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ASIA EDITION

World's largest natural drug library is being built in Singapore on an AI-powered drug discovery platform

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Nanyang Biologics signs MoU with HPE & Equinix to collaborate on AI-powered drug discovery through Vecura, a platform that processes organic therapeutics



Singapore hosted the AI4Life Summit, spearheaded by Nanyang Biologics, marking a strategic milestone in the advancement of AI-driven drug discovery and healthcare innovation. AI4Life Summit reflected on Singapore's innovation approaches involving multi-sectorial partnerships. This initiative brought together stakeholders like academics, researchers, global technology players, all here to offer a model for accelerating healthcare innovation at scale.

Designed to be an annual event, the Summit will accelerate drug discovery by leveraging artificial intelligence (AI) and fostering collaboration across sectors.

As part of the summit, high-level keynote addresses and panel discussions were held on building the infrastructure required to advance biotechnology and artificial intelligence-driven healthcare solutions, providing leaders in technology, biotechnology, and healthcare with a unique opportunity for strategic collaboration and cutting-edge innovations.

The event was graced by Ms Goh Hanyan, co-chair of the Committee on Technology and Innovation and Senior Parliamentary Secretary to the Ministry of Culture, Community and Youth, in which she hailed the initiative as another significant step in Singapore's journey to becoming a world-class hub for healthcare and biomedical and life sciences.

MoU signed to herald a new era of drug discovery in Singapore and beyond

At the inaugural AI4Life Summit, in a milestone step towards strengthening Singapore's leadership in AI-driven biomedical innovation, **Nanyang Biologics Pte Ltd (NYB),** an award-winning AI-driven biotechnology company spun off from Nanyang Technological University (NTU) over the past seven years, has partnered with Equinix and HPE to offer **Vecura**, an *as-a-Service proprietary AI-driven platform* for drug discovery to advance development from natural resources.

The parties signed an exclusive Memorandum of Understanding (MoU) for Multi-Party Collaborative Business Engagement. A consortium of companies, including **HPE** and **Equinix**, joined their forces aming to establish Singapore as a global hub for AI-powered life sciences and biotechnology.

Under the MoU, NYB will lead platform development to optimise model performance on next-generation GPU architectures and integrate seamlessly into its global AI ecosystem. NYB also plans to build the **world's largest natural drug compound library** within the next year with the support of these global leaders. HPE will power the engine with powerful computing and AI infrastructure to enable large-scale molecular screening, while Equinix anchors the system within its sovereign digital infrastructure, ensuring security and international accessibility.

Vecura's technology blends biodiversity and artificial intelligence to identify therapeutic candidates that traditional methods may not capture. NYB will leverage its knowledge and experience in AI-driven healthcare to transform global drug discovery. In comparison with conventional screening methods, Vecura improves both hit quality and translational relevance by 27% and 64x, respectively.

Singapore-headquartered **NYB.AI** is an AI driven-biotech firm generating biological data to understand drug-target interactions in disease pathways. Through its AI platform and compound libraries, NYB.AI identifies promising therapeutic molecules and optimizes them for effectiveness. Using advanced machine learning techniques, NYB.AI accelerates the discovery of next-generation treatments for cancer and chronic diseases.

The NYB Chairman, **Dr Roland Ong**, commented on this collaboration with the world's top leaders in technology and innovation. Highlighting the objectives he said, "We are working together to transform nature’s pharmacy into tomorrow’s solutions for health and well-being. We are building on the pioneering research of our NYB–NTU Joint Laboratory, which has been studying tropical medicinal plants since 2019.

Khai Peng Loh, Managing Director, Southeast Asia, HPE said “Our collaboration with NYB and Equinix marks a pivotal moment in accelerating drug discovery through scalable AI infrastructure. By powering Vecura with HPE’s AI computing, we’re enabling researchers to screen millions of natural compounds with unprecedented speed and precision.

NYB’s mission is to turn this hidden chemistry into therapies and wellness solutions. To achieve this, the company has built one of the world’s most diverse living libraries — already comprising over 50,000 unique organisms and their chemical compounds — 2 and paired it with Vecura, NYB’s proprietary AI platform, to uncover what was once invisible. This initiative also positions Singapore as a global hub where biodiversity meets artificial intelligence, and where hidden compounds are translated into breakthroughs for better healthcare, wellness, and everyday life.”

By Hithaishi Bhaskar