovator and physician-scientist who completed medical school at the National University of Singapore (NUS) with a PhD from the Johns Hopkins University, USA. In 2022, he assumed a new position as Chair Professor and Founding Head of Tsinghua Medicine at Tsinghua University, Beijing, China. Over the past two decades, Prof Wong has served in multiple leadership positions in Singapore and Australia. His last position was Arthur Lim Professor and Medical Director of the Singapore National Eye Center, one of the largest eye-care hospital globally. Prof Wong has served as Deputy Group Chief Executive Officer (CEO) (Research and Education), SingHealth, Vice-Dean of Duke-NUS Medical School, and Chair of Departments of Ophthalmology at NUS and the University of Melbourne, Australia.

Prof Wong is a practicing retinal specialist, with a research portfolio on retinal diseases, ocular imaging, AI and digital technology. He has published >1,500 peer-reviewed papers (h-index 214, highly cited researcher 2018, 2020 to 2024), given >500 invited named, plenary and symposium lectures, and received >US$100 million in grant funding. Prof Wong has been recognised with multiple international awards, including Arnall Patz Medal (Macula Society), the Jose Rizal Medal (Asia Pacific Academy of Ophthalmology) and the Friedenwald Award (ARVO). He has received Singapore's President's Science and Technology Award. He is an elected international (foreign) member of the US National Academy of Medicine and the Australian Academy of Health and Medical Sciences.

Comparison of Clinician Scientist Pathways: Singapore versus UK and Australia

Professor Sir John Savill
Melbourne Academic Centre for Health

DESIGNATION & ORGANISATION

Executive Director, Melbourne Academic Centre for Health

BIOGRAPHY

John Savill graduated in Physiological Sciences from Oxford in 1978 and in Medicine from Sheffield in 1981, receiving a PhD (London) in 1989. After junior hospital appointments in Sheffield, Nottingham and London, he spent seven years in the Department of Medicine at the Royal Postgraduate Medical School, Hammersmith Hospital, with spells as a Medical Research Council (MRC) Clinical Training Fellow and Wellcome Trust Senior Clinical Research Fellow.

In 1993, he moved to the Chair in Medicine at Nottingham; subsequently moving in 1998 to the University of Edinburgh as Professor of Medicine where he set up and became the first Director of the University of Edinburgh/ MRC Centre for Inflammation Research. Between 2002 and 2017 he served as the University's first Vice-Principal and Head of the College of Medicine and Veterinary Medicine, being knighted in the 2008 New Year's Honours List for services to clinical science. From 1st June 2008 to 30th September 2010, he was Chief Scientist for the Scottish Government Health Directorates (part-time). On 1st October 2010 he was appointed as Chief Executive of MRC, combining this with Head of College duties in Edinburgh; he demitted from the MRC at the end of March 2018. In June 2017 he was appointed to Edinburgh's Regius Chair of Medical Science by HM The Queen, retiring from that post in April 2023. He has been Executive Director of the Melbourne Academic Centre for Health (MACH) since July 2019.

The Evolution of an (accidental) Surgeon Scientist

Moderator

Fireside Chat (I): Translational and Clinical Research

Professor Pierce Chow Kah-Hoe
National Cancer Centre Singapore and Singapore General Hospital

DESIGNATION & ORGANISATION

Senior Consultant Surgeon, Department of Hepato-Pancreato-Biliary and Transplant Surgery, Division of Surgery & Surgical Oncology, National Cancer Centre Singapore and Singapore General Hospital

Professor and Program Director, Duke-NUS Medical School

BIOGRAPHY

Pierce Chow graduated MBBS and PhD from the National University of Singapore. He trained in General Surgery at the Singapore General Hospital and won the Chapter of Surgeons Gold Medal at the conjoint M.Med(Surgery)/FRCS(Edinburgh) examination. Following advanced surgical training in Singapore, he completed a clinical Fellowship in Hepato-Pancreato-Biliary Surgery and Liver Transplantation with Professor Russell Strong in Australia and was subsequently appointed Consultant Surgeon at the Singapore General Hospital.

Pierce is currently tenured professor at the Duke-NUS Medical School and director of the Comprehensive Liver Cancer Clinic at the National Cancer Center Singapore. He is a nationally funded senior Clinician Scientist and Principal Investigator (PI) of the NMRC Translational and Clinical Research Flagship Programme in Liver Cancer, the PLANet study which has been successfully renewed under the NMRC Open Fund – Large Collaborative Grant. He is also funded by Agency for Science, Technology and Research (A*STAR) Biomedical Research Council (BMRC) to conduct, in collaboration with industry, the prospective cohort study of patients at high risk of developing liver cancer (ELEGANCE). He has authored more than 300 peer-reviewed papers and has published in the Lancet, Cell, JCO, Nature Cancer, Journal of Hepatology, Gut and other top journals.

Besides clinical work and research, Pierce is also very active in medical education. He is the inaugural and current director of the PhD Program in Clinical and Translational Science at the Duke-NUS Medical School Singapore. He was the inaugural director of the pre-clinical Normal Body course in the same medical school and the founding president of the College of Clinician Scientists at the Academy of Medicine Singapore.

Pierce is Protocol Chair of the Asia-Pacific Hepatocellular Carcinoma (AHCC) Trials Group and has conducted 12 prospective multi-center clinical studies that has enrolled more than 5000 patients from 62 sites across 17 countries and territories in the Asia-Pacific. In recognition of his outstanding work in clinical and translational liver cancer research, Pierce was conferred the Outstanding Clinician Scientist Award under the National Medical Excellence Awards in 2012 and the NMRC Singapore Translational Research (STaR) Investigator Award in 2025. In 2023, he was inducted into Duke-NUS Medical School's Hall of Master Academic Clinicians.

Fireside Chat (I): Translational and Clinical Research

Professor Gemmy Cheung
Duke-NUS Medical School, National University of Singapore

DESIGNATION & ORGANISATION

Arthur Lim Professor in Ophthalmology, Duke-NUS Medical School, National University of Singapore
Head and Senior Consultant, Medical Retina Department, Singapore National Eye Center
Head, Retina Research Group, Singapore Eye Research Institute

BIOGRAPHY

Professor Gemmy Cheung is currently the Arthur Lim Professor in Ophthalmology at Duke-NUS Medical School, National University of Singapore (NUS). She is the Head of the Medical Retina Department, Singapore National Eye Center and Director of Translation Clinic Research at the Singapore Eye Research Institute (SERI). Her research interests focus on Asian retinal diseases, specifically age-related macular degeneration (AMD), polypoidal choroidal vasculopathy (PCV) and myopic macular degeneration.

Prof Cheung has published over 300 peer-reviewed articles mostly in age-related macular degeneration and polypoidal choroidal vasculopathy. She has contributed to major clinical trials in therapies for AMD and PCV. She serves on the executive committee of the Asia-Pacific Vitreoretina society, the International Retinal imaging Society and the Macula Society.

In 2018, her team was awarded the National Medical Research Council (NMRC) Open Fund Large Collaborative Grant, establishing the ongoing Translational Asian AMD Program (TAAP). Prof Cheung coordinates a multidisciplinary team of 10 theme Principal Investigators and numerous local and international co-investigators, aiming to improve health outcomes and reduce AMD-related blindness. The research findings have led to immediately translatable local and international clinical guidelines for AMD diagnosis and management. Cost-effectiveness analyses using clinical trial and real-world datasets inform policymakers on healthcare resource allocation. The program is internationally recognised as one of the most comprehensive translational Asian AMD programs, attracting over 40 academic collaborations, yielding more than 70 publications, securing over SGD $3 million in additional funding, and filing 4 patents.

In 2024, her team secured another $25 million TAAP-2 grant to advance AMD research. This program builds on the success of TAAP-1 ($24 million grant) to improve early detection, develop personalised treatments, and prevent vision loss from AMD, especially among the Asian population. Concurrently in 2024, she was awarded a $6 million NMRC Singapore Translational Research (STaR) Investigator Award, a prestigious grant supported by the Singapore Ministry of Health.

