



**GloFish
Go Places**

SEP-OCT 2017

NUS NEWS

**Best in
Asia**

P03

**Red Meat Raises
Diabetes Risk**

P10

**Friendly
Genes**

P11

Prof Tan Chorh Chuan to Helm Healthcare Innovation



Professor Tan Chorh Chuan will serve as Singapore's first Chief Health Scientist at the Ministry of Health (MOH) from 1 January 2018. He will concurrently head the new MOH Office for Healthcare Transformation as its founding Executive Director.

Prof Tan will assume these appointments after he steps down as NUS President end of the year, capping a decade in which he transformed the institution into a leading global university.

Prof Tan will play an instrumental role in establishing the new MOH Office for Healthcare Transformation. The new Office will identify and test-bed new concepts and innovations to promote the good health and wellbeing of Singaporeans, as well as enhance patient care.

It will focus on critical areas such as encouraging health-promoting behaviours to prevent or delay the onset of chronic conditions; making home-based management a viable care model for patients with chronic diseases; as well as providing more holistic inpatient care for people with multiple medical conditions.

As MOH's Chief Health Scientist, Prof Tan will leverage his leadership and experience in healthcare and research to drive the Ministry's research and development, especially in the health and biomedical sciences. He will oversee and strengthen the translation of research to better manage and treat diseases, as well as to develop new therapies and improve diagnostics.

“It has been a unique privilege to lead an institution like NUS and to work with such talented colleagues who are so fiercely committed to true academic excellence and innovation.”

– Professor Tan Chorh Chuan,
NUS President

Prof Tan said, “I am deeply honoured to have this rare opportunity to contribute

to the transformation of our healthcare system for the future. This is linked, in several ways, to the further growth of our strengths in biomedical research and their application to address health issues of greatest relevance and impact for Singapore. In this regard, the concurrent appointments which I will hold at the MOH will therefore be highly synergistic.”

This marks a return to MOH for Prof Tan, after his secondment there as its Director of Medical Services from 2000 to 2004, where he led the public health response to the 2003 SARS epidemic and received the Public Service Star award.

Prof Tan has served in numerous leadership capacities in the Singapore healthcare system, including Chairman of the National University Health System since 2011, of which NUS Yong Loo Lin School of Medicine, NUS Dentistry and the Saw Swee Hock School of Public Health at NUS are members. He has been Deputy Chairman of the Agency for Science, Technology and Research since 2004. He is also the first Singaporean to be elected to the influential US National Academy of Medicine.

2018 THE World Summit to Convene at NUS

The University will partner Times Higher Education (THE) to host the 2018 THE World Academic Summit from 25 to 27 September next year. Global thought leaders from universities, research institutions, industry and government attend the event annually to shape the future of higher education.

Professor Tan Chorh Chuan, NUS President announced the event's theme “The Transformative Power of Research: Advancing Knowledge, Driving Economies, Building Nations” at the THE World Academic Summit 2017 hosted by King's College London and THE in London, UK.

Prof Tan said, “This is a topic central to the vision and work of many universities, and yet the goals and pathways that each of our universities will pursue will vary, based on our differing contexts and priorities of the university community and our major stakeholders.”

He added, “The Summit will therefore provide a powerful forum for us to gain deep insights into these issues that are common to all universities, alongside opportunities for differentiation and innovation.”

Asia's Best, World's 22nd

NUS is now 22nd in the world in the latest Times Higher Education (THE) World University Rankings 2018, advancing two spots from last year. The University continues to maintain pole position in Asia for the third consecutive year.

Improvements were made in its teaching and research reputations, research productivity, research income and research influence (citations). NUS also ranks among the world's top 20 universities in research, teaching and international outlook.



The 2018 Summit to be held at NUS will address questions such as how universities can balance support for long-term fundamental research and promoting research translation and commercialisation; and how they can position themselves strategically in a future of accelerated and constant change.

Among the eminent speakers who will share their views at the event will be Nobel Laureate Professor Brian Schmidt, Vice Chancellor of the Australian National University; Professor Stephen Toope, Vice Chancellor of the University

of Cambridge; Professor Lino Guzzella, President of ETH Zurich; Professor Isaac Ben-Israel, Chair of the Israel National Council for Research and Development; Professor Lin Jianhua, President of Peking University; Professor Peretz Lavie, President of Technion - Israel Institute of Technology; and Dr Lily Chan, CEO of NUS Enterprise.

Please see 2018 THE World Summit website at: www.theworldsummitseries.com/events/the-world-academic-summit-2018/event-summary-959e1e6cf1da41e0a093350cec4d7fdd.aspx

“NUS has clearly established itself, against THE's 13 rigorous and exacting performance metrics, not only as Asia's number one university but as one of the best universities in the world.”

– Mr Phil Baty,
Editorial Director, THE Global Rankings

This year, the THE World University Rankings 2018 assessed 1,000 institutions from 77 countries based on 13 calibrated performance indicators in teaching, research, citations, international outlook and industry income.

Separately, the overall Best Global Universities rankings by U.S. News and World Report has also placed NUS top in Asia. The rankings encompass the top 1,250 institutions spread across 74 countries.

Engineering a Smart Nation



From left: Assoc Prof Chitre, Prof Ho, Mr Konno and Prof Thean at the Question and Answer session

The latest “NUS Greater Good Series” on 3 October, co-organised by NUS Development Office and NUS Engineering, explored the challenges and opportunities in Singapore’s move to become a Smart Nation, as well as the University’s research efforts in tandem with this nationwide push.

Titled “Smart Engineering: Smart City. Internet of Things. Manufacturing”, prominent speakers such as NUS Deputy President (Research & Technology) Professor Ho Teck Hua and NUS Engineering Professor Aaron Thean gave their insights on the hot topics.

