NUS GRIP

GRADUATE RESEARCH INNOVATION PROGRAMME

GRIP LIFT-OFF

NUS Deep Technology Start-Up Investors Showcase

22 July 2019

Flagship Innovation Programme by:

NUS National University of Singapore | Industry Liaison Office

NUS GRIP

GRADUATE RESEARCH INNOVATION PROGRAMME

THE FLAGSHIP INNOVATION PROGRAMME

by NUS Industry Liaison Office
Enabling NUS postgraduate
students and researchers
to develop deep technology start-ups.

ABOUT NUS GRIP

Launched in 2018, the NUS Graduate Research Innovation Programme (NUS GRIP) is the Industry Liaison Office's flagship innovation programme. Based on our extensive experience working with deep technology, the programme will provide step-by-step guidance to NUS postgraduate students and researchers to cultivate deep technology entrepreneurs to transform the university's world-class research into their own deep technology start-ups.

Twice a year, 25 teams are selected from the best and brightest NUS researchers and PhD students to equip them with entrepreneurial skills and experience. For the duration of one year, teams will undergo a transformation journey through a series of workshops, mentorships, industry linkages and incubation support, to develop commercially viable and investible deep technology start-ups. NUS will invest up to S$100,000 in start-ups demonstrating high commercial potential to accelerate their growth. We are committed to take in 50 teams a year, generating a pipeline of up to 250 teams in five years.

Find out more at **http://nus.edu.sg/grip/**

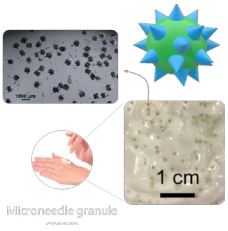
NUS GRIP TILL DATE

PROGRAMME SCHEDULE

1.00PM - 1.30PM	Welcome	
1.30PM - 3.00PM	Track 1 Foodtech, Bioscience & Medtech	Track 2 Engineering, ICT & Agritech
	• Nusmetics • Soynergy • Zoe Botanicals • Cellivate • SinGENE • Breathonix • UpperMed • FathomX • FitSight • Ocular Labs	• Singrow • Polybee • KleenSoil • Dravam • Sky Trek • NodeSeer • WaveBoost • Hamlit • SoleMetrix • Microtube • MuSigPro
3.00PM - 5.00PM	Networking	
5.00PM	Close	

nusmetics

beauty is more than skin deep



The protective outermost layers of the human skin naturally render most personal care products ineffective. Nusmetics's innovative delivery platform, Microbee™, with spikes of tailored depths and sizes, is designed to bypass this barrier by momentarily opening up self-sealing microsized channels on the skin's surface. By mixing it with skin and hair care products, Microbee™ can increase absorption into the skin by up to 10,000 times, tremendously enhancing efficacy. Nusmetics focuses on advanced materials and novel delivery systems to revolutionise beauty and healthcare. Our mission is to transform skin and healthcare solutions, leveraging microneedle technology for ease of use, safety and high efficacy.

Commercial Champion: ***SHEN Nansheng*** *Venture Dev Mngr:* ***David SHER***

Team members:

NGUYEN Duc Viet (PhD)
Co-Founder & CEO

Himanshu KATHURIA (PhD)
Co-Founder & CTO

Soynergy

Soynergy has a biotechnology platform to transform food by-products into high value functional food via enzymatic and microbial processing. It unlocks the nutrients such as soluble dietary fibre, antioxidants and free amino acids, giving a new lift to low-value or expensable food by-products. Okara, a by-product from soy milk and tofu production, is often discarded. Manufacturers have to spend substantially to manage the waste. Soynergy converts okara into a non-diary probiotic drink and soy fibre powder suitable for vegans, which will be distributed globally.

Team members:

LIN Jing (PhD)
Co-Founder, CEO & CTO

Yvonne YEO (BBA & BAcc)
Co-Founder & Head of Finance & Admin

LUM Yi Chyi (BSc Hons)
Co-Founder & Head of Operations

Commercial Champion: ***Clarence TAN*** *Venture Dev Mngr:* ***David SHER***

ZOE BOTANICALS
NATURALLY BETTER

Zoe Botanicals is a phytonutrient technology company that focuses on harnessing health benefits from edible tropical botanicals, through scientific research and discovery. Their goal is to address global health concerns, starting with diabetes. Having screened over 300 edible botanicals, they have identified top promising plants with high anti-diabetic efficacy. However, with most anti-diabetic compounds susceptible to stomach acid, the effect is diminished.
Zoe Botanicals has developed a natural gel protection technology to incorporate into botanicals, providing for higher efficacy with zero side-effects. Beyond diabetes, Zoe Botanicals endeavours to delve into weight management and anti-ageing markets.