Prof Cheung has received numerous prestigious awards and recognitions. These include the Neil Della Memorial Award, American Academy of Ophthalmology Secretariat Award, Asia Pacific Academy of Ophthalmology Senior Achievement Award, Nakajima Award, and Outstanding Service in Prevention of Blindness Award. She was named in The Ophthalmologist Power List in both 2021 and 2022. Notably, she was also recognised as one of the Top 10 Influential Researchers in the 100 Most Influential Ophthalmologists list for 2022, further cementing her status as a leading figure in the field of ophthalmology.

Fireside Chat (I): Translational and Clinical Research

Associate Professor Lim Su Chi
Admiralty Diabetes Centre, Khoo Teck Puat Hospital

DESIGNATION & ORGANISATION

Clinician Scientist and Senior Consultant, Admiralty Diabetes Centre, Khoo Teck Puat Hospital

BIOGRAPHY

Associate Professor Lim is also the Clinical Director of the Clinical Research Unit at Khoo Teck Puat Hospital; Clinical Director of the Clinician Scientist Development Office, National Healthcare Group (NHG) Research; Research Associate Professor at the Saw Swee Hock School of Public Health, National University of Singapore; and Associate Professor (Clinical Practice) at the Lee Kong Chian School of Medicine, Nanyang Technology University.

Fireside Chat (I): Translational and Clinical Research

Associate Professor Shefaly Shorey
Yong Loo Lin School of Medicine, National University of Singapore

DESIGNATION & ORGANISATION

Associate Professor (with tenure), Yong Loo Lin School of Medicine, National University of Singapore
Programme Director, Academic – Undergraduate Honours, National University of Singapore
Vice Dean (Administration), Yong Loo Lin School of Medicine, National University of Singapore

BIOGRAPHY

Dr. Shefaly Shorey is an Associate Professor and Vice Dean (Administration) at the Yong Loo Lin School of Medicine, Alice Lee Centre for Nursing Studies, National University of Singapore (NUS). A distinguished nurse scientist, her research focuses on enhancing family and women's health through innovative psychosocial and educational interventions. She has authored over 250 peer-reviewed publications in high-impact journals and has been consistently ranked among the world's top 2% most-cited scientists by Stanford University since 2021.

A/Prof Shorey's outstanding contributions to nursing research and education have earned her numerous prestigious accolades. She is the first nurse leader in Asia to be awarded the US-ASEAN Fulbright Scholarship and was inducted as a Fellow of the American Academy of Nursing (FAAN) in 2024. Her dedication to advancing healthcare extends beyond research—she is a passionate advocate for diversity, equity, and inclusivity, integrating these values into her leadership. She serves as the President of Women in Science and Healthcare (WISH) within the National University Health System (NUHS) and Chairs the Southeast and East Asia Nursing Education and Research Network (SEANERN), championing collaborative efforts to elevate nursing science and education in the region.

Recognised globally, A/Prof Shorey represents Singapore on the Global Working Group (GWG) on Salutogenesis, and her work has been widely featured in national newspapers, television, and radio. An award-winning educator, she is deeply committed to lifelong learning and employs a student-centered, evidence-based approach to teaching. As a dedicated mentor, she has guided more than 70 research students and emerging scholars, shaping the next generation of healthcare leaders.

Dr. Shorey's trailblazing achievements have also been recognised through numerous national awards, including the President's Nurse Award (2021), Singapore's highest honour for nursing excellence, and the Senior Clinician Scientist Award (2023), acknowledging her leadership in health service research bridging clinical practice and academia.

Fireside Chat (I): Translational and Clinical Research

Associate Professor Tham Huiwen Elizabeth
Yong Loo Lin School of Medicine, National University of Singapore

DESIGNATION & ORGANISATION

Associate Professor, Department of Paediatrics, Yong Loo Lin School of Medicine, National University of Singapore

Senior Consultant and Head, Division of Allergy, Immunology & Rheumatology, Department of Paediatrics, Khoo Teck Puat - National University Children's Medical Institute, National University Hospital

BIOGRAPHY

Dr Elizabeth Tham is a Clinician-Scientist with a research focus on childhood allergic disorders, in particular atopic dermatitis and food allergy; early life immunomodulation and Developmental Origins of Health and Disease (DoHAD). She has been awarded several NMRC talent awards and competitive grants for her research, which focuses on the epidemiology, risk factors and endophenotypes of childhood allergic disorders, and to elucidate the role of the host skin and gut microbiomes in modulating atopic dermatitis and food allergy risk and disease severity with the eventual aim of developing translational interventions for disease prevention and to improve clinical care.

Moderator

Fireside Chat (II): Innovations in Healthcare and Population Health

Professor Koh Woon Puay
Yong Loo Lin School of Medicine, National University of Singapore

DESIGNATION & ORGANISATION

Professor, Healthy Longevity Translational Research Programme
Assistant Dean, Faculty Development
Director, Clinician-Scientist Development Unit
Yong Loo Lin School of Medicine, National University of Singapore
Senior Principal Investigator, A*STAR Institute for Human Development and Potential, Singapore

BIOGRAPHY

Dr Koh is Professor in Healthy Longevity Translational Research Programme at Yong Loo Lin School of Medicine, National University of Singapore (NUS). She graduated with MBBS (Honours) as the valedictorian of her cohort from NUS, and completed PhD training in immunology at the University of Sydney, and postdoctoral training in epidemiology at the University of Southern California. Being a population health scientist, Prof Koh's research is in studying the epidemiology of common chronic diseases in Singapore and worldwide. She is the Principal Investigator of the 63,000-strong Singapore Chinese Health Study, and has co-authored about 500 scientific papers on diet, lifestyle and genes in relation to risk of diseases such as cancer, cardiovascular diseases, diabetes, end-stage kidney disease, gout, Parkinson's disease, osteoporosis and osteoarthritis. More recently, she has also published on factors that could influence important ageing outcomes such as physical frailty, cognitive impairment and aging-related depression. She is listed among the world's top 2% most cited scientists by Stanford University and has received over $34 million dollars in funding from National Institutes of Health (NIH) in USA and the National Medical Research Council (NMRC) in Singapore. She is also a recipient of the NMRC Clinician-Scientist Senior Investigator Award. In her role as Assistant Dean and Director for the Clinician-Scientist Development Unit in NUS School of Medicine, she mentors budding clinician-scientists and was awarded the Nature Awards for Mentoring in 2023 in recognition of her achievement as a mentor to many in their academic careers in Singapore.

Fireside Chat (II): Innovations in Healthcare and Population Health

Clinical Associate Professor (Dr) Tan Ngiap Chuan
SingHealth Polyclinics

DESIGNATION & ORGANISATION

Senior Consultant, Family Physician, Director (Research), SingHealth Polyclinics

Chairperson, Primary Care Research Institute

Vice-Chair (Research), SingHealth–Duke NUS Family Medicine Academic Clinical Programme

BIOGRAPHY

Dr Tan Ngiap Chuan is a practicing family physician, senior consultant, director in Research Department in SingHealth Polyclinics (SHP), chairperson of the Primary Care Research Institute in Singapore and clinical associate professor in Duke NUS Medical School, Singapore.

Associate Professor (A/P) Tan has a strong passion in primary care research focusing on preventive health, innovation, and new care model evaluation. He is the principal investigator and recipient of the SHP Centre Grant awarded by the Singapore National Medical Research Council. He also receives the Healthy Longevity Catalyst Award from the National Academy of Medicine, USA to develop and validate a virtual reality tool to screen for cognitive health. He leads key projects such as AI-enabled consultation module to optimise care of people with type-2 diabetes mellitus. He also coaches medical students, Family Medicine Fellowship trainees and multidisciplinary healthcare professionals in primary care research.

A/P Tan is recognised as one of the world's top 2% of most cited scientists by Stanford University and Elsevier in 2023. He receives the Master Academic Clinician Award 2022 from Duke NUS Medical School; Distinguished Senior Clinician Award 2023 from the Ministry of Health, Singapore; the Rajakumar Award (2023) for the best oral presentation at the 9th Asia Pacific Primary Care Research Conference in Kuala Lumpur, Malaysia.

