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Singapore Turns Its Deep-Tech Focus From Research to Global Commercialization With New S$12M Fellowship

by SEONGMIN HONG

Singapore's new Activate Global Fellows programme has selected five deep-tech startups from 123 applications, reflecting a broader push to move publicly supported research beyond technical validation and toward customers, industrial deployment and global markets.

Singapore is entering a new phase in its deep-tech strategy, with increasing emphasis not only on developing scientific capabilities but also on converting research into commercially viable companies. The inaugural cohort of Activate Global Fellows – Singapore, hosted by Nanyang Technological University, Singapore (NTU Singapore), brings that objective into focus by selecting five deep-tech startups from 123 submissions across Singapore's autonomous universities and research institutions.

The programme, backed by **S$12 million from the National Research Foundation, Singapore (NRF)** with support from Enterprise Singapore (EnterpriseSG), will support 20 Singapore-based companies over three years. Each fellow will receive up to **S$200,000** in stipend and

funding for business development and research and development, alongside mentorship and two US immersion trips. The first trip is scheduled for October 17 to 25, 2026, covering San Francisco and Silicon Valley.

The initiative arrives as Singapore expands its broader investment in research, innovation and enterprise. Under the RIE2030 plan, the country is committing S$37 billion over five years from April 2026, with a stronger focus on translating research into economic and national outcomes.

From research strength to commercial viability

Singapore's challenge is not simply building a research base. The country has spent decades developing scientific and engineering capabilities, while its policy framework has increasingly incorporated innovation and enterprise into the research agenda. Yet deep-tech commercialization remains a long and uncertain process.

In February 2026, Singapore's government noted that deep-tech commercialization can take years and that there is no single measure of commercial viability. It instead tracks indicators including IP licensing, startup growth, capability building and private-sector investment. The new fellowship is designed around this translational gap. It is Activate's first fellowship outside the United States and brings together NTU, NUS, A*STAR, Singapore Management University and Singapore University of Technology and Design within its working committee.

The selection of only five startups from 123 submissions also provides a window into what the programme considers commercially relevant deep tech.

Speaking with AsiaTechDaily, Anuj Jain, Project Lead and Director of Activate Global Fellows – Singapore at NTU Singapore and a Director of National GRIP, said the selection was not based simply on the strength of the underlying science.

> "We were looking for a combination of scientific defensibility, a significant problem with potential impact, a credible path to adoption, and founders with right mindset who could translate the technology into a commercial company with global potential."

Jain said the selection process also examined whether technologies were beginning to move beyond laboratory development. Depending on the sector, that evidence could include an integrated pilot system, industrial validation, customer engagement, real-world trials or a pathway toward demonstration and deployment. That distinction is significant for deep-tech ventures, where technical validation is only one stage of company formation. The next questions often concern manufacturing, customers, regulatory pathways, capital requirements and partnerships.

Five startups targeting global industrial problems

The cohort spans five areas where technological development intersects with large-scale industrial or environmental challenges.

- CRecTech, an NUS spin-off founded by Dr Kang Hui Lim and Dr Kok Giap Haw, is developing a two-step catalytic process to convert waste-derived biogas into renewable bio-methanol, including for shipping. It has built an integrated pre-pilot system and is supported by the Breakthrough Energy Fellows programme.
- LAPIS, an NTU spin-off founded by Dr Dominic Lim and Simon Goh, is developing metal additive manufacturing using ultra-thin metal sheets instead of combustible metal powders. NTU tests found stainless-steel parts produced through the process were fully dense and more than 70% stronger than bulk steel, while titanium alloy was printed without a sealed inert-gas chamber.
- AeroFlux, an NUS spin-off founded by Dr Feb Hillman, is developing compact membrane technology for capturing carbon dioxide from industrial exhaust, including on ships and other space-constrained facilities. The company reports potential reductions of up to 80% in carbon-capture costs and up to 90% in the carbon footprint of the capture process compared with conventional approaches.
- LoopForBio, an NTU spin-off founded by Dr Ezequiel Santillan and Dr Soheil Neshat, converts nutrient-rich food-processing by-products into microbial protein for aquaculture feed. Its technology has been evaluated in seven fish and shrimp trials.
- Healbac, founded by Dr Avinanda Banerjee, is developing non-antibiotic approaches intended to reduce reliance on conventional antibiotics and chemical preservatives, with current validation focused on veterinary wound and skin care and potential food-preservation applications.

