



## PRESS RELEASE

### **New Wilmar-NUS joint lab to drive innovation in food-tech and sustainable biochemicals**

***S\$110 million research facility will deepen knowledge of good macronutrients and micronutrients, food products and ingredients, as well as design eco-friendly 'bio-factories' to produce industrial biochemicals***

Singapore, 19 June 2018 – Asia's leading agribusiness group Wilmar International Limited (Wilmar) and the National University of Singapore (NUS) have established a new joint research laboratory to conduct cutting-edge clinical nutrition and synthetic biology research to create healthier food products as well as to devise green production technologies for industrial enzymes and biochemicals.

The new WIL@NUS Corporate Laboratory was officially launched today by Mr Heng Swee Keat, Minister for Finance and Chairman of the National Research Foundation Singapore (NRF). Based at the NUS Yong Loo Lin School of Medicine, the S\$110 million research facility is jointly set up by Wilmar, NUS and NRF. This laboratory seeks to strengthen Singapore's innovation system by conducting industry-relevant research and development.

NUS President Professor Tan Eng Chye said, "This win-win partnership combines NUS' strong expertise in biomedical sciences and translational medicine with Wilmar's rich industry experience and global networks to address two pressing real-world challenges - lifestyle-related diseases and sustainable production of industrial chemicals. We look forward to working closely with Wilmar to create and commercialise scientific innovations to improve health outcomes as well as generate societal and economic benefits for Singapore, Asia and beyond."

Wilmar's Chairman and Chief Executive Officer, Mr Kuok Khoon Hong, said, "As a Singapore-headquartered company, Wilmar is very honoured to be able to leverage the world-class clinical research capabilities of NUS in this academic-industry collaboration. We hope that this gathering of great minds will result in the development of new technologies that can enhance the quality of our food products and at the same time reduce our carbon footprint. This way, consumers worldwide will benefit."

NRF Chief Executive Officer Professor Low Teck Seng said, "The partnership between Wilmar and NUS is significant as it builds on Singapore's growing research expertise in synthetic biology, nutrition and food science. The WIL@NUS Corporate Laboratory leverages the deep knowledge and strong capabilities in NUS, and will see researchers work with industry to create products that have high value for health, nutrition and industrial use. Companies are investing more in R&D to create new products and businesses for growth. We will continue to support industry-academia partnerships to translate cutting-edge technologies into health and economic benefits for Singapore."

The WIL@NUS Corporate Laboratory is helmed by Associate Professor Matthew Chang, Director of the NUS Synthetic Biology for Clinical and Technological Innovation programme, and Dr Rebecca Lian, Distinguished Fellow at Wilmar. Research activities at the 2,000 square metre laboratory will focus on two key thrusts: firstly, to address major public health issues through the development of healthier foods and ingredients; and secondly, to design cost-effective and sustainable methods of producing chemical compounds using natural sources.

### **Food as the new medicine**

Inadequate understanding and availability of good macronutrients has contributed to a higher incidence of obesity, diabetes and cardiovascular diseases worldwide. As food choices and uptake are influenced by culture and ethnicity, Asian-centric studies are essential to better manage and prevent such lifestyle-related diseases in Singapore and the region.

Researchers at the WIL@NUS Corporate Laboratory will study how different combinations of food can alter absorption and metabolism in Asians, and ultimately prevent diseases or promote health and well-being. For example, researchers will formulate healthier cooking oils that could reduce cholesterol levels in the elderly, and in turn lower the risk of chronic diseases, increase muscle mass and improve taste perception. In addition, they will develop food products (such as ready-to-eat meals and beverages) that could control weight gain, blood glucose and lipids to help individuals manage diabetes and obesity.

### **Green technologies for bioeconomy**

Wilmar is the world's largest manufacturer of oleochemicals, which are used in the production of everyday consumer products. Currently, plant-based feedstock is utilised for the production of high value oleochemicals that are subsequently used in a number of industry sectors in Singapore and beyond.

Scientists at the WIL@NUS Corporate Laboratory will capitalise on recent advances in the field of synthetic biology to engineer microbes and enzymes - to function as 'bio-factories' - to produce biochemicals from natural sources in a more sustainable and cost-effective way. These biochemicals can then be used in industries such as food and nutrition, flavours and fragrances, as well as therapeutics.

### **Nurturing talent for emerging and high value-added industries**

Over the next five years, the WIL@NUS Corporate Laboratory expects to train more than 60 researchers and PhD students, who will play a critical role in supporting the growth of the food and nutrition, as well as synthetic biology-related industries in Singapore and Asia.

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### **About 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 multidisciplinary 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 multidisciplinary 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' Faculties and Schools, 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 science, operations research and cybersecurity to support Singapore's Smart Nation initiative.

For more information on NUS, please visit [www.nus.edu.sg](http://www.nus.edu.sg).

### **About Wilmar**

Wilmar International Limited, founded in 1991 and headquartered in Singapore, is today Asia's leading agribusiness group. Wilmar is ranked amongst the largest listed companies by market capitalisation on the Singapore Exchange.

Wilmar's business activities include oil palm cultivation, oilseed crushing, edible oils refining, sugar milling and refining, manufacturing of consumer products, specialty fats, oleochemicals, biodiesel and fertilisers as well as rice and flour milling. At the core of Wilmar's strategy is an integrated agribusiness model that encompasses the entire value chain of the agricultural commodity business, from cultivation, processing, merchandising to manufacturing of a wide range of branded agricultural products. It has over 500 manufacturing plants and an extensive distribution network covering China, India, Indonesia and some 50 other countries. The Group has a multinational workforce of about 90,000 people.

Wilmar's portfolio of high quality processed agricultural products is the preferred choice of consumers and the food manufacturing industry. Its consumer-packed products have a

leading share in many Asian and African markets. Through scale, integration and the logistical advantages of its business model, Wilmar is able to extract margins at every step of the value chain, thereby reaping operational synergies and cost efficiencies. Wilmar is a firm advocate of sustainable growth and is committed to its role as a responsible corporate citizen.

For more information, please visit [www.wilmar-international.com](http://www.wilmar-international.com).

### **About the National Research Foundation Singapore**

The National Research Foundation (NRF) is a department within the Prime Minister's Office. The NRF sets the national direction for research, innovation and enterprise (RIE) in Singapore. It seeks to invest in science, technology and engineering, build up the technological capacity of our companies, encourage innovation by industry to exploit new opportunities that drive economic growth, and facilitate public-private partnerships to address national challenges.

Under RIE2020, NRF is committed to create greater value in Singapore from our investment in research, innovation and enterprise through 1) closer integration of research thrusts, 2) stronger dynamic towards the best teams and ideas, 3) sharper focus on value creation, and 4) better optimised RIE manpower.

For more information, visit [www.nrf.gov.sg/RIE2020](http://www.nrf.gov.sg/RIE2020)