Fireside Chat (II): Innovations in Healthcare and Population Health

Dr Stephanie Ko
National University Hospital

DESIGNATION & ORGANISATION

Consultant, Advanced Internal Medicine, National University Hospital

Adjunct Associate Professor, Center for Behavioral and Implementation Science Interventions, Yong Loo Lin School of Medicine, National University Singapore

Lead, NUHS@Home

BIOGRAPHY

Dr. Stephanie Ko, MBBS, MMed, MPH, is a Consultant in Advanced Internal Medicine at the National University Hospital and Lead of NUHS@Home, Singapore's pioneering hospital-at-home program, which her team founded in 2020. She also runs a hospital-at-home research unit, driving innovation and evidence-based scaling of virtual care models and was recently awarded the HSHPR Clinician Scientist Award from NMRC for this work.

Fireside Chat (II): Innovations in Healthcare and Population Health

Dr Sharon Sung
Duke-NUS Medical School

DESIGNATION & ORGANISATION

Assistant Professor, Programme in Health Services & Systems Research, Pre-Hospital & Emergency Research Centre, & SingHealth-Duke-NUS Global Health Institute, Duke-NUS Medical School

Visiting Research Scientist, Centre for Population Health Research and Implementation, Singapore Health Services Pte Ltd

Senior Clinical Psychologist, Department of Psychology, Institute of Mental Health

Supervising Clinical Psychologist, Department of Psychological Medicine, KK Women's & Children's Hospital

BIOGRAPHY

Dr Sung is an Assistant Professor of Health Services & Systems Research at Duke-NUS Medical School. She holds joint appointments in the Pre-Hospital & Emergency Research Centre, SingHealth Duke-NUS Global Health Institute, and SingHealth Centre for Population Health Research and Implementation, in addition to serving as a Supervising Clinical Psychologist at the Institute of Mental Health and KK Women's and Children's Hospital. Prior to moving to Singapore, she held faculty positions at Albert Einstein College of Medicine and Harvard Medical School. Dr Sung is an expert in cognitive behavioural and mindfulness based therapies and an experienced clinician scientist who has dedicated her career to improving outcomes for children, adolescents, and adults suffering from anxiety, mood, and stress-related conditions. Her current research is focused on addressing gaps in current treatment approaches and models of mental healthcare. Since joining the faculty of Duke-NUS, Dr Sung has established a successful international research program focused on innovative strategies to improve patient care and ensure more rapid, effective, measurable, and scalable translation of research findings into patient communities. She has published numerous peer-reviewed articles, editorials, and book chapters, as well as a practitioner guide entitled 10-Minute CBT: Integrating Cognitive Behavioral Strategies Into Your Practice. The high calibre of her work has been formally recognised in the form of multiple scientific and career development awards, including the highly competitive Donald J. Cohen Fellowship for International Scholars in Child and Adolescent Mental Health, NMRC Health Services Research Grant New Investigator Grant, NMRC Transition Award, and NMRC HPHSR Clinician Scientist Award.

Fireside Chat (II): Innovations in Healthcare and Population Health

Mr Abel Ang
Advanced MedTech Investments

DESIGNATION & ORGANISATION

Chairperson, Advanced MedTech Investments

BIOGRAPHY

Mr. Abel Ang was the founding Chief Executive Officer (CEO) of Advanced MedTech Holdings, a US$335 million global leader in urology devices, headquartered in Singapore. Over his nearly 30-year career, he has brought 100 new medical devices to market. His experience includes roles as Senior Advisor at Greatbatch Inc. and President, Asia-Pacific and Chief Technology Officer (CTO) at Hill-Rom Inc.

He is an adjunct professor at Nanyang Business School and Waseda University and chairs the Board of Governors for Republic Polytechnic. Ang holds a Master's degree in Computational Biology from Rutgers University and has completed Harvard Business School's Advanced Management Program. He has received the Public Service Medal twice for his contributions to the medical field and pandemic response.

29 MAY (THURSDAY):

CONCURRENT SESSIONS 3 AND 4

CONCURRENT SESSION 3:
Advancing Population Health Research

29 MAY 2025 (THURSDAY)

TIME	PROGRAMME	VENUE
08:00 – 09:00	**REGISTRATION AND BREAKFAST**	FOYER
09:00 – 10:30	Session Chair: **Professor Johan Gunnar Eriksson** Yong Loo Lin School of Medicine, National University of Singapore	CLOVER 1
	Presentations (I)	
	Shifting the Patient Paradigm: Involving Family Caregivers for Healthy Societies **Dr Chan Ee Yuee** Tan Tock Seng Hospital	
	Population Health Research and Translation: Policy Perspectives **Adjunct Professor Derrick Heng** Ministry of Health	
	Addressing Systemic Disconnects in Musculoskeletal Health Across the Care Continuum: The Role of Population and Health Services Research **Assistant Professor Bryan Tan Yijia** Woodlands Health	
10:30 – 11:00	**TEABREAK & NETWORKING**	FOYER
11:00 – 12:00	**Presentations (II)**	CLOVER 1
	Maternal Mental Health Matters for Our Children – Getting It Right for SG **Clinical Associate Professor Helen Chen** KK Women's and Children's Hospital	
	The Power of Cohorts – in Population Health **Professor Johan Gunnar Eriksson** Yong Loo Lin School of Medicine, National University of Singapore	
12:00 – 13:00	**LUNCH & NETWORKING**	FOYER

Chairperson (Concurrent Session 3)

Advancing Population Health Research

The Power of Cohorts – in Population Health

Professor Johan Gunnar Eriksson

Yong Loo Lin School of Medicine, National University of Singapore

DESIGNATION & ORGANISATION

Professor, Yong Loo Lin School of Medicine, National University of Singapore

Executive Director, A*STAR Institute for Human Development and Potential

Programme Director, Human Potential Translational Research Programme, National University of Singapore

BIOGRAPHY

Professor Johan G. Eriksson is full professor at the National University of Singapore (NUS) Yong Loo Lin School of Medicine (SOM), programme lead for the Human Potential Programme at the SOM, Executive Director in A*STAR Institute for Human Development and Potential (IHDP). He is in charge of the daily scientific oversight and planning of the GUSTO and S-PRESTO cohort studies in Singapore.

Before moving to Singapore, Professor Eriksson was full Professor at the faculty of medicine, University of Helsinki, and chief physician at Helsinki University Central Hospital in Finland. He holds clinical interests in diabetes, obesity and related metabolic diseases. He received his medical degree and specialist qualifications (internal medicine and general practice) from the University of Helsinki.

His research focuses on the early programming of health and disease, as well as on the prevention of gestational diabetes (GDM), type 2 diabetes and related metabolic outcomes by lifestyle interventions. In Finland he is in charge of the Helsinki Birth Cohort Study, a unique birth cohort study with a follow-up of over 20,000 individuals from birth until the age of over 80 years. Furthermore, he has been involved in the gestational diabetes prevention study RADIEL, in which a lifestyle intervention was shown to successfully reduce GDM and the Finnish Diabetes Prevention Study (DPS) – the first randomised study to show that lifestyle intervention is effective in the prevention of type 2 diabetes.

He has been recognised as a Highly Cited Researcher by Clarivate Analytics by ranking in the top 1% by citations for a field.

In 2021 he was awarded the J.W. Runeberg Prize the most prestigious prize awarded by the Finnish Medical Association for scientific research for his pioneering research on the importance of early life risk factors for health and disease.

He is ranked number 1 in Singapore in the field of medicine by Research.com and his H-index is 175.

He has co-authored several books and published over 1000 original research articles.

Shifting the Patient Paradigm: Involving Family Caregivers for Healthy Societies

Dr Chan Ee Yuee
Tan Tock Seng Hospital

DESIGNATION & ORGANISATION

Deputy Director of Nursing, Tan Tock Seng Hospital

Adjunct Assistant Professor, Alice Lee Center of Nursing Studies, National University of Singapore

BIOGRAPHY

Ee Yuee is the Deputy Director of Nursing and Head of the Nursing Implementation, Translation and Research Office (NITRO) at Tan Tock Seng Hospital (TTSH). She also serves as faculty at the Alice Lee Centre of Nursing Studies at NUS. Throughout her career, Ee Yuee work has been instrumental in developing research, evidence-based care and innovation initiatives and capabilities within the TTSH community and beyond.