Prof Ho shared his “Ho’s Happiness Equation”, which looks at three specific areas he sees as essential to human living — love, career and health. Peppering his talk with interesting analogies and real-world examples, he elaborated on how functions such as customisation and widening of the search field that Artificial Intelligence (AI) and data science provide can help achieve these goals more efficiently.

However, Prof Ho pointed out three potential pitfalls ahead —

“In some ways, I see the Smart Nation as a way to tell the Singapore story. We’re not just efficient, we’re also smart about the things we do. To me, this story has to be compelling. I think this narrative will ultimately be about positioning Singapore as a country with differentiation which we can add value to.”

— Professor Ho Teck Hua,
NUS Deputy President
(Research & Technology)

challenges in obtaining data, assigning liability for mistakes, and the division of labour between man and machine.

Prof Ho currently heads NUS’ Smart Nation Research Cluster to bring together researchers across multidisciplinary backgrounds to create powerful solutions for society and contribute to Singapore’s Smart Nation Initiative. He is also lending his leadership to two Smart Nation initiatives launched by the National Research Foundation, serving as Executive Chairman of AI.SG, and Chairman of the Singapore Data Science Consortium.

Prof Thean, an engineer and prolific inventor with 50 patents, noted how technology-human interaction has changed over the years. Its present iteration of “personal computing dominated by mobile applications” resulted from the convergence of mobile broadband, social media and more affordable chip technology, he said.

NUS scientists have already started work on technologies for Smart Nation in areas such as solar cells, security chips, diagnostic systems and wearable technologies, he added.

The event also included a talk by Mr Masaki Sox Konno, Managing Director of software and solutions company Dassault Systèmes, Asia Pacific South, followed by a Question and Answer session moderated by Associate Professor Mandar Chitre from NUS Engineering. The speakers addressed questions on a variety of topics including the risks of AI.

The NUS Greater Good Series features dialogues and workshops by leading minds on topics related to philanthropy as well as issues that impact the community and society.

Glowing Fish Go Places



GloFish

GloFish, the first transgenic fluorescent pet fish, could be considered an accidental “product” arising from the research by Professor Gong Zhiyuan of NUS Biological Sciences.

Almost two decades ago, Prof Gong wanted to develop a zebrafish that would glow in response to toxins in the waters to detect and fight environmental pollution. He inserted a fluorescent jellyfish gene into the fish successfully, and the resulting

colour was so strong that “it could be viewed comfortably with the naked eye”, he recounted.

He also recognised the potential of the product in the ornamental fish industry. With the help of NUS Industry Liaison Office, Prof Gong filed a patent for the technology and its application in ornamental fishes.

US-based Yorktown Technologies licensed the technology to create its proprietary GloFish. The first fluorescent

zebrafish it marketed was red, which incorporated a bright red gene from the sea anemone. The ornamental fish is also available in green, orange-yellow, purple, blue and pink. The licensing arrangement also meant the University continues to receive royalties from the sale of the fish.

Prof Gong, who is also with the NUS Environmental Research Institute, went on to develop several strains of genetically modified zebrafish which exhibit fluorescent colours only after exposure to specific chemical pollutants, such as oestrogenic compounds, heavy metals and dioxins.

Looking back at how far his work has gone, Prof Gong said, “I am very proud that our technology has become an established tool to develop novel varieties of ornamental fish and how it created a new and growing industry in the pet market. I am even prouder that the GloFish has become teaching material in classrooms, museums and aquariums for public education in topics ranging from classical genetics to modern biotechnology.”

BLOCK71 San Francisco Brings Camaraderie and Opportunities

NUS Engineering alumnus Arun Thampi co-founded chatbot analytics start-up Botmetrics some 20 months ago in San Francisco. He decided to work out of BLOCK71 San Francisco, an initiative by NUS Enterprise, Singtel Innov8 and SG Innovate.

Arun attributed his choice to the environment where like-minded people met and shared experiences.

“Entrepreneurs go through hard days. Knowing that the people sitting next to me had also similar experiences

made our entrepreneurial journey less lonely. We motivated each other. It’s the camaraderie that you can’t replicate,” said Arun, who went on the NUS Overseas Colleges programme in Silicon Valley. He also found the frequent sharing sessions with entrepreneurs and investors valuable because they helped him keep up with developments, learn new things and meet new people.

As a young start-up facing multiple business problems and challenges, BLOCK71 San Francisco took care of

office set-up issues and distractions, allowing Arun to focus on his business. In July this year, bot software start-up Howdy bought Botmetrics for an undisclosed sum.

BLOCK71 San Francisco has hosted more than 70 start-ups since its operation in 2015. Its premises in the South of Market area of San Francisco, a hang-out of tech entrepreneurs, sees neighbours that include Twitter and LinkedIn, as well as numerous cafes and restaurants.

Cross-faculty Innovations for Healthcare



The team that developed Hipportable, a device which facilitates one-to-one lifting and transferring of disabled elderly

The inaugural Medical Grand Challenge witnessed creative healthcare ideas of NUS undergraduates, including a belt to transfer patients safely and easily, a device to reduce infections in dialysis patients, and an electronic band to prevent pooling of blood in legs.

Organised by students of NUS Yong Loo Lin School of Medicine (NUS Medicine), the event gathered participants from NUS Medicine, Engineering, Law, Arts and Social Sciences, and Business. The multidisciplinary teams spent over a year developing solutions to address various medical problems.

Prototypes of 17 shortlisted teams were presented at the final showcase on 18 August and evaluated by a panel of judges for business strategy, creativity, design quality and healthcare impact.

The team that designed Hipportable, a device which facilitates one-to-one lifting and transferring of disabled elderly, won over judges to clinch the grand prize of \$20,000.

