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Singapore's Nanyang Biologics to validate natural compounds against genetic disease markers

12 May 2025 | News

Bridging the gap between genomic analysis and natural compound research

Singapore-based startup Nanyang Biologics (NYB) and Precisya Global Inc (PGI), based in the US, have announced a strategic collaboration to leverage technologies in validating potential therapeutic benefits of natural compounds against genetically identified risk factors and predispositions for chronic diseases. The partnership combines PGI's genomic big data analytics with NYB's natural compound libraries and artificial intelligence (AI) capabilities.

The collaboration will leverage DTIGN (Drug-Target Interaction Graph Neural Network), NYB’s proprietary AI model that has demonstrated a 27.03% improvement in prediction accuracy over leading methods.

DTIGN significantly enhances the identification of active compounds and shortens early-stage discovery timelines. This technology will be used to screen compounds as NYB continues to build one of the world’s largest natural compound libraries, unlocking novel therapeutic opportunities with exceptional precision and speed.

As a key contributor to this strategic partnership, Precisya Global Inc will utilise advanced genomic data analysis platforms and specialised genetic knowledge from 22+ Million Scientific Publications to identify disease-relevant biomarkers. The company will provide secure access to anonymised patient genomic data in compliance with privacy regulations, while offering expert bioinformatic analysis of correlations between natural compound responses and genetic variants.

This joint initiative bridges the gap between genomic analysis and natural compound research, aiming to accelerate the discovery of nature-based treatments for genetic diseases through AI-driven matching and rigorous validation processes. This enables personalised nature-based treatments for individuals with genetic health conditions, offering better outcomes, fewer side effects, and more affordable options.