A trailblazing pioneer in nursing research, Ee Yuee was the first nurse in Singapore to be sponsored for research-specific training, studying at the prestigious McMaster University in 2007. She was the first nurse awardee respectively of the Singapore Small Innovative Grant, the National Healthcare Group Research Support Scheme, and the MOH National Innovation Challenge Grant. She has a comprehensive track record of impactful scholarly work, including 42 peer-reviewed publications; 16 competitive awards in research and innovation; and more than $10 million in competitive grants received for research and innovation. Her research has resulted in several system-level changes in clinical care.

Ee Yuee research in caregiving led to the caregiving support initiative Project Carer Matters, which was Singapore's first hospital-to-home framework of care to support patient-caregiver dyads at home. Launched in the midst of the COVID-19 pandemic, Carer Matters provided valuable support to family caregivers struggling to manage their loved ones at home, with the provision of training, telesupport and coaching from a team of caregiver support nurses. This is now being implemented in the inpatient wards at TTSH and to date has benefitted over 700 caregivers and their loved ones.

She is now leading a team to strengthen the caregiving ecosystem through Project Carer Matters 2, supported by the Ministry of Health's National Innovation Challenge. Over the past 2 years, her team has developed a caregiver-centric mobile application, to be launched in 2025.

Throughout her initiatives, Ee Yuee drives the advancement of nursing research and the generation of new knowledge for patient care excellence. She conceptualised and pioneered the hybrid Nurse Clinician-Scientist career track in TTSH Nursing.

Her research interests include successful aging, caregiver research, health activation, digital health.

Population Health Research and Translation: Policy Perspectives

Adjunct Professor Derrick Heng
Ministry of Health

DESIGNATION & ORGANISATION

Deputy Director-General of Health (Public Health), Ministry of Health

BIOGRAPHY

Dr Derrick Heng is Deputy Director-General of Health (Public Health) at the Ministry of Health in Singapore. His area of work includes population health, including analytics and the provision of public health intelligence to support policy and planning, and international co-operation. Derrick has been involved in policy initiatives in the areas of HIV, tuberculosis (TB), tobacco control, nutrition, obesity, chronic disease screening and mental health in Singapore.

Coming from a background in clinical internal medicine, Derrick began working in the field of epidemiology in 1997, after obtaining a Masters at Cambridge University. Before taking on a policy role, he was involved in epidemiological research in the areas of clinical epidemiology, cardiovascular diseases, diabetes and cancer, in addition to interests in research design and methodology, and the ethical review of clinical trials.

Addressing Systemic Disconnects in Musculoskeletal Health Across the Care Continuum: The Role of Population and Health Services Research

Assistant Professor Bryan Tan Yijia
Woodlands Health

DESIGNATION & ORGANISATION

Consultant, Department of Orthopaedic Surgery, Woodlands Health

Clinician-Scientist, Lee Kong Chian School of Medicine, Nanyang Technological University

Assistant Professor, Lee Kong Chian School of Medicine, Nanyang Technological University

BIOGRAPHY

Asst Prof Bryan Tan is currently a Consultant in Orthopaedic Surgery, Woodlands Health, NHG. He has experience practicing both locally and overseas having done several fellowships internationally. He has served as the Singapore Orthopaedic Trainee Committee (SOTC) President and has represented the Singapore Orthopaedic Association (SOA) as its Junior Ambassador.

He is very active in the research scene and has completed his PhD post specialist training with a focus on health service research, implementation science and health economics in the area of knee osteoarthritis. He has more than 40 publications and has presented at multiple international conference. He currently holds several grants with total quantum exceeding S$9 million. He has been recognised for his research achievements through awards such as the Singapore Young Investigator Award, Health Services Research (Gold) in 2019, INEX-OSCAR by the College of Clinician-Scientist in 2022, Public Sector Transformation Exemplary Innovator Award in 2023 and the NHG Young Achiever Award in 2024. He is currently an Assistant Professor at LKCMedicine and Deputy Director at the Rehabilitation Research Institute of Singapore (RRIS) spearheading the Musculoskeletal Pillar.

In addition to his training as an Orthopaedic surgeon and researcher, he has a strong interest in administration, policy making and public health and applies a public health, system lens to musculoskeletal problems. He currently sits on several hospital and national workgroups to deliver new models of care for musculoskeletal health.

He is passionate about combining his interests in research, public health and administration as a surgeon-scientist to develop the niche area in health services research and implementation science using a grounded, evidence based, data-driven approach to guide policy making and transform the care of musculoskeletal patients.

Maternal Mental Health Matters for Our Children – Getting It Right for SG

Clinical Associate Professor Helen Chen
KK Women's and Children's Hospital

DESIGNATION & ORGANISATION

Senior Consultant Psychiatrist, Department of Psychological Medicine, KK Women's and Children's Hospital
Duke-NUS Medical School

BIOGRAPHY

Assoc Prof Helen Chen is Senior Consultant Psychiatrist, past Head, Department of Psychological Medicine, KK Women's and Children's Hospital, Duke-National University of Singapore. She completed her training in perinatal psychiatry at Queen's Medical Centre, University of Nottingham, UK, and has many years of clinical experience and academic expertise in maternal mental health.

She led the Postnatal Depression Intervention Programme, a MOH-funded project that was mainstreamed, for screening and early intervention of postpartum mental disorders. In recent years she has actively consulted for screening of postpartum depression at primary care level, and has served as advisor for various MOH committees, in particular the Interagency Taskforce for Maternal and Child Health, and enabled the development of the Psychological Resilience for Antenatal Management (PRAM) programme catering to screening and early intervention for antepartum depression.

Her ongoing research collaborative experience on the GUSTO birth cohort study since 2009, and the S-PRESTO preconception study has provided rich evidence to champion a push for maternal mental healthcare to optimise child wellbeing and neurodevelopment. She also led the development of the Singapore Perinatal Mental Health Guidelines for Depression and Anxiety launched in Feb 2023. In recent years, she has focused on perinatal infant mental health, building capacity and fostering shared learning experiences in dyadic interventions. She is collaborating on the LOVING project, funded under the NMRC A*star Human Potential Grant to study interventions for improving caregiver empathy and sensitivity for better outcomes in terms of child metabolic health and behavioural problems. She is also co-Investigator on PIIPS, a NMRC funded research examining maternal mental health and sensitive caregiving in relation to preterm child health and neurodevelopment. She is actively involved in sustaining and developing local psychiatric capability to meet the needs of the population, and serves on the Psychiatry Residents Advisory Council and Exam Committee.

Her clinical practice remains a key focus of her work, and seeing mothers nurturing their children well gives her meaning and purpose. She also strongly believes in supporting the early childhood intervention programmes Anchor and KIDS0-3/Kidstart for at risk and low-income families, serving as maternal mental health consultant.

CONCURRENT SESSION 4: Innovative Technologies and Medical Entrepreneurship

29 MAY 2025 (THURSDAY)

TIME	PROGRAMME	VENUE
08:00 – 09:00	REGISTRATION AND BREAKFAST	
09:00 – 10:30	Session Chair: Adjunct Assistant Professor Gao Yujia National University Hospital	CLOVER 3
	Presentations (I)	
	Medical Robotics – the 5th Generation Professor Guang-Zhong Yang Institute of Medical Robotics, Shanghai Jiao Tong University	
	3D Printing for Tissue Engineering Application Professor Paulo Bartolo Nanyang Technological University	
	Innovations in Surgical Imaging – From Mixed Reality to Spatial AI Adjunct Assistant Professor Gao Yujia National University Hospital	
10:30 – 11:00	TEABREAK & NETWORKING	FOYER
11:00 – 12:00	Presentations (II)	CLOVER 3
	On the evolution of Translational Medicine from Reductionist to High Dimensionality-driven Professor Salvatore Albani Duke-NUS Medical School	
	Redefining Endoscopes as Surgical Robots: A New Clinical Paradigm Dr Kevin Koh Vivo Surgical	
12:00 – 13:00	LUNCH & NETWORKING	FOYER

Chairperson (Concurrent Session 4)

Innovative Technologies and Medical Entreprenuership

Innovations in Surgical Imaging – From Mixed Reality to Spatial AI

Adjunct Assistant Professor Gao Yujia
National University Hospital

DESIGNATION & ORGANISATION

Consultant, Division of Hepatobiliary & Pancreatic Surgery, Department of Surgery, National University Hospital

Assistant Group Chief Technology Officer, National University Health System

Principal Investigator, iHealthTech, National University of Singapore

Director, Undergraduate Medical Education, Department of Surgery, Yong Loo Lin School of Medicine, National University of Singapore

BIOGRAPHY

Dr Gao Yujia is a Consultant Surgeon in Liver, Pancreas, and Liver Transplant Surgery at the National University Hospital in Singapore. As the Assistant Group Chief Technology Officer for the National University Health System, Dr Gao is involved in the research and development of immersive technology and its application in clinical care and education, and digital-twin projects. He works extensively with Mixed Reality (MR) technology, utilising MR devices to deliver cutting edge capabilities to clinicians including 3D holographic imaging, real-time computer-vision based imaged analysis, and multisource data integration. He is also responsible for the integration and implementation of 5G wireless technology for hospital infrastructure development and building of secured high-speed integrated data networks.