The students decided on the project after learning that the most difficult task in nursing homes was lifting. Nurses spend about three hours each

day just lifting and transferring patients, said second year medical student Julian Low.

Having tried different methods of lifting another person, the team members eventually engineered a double-loop belt system. By capitalising on the strongest parts of the human body — the hips and legs — the device enables a 40kg female to easily lift a 60kg male. Hipportable has since been awarded a provisional patent.

Coming in second place was PDSafe, a contactless sterilisation system for peritoneal dialysis used to treat kidney failure.

Improper sterilisation of the dialysis connecting tubes can lead to infections, which killed half the infected patients in Singapore. PDSafe inactivated 100 per cent of Escherichia coli bacteria in preliminary tests, making the sterilisation process foolproof for patients.

Fourth year NUS Engineering student Poon Chong Wei found his experience in the Challenge rewarding, "I found the team very inclusive and saw how I could use my technical expertise to fill the gaps for this project."

Securing the Change Maker Prize for the most creative and impactful project was eVand, a palm-sized electronic leg band for treating chronic venous insufficiency, a common condition that causes blood to pool in the legs resulting in swelling, skin changes and leg ulcers.

The device uses an electric current to induce contraction of the calf muscles and promote blood circulation. Its motion-sensing technology automatically turns the device off when the user is walking to prevent falls.

All out for a Green Campus



Mr Masagos (left) checking out an activity at the booth of NUS Students Against Violation of the Earth

SEA Games Success



Photo: Lim Sin Thai

The Men's Water Polo team took home their 27th consecutive SEA Games gold medal since 1965

NUS students and alumni did the nation and University proud when they contributed to Team Singapore's impressive haul of 188 medals at the 29th Southeast Asian Games (SEA Games) held in Kuala Lumpur, Malaysia in August.

Playing their part in the nation's longest winning streak in Men's Water Polo were NUS Law alumnus Koh Jian Ying, NUS Medicine student Bryan Ong, NUS Engineering student Chiam Kun Yang, as well as NUS Business students Ang An Jun and Ooi Yee Jia. The team dominated the sport by clinching their 27th consecutive SEA Games gold in a decisive 17-4 match against hosts Malaysia.

Despite juggling his studies and a gruelling training schedule which saw him in the pool up to nine times a week, An Jun was happy the efforts paid off. "Being on the podium and getting the gold for Singapore was definitely an incredible feeling," he said.



Nicholas Yau (with rugby ball) in action

The Women's National Sailing Team sailed to victory at the Games, with NUS Science student Elisa Yukie Yokoyama bringing home the gold in the Women's Double Handed 470 race, and NUS Business student Jillian Lee securing gold in the Women's Individual Dinghy Laser Radial event.

Alumnae Cherie Tan Shi Hua and Jasmine Ser Xiang Wei struck gold in the Women's Bowling and Women's Shooting, respectively, while Yale-NUS College undergraduate Benedict Chan Jia Wei received a gold for his skilful play in the Men's Squash. He also snared a bronze in the squash men's doubles.

The Women's Water Polo team won a silver after a close fight with Thailand in the finals. NUS alumnae Angeline Teo, Gina Koh and Melissa Ooi, as well as NUS Business student Cleona Zhu were among the team players.

The Singapore Rugby team, which included NUS Business students Nicholas Yau and Samuel Teo, as well as NUS Medicine student Samuel Koh, garnered a silver after an adrenaline-filled finals against their Malaysian rivals.

NUS Business students Jessica Goh Kai Ling and Jillian Lee were part of the sailing team that won a silver in the Women's Team Racing Dinghy Laser Radial event.

The inaugural sustainABLE NUS Showcase — a two-day exhibition and carnival featuring NUS' initiatives to become a greener campus as well as efforts in research and education addressing sustainability challenges — was held at NUS University Town on 29 and 30 August. Mr Masagos Zulkifli, Minister for the Environment and Water Resources, graced the occasion as the Guest-of-Honour.

In his opening address, Mr Masagos elaborated on the Sustainable Singapore Blueprint 2015, which outlines the nation's approach towards growing the economy and protecting the environment.

"To realise our vision, we need innovative technological solutions that are also scalable," he said. Mr Masagos commended NUS for recognising the need for graduates to be well-versed across multiple disciplines to tackle increasingly complex environmental problems.

The showcase presented the University's sustainability initiatives in four areas — operations; research and education; community engagement; and partnerships. A total of 28 booths were put up by faculties, research institutes and student groups in NUS, as well as those by various government agencies and community organisations.

