LEAVE A NEST AND ESCO ASTER LAUNCH THE "BIO GARAGE" INITIATIVE — A NEW CROSS-BORDER BIOTECH COLLABORATION TAKES ROOT AT TOKYO'S TAKANAWA GATEWAY

By Haruka Sakurai, MSc.

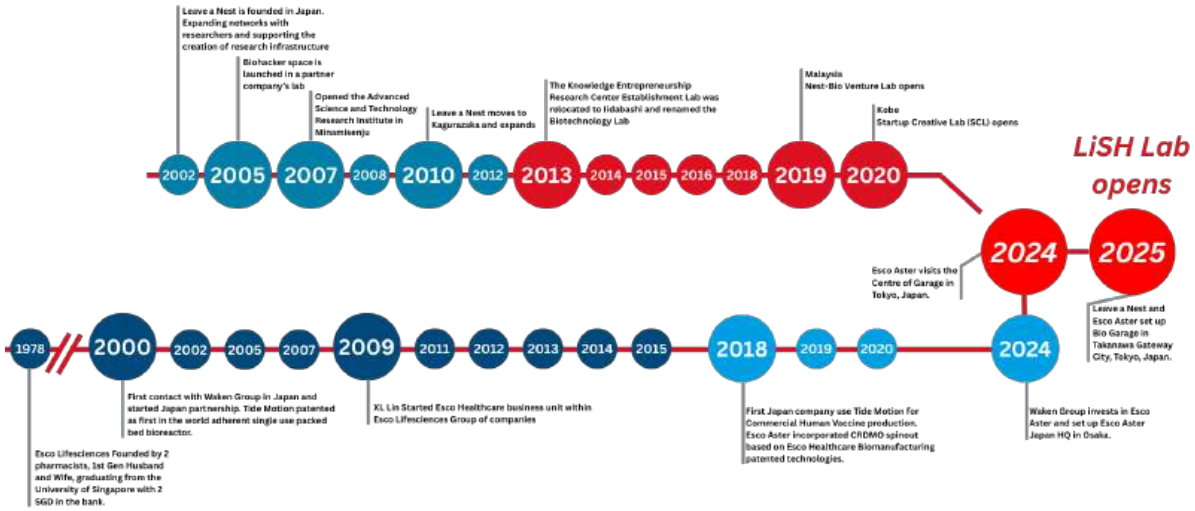
In 2025, Singapore-based biotech company Esco Aster established its first overseas presence by joining LiSH (Link's Scholars Hub), an urban laboratory located adjacent to Tokyo's Takanawa Gateway Station. This move marked the beginning of a new initiative called the "Bio Garage"—a concept that aims to accelerate the societal implementation of biotechnology by leveraging the complementary strengths of Japan and Singapore across research, industry, and regulatory domains.

Since its founding, Leave a Nest has developed four laboratory spaces across Japan to support early-stage startups in life sciences. With the integration of both R&D and practical implementation functions into LiSH, situated within the daily fabric of the city, the Bio Garage concept is now entering a new phase.

Picture in front of Esco Aster's Singapore Factory for Foodtech Startups
Left: Dr Yukihiro Maru, Founder and Group CEO, Leave a Nest Co. Ltd,
Right: XL Lin, Executive Director and Deputy CEO of Esco Lifesciences Group.
Founder, CEO and President of Esco Aster.

Part 1: The Evolution of Leave a Nest's Bio Labs

Biotech R&D is notoriously expensive—high-end lab equipment often places it out of reach for early-stage ventures. Inspired by how software startups emerged from Silicon Valley garages, Leave a Nest has operated on the principle that life sciences innovation should also start at a personal, hands-on level. Since 2002, the company has established four labs that offer more than just space and equipment—they provide a community and a culture of co-creation.



In 2007, the first lab was opened in a repurposed industrial unit in Minami-Senju. There, Leave a Nest's communicators not only provided access to instruments but actively collaborated with tenant startups. One early tenant, JEPLAN Inc., began developing enzyme technologies for bioethanol production from cotton waste—eventually going public. Others, such as Euglena Co., which became the world's first to mass-produce microalgae, and IntegriCulture, known for its scalable cell culture systems, also trace their roots to these labs.
These spaces were more than just laboratories; they were ecosystems of experimentation, where ideas were nurtured hands-on, alongside trusted collaborators.

This concept eventually crossed borders. In 2019, Leave a Nest partnered with Universiti Teknologi Malaysia (UTM) to launch the Nest Bio Venture Lab, marking the country's first industry-academic co-founded research facility. In Malaysia, Euglena successfully isolated new algae strains from local peatlands for low-cost biofuel production, while Metagen Inc. explored links between halal dietary culture and gut microbiome health. In every case, the labs became places where location-specific research could flourish.

