

## **PRESS RELEASE**

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### **Record number of winners for the 2014 Innovation & Enterprise Awards**

*Singapore, 15 April 2014* – For the first time in its four-year history, five winners will walk home with the Innovation & Enterprise (I&E) Awards. The organisers, NUS Enterprise and The National University of Singapore Society (NUSS), today revealed the winners of the I&E Awards, which is divided into two categories – the Promising NUS Start-up Award and the Outstanding NUS Innovator Award. The Promising NUS Start-up Award will be presented to AyoxxA BioSystems, Pirate3D and Semantics3. The Outstanding NUS Innovator Award will be presented to Professor Lim Chwee Teck from the Mechanobiology Institute, who also holds joint appointments at the Department of Biomedical Engineering and Department of Mechanical Engineering at the NUS Faculty of Engineering, as well as Professor Ng Kim Choon from the Department of Mechanical Engineering. These five winners will collect their trophies and prizes this evening at the InnovFest 2014 Celebration Dinner, held at the Grand Copthorne Waterfront Hotel.

“We are delighted at the strength of the start-ups that were shortlisted this year, which is a reflection not only of the growing maturity of the start-up environment in Singapore, but also the growing acceptance of entrepreneurship as a viable career option for young graduates. It is good to see both innovators and start-ups coming from a diverse range of industries, from infocomms, to biomedical sciences and engineering,” said Dr Lily Chan, CEO NUS Enterprise.

“This year was the toughest for the judging panel to select the winners, as each of the short-listed companies had strong winning elements. In the end, we selected the winners, as the start-ups that we believe have the greatest potential to scale and make a real impact through their products and technologies. NUSS is proud to be a part of this award for entrepreneurs and innovators from the NUS community,” said Dr Lim Wie Ming, NUSS Management Committee and Co-Chairman I&E Awards.

#### **The Promising NUS Start-up Award**

The Promising NUS Start-up Award recognises innovation-based ventures within the NUS community that have the potential to make global impact. The three winners each receive a trophy and S\$100,000 in prize money. The winners are:

- 1) AyoxxA – Founded in 2010, this is a biotech start-up, based in Singapore and Germany. The technology behind AyoxxA began in 2008 when Associate Professor Dieter Trau, from the NUS Department of Biomedical

Engineering, became one of the first recipients of the National Research Foundation's (NRF) Proof of Concept funding scheme, for his project on bead based microarray for bio-molecular diagnostics. He and his team then won a second grant from the Singapore-MIT Alliance for Research (SMART) Innovation Centre and spun off AyoxxA. This has since developed its NUS licensed technology into a platform for multiplexed protein analysis. The Ayoxxa biochip can simultaneously and cost-effectively analyse proteins from very small biological samples (eg. Blood or saliva). The 25-man team is headed by CEO, Dr Andreas Schmidt, with Prof Trau as the CSO, while also maintaining his appointment at NUS. In 2012, AyoxxA closed its Series A financing round at S\$5.2 million, and have secured commitment for their Series B, which will be announced next month. AyoxxA is incubated by NUS Enterprise.

"Bringing a product from lab to market is not an easy task, especially within the biomedical sector, where product development is typically lengthy and expensive. Winning the Promising NUS Start-up Award is a strong validation to the team that we are on the right track, and have the potential to revolutionise applications in biomedical research, pharmacological screening and diagnostics," said Dr Andreas Schmidt, CEO AyoxxA.

- 2) Pirate3D – The idea for this start-up began in 2012 when two of the founders, Brendan Goh and Tsang You Jun, were working on their university projects and need to prototype their designs. However, they found already-available 3D printers difficult to use and unreliable. They teamed up with another friend Roger Chang and Adjunct Associate Professor Neo Kok Beng (who is a mentor with NUS Enterprise and also Roger's lecturer at the NUS Business School). Together they formed Pirate3D, with the mandate of creating a quality and affordable 3D printer for the masses. To develop their flagship product, the Buccaneer 3D Printer, they innovated upon existing 3D printer technology, resulting in the filing of 8 new patents for their innovations. In 2013, they launched a Kickstarter campaign, successfully raising over US\$1.4 million from some 3,500 backers. This made them amongst the top 20 crowd-funded companies in 2013.