NUS' Contribution to Singapore's Smart Nation Initiative

Principles of data science



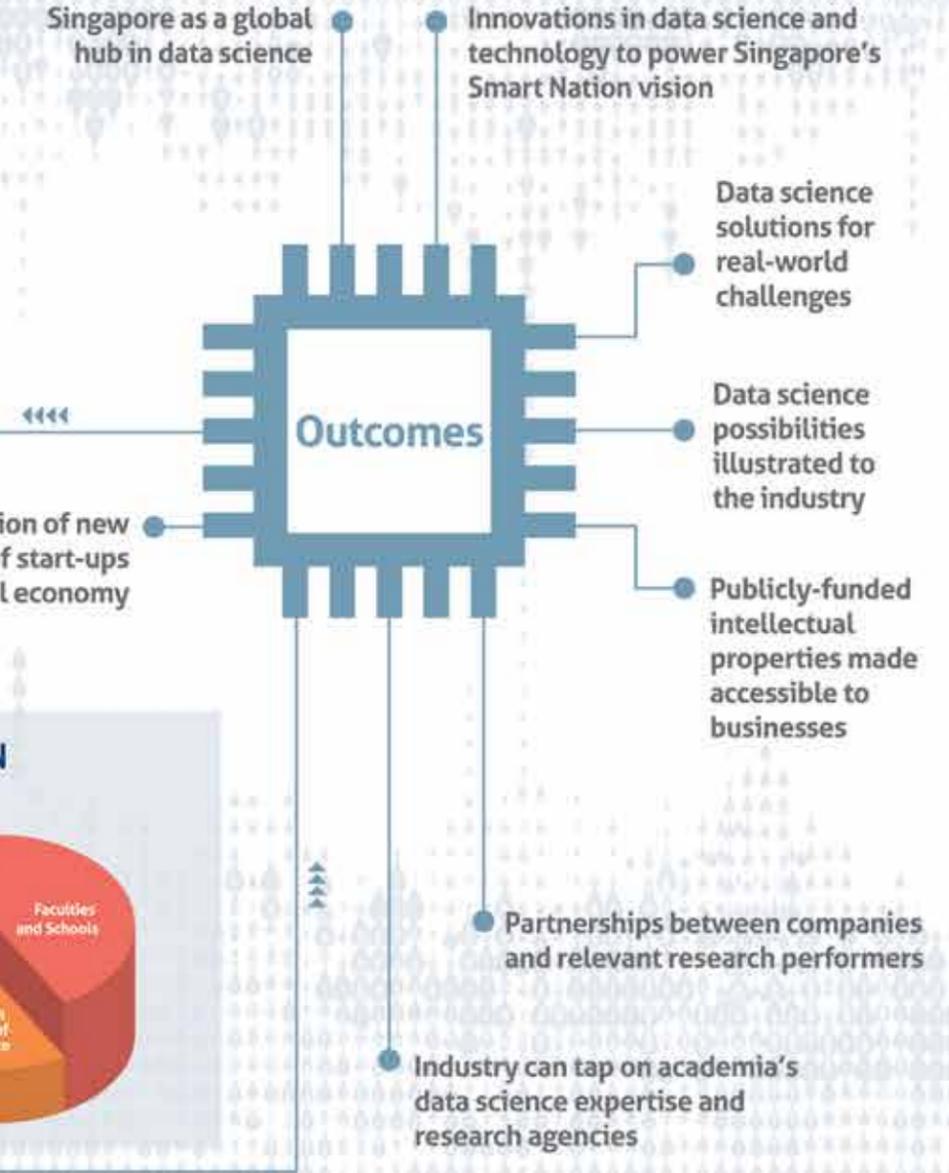
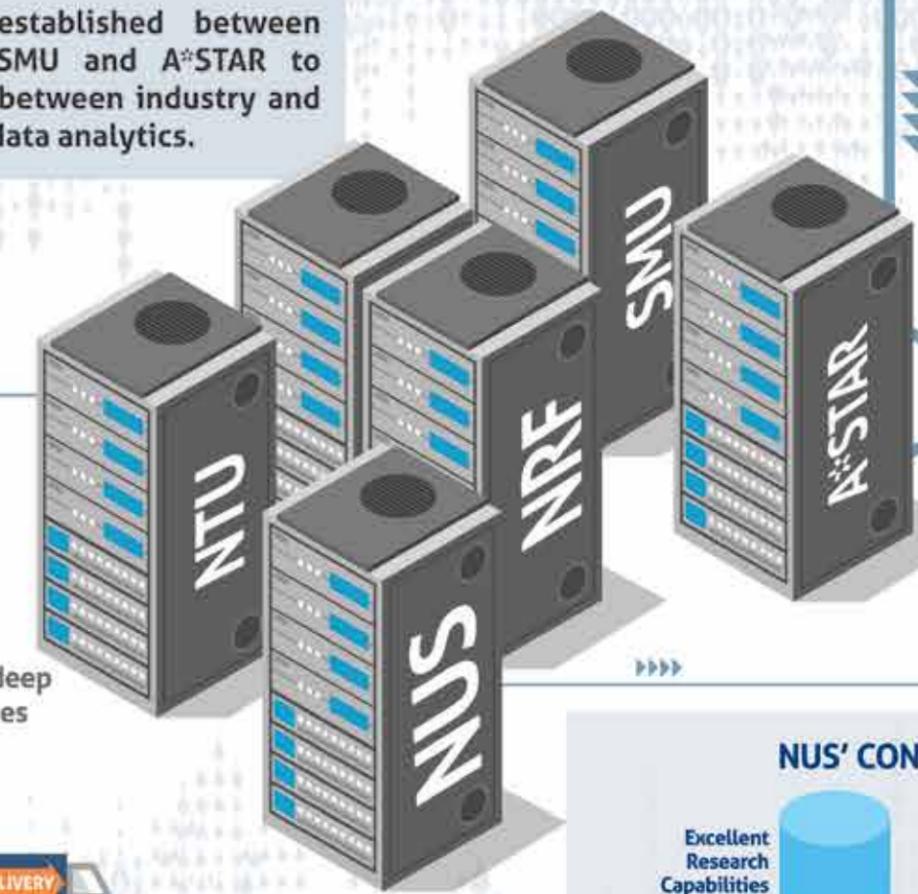
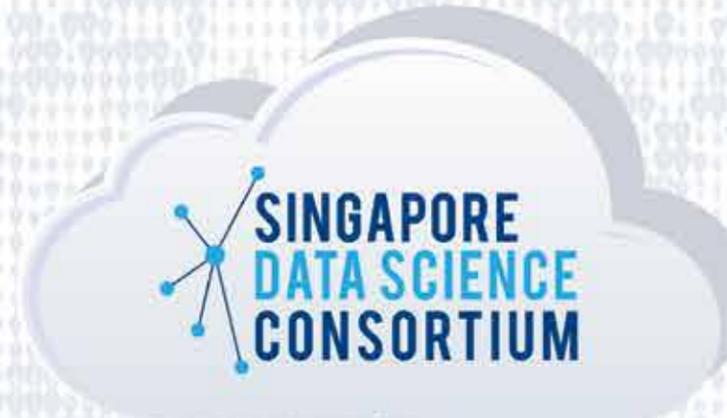
Capturing information quickly and accurately

Computing data to understand relationships

Creating solutions to address real-world challenges

WHAT IS SINGAPORE DATA SCIENCE CONSORTIUM?

