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NTU Singapore, WHO Partner to Advance Global Food Safety

Alita Sharon June 19, 2025



Nanyang Technological University, Singapore (NTU Singapore) and the World Health Organization (WHO) have launched a pioneering collaboration to modernise the global food safety framework using cutting-edge technologies. Anchored in the WHO Global Strategy for Food Safety 2022–2030, this three-year project is designed to bolster the scientific foundations of food safety risk assessment, particularly for novel and emerging food systems.



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At the core of the initiative is the application of New Approach Methodologies (NAMs), a category that includes artificial intelligence (AI), digital modelling, in silico computational models and in vitro assays. These advanced techniques are expected to revolutionise how countries assess food safety risks, particularly in relation to next-generation food products such as cultured meat, precision-fermented foods and functional nutrition innovations.

The collaboration was officially launched at the WHO-NTU Joint Workshop on New Approach Methodologies in Future Food Safety Risk Assessment, held in Singapore from 18 to 20 June 2025.

During the workshop's opening ceremony, the agreement was signed by Professor William Chen, Director of the Future Ready Food Safety Hub (FRESH) at NTU Singapore and Dr Simone Moraes Raszl, Scientist for Multisectoral Action in Food Systems at WHO. The event was witnessed by Mr Lim Chuan Poh, Chairman of the Singapore Food Agency (SFA), who also served as Guest of Honour.

Professor Chen, who also directs NTU's Food Science and Technology programme, emphasised the strategic importance of the partnership. "This collaboration with WHO underscores NTU's commitment to advancing food safety science and innovation. Supported by FRESH and our partners in the Singapore ecosystem, we aim to develop robust methodologies that will benefit global public health, particularly to assess and regulate novel food innovations," he said.

Dr Moraes Raszl of WHO highlighted the global impact of the collaboration, noting, "Ensuring safe food is fundamental to global health, sustainable development and resilient societies. Our joint efforts with NTU Singapore exemplify our collective commitment to advancing science-driven solutions that can be shared and scaled across borders."

The partnership will involve joint research, capacity-building workshops and the development of technical guidance aimed at integrating NAMs into national food safety systems. These efforts are tailored to help WHO member states enhance their risk assessment capabilities and respond to rapidly evolving food technologies.

The collaboration also leverages the resources and expertise of FRESH, a tripartite partnership between NTU Singapore, A*STAR and SFA. This synergy is positioned to serve as a model for how international cooperation can accelerate innovation while maintaining rigorous safety standards.

According to Mr Lim Chuan Poh, the project reflects the growing importance of global partnerships in safeguarding the integrity of modern food systems. "This project is an illustrative example of how international collaborations can drive innovation in food safety science. As Singapore develops a more resilient and robust food system, global partnerships like this will play a vital role in ensuring the safety, trust and sustainability of both local and global food supply chains."

NTU Singapore is actively engaged in advancing food sustainability and preservation through its focus on scientific research and technological innovation. It adopts interdisciplinary approaches to build safe, reliable food systems and support global food security and sustainability.

As OpenGov Asia reported, NTU researchers developed a <u>compact, mercury-free</u> <u>UV chip</u> that uses UVC light to extend food freshness, enhance safety and reduce waste for more sustainable consumption.

By embedding technological innovation, advanced digital tools and international scientific collaboration into contemporary food safety practices, NTU Singapore is helping to set a new global benchmark for the future of food regulation. This partnership aims to build scalable, science-based and trustworthy frameworks that can effectively address the complex challenges posed by a rapidly evolving food landscape.