Team members:

Jason POH (Executive MBA)
CEO

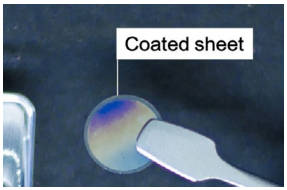
CHEN Qi Min (PhD)
CTO

Adeline WONG (PhD)
COO

Commercial Champion: ***Charlie SOH*** *Venture Dev Mngr:* ***David SHER***

Cellivate Technologies

Growing cells is a key component in cell therapy, cosmeceuticals, and clean meat. In vitro cell culture requires a suitable environment for cells to grow. With current solutions, growth of critical cells are slow, and the processes complicated and expensive. Cellivate products enable difficult cells to attach and to grow 100-200% faster than products in today's market.



Team members:

Viknish KRISHNAN-KUTTY (PhD)
Founder & CEO

Shen Kiat LIM (PhD)
Chief Scientific Officer (Biology)

KHONG Jenn Hui (PhD)
Marketing Associate

Commercial Champion: ***PHAN TT*** *Venture Dev Mngr:* ***Chung-Pei OU***

SinGENE

Microbial contamination is a severe public health problem for food and water safety. It is extremely challenging to monitor and detect the wide range of pathogenic microbes (e.g. bacteria and viruses) within a 24-hour time span. SinGENE has developed a Machine learning assisted Automatic Pipeline System (MAPS), a work flow and an online platform for microbial contamination identification within hours. SinGENE provides reports with critical benchmarking, quantitative quality index, and microbe data visualisation.

Team members:

YOU Fang (PhD)
Founder & CEO

GU Xiaoqiong (PhD)
Co-Founder & Chief Technology Officer

KONG Xiaolu (PhD Candidate)
Co-Founder & Chief Information Officer

YANG Yi (PhD)
Chief Marketing Officer

Commercial Champion: ***David KLINZING*** *Venture Dev Mngr:* ***Chung-Pei OU***

breathonix

Lung cancer is the number one cancer killer. 80% of lung cancer cases are diagnosed at late stages, with resulting high mortality rate. The current gold standard diagnostic tool, the CT scan, is non-specific in differentiating benign from cancerous tumors in the early stages, leading to a high false positive rate. Breathonix offers a solution to detect lung cancer at early stages. This is achieved by analysing volatile cancer biomarkers in exhaled breath using our proprietary device. In our pilot trial with NUH, we successfully identified unique breath prints of lung cancer and detected early stage cases. Our vision is to become the global leader in non-invasive breath tests for diseases.

Team members:

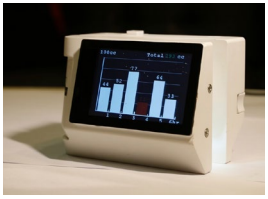
JIA Zhunan (PhD)
CEO

DU Fang (MSc)
Chief Operating Officer

Commercial Champion: ***Emiliano LEPORE*** *Venture Dev Mngr:* ***Chung-Pei OU***

UPPERMED

UpperMed is an advanced medical technology company dedicated to *Save Time, Save Life,* by providing better medical care to patients in hospitals. In the intensive care unit (ICU), delayed diagnosis of acute kidney injuries can lead to lifelong dialysis or even death. Our product, the Urodius™, can help nurses by providing continuous monitoring of the urine output of ICU patients, to allow for diagnosis of acute kidney injuries at an early stage. UpperMed - Save Time, Save Life.



Team members:

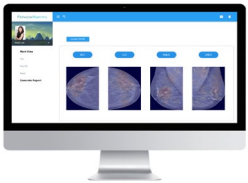
CHENG Yi-Chih (MEng)
Co-Founder & CEO

CHEN Ning (BSc)
Co-Founder & CTO

CHIOU Meng-Jiun (PhD Candidate)
Co-Founder & AI Tech Lead

Commercial Champion: ***Charlie SOH*** *Venture Dev Mngr:* ***Chung-Pei OU***

FATHOMX



FathomMammo is an AI Assistant developed by FathomX, that analyses mammograms to assist in early detection of breast cancer. Through the use of deep learning technologies and clinically validated parameters, the assistant is able to detect abnormal lesions, estimate one's risk of developing breast cancer, and automatically generate a radiology report for use by clinicians. The AI technology is able to improve both the efficiency and accuracy of existing methods, hence reducing the burden on clinicians on the ground.