Medical Robotics – the 5th Generation

Adjunct Assistant Professor Guang-Zhong Yang
Institute of Medical Robotics, Shanghai Jiao Tong University

DESIGNATION & ORGANISATION

Founder, Chief Scientist, and Distinguished Professor
Institute of Medical Robotics, Shanghai Jiao Tong University

BIOGRAPHY

Professor Guang-Zhong Yang (CBE, FREng, FIEEE, FIET, FAIMBE, FIAMBE, FMICCAI, FCGI) is the founder and chief scientist of the Institute of Medical Robotics at Shanghai Jiao Tong University. He was the founder and director of the Hamlyn Centre for Robotic Surgery, Imperial College London, UK. Professor Yang's main research interests are in medical imaging, sensing and robotics. He is a Fellow of the Royal Academy of Engineering, fellow of IEEE, IET, AIMBE, IAMBE, MICCAI, CGI and a recipient of the Royal Society Research Merit Award and listed in The Times Eureka 'Top 100' in British Science. Professor Yang is the founding editor of Science Robotics – a journal of the Science family dedicated to the latest advances in robotics and how it enables or underpins new scientific discoveries. He was awarded a CBE in the Queen's 2017 New Year Honour for his contribution to biomedical engineering.

3D Printing for Tissue Engineering Application

Professor Paulo Bartolo
Nanyang Technological University

DESIGNATION & ORGANISATION

Executive Director, Singapore Centre for 3D Printing

Programme Director, NAMIC Hub at NTU

Professor, School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore

BIOGRAPHY

Paulo Bartolo holds a PhD from the University of Reading (2001), an MSC in Mechanical Engineering (1996) and a first degree (Licenciatura – five-year programme) in Mechanical Engineering (1993) both from the University of Lisbon (Portugal). Since August 2021, he is Professor at the School of Mechanical and Aerospace Engineering (MAE), Nanyang Technological University (NTU), Executive Director of Singapore Centre for 3D Printing (SC3DP), Programme Director of National Additive Manufacturing Innovation Cluster (NAMIC) Hub at NTU, member of the NAMIC Joint Cluster-Agency Management and NAMIC Cluster Project Evaluation Panel. He is Fellow of CIRP (International Academy for Production Engineering), Honorary/Visiting Professor at several Universities in China, Europe and North America and Advisor of several Funding Agencies and Research Institutes across the world.

Between 2014 and 2022, Paulo Bartolo was Chair Professor on Advanced Manufacturing at the University of Manchester, where he was the Head of the Manufacturing Group, the Industry 4.0 Academic Lead, the theme leader for the Industry 5.0 societal challenge area within the Digital Futures, the coordinator of the "scale-up and manufacture" cross-cutting capability of the Advanced Medical Materials@Manchester platform, member of the Department of Mechanical, Aerospace and Civil Engineering (MACE) Executive Committee, the Advanced Manufacturing Strategic Oversight Group, the Management Board of the EPSRC & MRC Centre for Doctoral Training in Regenerative Medicine and a representative of the University of Manchester at the Advanced Machinery and Productivity Institute.

Paulo Bartolo published more than 650 publications (journal papers, book chapters and conference papers) and 22 books, and has been engaged in a large number of projects funded by Singapore National Research Foundation, A*STAR, EPSRC (UK), Innovate UK, Bill and Melinda Gates Foundation, the Royal Society, the Portuguese Foundation for Science and Technology, the Portuguese Agency for Innovation, the European Commission, and Industry.

On the Evolution of Translational Medicine from Reductionist to High Dimensionality-driven

Professor Salvatore Albani
Duke-NUS Medical School

DESIGNATION & ORGANISATION

Professor, Duke-NUS Medical School, Singapore
Director, Translational Immunology Institute, SingHealth
President, Eureka Institute for Translational Medicine
Scientific Founder, Ananda Immunotherapies Pte Ltd

BIOGRAPHY

Professor Salvatore Albani is an internationally renowned rheumatologist and immunologist. He is a Professor at Duke-NUS Medical School and Director of the Translational Immunology Institute (TII) at SingHealth-Duke-NUS Medical Centre.

His fundamental research interest is in understanding human immunity and contributing the knowledge to therapeutic and diagnostic advancements. He has developed several innovative approaches in the area of induction and maintenance of immune tolerance in humans, being responsible for the whole translational process from idea to the Clinical Trial. He is developing 4 IND/CTA stemming from his own inventions.

He has authored publications in top-tier journals, an H-index of 57, and over 12,978 citations. His contributions place him in the top 1% of his field worldwide (SCOPUS). Beyond research, he is a serial entrepreneur and the scientific founder of Ananda Immunotherapies Pte Ltd, a start-up spun out from TII's technology. He is also the Founder and President of the Eureka Institute for Translational Medicine, a global initiative dedicated to advancing translational medicine through research, education, and policy.

Professor Albani is a globally recognised key opinion leader in immunotherapy, serving on advisory and review boards for pharmaceutical companies, government agencies, and funding bodies. His excellence has been acknowledged through numerous prestigious awards, including the Singapore Translational Research Investigator Award (2013, 2020), the SingHealth Excellence Distinguished Researcher Award (2019). Most recently, he received the 2024 AMEI Golden Apple Generativity Award for his contributions to medical education.

Redefining Endoscopes as Surgical Robots: A New Clinical Paradigm

Dr Kevin Koh
Vivo Surgical

DESIGNATION & ORGANISATION

Founder & Chief Executive Officer, Vivo Surgical (Singapore)
Chairman of the Governing Board, TÜV Rheinland (Singapore & Malaysia)
Chairman and Board Director, PathoVax (USA)
Board Director, VerImmune (USA)

BIOGRAPHY

Dr Kevin Koh is a biomedical engineer, entrepreneur, and start-up mentor with deep expertise in translating medical technology innovations from research to commercial success.

As Founder and Chief Executive Officer (CEO) of Vivo Surgical, Dr Koh leads the development of cutting-edge surgical technologies, including a novel endoscopic surgical robot for advanced endoluminal procedures. Under his leadership, the company has achieved ISO 13485 certification, secured key regulatory approvals such as the FDA and CE mark, and forged strategic global clinical partnerships. Vivo Surgical has also earned major accolades, including the US National Institutes of Health's R01 grant, recognition as a Top 4 Grand Finalist at MedTech Innovator APAC 2023, and winner of the prestigious WIPO Global Award 2024 for its contributions to global healthcare.

Beyond Vivo Surgical, Dr Koh serves as Chairman of the Governing Board at TÜV Rheinland (Singapore & Malaysia), Chairman of the Board at PathoVax (USA), Board Director at VerImmune (USA), and Co-Founder & Executive Director of the Metropolitan Festival Orchestra (Singapore).

Dr Koh holds a PhD in Biomedical Engineering from Imperial College London (The Hamlyn Centre, Institute of Global Health Innovation) and a BSc (Hons) in Molecular Cell Biology from University College London.

EXHIBITORS

EXHIBITORS

A*STAR

Biomedical Data Hub, Agency for Science Technology and Research

The Biomedical Data Hub (BDH) is a national platform that brings together BioMed DAR, a multimodal data repository at the Bioinformatics Institute (BII), and RAPTOR, a cloud-based data management and computing platform for genomics at the Genome Institute of Singapore (GIS). BDH focuses on curating and maintaining strategic deidentified Asian biomedical research data and provides support to researchers and innovators with expertise in bioinformatics and A.I.

