



PRESS RELEASE

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NUS students launch competition to find answers to healthcare challenges

Over the past 12 months, students from the NUS Yong Loo Lin School of Medicine (NUS Medicine) and their counterparts from the Engineering, Law, Arts and Business faculties have been working hard in attempts to find solutions to a number of healthcare problems. The students, grouped into 17 teams, are taking part in the inaugural Medical Grand Challenge (MGC).

This is a student-led, multi-disciplinary competition to identify unmet healthcare needs and explore creative solutions to address these issues. Based on the idea that all discoveries begin with a single question, the MGC was launched in August last year. It aims to nurture a culture of curiosity among undergraduates, while encouraging creativity and entrepreneurship. Given the immense value of multi-disciplinary work, the Challenge also seeks to foster relationships between students from different faculties and backgrounds.

The year-long competition concludes today (18 August 2017), when the efforts of the 17 teams are assessed by a panel of judges for business strategy, creativity, design quality and healthcare impact.

Working on a range of different topics, from making dialysis safer, tackling the growing epidemics of diabetes and obesity to providing patients with information on waiting times at hospitals and clinics, the 17 groups were shortlisted and provided seed grants of \$500 each.

Said the Dean of NUS Medicine, Associate Professor Yeoh Khay Guan, "The Medical Grand Challenge serves as a stimulus to encourage bright young minds to collaborate, unleash their creativity and apply their ingenuity to important needs in Singapore healthcare. We hope this sparks a life-long interest in innovation, thinking out-of-the-box and solving real life problems."

Added NUS Provost and Deputy President (Academic Affairs), Professor Tan Eng Chye, who is the Guest-of-Honour, "I am deeply heartened that NUS Medicine students have taken the lead to work collaboratively and innovatively with students from other faculties to form interdisciplinary teams to explore creative and out-of-the-box solutions to meet these needs – and drawing upon technology to achieve their objectives. This collaboration is essential to help advance medical breakthroughs and innovations, to revolutionise healthcare and to make a difference to society. It also neatly expresses the NUS mission to transform the way people think and do things through education, research and service."

For more information about the Challenge, visit the [website](http://medicine.nus.edu.sg/cenmed/mgc/nus.html) (medicine.nus.edu.sg/cenmed/mgc/nus.html) and [Facebook page](https://facebook.com/nusmgc) (facebook.com/nusmgc).

Details of the 17 projects:

No.	Title / Problem	Team members
1	To develop an effective approach to remove urine from patients with neurogenic bladder with minimal risk of urinary tract infection (UTI)	NUS Medicine, Engineering & Technology Management, Industrial & Systems Engineering, Biomedical Engineering
2	eVand: A Lightweight, Motion-Sensing, Inexpensive Smartwear for Administration of Neuromuscular Electrical Stimulation to Treat Chronic Venous Insufficiency	NUS Medicine, Science, Business, Biomedical Engineering
3	MissiQ (hospital/clinic queue times)	NUS Medicine, Computer Engineering, Business Administration
4	The Hipportable (transferring disabled elderly)	NUS Medicine, Engineering, Business
5	SNP Surgical Neck Positioner	NUS Medicine, Pharmacy, Biomedical Engineering, Accounting
6	Thyport (an inflatable neck and shoulder support)	NUS Medicine, FASS, Science
7	Smart Clip-On Inhaler Assistant	NUS Medicine, Computer Engineering, Dentistry, Law
8	MODA (Development of a portable and modular photometric/optical platform for point of care medical diagnostics)	NUS Medicine, Science, Engineering, Computing
9	Obye (a smartphone application that helps overweight individuals change diet and exercise habits)	NUS Medicine, Computing, Biomedical Engineering, Environmental Studies
10	eTimesaver (a new medical compliance device)	NUS Medicine, Pharmacy, Business, Biomedical Engineering
11	PDSafe (to reduce infections in peritoneal dialysis (PD) patients)	NUS Medicine, Engineering, FASS
12	Heads Up (a shoulder-neck-head rest used in thyroidectomies)	NUS Medicine, Engineering, Business Administration
13	myHEROsg (Health Emergency Resource Organiser)	NUS Medicine, Computer Engineering, Computer Science
14	EyeDEA (glaucoma)	NUS Medicine, Nursing, Business
15	FootSense (An affordable, portable, home-based foot temperature monitoring system for the early detection of foot ulcers)	NUS Medicine, Nursing, Engineering
16	SNIPER: Singapore Novel Intraluminal Proximal-Anastomosis Repertoire	NUS Medicine, Engineering, Business
17	Infra-sight (a device to lower the incidences of missed intravenous attempts)	NUS Medicine, Computing