Commercial Champion: ***Jeff WEISEL***
Venture Dev Mngr: ***Mayank GURNANI***

Team members:

DU Hao (PhD student)
Co-Founder, Engineering & Technology

ZHANG Ao (BEng)
Co-Founder, Operations & Product

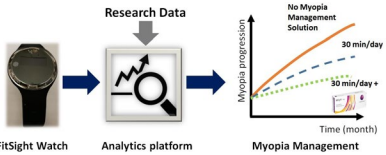
Amos HENG (BEng)
Co-Founder, Business Development

Mengling FENG (PhD)
Technical Advisor

Mikael HARTMAN (MD & PhD)
Clinical Advisor

Fit
FitSight, Myopia Management

The prevalence of myopia is at about 50% in developed countries and up to 80% in Asian populations. Decades of research by the scientific team has found a strong correlation between an optimal amount of natural light and the prevention of early onset of myopia, as well as reduction of its progression. Our solution, component of a combination treatment, is a monitoring tool powered by AI to help parents to ensure their children receive the right amount of natural light, including the intensity and frequency. This information can help children achieve a better lifestyle for better myopia management. Our kit is powered by an AI algorithm, which is trained with the data gathered over the years, over multiple studies.



Team members:

Hassanali GHAEDAMINI Harouni (PhD)
Co-Founder (Business)

DO Dang Vinh (PhD)
Co-Founder (Technology)

Commercial Champion: ***YEW Hock Meng*** *Venture Dev Mngr:* ***Chung-Pei OU***

OCULAR LABS
HEALTH FOR YOU AND Ai

Team members:

Matt GOH (BEng)
Co-Founder & Business Lead

Muhammad Azri Bin RAZALI (BEng)
Co-Founder & Technical Lead

Lyana SHAFFIEE (BSc)
Co-Founder & Regulatory, Quality & Clinical Lead

OcuViz™ from Ocular Labs is a complete hardware and software screening solution for the detection of major blinding diseases. It increases access of at-risk groups to eye healthcare by empowering primary care physicians to detect eye diseases before symptoms appear. OcuViz™ is able to automatically position the optics and lighting to capture specific regions of interest in the eye. The images captured by OcuViz™ are then segmented, and features are extracted for analysis using AI to generate a report. As our database grows, so would the AI software's ability to diagnose eye diseases.

Commercial Champion: ***Sipika SINGH*** *Venture Dev Mngr:* ***Bipin BHOLA***

SINGROW
Growing Your Daily Fresh

Singrow is a start-up using cutting-edge agro-technology to grow premium fruits and crops. Their current key innovations include the first white strawberry variety developed in a tropical country, a faster indoor hydroponic strawberry cultivation method, and a strawberry-specific hydroponic system. These has allowed them to grow premium strawberries using less energy and within a shorter time. Over 90% of strawberries in Singapore are imported from overseas. Singrow will be launching their first Singapore-grown fresh strawberries with the highest sweetness, in local and regional retail markets.

Commercial Champion: ***Allan ONG*** *Venture Dev Mngr:* ***David SHER***

Team members:

BAO Shengjie (PhD)
Co-Founder, CEO & CTO

XU Tao (PhD candidate)
Co-Founder & COO

YU Hao (PhD)
Co-Founder, Scientific Advisor

Polybee

Polybee is building small-sized autonomous drones for pollination in those sectors of agriculture where the only way to do it is by hand. Their first two markets are indoor vertical farming and hybrid seed production. With high precision, autonomous flight and visual data collection at a high resolution, their goal is to leave nothing to chance when it comes to pollination. In the future, Polybee aims to build autonomous solutions for markets like date palms where natural pollinators just don't make the cut.

