



JOINT NEWS RELEASE

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NTU Singapore, A*STAR, and NHG officially open S\$15 million biomedtech incubator co11ab Novena

Nanyang Technological University, Singapore (NTU Singapore), Agency for Science, Technology and Research (A*STAR), and National Healthcare Group (NHG) today officially opened **co11ab Novena (co11ab)**, the first biomedical technology (biomedtech) incubator in Singapore to be embedded in a healthcare precinct.

The S\$15 million incubator's physical space was unveiled today by **Dr Janil Puthucheary, Senior Minister of State for Health**, as the Guest of Honour.

Situated at NTU Singapore's Lee Kong Chian School of Medicine (LKCMedicine) Novena campus, co11ab aims to advance healthcare innovations by fostering a thriving ecosystem for biomedtech start-ups, and by bridging the gap between ground-breaking research and successful commercial ventures.

Its location in a medical school and within easy reach of a hospital, national specialty centres, and research institutions allows start-ups to tap on clinical and research expertise in the vicinity.

co11ab comes amid an accelerated pace of medical innovation. Figures from Enterprise Singapore show that the biomedical innovation ecosystem here has grown nearly six times over the last decade.

Professor Joseph Sung, NTU Senior Vice President (Health & Life Sciences) and Dean, NTU LKCMedicine, said: "The demand for biomedical solutions has gone up during the pandemic, creating the need for a biomedtech incubator like co11ab to nurture innovation and accelerate the development and commercialisation of such technologies. With its strategic location and easy access to research, clinical and business expertise, co11ab is well-placed to drive progress in the healthcare industry and ultimately benefit society as a whole."

Professor Yeo Yee Chia, Assistant Chief Executive of A*STAR's Innovation & Enterprise Group, said: "co11ab is an important platform to bring together the research ecosystem's

collective capabilities, and facilitate the translation of R&D from bench to bedside. From the excellent science developed at our research institutes to the translation of R&D through spinoffs and technology licensing, A*STAR is well positioned as a strategic innovation engine for the local R&D ecosystem. We continue to support the development and commercialisation of novel biomedical technologies, to create better health and social outcomes for patients in Singapore and beyond. We look forward to working closely with our partners at NTU and NHG to achieve the good outcomes that co11ab can bring to biomedical innovation.”

Professor Benjamin Seet, Deputy Group CEO (Education and Research), NHG, said: “The best research cannot change patients’ lives if there is no product or service. We need successful companies to develop, validate, manufacture and sell such products, before they can enter the clinic. co11ab supports this process by giving early-stage companies direct access to platforms, expertise and resources to do this better and faster. It is a key cog in the biomedical and med tech innovation system.”

The establishment of co11ab is also in line with the Human Health and Potential (HHP) domain under the Research, Innovation and Enterprise 2025 (RIE2025) plan¹, which aims to develop the life sciences as a pillar of Singapore’s economy.

Notable start-ups at co11ab

To-date, seven start-ups have benefitted from co11ab.

One of them is **RNAscence Biotech**, a spin-off company from NTU and National Skin Centre (NSC) based on their research in RNA therapeutics nanoparticles. The team has developed a skin patch that reduces the appearance of scars, and it is the first of its kind RNA-based skin product with active ingredients delivered using bio-dissolvable microneedles.

The technology was developed by Associate Professor Timothy Tan, Dr Chun Yong Yao, and Mr Chan Wen Kiat from the NTU School of Chemistry, Chemical Engineering and Biotechnology, in collaboration with Associate Professor Tey Hong Liang, Clinical Director, NHG’s Centre for Medical Technologies and Innovations (CMTi); Head of Research Division at NSC; and Co-Director of the Skin Research Programme at LKC Medicine.

After successful laboratory studies, a clinical trial involving patients who underwent skin surgeries was conducted. Post-surgical scars with application of the RNA-microneedle patch were 84 per cent smaller after 60 days, and their scar volumes were 30 per cent lower compared to scars treated with silicone patches, which is the current standard-of-care.