As a trusted research node and partner to MOH TRUST, BDH plays a crucial role in unlocking the value of biomedical data to advance cutting-edge science and digital health solutions. Set to launch in mid-2025, BDH will offer several key services to its users, including:

- Secure data repository and analytics environment
- Domain and platform expertise such as data curation and harmonisation
- Tools for data search, exploration, and analytics

BDH currently hosts around a dozen multimodal research cohort datasets, which include structured, unstructured, imaging, and -omics data. These datasets have been onboarded for data curation and harmonisation to enable large-scale analysis and A.I. Furthermore, as the designated data repository for the National Medical Research Council (NMRC), BDH will facilitate research collaborations and data sharing by onboarding eligible research datasets.

This national initiative is hosted by the Agency for Science Technology and Research (A*STAR) in partnership with the Ministry of Health (MOH) Singapore and is funded by Singapore's National Research Foundation (NRF).

EXHIBITORS

A*STAR

Diagnostics Development Hub (DxD Hub), Agency for Science Technology and Research

Diagnostics Development Hub (DxD Hub) is a national platform hosted by the Agency for Science, Technology and Research (A*STAR). With a mission to revolutionise diagnostics and improve healthcare outcomes, we drive the transformation of innovations into clinically validated diagnostic devices that are ready for market adoption.

DxD Hub operates an internal, ISO 13485-compliant productisation engine that supports end-to-end diagnostics development. This integrated capability spans product design and development, regulatory strategy, manufacturing, and clinical validation, enabling efficient translation of innovations into commercial-ready solutions. By adopting a product-market fit approach, we provide a suite of multidisciplinary capabilities tailored for In Vitro Diagnostics (IVDs), Point-of-Care Connected Devices, Digital Diagnostics, and Digital Therapeutics. These services help innovators and enterprises address technical, regulatory, and manufacturing challenges, reducing development risks and time-to-market.

We play a strategic role in strengthening Singapore's diagnostics MedTech ecosystem by delivering impactful products, supporting the growth of local enterprises, and anchoring global companies in the region, contributing to a vibrant and sustainable sector.

EXHIBITORS

A*STAR

Experimental Drug Development Centre (EDDC), Agency for Science Technology and Research

The Experimental Drug Development Centre (EDDC) is Singapore's national platform for drug discovery and development and was established to fulfil a dual mission of translating basic research into impactful medicines as well as attracting research investment and catalysing the development of Singapore's biopharma ecosystem.

Organised like a biotech, EDDC is staffed by more than 100 scientists experienced in therapeutics development. Our end-to-end capabilities allow us to initiate small and large molecule discovery through to conducting clinical proof-of-concept trials. Our pipeline comprises small molecules, large molecules, antibody-drug conjugates (ADCs) and ADC payloads across key disease areas including oncology, ophthalmology, inflammation and immunology, and infectious diseases.

EDDC's Governing Board membership includes Prof Benjamin Seet (Group Chairman Medical Board (Research), National Healthcare Group), Prof Tan Say Beng, (Executive Director, National Medical Research Council), and Adj A/Prof Danny Soon (Chief Executive Officer, Consortium for Clinical Research and Innovation, Executive Director, Singapore Clinical Research Institute). We have out-licensed five assets, such as first-in-class small molecules and antibodies, co-developed projects with both local and global biotech companies, and spun off of a biotech in the PROTAC field. In close collaboration with clinicians, EDDC is also developing Singapore's first made-in-Singapore ADC, EBC-129, which has progressed to Phase 1B dose expansion of clinical trials for solid tumours.

As a national platform, EDDC also supports Singapore's clinicians and scientific community through initiatives like the Target Translation Consortium (TTC). This is a collaborative effort between A*STAR, Duke-NUS Medical School, Lee Kong Chian School of Medicine, Nanyang Technological University, National Healthcare Group, National University of Singapore, National University Health System, and SingHealth. It aims to foster the first step in the translation of promising research into therapeutic candidates, by providing support for the preclinical validation of putative drug targets through the Singapore Therapeutics Development Review.

EDDC welcomes opportunities to work even more closely with the local clinical community to understand unmet needs that remain across diseases relevant to Singapore, derive insights from patient-derived data, identify and validate putative drug targets and co-develop translational research programs. Whether you are exploring new drug targets, looking to advance early-stage therapies or seeking translational partners on a collaborative or fee-for service basis, we invite you to connect with us.

Website: www.eddc.sg

LinkedIn: https://sg.linkedin.com/company/experimental-drug-development-centre-eddc

Contact: bd@eddc.sg

EXHIBITORS

A*STAR
Medtech Catapult

MedTech Catapult (MC) is a national initiative hosted by the Agency for Science, Technology and Research (A*STAR) that seeks to establish itself as the go-to medical device product development platform in Singapore.

MC operates to bolster local design and development capabilities for novel MedTech product development whilst enhancing high-value MedTech manufacturing capacities of our local contract manufacturing organisations (CMOs). Through this, we will contribute to the growth of an innovation-driven economy and a robust MedTech ecosystem in Singapore.

MC offers comprehensive support including in-house product engineering, quality assurance, regulatory affairs, clinical affairs, as well as project management to accelerate market readiness. By collaborating with clinicians, regulators, and industry leaders, we guide product owners of life science instruments and medical devices through the development cycle, aiming for manufacturing in Singapore.

EXHIBITORS

A*STAR

Nucleic Acid Therapeutics Initiative (NATi), Agency for Science Technology and Research

Nucleic Acid Therapeutics Initiative (NATi), hosted by A*STAR, is Singapore's national platform dedicated to advancing RNA-based medicines and revolutionising drug and vaccine development. NATi's mission is to establish Singapore as a globally recognised hub of excellence in nucleic acid therapeutics research, clinical translation, and commercialisation. NATi focuses on key RNA modalities such as antisense oligonucleotides (ASOs), small interfering RNA (siRNA), and messenger RNA (mRNA). To drive this vision, NATi is building a biotech-like translational engine focused on asset and technology development spanning from early discovery to clinical development.

EXHIBITORS

A*STAR

Research Support Centre, Agency for Science Technology and Research

A*STAR's Research Support Centre (RSC) provides exceptional service and support to scientists from across A*STAR and Singapore's wider research ecosystem. Our mission is to deliver integrated services that empower researchers and streamline operations in several key areas:

Technology Platforms: We drive innovation and accelerate research by offering world-class Technology Platforms with expert support and cutting-edge scientific equipment.

Research Consumables: We ensure cost savings, efficient operations, rapid fulfilment, and resilient supply chains.

Critical Research Support Services: We ensure efficient research operations through essential services such as glassware washing and sterilisation, biohazard waste management, and cryo-storage.

Scientific Equipment Asset Lifecycle Management: We provide visibility, access, and data insights to support research and drive strategic decision-making throughout the asset lifecycle.

We take pride in being a trusted partner to the scientific community and look forward to continuing to support your research endeavours.

EXHIBITORS

A*STAR

Singapore Health Technologies Consortium (HealthTEC.SG)

Funded by the National Research Foundation (NRF), the Singapore Health Technologies Consortium (HealthTEC.SG) is a technology consortium hosted by the Consortium Management Office (CMO) at Agency for Science, Technology and Research (A*STAR). HealthTEC.SG seeks to develop the health technology ecosystem, focusing on both software- and hardware-based health technologies that aim to transform health and wellness. Through facilitating partnerships across academia, industry and healthcare institutions, the Consortium accelerates the adoption and value capture of technologies developed in the research ecosystem for the public healthcare system and the industry.

To enhance synergies among ecosystem stakeholders for innovation opportunities, HealthTEC.SG organises our annual International HealthTEC Summit, symposia, seminars, and workshops regularly. We also collaborate actively with overseas ecosystems to promote cross-market R&D partnerships that may lead to relevant industry or healthcare outcomes.