A collaboration established between NRF, NUS, NTU, SMU and A*STAR to boost partnership between industry and researchers in big data analytics.



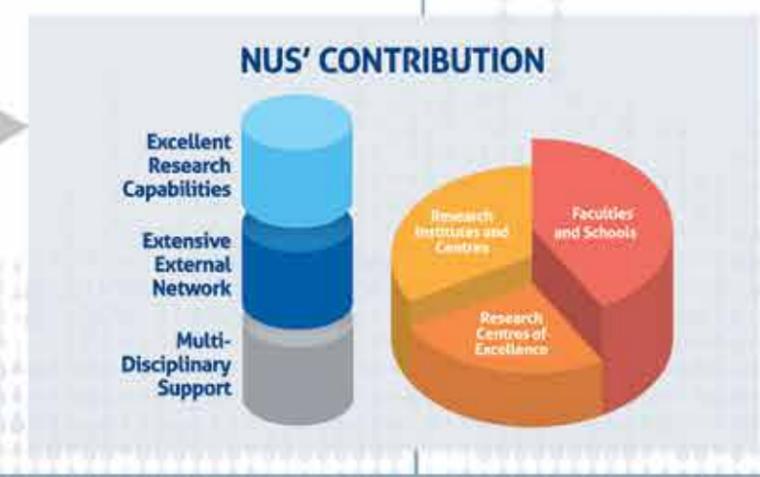
Partnership with EDB and IMDA

Encourage adoption of cutting-edge data science and analytics technologies

Train local talents with deep data science capabilities



- Finance
- Healthcare
- Customer and Retail
- Manufacturing
- Logistics
- Transport



LEGEND

- A*STAR - Agency for Science, Technology and Research
- EDB - Economic Development Board
- IMDA - Info-communications Media Development Authority
- NRF - National Research Foundation
- NUS - National University of Singapore
- NTU - Nanyang Technological University
- SMU - Singapore Management University

Red Meat Raises Diabetes Risk



Increased consumption of red meat and poultry is linked to a higher risk of developing type 2 diabetes

More bad news for meat eaters: increased consumption of red meat and poultry is linked to a higher risk of developing type 2 diabetes.

An analysis on Singapore Chinese drawn from the Singapore Chinese Health Study — a population-based cohort study on more than

63,000 middle-aged and elderly Chinese in Singapore from 1993 to 1998 — examined data from 45,411 participants who were eligible for this study, and followed up for an average of 11 years for the incidence of diabetes.

Led by Professor Koh Woon Puay of Duke-NUS Medical

School (Duke-NUS), who is also from the Saw Swee Hock School of Public Health at NUS, the team investigated the association between diabetes and various types of meats, including red meat, poultry, fish and shellfish.

The report, published in *American Journal of*

Epidemiology in August, found that participants in the group with highest intake of red meat and poultry demonstrated a 23 per cent and 15 per cent increase in risk of diabetes, respectively. Consumption of seafood such as fish and shellfish had no significant correlation with diabetes risk.

The researchers also observed that dietary haem-iron content was present in greater amounts in red meat and parts of poultry such as the thigh. Consistent with existing studies, diabetes risk rose with a higher intake of haem-iron.

After adjusting for haem-iron content in the diet, there was still a link between red meat, including poultry, and diabetes, suggesting that other chemicals in red meat could account for the greater risk.

Combo Drug Boosts Cancer Treatment

Antimalarial drug artemisinin, widely hailed as a promising alternative cancer treatment, is set to receive a power boost when complemented with another drug.

NUS scientists recently discovered that anticancer properties of artemisinin could be enhanced 10 times when used in combination with aminolevulinic acid (ALA), a photosensitising drug which, upon exposure to light, leads to generation of free radicals that can kill cells. ALA is used in photodynamic therapy, in combination with a special light source, to treat various types of cancer, including skin and prostate cancer.

Led by Dr Lin Qingsong from the Department of Biological Sciences at NUS Science, together with Dr Wang Jigang and Professor Shen Han-Ming from the Department of Physiology at

NUS Yong Loo Lin School of Medicine, the team discovered that the two-drug combo could destroy colorectal cancer cells and suppress tumour growth more effectively than administering artemisinin alone.

“Artemisinin and ALA are both existing drugs that are well tolerated by the human body. As such, this promising cancer treatment could have fewer side effects,” explained Dr Wang.

The findings were published in *ACS Central Science* recently as the cover story.

The investigators had previously conducted research on the antimalarial mechanism of artemisinin and its parasite-killing effect. The study showed that artemisinin is activated by haem, an iron-containing compound

essential in important proteins such as haemoglobin. Malaria parasites digest the haemoglobin in red blood cells as their food and release large amount of haem, which activates the artemisinin to kill the parasites.

In the latest study, the researchers found cancer cells to have higher haem levels than non-cancerous ones, likely due to the former's higher rates of metabolism. Upon activation by the haem in cancer cells, artemisinin attacks the rogue cells.

The team noted that the anticancer activity of artemisinin can be increased further with ALA, a clinically used haem synthesis precursor. By elevating the haem levels inside the cancer cells, the killing effect of artemisinin against colorectal cancer cells is enhanced, with minimal impact on the non-cancer cells.

Friendly Genes

Is it nature or nurture that makes a person more sociable while another seeks solitude? NUS researchers have found that two genes are associated with the sociality of young individuals.