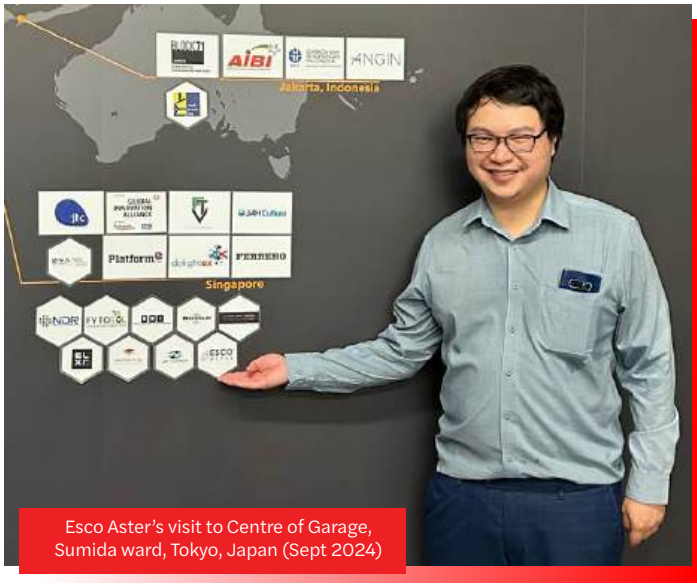
Part 2: A Resonance with Esco Aster

Founded in 1978 as a cleanroom manufacturer, Esco Lifesciences Group built the first commercial cleanroom in ASEAN for Siemens components. Since then, the company has evolved into a global provider of mission-critical life sciences, medical, and healthcare advanced manufacturing machines — improving lives through science.

In 2017, Esco Aster was formed as a wholly owned subsidiary. It is Asia's first BioSolutions/BioIndustry CRDMO (Contract Research, Development, and Manufacturing Organization), specializing in cell-based products and derivatives.

Esco Aster has developed its own patented adherent cell Tide Motion™ packed-bed bioreactors, scalable up to 55 tonnes, with optional bio-edible scaffolds and proprietary technologies. These innovations serve as the backbone for the new world bioeconomy, supporting specialized modalities such as cellular agriculture and exosomes.

In 2024, Esco representatives visited COG (Center of Garage), Leave a Nest's deep tech incubation space and LiSH in Takanawa. During their stay, they remarked: "We realized—we've been building a Bio Garage of our own all along." They described LiSH as a "microcosm of Japan"—a compact yet vibrant space where science, policy, startups, and infrastructure converge. It was clear to them: LiSH was the ideal place to connect their infrastructure and regulatory knowledge with Japan's deep scientific and technological assets.



Esco Aster's visit to Centre of Garage, Sumida ward, Tokyo, Japan (Sept 2024)

Today, Esco holds GMP-certified cell culture facilities in Singapore, the only country in Asia where cultivated meat and cell-based foods are legally approved for consumption. The country offers a testbed for downstream production and market validation as biofram in a multicultural city. In contrast, Japan offers unmatched strengths in basic science, stem cell R&D, and the precision of its food tech sector.

Together, this synergy opens the door to a bi-directional value cycle: startups from Singapore and Southeast Asia can prototype and co-develop in Japan via LiSH, then scale and commercialize in Singapore through Esco's infrastructure. What was previously a facility where mainly contract research services were conducted, and the research was localised within that company or region, the concept of Bio Garage has evolved to an infrastructure, becoming the engine for new cross-border innovation pipeline.

Part 3: Intersecting Histories, a Shared Future

The Bio Garage now taking shape at LiSH represents a convergence of 17 years of Leave a Nest's lab-building experience with over 47 years of Esco's infrastructure and regulatory expertise. This partnership is more than symbolic—it embodies a model for future-ready biotech ecosystems that are open, modular, and deeply embedded in urban life. Biotechnology is no longer a siloed sector. It is rapidly becoming the underlying infrastructure for domains like marine tech, agri-tech, food tech, and beyond. In this landscape, urban biotech labs like LiSH play a critical role by collapsing the distance between research and implementation, science and society.

In Singapore, CapitaLand's new Geneo life sciences hub is already demonstrating how biotech and urban infrastructure can co-evolve. The Bio Garage concept, too, will expand into a multi-city, multi-national collaborative platform, enabling startups, researchers, and governments to co-create across borders. Combining Japan's rigorous scientific foundation with Singapore's agile regulatory and commercialization frameworks, this cross-border Bio Garage network is just starting here—from Takanawa to the world.


Esco's cGMP Facility in Singapore

Entrance to LiSH in Takanawa Gateway