"We plan to use the prize money from the Promising NUS Start-up Award to replenish the beer and coffee supplies in our pantry. You should never underestimate the power of incentivising the team and keeping them charged and caffeinated! On a more serious note, we will likely use the resources to roll out our marketing plan, as we plan to launch our Buccaneer 3D Printer later this year," explained Roger Chang, Chief Executive Pirate, Pirate3D.

- 3) Semantics3 – Founded in 2012, Semantics3 aims to organise the world's e-commerce data. Semantics3 has built one of the largest databases of product and pricing information and crunches data from well over 1.5 million online merchants and sellers. Through its Product API, retailers, brands and financial institutions are able to determine the optimal price to sell their products, track market trends, gain competitive insights and

make data-driven decisions. In 2013, Semantics3 became the first Singaporean start-up to be accepted into YCombinator, one of the world's most well-regarded start-up accelerators. They then moved their office from the NUS Enterprise Incubator in Singapore to San Francisco, U.S. The founding team of Semantics3 includes classmates Sivamani Varun, Vinoth Gopinathan and Govind Chandrasekhar, who are all graduates of the NUS Department of Electrical and Computer Engineering, Class of 2012.

"It is almost like a home-coming for us to win the Promising NUS Start-up Award, as the idea for the company began while we were still students at NUS and participated in the 2012 Start-Up@Singapore business plan competition. The support from NUS Enterprise during our early days has helped us to get to where we are today," said Sivamani Varun, Co-founder Semantics3.

### **The Outstanding NUS Innovator Award**

The Outstanding NUS Innovator Award recognises individuals within the NUS community that have developed innovations, generated commercialisation value or made social impact. The two winners each receive a trophy and S\$10,000 in prize money. They are:

- 1) Professor Lim Chwee Teck (Mechanobiology Institute, Department of Biomedical Engineering and Department of Mechanical Engineering, NUS Faculty of Engineering) – Prof Lim has developed a suite of microfluidic devices that harvests circulating tumour cells from the blood. This technology was spun off into Clearbridge BioMedics in 2009, which has since been commercialised into a device that can detect and diagnose cancer. This is commercially-available for research use and Clearbridge BioMedics is now targeting clinical diagnostic applications. Prof Lim's second innovation is a nanofibre technology, which was spun off into Clearbridge Nanomedics in 2010. The company is developing a nanofibre mesh which is ultra-pliable, with high surface contact area and time-release properties. This has applications in the medical or cosmetics industries. Prof Lim is a co-founder of both Clearbridge Biomedics and Clearbridge Nanomedics. He was also involved in co-founding two other companies, Robust Dynamics and Clearbridge mFluidics and is co-founder and affiliated partner of Clearbridge Accelerator.

Prof Lim is currently working in the area of skin regeneration and was instrumental in clinching a research partnership with L'Oreal. This project aims to characterise the behaviour of skin cells present in the dermis and epidermis, after exposed to mechanical stresses and variations in the environment. Prof Lim is an inventor on 8 independent patent families.

- 2) Professor Ng Kim Choon (Department of Mechanical Engineering, NUS Faculty of Engineering) – Prof Ng has developed a series of engineering technologies that have been translated into NUS spin-off companies. His research in heat transfer optimisation resulted in a two-faced cooling technology prototype. This was spun-off into a start-up company, Gatekeeper Laboratories in 2009. Prof Ng then developed a technology

that improves the rate at which a disinfecting gas (ozone) is mixed with water. In 2010, this was spun off into a start-up company, NanoThree which is developing the technology into a ballast water treatment system. Prof Ng's latest spin-off company is Medad Technologies, set up in 2012. This is commercialising a system design driven by the basis of absorption-desorption in heat exchanger beds. This has applications in water management and cooling, as it can produce pure drinking water from sea water or brackish water, and simultaneously produces cooling effects. Medad has already deployed the technology in several commercial and industrial buildings in Singapore, and is currently expanding the business into China and the Middle East.