Team members:

Siddharth JADHAV (BEng)
Founder & CEO

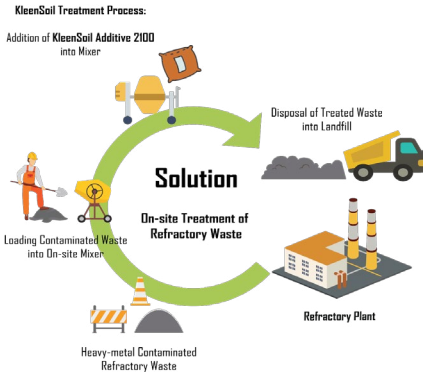
Vinitha S (MSc)
Computer Vision Engineering Lead

Commercial Champion: ***Teck Moh PHEY*** *Venture Dev Mngr:* ***Amir NIVY***

KleenSoil

Reviving Life for Soil

KleenSoil commits to provide sustainable and customised solid waste remediation solutions for construction, mining, environmental and waste management industries in the global market. KleenSoil has developed a suite of patented and readily customisable formulations which can seal and inactivate heavy-metal contaminants in soil and solid waste for on-site remediation.



Team members:

LU Di (PhD student)
Chief Executive Officer

EE Liang Ying (PhD student)
Chief Marketing Officer

LIN Xuanhao (PhD)
Chief Technology Officer

Commercial Champion: ***LOH Wah Sing*** *Venture Dev Mngr:* ***Amir NIVY***

DRAVAM
SIMULATIONS TO REALITY

Dravam is a flow solutions provider specialising in the maritime and oil & gas industries. Their aim is to provide data-driven insights into fuel quality, pipeline corrosion, boil off/condensates, deposits and pressure surges for conventional marine fuel, liquefied natural gas (LNG) and more. Dravam's Intelligent Multiphase Engine (DIME), built on an AI platform, is the resultant product of over seven years of industrial scale multiphase testing in the NUS Multiphase Flow Test Facility - the largest of its kind in Southeast Asia. The start-up provides real time solutions by integrating input sensor data with DIME to generate actionable data, which augments transparency of bunkering operations, and increases work efficiencies. Find out more at www.dravam.com.

Team members:

Vivek PREMANADHAN (PhD)
Founder & Chief Executive Officer

Commercial Champion: ***Derrick LEE*** *Venture Dev Mngr:* ***Jack SO***

SkyTrek

Sky Trek's SkyLock technology allows drones to performance precision landings with accuracies within ±2cm with specific orientation headings. With this ability, drones can land on small landing zones, both stationary and moving. This ability is being developed to enable ship-shore aerial delivery services for items under 5kg.

Team members:

Seth POH (PhD)
Founder & CEO

Mayank GADWALKAR (MSc Hons)
Co-Founder & COO

Commercial Champion: ***Wee Jin TAN*** *Venture Dev Mngr:* ***Cato Andre GULLICHSEN***

NodeSeer

NodeSeer is an online B2B marketplace for rapid strategic sourcing of services. The platform is built upon proprietary AI technology and comprises the following core features: Power Marketplace, Scope Assistant and Sourcing Director. The Power Marketplace is a public forum of qualified buyers and suppliers, complete with rich collaboration tools to help raise business profiles and engagement. By harnessing aggregated market intelligence with expert consultant knowledge, Sourcing Director helps to establish the best suppliers for different needs. Scope Assistant leverages a hybrid Natural Language Generation (NLG) framework to help define scope-of-work rapidly and in line with industry best practices. NodeSeer's strong network and technology edge gives businesses deep buying insights to drive significant savings in spend control, cutting source-to-contract cycles by up to 80%.

Team members:

Victor LOKE (MEng)
Co-Founder, Technology Architect

Cassy XIE (BSocSc)
Co-founder, Business Development

FENG Dan (MSc)
Co-Founder, Platform Development

Commercial Champion: ***LEE KS*** *Venture Dev Mngr:* ***Cato Andre GULLICHSEN***

WAVEBOOST

TOWARDS A WORLD WITHOUT BATTERIES

With billions of sensors installed and connected to the internet, conventional methods to provide power to sensors will soon be unable to keep up to the demands of a data-rich society. A more efficient and sustainable alternative to plug-in or battery-powered options is required. WaveBoost believes that wireless power delivery will be the next breakthrough. This energy technology start-up aims to cut power cords and remove batteries to provide wireless power solutions to sensors. By harnessing Radio-frequency energy, WaveBoost's technology can enable remote power charging for sensors, eliminating the hassles associated with complex wired infrastructure or frequent battery replacements, to achieve sustainable sensor operation. WaveBoost is well positioned to deliver quality wireless power solutions and enable truly wireless systems.