Published in *Psychoneuroendocrinology*, the study reported that higher expression of the CD38 gene and the presence of differences in the CD157 gene sequence are linked to a person having more close friends and better social skills.

The research was conducted by NUS Psychology Professor Richard Ebstein and recent PhD graduate Dr Anne Chong, both part of the Behavioural and Biological Economics and the Social Sciences Group at NUS Arts and Social Sciences.

They worked in collaboration with Professor Chew Soo Hong from NUS Department of Economics and Associate Professor Lai Poh San from NUS Yong Loo Lin School of Medicine, who carried out the lab work.



Dr Chong (left) and Prof Ebstein found that two genes are associated with the friendliness of young people

The study recruited 1,300 Chinese young adults in Singapore. Their social skills were evaluated using questionnaires which appraised their ability to engage in social relationships, the quality of their friendships and the perceived value.

CD157 and CD38 genes regulate the release of oxytocin, the key social hormone involved in primary social behaviours including pair-bonding, mating and child-rearing.

Many gene studies focus on the structural changes in the gene sequences, Prof Ebstein noted. Studying gene expression would capture more information on DNA sequences as the expression of genes “ultimately determines how a gene impacts our traits”, he said.

An individual's genetic makeup could only go so far as predicting one's social predisposition but does not necessarily trigger the trait since it is the expression of gene that determines so, pointed out Prof Ebstein.

The study showed that a change in the sequence of CD157 corresponded with the participants' interest in socialising and building relationships. It also correlated with increased expression of CD38 and raised levels of oxytocin.

This observation would explain about 14 per cent of the variance in social skills in the general population, much higher from the 2 per cent of studies on structural changes.

New Material Charges up Batteries



NUS chemists have invented an organic material with superior electrical conductivity and energy retention capability, paving the way for the development of ultra-stable, high-capacity and environment-friendly rechargeable batteries.

Led by Professor Loh Kian Ping from NUS Chemistry, the findings were published in *Nature Energy* recently.

Organic electrodes in a rechargeable battery have lower environmental footprints during production and disposal, compared to conventional inorganic metal oxide electrodes. Organic electrodes can also be engineered to support high energy storage capabilities.

However, challenges arise from the poor electrical conductivity and

stability of organic compounds used in batteries, as well as the rapid loss in energy after multiple charges.

To tackle these issues, Prof Loh and his team synthesised a novel organic compound 3Q (π -conjugated quinoxaline-based heteroaromatic molecule) that allows up to six charge storage sites per molecule.

When combined with graphene in an ether-based electrolyte, the 3Q-based electrode showed a high electrical conductivity of almost 400mA hour per gram. It also demonstrated strong energy retention after multiple cycles of charge and discharge.

Prof Loh expects the work to lead to the engineering of small organic molecule-based cathode materials for lithium ion batteries with high energy density and a long lifespan.

Grants Promote Cybersecurity Research

NUS Computing researchers are contributing to four of the 15 projects recently awarded more than \$16 million in grants to develop cyber tools and technologies that strengthen Singapore's defence against growing global cyber threats.

Two of the projects involving NUS were awarded under the National Cybersecurity R&D Programme, which seeks to advance capabilities in key technology areas to meet Singapore's cybersecurity needs, with a focus on national security, critical infrastructure and smart nation.

Associate Professor Liang Zhenkai and Professor Abhik Roychoudhury, in collaboration with cybersecurity and antivirus provider Kaspersky Lab Singapore Pte Ltd, employ automated solutions to help malware analysts and security response teams understand similarities

across malware used in attacks and quickly identify the perpetrators.

The second idea is an innovative antimalware by Professor Ooi Beng Chin, Distinguished Professor of Computer Science, and Assistant Professor Wang Wei, who work together with local company SecureAge Technology Pte Ltd and the Cyber Security Agency of Singapore.

The solution is designed to be highly accurate and efficient in detecting and identifying emerging and stealthy malware, as well as able to adapt quickly to new trends and changes in malware population.

The other two projects received a seed grant by the Singapore Cybersecurity Consortium anchored at NUS, to spur the commercialisation of cybersecurity technologies and innovative ideas.

Associate Professor Chang Ee-Chien and Assoc Prof Liang partnered local start-up InsiderSecurity and the National Cybersecurity R&D Lab to create a testing environment for security technologies that simulates various network-based attacks. Coupled with an automatic measurement framework, this could serve as a demonstration platform for solution developers.

The final NUS-related project looks at training a deep learning network to model normal behaviour in a cyber-physical system, while detecting anomalies due to cyber attacks in the networked sensor time series using a realistic complex dataset from the Secure Water Treatment Testbed. It was led by Dr Ng See Kiong, Deputy Director of the Institute of Data Science at NUS, in collaboration with ST Electronics (Info-Security).

Students Create Social Solutions

A group of NUS undergraduates recently beat 10 other teams to become winners in the Local Category of the Crossing the Chasm Challenge 2017.

Team Hatch — comprising Li Xin Yi, Victor Zhu and Kaitlyn Ho — paired with Singapore social enterprise E&I Food Concepts (E&I) to raise public awareness about the latter's social cause and expand the patronage of its restaurant Garcon Nosh. Since setting up in 2014, E&I has trained 25 ex-offenders and at-risk youths in French cuisine and cooking techniques, while providing them with full-time employment and apprenticeship opportunities.

The students worked closely with E&I and mentors Mr Ow Tai Zhi and Mr Noel Lee, AutoWealth's Chief Executive Officer and Chief Operation Officer respectively, to develop lean and sustainable marketing

solutions for the restaurant. Recommendations to expand the business include a "Pay as You Feel" campaign, corporate catering services and student promotions. Team Hatch also won the Tanoto Foundation – People's Choice award, voted by audience for the best team presentation.