Website: https://www.healthtec.sg/

Contact: Dr Gordon Xiong, Senior Assistant Director, HealthTEC.SG
Gordon_xiong@healthtec.sg

EXHIBITORS

Centre for Biomedical Ethics (CBmE)

The NUS Centre for Biomedical Ethics (CBmE), established in September 2006 at the Yong Loo Lin School of Medicine, is a leading centre for learning, teaching, and research on ethical and legal aspects of healthcare and biomedical sciences. CBmE focuses on issues of international significance, with a special emphasis on Singapore and Asia, collaborating with academic colleagues and key stakeholders in healthcare, biomedical science, and policy communities.

Research: Our research platforms cover clinical, health systems, and public health ethics, ethics and regulation of emerging science and biomedical technologies, and research ethics and regulation. Our interdisciplinary approach, involving philosophy, law, and social science, promotes critical inquiry, fosters dialogue, and produces rigorous theoretical and empirical analyses. We aim to generate policy-relevant outputs accessible to professionals, academics, and the broader community.

Education: CBmE delivers core teaching in Health Ethics, Law, and Professionalism to undergraduate medical, nursing, dentistry, and pharmacy at NUS. The Centre offers a vibrant environment for postgraduate studies (Masters and PhD) in bioethics. CBmE has short courses, seminars, and certificate programmes to enhance the capacity of healthcare professionals and others in the healthcare ecosystem, helping them develop understanding, good judgment, and sound ethical practices in real-world environments.

EXHIBITORS

College of Clinician Scientists

On behalf of the College of Clinician Scientists, it is our great pleasure to congratulate all the award winners at the National Medical Research Council (NMRC) Awards Ceremony and Research Symposium 2025. The support and Awards from the NMRC have enabled and made all of our research possible as Clinician-Scientists, and it is heartening to see the next generation of clinician scientists being similarly supported in their journey.

Formally established in 2016, the College of Clinician Scientists celebrates its 9th anniversary this year, and the College has grown now to be more than 125 members strong. Our mission is to provide a collective voice and identity for clinician scientists in Singapore, and to be the scientific arm of the Academy of Medicine (AMS). Our vision is for our College to be the go-to place where all Clinician-Scientists and in-training Clinician-Scientists, will become a member. Through the College, aspiring clinician scientists receive valuable mentorship, training, and advancement opportunities. We hope that all the aspiring clinician scientists being awarded today will consider joining us, and actively engage with our vibrant and supportive community.

We believe that the theme of the Research Symposium today: "Research for a Better Future", unites us all in the mission of doing valuable patient-related scientific research, to improve outcomes for our patients and broader society in the years to come.

Veritas Vos Liberabit !
(The truth will set you free)

On behalf of the College of Clinician Scientists, Academy of Medicine Singapore

Wan-Yee Teo, Vice President
Tien-En Tan, Council Member
Membership & Recruitment Section

Website: https://www.ams.edu.sg/colleges/clinician-scientists/about
Email: membership@ams.edu.sg

EXHIBITORS

CRIS

Consortium for Clinical Research and Innovation, Singapore

CRIS was established in 2020 with the goal of strengthening synergies and developing strategies for national-level clinical research and translation programmes that are under the stewardship of the Ministry of Health. It is a subsidiary of MOH Holdings.

CRIS brings together six key national-level R&D initiatives, and facilitates synergistic collaborations among them. These initiatives include:

1. Singapore Clinical Research Institute (SCRI)
2. National Health Innovation Centre Singapore (NHIC)
3. Advanced Cell Therapy and Research Institute, Singapore (ACTRIS)
4. Precision Health Research, Singapore (PRECISE)
5. Singapore Translational Cancer Consortium (STCC)
6. Cardiovascular Disease National Collaborative Enterprise (CADENCE)

CRIS aims to make a positive difference to Singapore patients and researchers by ensuring that these clinical research platforms and programmes are at the cutting edge of capability development and innovation. This will be achieved through facilitated collaborations and enduring partnerships with research and biomedical entities, as well as communities across the public sector and industry across Singapore.

For more information, please visit https://www.cris.sg

EXHIBITORS

CRIS
Singapore Clinical Research Institute (SCRI)

SCRI was established in 2008 as the national academic clinical research organisation to enhance the standards of clinical research in Singapore by developing core capabilities, infrastructure and scientific leadership for clinical research.

In 2021, SCRI was appointed as the national coordinating body to implement the national clinical trial strategy and enhance Singapore's clinical trial ecosystem.

This is accomplished through the deployment of innovative technologies and processes, and strategic coordination of ecosystem capabilities and infrastructure to achieve synergies that will enhance the clinical research ecosystem aimed towards a healthier community and better patient outcomes.

SCRI's key pillars include:

1. Clinical Research Operations
2. Clinical Research Networks
3. Academic Research Partnerships
4. SCRI Academy

SCRI is a programme of the Consortium for Clinical Research and Innovation, Singapore (CRIS). SCRI is supported by the Singapore Ministry of Health through the NMRC Office, MOH Holdings Pte Ltd under the NMRC Enablers and Infrastructure Support for Clinical Trials-related Activities funding initiative (MOH-001144).

For more information, please visit https://www.scri.edu.sg/

Clinical Trials Singapore (CTSG)

CTSG is an effort by Singapore Clinical Research Institute (SCRI) to serve as Singapore's centralised portal for all things related to clinical trials. Crafted to cater to patients, caregivers, clinical investigators and companies by making clinical trial information more accessible and comprehensible. By demystifying the clinical trial landscape, CTSG aims to encourage greater interest in clinical trials, fostering innovation and improving health outcomes.

For more information, please visit https://clinicaltrials.sg/

EXHIBITORS

CRIS
National Health Innovation Centre Singapore (NHIC)

The National Health Innovation Centre Singapore (NHIC) is a nationally appointed programme office that works with Public Health Institutions across Singapore to identify and commercialise promising clinical innovations. NHIC funds the translation and development of medical innovations from Singapore's clinical sector, and provide strategic guidance and connection to industry partners, accelerating the pathway to impact in healthcare. NHIC's programmes catalyse the translation of clinical innovations towards commercially viable products that benefit patients and healthcare.

Established since 2014, the office has supported several projects and companies in the development and implementation of innovative medical technologies and services, improving the standard of healthcare in Singapore and beyond.

NHIC is a programme of the Consortium for Clinical Research and Innovation, Singapore (CRIS). NHIC is supported by the Singapore Ministry of Health (MOH) through the National Medical Research Council (NMRC) Office, MOH Holdings Pte Ltd under the MOH Innovation and Enterprise Office (IEO) Decentralised Core Funding Initiative (MOH-000952) and MOH IEO Decentralised Gap Funding Initiative (MOH-000953).

For more information, visit www.nhic.sg

EXHIBITORS

CRIS

Advanced Cell Therapy and Research Institute, Singapore (ACTRIS)

ACTRIS was established in April 2020 to meet the increasing clinical demand of using cellular therapeutics to treat various life-threatening diseases.

Its vision is to be the national and regional centre of excellence for facilitating discovery, process development and manufacturing of cellular-based therapeutics across the broad spectrum of immunotherapy and regenerative medicine, encompassing both investigational and approved products for Singapore.

Through its specialised infrastructure and skilled workforce, ACTRIS aims to promote and foster the entire value chain of the cellular therapy ecosystem by enabling translational research and development, manufacturing, clinical service provision and commercialisation by serving the healthcare, academic and industrial sectors.

In addition, ACTRIS will also provide value-added services such as workforce training, GMP support and ancillary material standardisation pertaining to the delivery of cellular therapy to patients.

ACTRIS is a programme of the Consortium for Clinical Research and Innovation, Singapore (CRIS), a subsidiary of MOH Holdings (MOHH) and supported by the Ministry of Health (MOH), Singapore.

For more information, please visit https://www.actris.sg

EXHIBITORS

CRIS

Precision Health Research, Singapore (PRECISE)

Precision Health Research, Singapore (PRECISE) is the central entity set up to coordinate a whole of Singapore effort to implement Phase II of Singapore's three-phase National Precision Medicine (NPM) programme. Phase I (2017-2021) focused on developing an Asian reference genome database called SG10K_Health, comprising whole genome sequences (WGS) of 10,000 Singaporeans that still represents one of the world's largest genomic datasets of multi-ethnic Asian populations.