The diversity of the cohort also reflects Singapore's broader translational infrastructure. Four of the five startups came through National GRIP, the national deep-tech incubation programme designed to help researchers turn university and research-institute work into ventures.

Building founders, not just technologies

The fellowship's US component is another indication that the programme is targeting commercialization rather than laboratory development alone. Founders will meet potential customers, investors and industry partners during two immersion trips, connecting Singapore-based ventures with international networks at an earlier stage of development.

Activate brings experience from its US programme, which began at Lawrence Berkeley National Laboratory in 2015. According to Activate, companies supported through its programmes have attracted more than US$5.5 billion in follow-on funding and launched more than 275 companies.

For Singapore, the more immediate question is whether such international exposure can help researchers develop into company builders capable of navigating long commercialization cycles.

Jain told AsiaTechDaily that the selection process considered characteristics beyond technical expertise, including customer curiosity, openness to changing direction, resilience through long development cycles and the ability to build teams and partnerships outside a founder's technical domain. He said the five companies demonstrated a combination of deep science, significant problems, technical progress, commercial potential and founders capable of making the transition from researcher to company builder.

That focus aligns with Singapore's wider policy direction. The government has also committed an additional S$1 billion to Startup SG Equity, extending support to Singapore-based deep-tech companies from early stages into growth stages.

The significance of Activate Global Fellows – Singapore will therefore depend less on the size of its inaugural cohort than on whether its companies can convert technical progress into sustained commercial adoption. For a country that already has substantial research capacity, the harder test is increasingly what happens after the breakthrough: whether technologies can find customers, attract industrial partners, secure capital and scale beyond Singapore. Jain's assessment captures that challenge clearly: the opportunity is for Singapore to become as effective at identifying technologies that can become enduring companies as it is at generating scientific research, and then provide founders with the global connectivity to make that transition.

Quick takeaways

- NTU Singapore has selected five deep-tech startups from 123 applications for the inaugural Activate Global Fellows – Singapore cohort.

- The S$12 million programme, funded by NRF with EnterpriseSG support, will support 20 Singapore-based companies over three years.
- Each fellow can receive up to S$200,000 for stipend, business development and R&D, plus mentorship and two US immersion trips.
- The first US immersion will take place in San Francisco and Silicon Valley from October 17–25, 2026, connecting founders with potential customers, investors and industry partners.
- The five startups span green methanol, carbon capture, metal additive manufacturing, sustainable aquaculture feed and food preservation.
- Four of the five startups came through National GRIP, showing how the new fellowship builds on Singapore's existing deep-tech commercialization pipeline.
- The key editorial insight from Anuj Jain's exclusive AsiaTechDaily response is that selection was not simply about having stronger science. The programme looked for scientific defensibility, important problems, a credible adoption path, technical progress, commercial potential and founders capable of becoming company builders.
- The startups were expected to show evidence of moving beyond laboratory validation, such as pilots, industrial validation, customer engagement, real-world trials or a pathway toward deployment.
- This makes the programme less about another startup accelerator and more about bridging the gap between Singapore's research strength and global commercialization.
- The five startups are at different translational stages, from CRecTech's integrated pre-pilot system and LoopForBio's seven trials to AeroFlux moving toward industrial demonstration and Healbac still validating applications.
- Activate's US track record adds an international commercialization component: its US fellowship has supported nearly 350 fellows, who have launched more than 275 companies and secured over US$5.5 billion in follow-on funding.
- The broader story is Singapore trying to become better not only at producing deep-tech research, but at identifying which research can become enduring companies and giving

those founders access to the capital, customers and networks needed to scale globally.

This is also the core point Jain makes in his exclusive response.

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