Organised by the Asia Centre for Social Entrepreneurship and Philanthropy at NUS Business School, with support from the Chua Thian Poh Community Leadership Programme, National Youth Council Singapore and Tanoto Foundation, the Challenge seeks to grow student empathy and intrapreneurship, while equipping them to become investment-ready in developing social enterprises.



From left: Mr Lee, Mr Ow, Xin Yi, Victor and Kaitlyn, together with Mr Enoch Teo, co-founder of E&I Concepts, and Mr Sihol Parulian Aritonang, head of executive board, Tanoto Foundation (Indonesia)

For the Regional Category, Team Delta Squad and their Cambodian social enterprise Color Silk clinched the first prize for demonstrating the best strategy for Color Silk's expansion in Southeast Asia. Team Delta Squad comprised NUS undergraduates Gina Ng, Edison Daniel Lim and Ankita Sanjeev Jindal, together with Singapore Management University undergraduate Gao Tian.

Champions at Asia Cup Moot

NUS Law students have taken home the Asia Cup (Foreign Minister's Award) for the second consecutive year in a moot competition featuring over 40 schools from various Asian countries. The teams competed in a memorial round to determine each country's representative and thereafter proceeded to the final oral round in Tokyo.

The NUS team — comprising second year student Joel Sherard and third year Ayana Ki, Law May Ning and Melody Lau — also won the award for the third best memorial. Joel and Melody were named joint Best Oralists of the moot, a first for the competition.

This is the University's fifth overall Asia Cup victory, tying Ateneo Law School from the Philippines for the most number of Asia Cup wins.



Prof Simon Chesterman (centre), Dean of NUS Law, with Asia Cup 2017 winners (from left) Joel, Ayana, Melody and May Ning

The 2017 moot problem centred on the UN Law of the Sea and Transnational Organized Crime Conventions, with issues covering

exercise of criminal jurisdiction, the legality of enforcement measures and the use of force against other naval vessels.

EcoFriends Recognised

NUS students Chen Lin and Tan Weiliang, together with alumna Ms Kia Jie Hui, have received the EcoFriend Awards from the National Environment Agency for their dedicated effort in protecting the environment.

Third year NUS Civil Engineering student Chen Lin, who was presented the Award under the Youth & Students category, has been passionate about saving the environment since going on a field trip to Christmas Island. She was dismayed at the state of the remote island — threatened native species, cleared forests and plastic waste on the shores.

Chen Lin started participating actively in

the NUS Students Against Violation of the Earth (SAVE). Now its Vice President, she co-developed Bento Bash, an initiative for the rental of lunchboxes in NUS to reduce the use of disposable containers. Another SAVE platform is Green Bazaar, which allows

the exchange of second-hand clothing.

Final year Yale-NUS College undergraduate and fellow Award winner Tan Weiliang is a former President of l'dECO, a Yale-NUS sustainability student group. He co-created

the group's Singapore Environmental Action and Leadership programme to improve environmental education in Singapore and to inculcate a culture of sustainability from a young age.

Jie Hui, a graduate of NUS Business School and University Scholars Programme, won the EcoFriend Award under the Non-Government Organisation and Grassroots Volunteers category.

She co-founded Save That Pen in 2010 to give used and discarded pens a new lease of life by refurbishing refillable pens or converting non-refillable ones into useful items such as stationery holders.



Chen Lin at Green Bazaar, which allows the exchange of clothing

Innovate for Human Well-being



Dr Yudhoyono delivering his keynote address at the Dialogue

The 2nd Raffles Dialogue titled “Human Well-Being and Security in 2030: The Critical Role of Innovation” brought together global scholars and practitioners from 4 to 6 September to analyse areas of concern regarding human well-being and security, particularly for the Asia Pacific. The event was organised by NUS and the National University Health System (NUHS).

A key challenge which surfaced at the inaugural Raffles Dialogue in 2015 was the lack of implementation rather than knowledge, noted Professor John Eu-Li Wong, Chief Executive of NUHS and Senior Vice President (Health Affairs) at NUS, in his welcome remarks. “It has become even more important to gather leaders from across academia, government, healthcare, enterprise and the scientific media to better understand the issues confronting us, and explore strategies to address them,” he said. Prof Wong is also Chairman of the 2nd Raffles Dialogue Organising Council.

Guest-of-Honour Dr Vivian Balakrishnan, Singapore Minister for Foreign Affairs, drove home four key essentials for well-being and security in a rapidly changing global climate — being at the forefront of the evolving digital landscape

brought about by the Fourth Industrial Revolution; anticipating and preparing for future requirements through education and upskilling; greater global cooperation to boost research and innovation that create meaningful societal outcomes; and building a secure and resilient future by strengthening cybersecurity governance.

During his keynote address at the Dialogue’s opening dinner, Dr Susilo Bambang Yudhoyono, former President of Indonesia, shared his experience in governance, the importance of the United Nations Sustainable Development Goals and the current precarious state of world affairs.

“The issues of human well-being and human security are truly complex and broad. It is not easy to analyse them all but for the sake of humanity, we cannot surrender by closing the book and ending the discussion.”

– Dr Susilo Bambang Yudhoyono, former President of Indonesia

However, he expressed optimism in the way forward. “Better and improved

human well-being and security can be achieved through tireless efforts at all levels of both private and public sectors, global collaboration and international cooperation, as well as empowering science, technology and innovations,” said Dr Yudhoyono.

Public-Private Partnerships require the building of trust between all stakeholders and a change in mindsets, he pointed out. For international collaboration and cooperation, which is also key to tackling risks that adversely impact human well-being and human security, he underscored that international societies must closely engage by putting their differences aside for the sake of our planet.

Finally, Dr Yudhoyono highlighted the importance of science, technology and innovation in leading to an improved human well-being and security.

