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SFA AND A*STAR LAUNCH GRANT CALLS FOR R&D IN SUSTAINABLE FOOD PRODUCTION AND FUTURE FOODS

The Singapore Food Agency (SFA) and the Agency for Science, Technology and Research (A*STAR) have launched grant calls for R&D in ‘Sustainable Urban Food Production’ and ‘Future Foods: Alternative Proteins’, respectively¹. These grant calls will provide funding support for innovative research projects that address:

- i. Challenges facing the tropical aquaculture and urban agriculture industries, and
- ii. Global and local limitations for producing dietary protein.

Grant call for ‘Sustainable Urban Food Production’

2 SFA has been engaging our research community and industry to shape the R&D grant call to catalyse research in the development of technological solutions for tropical aquaculture and urban agriculture in Singapore. Some target research areas include genetic improvement of key tropical aquaculture species and vegetable varieties with traits adapted for indoor farming, and developing solutions for improved disease and health management.

3 Research proposals must articulate solutions with the ability to increase the productivity of local food producers beyond what is achievable by current best-in-class technologies, while taking into consideration cost effectiveness, resource use efficiency, sustainability, and climate resilience.

4 Ms Melin Lim, Senior Director for SFA’s Research Planning & Systems Integration and Urban Food Solutions divisions, said, “R&D in sustainable urban food production technologies is critical in view of rising food security challenges such as climate change, the growing complexity of food systems and Singapore’s resource constraints. Leveraging on innovative technologies can help our industry grow more with less sustainably, and help us achieve our “30-by-30” goal for Singapore’s food security. We urge researchers and the agri-food industry to work hand-in-hand to co-develop innovative solutions that can plug technological gaps in the agri-food sector.”

¹ In March 2019, to support Singapore’s “30-by-30” goal (to produce 30 per cent of Singapore’s nutritional needs locally by 2030), funding of up to \$144 million was allocated from within the Research, Innovation and Enterprise 2020 Plan to carry out R&D in Sustainable Urban Food Production, Future Foods and Food Safety Science & Innovation.

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Grant call for ‘Future Foods: Alternative Protein’

5 Likewise, A*STAR has been building capabilities in Singapore’s research ecosystem to address industry needs. The global protein industry faces mounting constraints on land use and environmental sustainability, and seeks alternative methods to produce protein-rich foods.

6 High-protein plant foods such as soy, pulses, cereals and tubers could potentially meet nutrition requirements in Asia, and the production of these have a lower carbon footprint than that of livestock or conventional animal protein production.

7 Therefore, foodtech startups and manufacturing methods focused on alternatives to animal-based proteins are a fast growing segment of the food and agritech industries. To-date, many have focused on producing alternatives to animal meat, milk and eggs. Others are dedicated to producing algae and insects as more sustainable sources of protein. Such developments will help Singapore diversify its sources of protein to meet nutrition requirements.

8 Research proposals must address topics related to the creation of protein-rich foods and ingredients using sources including but not limited to plants, vegetables, microbes, animal cell culture, insects, and commercial side streams. Applicants are encouraged to consider food safety, nutrition, palatability, scalability, sustainability, cost-effectiveness, and other real-world implications.

9 This grant call will be in the form of a Seed Grant where researchers are to demonstrate novelty in their R&D approach and ground breaking science to address some of the fundamental challenges in Alternative Proteins. With the seed funding, A*STAR hopes to enable researchers to demonstrate evidence-based proof-of-concept technologies and solutions that will have regional and global commercial values in the near term while supporting the “30-by-30” national goal.

10 Prof Ralph Graichen, Senior Director of the Food and Consumer Cluster at A*STAR, said, “Asia has rich and diverse natural resources, yet there is a prevalence of malnutrition. It is crucial for Singapore to take on a leadership role in nutrition R&D together with our regional partners so that the rising dietary demands of the Asian population – including proteins – are met. This will present plenty of economic opportunities for Singapore, while ensuring good social outcomes.”



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Eligibility and application

11 Local researchers from Singapore-based institutions of higher learning, public sector agencies and not-for profit research laboratories, as well as local companies and company-affiliated research laboratories/institutions, are eligible to apply. Funded projects must be conducted in Singapore.

12 More details of the Singapore Food Story R&D grant calls and application procedures can be found at the following websites:

- Grant call for Sustainable Urban Food Production: <https://www.sfa.gov.sg/food-farming/singapore-food-story/singapore-food-story-r-d-grant-call>. All proposals must be submitted by 31 March 2020, 12pm.
- Grant call for Alternative Protein Seed Challenge: <https://www.a-star.edu.sg/Research/Funding-Opportunities/Overview>. All proposals must be submitted by 18 February 2020, 11.59pm.

Issued by Singapore Food Agency and Agency for Science, Technology and Research

On 18 December 2019

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About the Singapore Food Agency (SFA)

The Singapore Food Agency (SFA) was formed as a new statutory board under the Ministry of the Environment and Water Resources on 1 April 2019. The SFA brings together food-related functions carried out by the former Agri-Food & Veterinary Authority of Singapore, the National Environment Agency and the Health Sciences Authority.

As the lead agency for food-related matters, SFA's mission is to ensure and secure a supply of safe food for Singapore. SFA works hand-in-hand with the industry and consumers to grow our three "food baskets" – Diversify import sources, Grow local, and Grow overseas, as well as ensure food safety from farm-to-fork. SFA also partners food businesses to strengthen capabilities, tap on technologies to raise productivity, undertake research to develop new lines of business, and catalyse industry transformation to ensure food security. For more information on SFA, visit www.sfa.gov.sg.

About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector agency that spearheads economic oriented research and development. As a Science and Technological Organisation, A*STAR bridges the gap between academia and industry. Our research creates economic growth and jobs for Singapore, and enhances lives by contributing to societal benefits such as improving outcomes in healthcare, urban living, and sustainability. Through open innovation, we collaborate with our partners in both the public and private sectors to benefit society. A*STAR's R&D activities span biomedical sciences and physical sciences and engineering, with research entities primarily located in Biopolis and Fusionopolis. A*STAR also plays a pivotal role in nurturing scientific talent and leaders for the wider research community and industry. For ongoing news, visit www.a-star.edu.sg.