In brief:

The Medical Grand Challenge is a year-long student-led, multi-disciplinary medical innovation programme. NUS Yong Loo Lin School of Medicine (NUS Medicine) students join counterparts from the Engineering, Law, Arts and Business faculties to form inter-disciplinary teams to develop solutions and tackle challenges and needs faced by the healthcare industry. These solutions can be in the form of products, smartphone applications, and devices.

Since August 2016, participating students participated in boot camps and workshops. They also discussed project ideas with their mentors and set to work with seed grants to develop prototypes of their projects.

In all, 17 groups successfully developed their proposals into prototypes. They will present their ideas to judges on 18 August 2017.

Objectives

To stimulate innovation, creativity, promote collaboration among students and inculcate in medical students a strong entrepreneurial spirit and interest in meeting the needs of the community.

Judges

- Professor Tan Sze Wee, Chief Judge
Executive Director, Science and Engineering Research Council, Agency for Science, Technology and Research (A*STAR) and Adjunct Professor, NTU School of Chemical and Biomedical Engineering & Lee Kong Chian School of Medicine (LKCMedicine)
- Dr John Langell
Executive Director of the Center for Medical Innovation with the Office of Senior Vice-President, Health Science, University of Utah and Chief of General Surgery, George E. Wahlen VA Medical Center, USA
- Dr Lincoln Chee
Managing Director, Vertex Healthcare
- Mr John Dahlberg
Managing Partner, Cyberella Ventures
- Associate Professor Glenn Vandevoorde
Head, Technology Ventures Lab, Institute for Engineering Leadership, NUS
- Dr Gary Rubin
Senior Associate Director, NUS Enterprise
- Associate Professor Audrey Chia
NUS Business School
- Professor Lawrence Ho
Vice-Dean (Research), NUS Medicine

- Dr Voo Teck Chuan
Centre for Biomedical Ethics, NUS Medicine
 - Associate Professor Jason Yap
Saw Swee Hock School of Public Health, NUS
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About the National University of Singapore (NUS)

A leading global university centred in Asia, the National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education and research, with a focus on Asian perspectives and expertise.

NUS has 17 faculties and schools across three campuses. Its transformative education includes a broad-based curriculum underscored by multi-disciplinary courses and cross-faculty enrichment. Over 38,000 students from 100 countries enrich the community with their diverse social and cultural perspectives. NUS also strives to create a supportive and innovative environment to promote creative enterprise within its community.

NUS takes an integrated and multi-disciplinary approach to research, working with partners from industry, government and academia, to address crucial and complex issues relevant to Asia and the world. Researchers in NUS' Schools and Faculties, 30 university-level research institutes and centres, and Research Centres of Excellence cover a wide range of themes including: energy, environmental and urban sustainability; treatment and prevention of diseases common among Asians; active ageing; advanced materials; risk management and resilience of financial systems. The University's latest research focus is to use data sciences, optimisation research and cybersecurity to support Singapore's Smart Nation initiative.

For more information on NUS, please visit www.nus.edu.sg.

About the NUS Yong Loo Lin School of Medicine

Established in 1905, the NUS Yong Loo Lin School of Medicine is the first institution of higher learning in Singapore and the genesis of the National University of Singapore.

The School offers one of the finest undergraduate medical programmes in the Asia Pacific region and commands international recognition and respect. The Times Higher Education World University Rankings 2016 by subject and Quacquarelli Symonds (QS) World University Rankings by Subject 2017 list NUS Medicine as a leading medical school in Asia.

It admits 300 students to the MBBS degree programme annually and its principal missions are to educate and train the next generation of healthcare professionals, and foster research that will help to advance the practice of medicine.

The 18 NUS Medicine departments in the basic sciences and clinical specialties work closely with the Centre for Medical Education, the Centre for Biomedical Ethics, the Centre for Healthcare Simulation as well as the restructured public hospitals to ensure that teaching and research are aligned and relevant to Singapore's healthcare needs. The School is a founding institutional member of the National University Health System.

For more information about NUS Medicine, please visit <http://nusmedicine.nus.edu.sg>.