

## **Project Cube/Roots – A tripartite partnership to build Singapore’s first urban agriculture research facility in a junior college**

Life3 Biotech (Life3), Agri-Food & Veterinary Authority (AVA) and National Junior College (NJC) have signed a Memorandum of Understanding to work collaboratively to establish Project Cube/Roots – Singapore’s first urban agriculture research facility in a junior college for research and development work on innovative, sustainable agri-tech solutions for the production of healthy food products. The project will span five years.

2 This tripartite partnership is the first of its kind between a local enterprise, government agency and academia that exemplifies the project’s shared vision of R.I.C.E – Research, Innovation, Community Engagement and Enterprise. Each party will provide resources such as infrastructure, technical expertise and manpower to determine research topics and develop new agri-food technologies and innovation for sustainable urban food production. The collective objectives of this project are as follows:

### **Research & Innovation:**

- i. Design and implement agri-tech based projects within Research@NJC programmes;
- ii. Develop compact and modular container-like agriculture systems that provide a controlled growing environment in an outdoor space;
- iii. Develop precision agriculture technology for both indoor and outdoor agriculture using robotics, sensors, Internet of Things, data analytics and clean energy to redesign and modernize farming practices to improve sustainability in a resource-limited environment;
- iv. Develop improved crop varieties through selective breeding, and proprietary growing protocols to achieve maximum yield and targeted nutritional profile;
- v. Cultivate and bio-transform high nutritional plants, fungi and superfood microalgae, as well as upcycle their post-harvest by-products into functional food that can be used for direct food processing or 3D food printing processes.

### **Community Engagement & Enterprise:**

- i. Engage students from other schools in the joy of research through workshops and collaborative projects;
- ii. Mobilise student leaders and CCA groups as ambassadors to promote health and sustainability. Fresh quality produce will be harvested and sold to food vendors in the school to reduce carbon footprint. Net proceeds from harvested

# MEDIA RELEASE

crops will contribute to “Cube/Roots Care” funds to benefit the under-privileged youth and community-at-large.

- iii. Partner grass root organizations to conduct workshops in precision agriculture;
- iv. Establish Agri-Food Tech Interest Groups to promote food production capabilities across Singapore;
- v. Inspire a new generation of agri-food technologists and entrepreneurs to join the movement in harmonising traditional farming with revolutionary science and technology.

3 Life3 Biotech CEO Ricky Lin says the MoU formalizes a relationship between a local start-up and the two esteemed partners who believe and support the value of building a sustainable food system, from upstream cultivation and harvesting, to midstream food processing and to meet downstream consumers need in managing health and wellness.

4 “As a local start-up developing novel and sustainable plant-based food ingredients, it is essential for our team to develop the core technology in optimizing the plants growth and nutrition yield in order to maximize the functional benefits for human health such as combating cardiovascular diseases and diabetes,” said Mr Ricky Lin.

5 AVA looks forward to working with Life3 and NJC on the urban agriculture research facility. “Such collaborations are important to help build up the ecosystem for urban food production. The interaction between the government, academia and private sector will push technological boundaries and inspire innovative, sustainable agri-tech solutions. By having this research facility in a school, we will expose students to agri-tech early, and inspire them to be the new generation of agri-specialists to transform our food industry,” said Mr Lim Kok Thai, CEO of AVA.

6 National Junior College, true to her motto, places strong emphasis on service. In particular, Research@NJC programmes foster strong values and critical thinking that enable students to enrich the lives of others. NJC seeks out opportunities with IHLs and industry partners to engage students in developing new solutions to address global sustainable issues and national imperatives.

7 “We will be celebrating our Jubilee 50th Anniversary in May 2019. One of the key events in our year-long celebration will be the official opening of Project Cube/Roots. We would like to connect with our alumni to involve them to work together in creating a Singapore-brand solution in our resource-limited country, thus turning a limitation into an opportunity,” said Mr Ang Pow Chew, Principal of NJC.

**Issued by Life3 Biotech, Agri-Food & Veterinary Authority of Singapore and National Junior College**  
*14 September 2018*

**MEDIA RELEASE**

**Organisation Bio**

**Life3 Biotech**

Life3 Biotech (Life3) is a Singapore company specializing in the R&D and manufacturing of innovative and sustainable functional food and beverage solutions. Their novel approach redefines the meaning of food – not just for sustenance but also a means of promoting holistic well-being to all consumers globally, through natural plant-based ingredients. Their mission is to reduce the illness of chronic diseases and promote health & wellness; especially cardiovascular disease, diabetes, osteoporosis and intestinal diseases. Life3’s work on plants has bagged numerous awards in food innovation competition as well as recognition from the international food technology media publications.

**Agri-Food & Veterinary Authority**

The Agri-Food & Veterinary Authority is a statutory board under the Ministry of National Development that is responsible for ensuring a resilient supply of safe food, safeguarding health and welfare of animals, safeguarding the health of plants, and facilitating agri-trade.

**National Junior College**

Established in 1969, National Junior College (NJC) is the first Junior College in Singapore. NJC is an Integrated Programme (IP) School, and matriculates students at both Secondary 1 and JC 1 levels. As part of a joyful and lively community, NJCians are engaged in a wide range of distinctive and memorable experiences that imbibe values of civility, altruism, resilience and enterprise to ultimately *serve with honour*.

**MEDIA RELEASE**