Phase II (2021-2025) builds upon Phase I's genomics foundation and established the longitudinal PRECISE-SG100K cohort with integration of genomic, research phenotypic and clinical data. Phase II includes clinical implementation pilots (CIPs) to develop predictive preventive pathways and evaluate their healthcare impact. Key achievements include completing the PRECISE-SG100K cohort, upcoming establishment of Genomic Assessment Centres by MOH (with familial hypercholesterolemia selected as the first national rollout), and enabling 11 companies to conduct businesses in Singapore.

Phase III (2025-2031) will focus on healthcare transformation and precision population health through partnerships with the healthcare clusters in Singapore. Phase III aims to address three core areas: identifying genetic factors in Asian-relevant diseases for novel treatments; scaling precision medicine from pilots to national implementation; and leveraging innovative data linkages to enhance Asian-centric datasets for AI applications and international collaboration.

National Precision Medicine (NPM) Phase II is supported by the National Research Foundation, Singapore (NRF) under the RIE2020 White Space (MOH-000588 and MOH-001264) and administered by the Singapore Ministry of Health through the National Medical Research Council (NMRC) Office, MOH Holdings Pte Ltd. NPM Phase III is supported by the Singapore Ministry of Health through the NMRC Office, MOH Holdings Pte Ltd under the NMRC RIE2025 NPM Phase III Funding Initiative (MOH-001734).

For more information, visit www.npm.sg

EXHIBITORS

CRIS
Singapore Translational Cancer Consortium (STCC)

STCC was established in 2020, as a nationally coordinated consortium to synergise cancer research capabilities in Singapore.

STCC brings together unmatched basic, clinical, and translational talent in Singapore to create globally significant peaks of excellence in selected Asian cancers. STCC's five joint platforms – Cancer Clinical Trials and Investigational Medicine Units, Cancer Databases and Tissue Banks, Translational Research Integration and Support, Business Intelligence and Development, and Impact and Population Health – provide an enabling research and innovation environment driven to foster translational research and meaningful outcomes for society.

Through these forged collaborative relationships between local cancer research groups and by capitalising on the strengths of industry and academia, STCC is uniquely poised to develop initiatives that are aligned with Singapore's goals in value-based healthcare innovation and economic value creation.

STCC is a program of Consortium for Clinical Research and Innovation, Singapore (CRIS) and is supported by the National Research Foundation, Singapore and funded by the Ministry of Health through the National Medical Research Council Office, MOH Holdings Pte Ltd.

For more information, please visit https://www.stcc.sg

EXHIBITORS

CRIS

Cardiovascular Disease National Collaborative Enterprise (CADENCE)

Established in February 2023, the Cardiovascular Disease National Collaborative Enterprise (CADENCE) is a national clinical translational programme aimed at synergising cardiovascular research and technology capabilities across Singapore.

Its goal is to integrate existing research capabilities, and bring together the strongest basic, clinical, and translational talent and expertise across Singapore and institutions, to establish a focused and impactful national cardiovascular disease research and translational programme with world-class peaks of excellence.

To achieve this, CADENCE has established four national joint platforms focused on data science, clinical trials, and artificial intelligence/digital health, together with a business intelligence and development unit to attract industry collaborations/external investments.

CADENCE is a programme of the Consortium for Clinical Research and Innovation, Singapore (CRIS). CADENCE is supported by the Singapore Ministry of Health through the National Medical Research Council (NMRC) Office, MOH Holdings Pte Ltd under the NMRC RIE2025 National Clinical Translational Programme Funding Initiative (MOH-001277).

For more information, please visit https://cadence-cvd.sg

EXHIBITORS

National Healthcare Group Domain Specific Review Board (NHG DSRB) and SingHealth Centralised Institutional Review Board (CIRB)

The NHG Office of Human Research Protection Programme

The National Healthcare Group (NHG) Office of Human Research Protection Programme (OHRPP) safeguards the rights, safety, and welfare of research participants while upholding high standards of research ethics. The office conducts proportionate ethics reviews, oversees human research activities, educates researchers and engages in public outreach to promote awareness of participant rights. OHRPP is accredited by the Association of the Accreditation of Human Research Protection Programs (AAHRPP), an assurance of its dedication to ethical and scientifically sound research with processes to protect the rights and safety of research participants.

Learn more about the NHG OHRPP at https://ethics.gri.nhg.com.sg/about-ohrpp

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SingHealth Research Integrity, Compliance and Ethics (RICE)

RICE provides regulatory oversight, promotes research integrity and ethical conduct for research and research tissue banking within SingHealth. Within RICE, the Centralised Institutional Review Board (CIRB) provides reviews and oversight on biomedical and behavioural research involving humans. CIRB is an independent body comprising medical, scientific, and non-scientific members. It adheres to ethical principles from the Belmont Report and legal mandates from the International Conference for Harmonisation Guidelines for Good Clinical Practice (ICH GCP) and the Human Biomedical Research Act (HBRA) to ensure the protection of human subjects in research by approving and reviewing research studies and informed consent processes.

Learn more about the SingHealth RICE at https://www.singhealthdukenus.com.sg/research/rice

EXHIBITORS

National Healthcare Group Domain Specific Review Board (NHG DSRB) and SingHealth Centralised Institutional Review Board (CIRB)

Enhancing Public Healthcare Research Through Ethics Board Collaborations

Through the support of NMRC funding, NHG and SingHealth launched ECOS, a common IT platform to enhance ethics reviews for public healthcare research. At the same time, 5 key IRBs established an agreement to streamline reviews. Together, these are set to revolutionize research collaborations within our healthcare ecosystem and contribute to improved outcomes for the patients and communities we serve. About ECOS & Mutual Recognition Agreement:

- **Ethics and Compliance Online System (ECOS)** – The first integrated online system utilised by all 3 public healthcare clusters in Singapore serves as a comprehensive, one-stop solution that streamlines research processes from start to end. Researchers from the 3 public healthcare clusters and our local partners now submit applications through a unified system. The harmonised workflows significantly enhance the efficiency and speed of processing ethics applications processing.

- **Mutual Recognition of Ethics Review** – This initiative involves the 5 key Institutional Review Boards (IRBs) in Singapore, including NHG, SingHealth, Nanyang Technological University Singapore (NTU), National University of Singapore (NUS), and Agency for Science, Technology and Research (A*STAR). Researchers only need to submit one IRB application for collaborative studies. By streamlining the IRB review process, this collaboration optimizes resources and promotes synergistic research among institutions.

EXHIBITORS

RNAscence Biotechnology

RNAscence Biotechnology is a RNA therapy spin-off company from National Skin Centre (NSC) and Nanyang Technological University (NTU). With a focus on topically administered RNA-based therapies, it aims to address skin problems which effective options are lacking.

Through a research collaboration, the Company developed BioRNA Antiscar. It is a first-of-its-kind dissolvable microneedle patch with proprietary RNA-based technology. The product reduces the appearance of scar by targeting the root cause of excessive scar tissue formation. Results from a randomised controlled clinical trial revealed that the patch is superior to silicone sheets, the current standard-of-care, in reducing the volume of post-surgical scars.

BioRNA Antiscar is currently available in Singapore, Malaysia, China, Hong Kong and Australia, with distribution pending in Europe and other markets. RNAscence Biotechnology is currently studying how its technology can be used to treat other skin conditions, such as Eczema.

Website: www.bioRNA.sg

Email: enquiry@bioRNA.sg

EXHIBITORS

Singapore Biodesign

Singapore Biodesign, a National-level talent development platform and global affiliate of the renowned Stanford Mussallem Center for Biodesign, focuses on bringing economic benefits and healthcare value through its healthtech innovation training. The programme aims to empower the next generation of med-/healthtech innovators for Asia using the needs-centric Biodesign Process that the programme has adapted for the region.

EXHIBITORS

Vivo Surgical

Vivo Surgical is a patient focused, clinically driven medical device developer and manufacturer headquartered in Singapore. With commercial and co-innovation partnerships spanning several international territories, the company is pioneering a novel flexible endoscopic robot for complex endoluminal procedures along the gastrointestinal tract. ISO 13485 certified with international accreditations attained such as the US FDA and European CE mark, Vivo Surgical's proprietary devices - from in vivo surgical lighting to endoluminal robotics - target the world's medical needs through the innovative applications of science & technology.