Team members:

ZAW Thet Aung (BTech)
CEO

BAO Zengdi (PhD)
CTO

NGO Tung (PhD student)
COO

GUO Yongxin (PhD)
Technical Advisor

Commercial Champion: ***David BONG*** *Venture Dev Mngr:* ***Haujiun CHEN***

HAMLIT

Creating a safer everyday ride
for two-wheeled riders

Hamlit is the world's first AI-based Driver Safety Assistance device created especially for Two-Wheelers. It constantly senses a vehicle's surroundings and warns of any Blind Spot and Collision dangers, through intuitive light notifications on the helmet. It uses AI to customise the notification behavior according to driving styles and traffic conditions, so that riders only act when required. Just attach to a bike, connect the app and enjoy a safer ride.

Team members:

Pranshu SHARMA (Dual MBA)
Chief Executive Officer

Anurag Saha ROY (BTech)
Technology Lead

Commercial Champion: ***KS LEE*** *Venture Dev Mngr:* ***Amir NIVY***

SOLEMETRIX

SoleMetrix is a sports technology company that combines wearable technology, machine learning, and data analytics to provide precision metrics and actionable insights for coaches and athletes. Their technology solution is a portable shoe-mounted wearable device backed by state-of-the-art algorithms for calculating advanced gait metrics not currently possible on traditional wearables. These metrics can be used for preventing or reducing sport injuries, empowering coaches with analytics for improving training and team management, and providing personalised actionable feedback to athletes.

Team members:

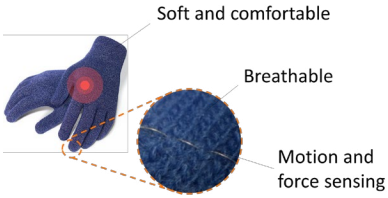
Boyd ANDERSON (PhD candidate)
Co-Founder & Technical Lead

Aijing WANG (BSc)
Co-Founder & Business Lead

Commercial Champion: ***Yoav ELGRICHI*** *Venture Dev Mngr:* ***Bipin BHOLA***

MICROTUBE TECHNOLOGIES

Microtube offers the thinnest and most stretchable fiber sensor to capture motion and force. Using patented technologies, they have developed the most comfortable gaming glove controller to create immersive experiences in a mixed reality world.



Team members:

YU Longteng (PhD candidate)
Co-Founder, CEO & CTO

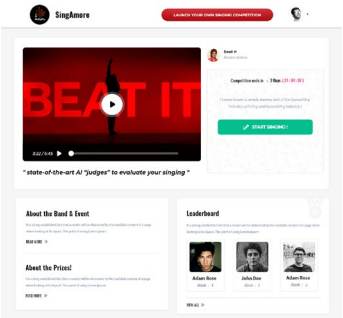
YEO Joo Chuan (PhD)
Co-Founder & COO

LIM Chwee Teck (PhD)
Co-Founder & Business Advisor

Commercial Champion: ***Prusothman RAJA*** *Venture Dev Mngr:* ***Alfred CHIA***

MuSigPro

MuSigPro is an online singing contest platform powered by SingAmore™ , the state-of-the-art AI "judge" to evaluate singing quality. This platform provides singers, from amateurs, aspirants to professionals, a way to measure their singing talent against others. The platform also allows music bands, musicians, or anyone else to launch customisable singing competitions to showcase and promote great music and find passionate fans.



Team members:

Chitralekha GUPTA (PhD)
Co-Founder & CEO

Serene HUANG (PLD, BSc)
Co-Founder & CFO

Commercial Champion: ***Kristav CHILDRESS*** *Venture Dev Mngr:* ***Cato Andre GULLICHSEN***

NUS INDUSTRY LIAISON OFFICE

The NUS Industry Liaison Office (ILO) is the technology translation and commercialisation arm of the National University of Singapore (NUS). Over the last five years, ILO has played a pivotal role in getting more than 670 patents granted and more than 80 technology-based companies spun off from the NUS. Through innovative programmes delivered in a customer-centric manner, ILO provides funding, connections and expertise to students, researchers and professors, whether they are seeking to create a spin-off company or partner with established industry players to translate their innovations into the market place. The ILO team comprises of technical, business and legal expertise that commercialises any technology-based opportunities.

NUS National University of Singapore | Industry Liaison Office

Download the teams factsheet

Thank you for joining us

NUSGRIP

GRADUATE RESEARCH INNOVATION PROGRAMME

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