¹ *The RIE2025 lays the groundwork for Singapore’s science and technology efforts from 2021 to 2025.*

The RNA-microneedle patch has thus far been used by multiple plastic surgeons and dermatologists locally and overseas, and it is currently available for sale to the public.

Another medical start-up is **Occutrack**, a spin-off from A*STAR, NHG, and Trendlines Medical Singapore. In collaboration with NHG Eye Institute, Occutrack is developing a prototype eye movement tracking system for the management of visual deterioration, such as in age-related macular degeneration (AMD), a major cause of blindness in those over 50 years old and is expected to affect 27 per cent of Singapore's population².

The patented system is developed by Mark Ong, CEO, Occutrack; Professor Lim Tock Han, Group Chairman Medical Board, NHG, and Senior Consultant, Ophthalmology, Tan Tock Seng Hospital (TTSH); and Associate Professor Laude Augustinus, Senior Consultant, Ophthalmology, TTSH.

It uses advanced eye gaze-tracking algorithms to provide an intelligent assessment of an individual's central vision performance non-invasively, without the need for manual or skilled intervention. This could reduce the need for multiple clinic visits and allow for timely therapeutic intervention.

Further nurturing the start-up ecosystem

As part of nurturing the biomedtech ecosystem, co11ab is partnering national agencies, international industry players, trade associations and institutions to curate workshops and networking sessions, thereby adding value to start-ups by helping to create and attract potential funders.

One such funder is **Coronet Ventures**, a Singapore-based venture unit by Cedars-Sinai Intellectual Property Company (CSIP), the innovation arm of US hospital operator Cedars-Sinai Medical Centre.

Coronet Ventures plans to invest in 12 to 15 early-stage healthcare and biomedical science start-ups in Singapore over the next five years, and support funding ranging between US\$100,000 and US\$3 million (between S\$132,000 and S\$4 million).

CSIP chose co11ab in Singapore as the base for Coronet, given the relevant start-ups incubated at co11ab and its location within a healthcare campus.

² [Age-related Macular Degeneration](#), Ng Teng Fong General Hospital

James Laur, Chairman, Coronet Ventures, and President, Cedars Sinai Intellectual Property Company said: “Coronet’s presence in co11ab is a synergistic move, providing startups with the possibility of enriched access to strategic funding and expertise that we hope will bolster co11ab’s stature in healthcare and biomedical innovation.”

Dr Nirdesh Gupta, Chief Executive of Coronet Ventures and Managing Director of Cedars-Sinai Technology Ventures, said: “We eagerly anticipate the wealth of ideas, knowledge, and expertise that Cedars-Sinai Intellectual Property Company will contribute to the co11ab ecosystem and to Singapore, particularly in the commercialisation of early-stage biotech companies and their expansion into international markets.”

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About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in the Engineering, Business, Science, Medicine, Humanities, Arts, & Social Sciences, and Graduate colleges.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore

Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI) and Energy Research Institute @ NTU (ERI@N).

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

Ranked amongst the world's top universities, the University's main campus is also frequently listed among the world's most beautiful. Known for its sustainability, NTU has achieved 100% Green Mark Platinum certification for all its eligible building projects. Apart from its main campus, NTU also has a medical campus in Novena, Singapore's healthcare district.

For more information, visit www.ntu.edu.sg

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

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

About National Healthcare Group

The National Healthcare Group (NHG) is a leader in public healthcare in Singapore recognised for the quality of its medical expertise and facilities. Care is provided through an integrated system of primary care polyclinics, acute care and tertiary hospitals, and national specialty centres. Together, we provide comprehensive and innovative healthcare to address the unique needs of our patients and the population we serve.

As the Regional Health Manager for 1.5 million residents in Central and North Singapore, NHG through its Central, Woodlands, and Yishun health networks collaborates with private general

practices, public and community health and social care providers to keep residents well and healthy.

The 22,000 healthcare professionals in NHG are committed towards building healthier and resilient communities, and Adding Years of Healthy Life to the people we serve.

More information is available at www.nhg.com.sg.