Prof Ng is currently working on research in the area of adsorption desalination cooling systems, where low temperature heat (typically waste heat from industrial processes or solar/ geothermal heat sources) is recovered to produce cooling and potable water. Prof Ng has 19 patent families – granted and pending – under his name and continues to invent more.

The I&E Awards are annual awards, organised by NUS Enterprise and NUS, and supported by the National Research Foundation's University Innovation Fund. They aim to recognise individuals and companies within the NUS community, who have achieved significant accomplishments or contributed towards entrepreneurship and innovation.

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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 16 faculties and schools across three campuses. Its transformative education includes a broad-based curriculum underscored by multi-disciplinary courses and cross-faculty enrichment. Over 37,000 students from 100 countries enrich the community with their diverse social and cultural perspectives.

NUS has three Research Centres of Excellence (RCE) and 23 university-level research institutes and centres. It is also a partner in Singapore's fifth RCE. NUS shares a close affiliation with 16 national-level research institutes and centres. Research activities are strategic and robust, and NUS is well-known for its research strengths in engineering, life sciences and biomedicine, social sciences and natural sciences. It also strives to create a supportive and innovative environment to promote creative enterprise within its community.

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

### **About NUS Enterprise**

NUS Enterprise is a University-level cluster that provides an enterprise dimension to NUS teaching and research involving the University's students, staff and alumni. The functions of the Enterprise Cluster complement the academic cluster of the University to nurture talents with an entrepreneurial and global mindset. NUS Enterprise promotes the spirit of innovation and enterprise through Experiential Education, Industry Engagement & Partnerships and Entrepreneurship Support. [www.nus.edu.sg/enterprise](http://www.nus.edu.sg/enterprise)

### **About The National University of Singapore Society (NUSS)**

NUSS is the foremost graduate club with more than 15,000 graduate members from NUS and other universities. Officially established in 1954, NUSS has undergone several revisions in name – the University of Malaya Society (1954), the University of Singapore Society (1962) and finally the National University of Singapore Society (1981), as it is known today. In promoting the interests of its members and NUS, NUSS continually fosters a lifelong relationship with NUS and the wider graduate community. With an extensive network of graduates frequenting its three Guild Houses in Kent Ridge, Adam Park and Bukit Timah, NUSS endeavours to provide its members with a vast network of opportunities with fellow graduates and professionals, as well as premium social, recreational and dining facilities. [www.nuss.org.sg](http://www.nuss.org.sg)

## **Annex – Eligibility Criteria and Judging Guidelines**

### Promising NUS Start-up Award

To be eligible, the companies should be innovation-based ventures, as well as be located within Singapore. They should also have some NUS linkage, including utilising NUS technology, being founded by NUS staff/ ex-staff, students or alumni, or being incubated by NUS. The company should also be revenue generating. Nominations for this category must be submitted by a member of the companies' senior management team.

The judging guidelines are as follows:

- Degree of innovation in the product/ service
- Validation of business model
- Scalability and growth potential
- International recognition
- Social Impact

### Outstanding NUS Innovator Award

To be eligible, nominees must be NUS staff/ ex-staff, students or alumni, who have made innovations in recent years that have generated significant commercialisation value or social impact. Entries for this award must be nominated by a third party.

The judging guidelines are as follows:

- Commercialisation of licensed innovations in the recent years.
- Financial returns
- Innovativeness of innovation(s)
- Commercial impact
- International recognition
- Social impact

### Panel of judges for the I&E Award

- Prof Chua Kee Chiang, NUS Faculty of Engineering
- Ms Natasha Foong, Founder and Managing Partner Incuvest
- Ms Yvonne Kwek, CEO Singtel Innov8
- Mr Damien Lim, General Partner, Bioveda Capital
- Mr Tan Kim Seng, Managing Director 3V SourceOne Capital

### Members of the Organising Committee

- Dr Lily Chan, CEO NUS Enterprise (co-chair)
- Dr Lim Wie Ming, Deputy Chairman, Alumni Development and University Relations, NUSS (co-chair)
- Ms Irene Cheong, Director NUS Industry Liaison Office, NUS Enterprise
- Mr Tong Hsien Hui – CEO NUSS
- Mr Yeo Keng Joon, NUS Business School Advisory Board member