The theme of discussion throughout the event centred around innovation, with talks by eminent speakers covering five main areas — Improving Human Well-being; Information; Finances and Resources for Human Well-being; Mental Health in an Ageing Society and Spiritual Well-being; and Global Governance.

Judge of Family Justice Courts



NUS Law’s Associate Professor Debbie Ong Siew Ling has assumed the role of Presiding Judge of the Family Justice Courts, effective 30 September 2017. She was named Judicial Commissioner in November 2014.

Assoc Prof Ong’s latest appointment follows NUS Law’s illustrious history where many of its outstanding alumni and faculty have been appointed to serve the Bench. They include The Honourable the Chief

Justice Sundaresh Menon, former Chief Justice Chan Sek Keong and Justice Steven Chong.

Professor Simon Chesterman, Dean of NUS Law said, “All of us at NUS Law are thrilled at Debbie’s new appointment. Though we are, of course, sad not to have her on our campus and in our classrooms, we take comfort in the knowledge that our brilliant colleague will play a leading role in family justice in Singapore, bringing to it the same wisdom and heart that she has brought to her teaching and research.”

New Dean at School of Public Health



Well-known biostatistician Professor Teo Yik Ying has been appointed the next Dean of the Saw Swee Hock School of Public Health (SSHSPH) at NUS with effect from 1 January 2018. He will succeed Professor Chia Kee Seng, who has served as the founding Dean of the School since 2011.

Prof Teo is currently Vice Dean (Research) at SSHSPH and holds a joint appointment at the Department of Statistics and Applied Probability under NUS Science. He is also the iOmic Programme Leader at the NUS Life Sciences Institute and previously served as Director for SSHSPH’s Centre for Infectious Disease Epidemiology and Research as well as founding Director of its Centre for Health Services and Policy Research.

Prof Teo’s work focuses on applying mathematical and statistical techniques to understand the genetic causes of human diseases.

Prof Chia, who specialises in molecular epidemiology of chronic diseases, will return to teaching and research when he steps down next year. Under his leadership, SSHSPH has transitioned from an academic department to a full-fledged Faculty.

Visual Artist Leaves Education Legacy



“Endings do happen, and thinking about what kind of end, and to what end all that one has accumulated in life should go, is important. I wanted to support NUS as I know that there are many local students who face financial challenges, and education should not be denied to anyone just because of financial limitations. I feel that I have the capacity to support the younger generation in this way.”

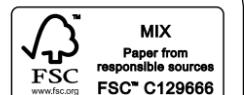
Ms Felicia Low (‘14 Arts and Social Sciences)

The successful visual artist, and a former recipient of the Lee Kong Chian Scholarship for her doctorate in Cultural Studies at NUS Faculty of Arts and Social Sciences (FASS), will be supporting bursaries and scholarships at FASS through her bequest. Ms Low nominated NUS in her will because of the positive long-term impact of her gift. She hopes the beneficiaries will appreciate that they too have a responsibility to transform this financial support into a larger, societal benefit.

To find out more about making a gift to NUS, call 1-800-DEVELOP (1-800-338-3567), email askdvo@nus.edu.sg or visit www.giving.nus.edu.sg

NUSGIVING
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Editorial Team: Ng Tse Wei, Tan Lay Leng, Rachel Lim, Sharon Roberts, Cassandra Yue, Amanda Yee
 :: Office of Corporate Relations, National University of Singapore
 :: University Hall, Lee Kong Chian Wing, UHL #05-03, 21 Lower Kent Ridge Road, Singapore 119077
 :: +65 6516 1517 (Tel) :: +65 6775 7630 (Fax) :: news@nus.edu.sg (Email) :: news.nus.edu.sg/inprint
 :: Company Registration No: 200604346E



Committed to Service



Prof Tan Chorh Chuan (right) at the tree planting activity at Chestnut Nature Park

Almost 2,000 NUS students, alumni and staff took part in various community service programmes across Singapore and overseas on 9 September, touching the lives of more than 5,000 beneficiaries.

The second run of NUS Day of Service featured a total of 42 activities — twice that of last year's — which covered wide-ranging causes from health and environment to public education. It also reached out to various communities like the elderly, children, youth as well as those with special needs.

Professor Tan Chorh Chuan, NUS President joined staff and students from Ridge View Residential College (RVRC) to plant 50 trees at Chestnut Nature Park. The occasion also commemorates RVRC's inauguration as a Friend of Chestnut Nature Park.

Staff and students from the College of Alice & Peter Tan, together with Professor Tan Eng Chye, NUS Deputy President (Academic Affairs) and Provost, conducted a large-scale clean-up of the shores, waterways and mangroves at Tanah Merah Beach. The 80 volunteers collected, categorised and removed a total of 355kg of trash.

NUS Dentistry provided free oral health screenings for 100 cleaners, as well as customised dental health education and information on the various healthcare services available.

Other activities included Eusoff Hall's Mini Sports Day with the children of the Salvation Army Haven; a cooking workshop for AWWA Ltd's beneficiaries by the Orion Alumni Network; and various food distribution programmes to

disadvantaged communities across Singapore.

NUS alumni communities beyond Singapore also participated in the Day of Service.

Among their efforts were: a public education campaign on the bike-sharing scheme by the NUS Alumni Xiamen Chapter; setting up drinking water filters and

distributing food to flood victims in Dhaka City by the Bangladesh Alumni Chapter of the Lee Kuan Yew School of Public Policy (LKY School); donating old clothes, household items and dry rations to flood victims in Bihar and Assam by the India Alumni Chapter of the LKY School; as well as grocery distribution to needy communities by the NUS Alumni Auckland Chapter.



Prof Tan Eng Chye (left) and students from CAPT working hard at the coastal clean-up of Tanah Merah Beach