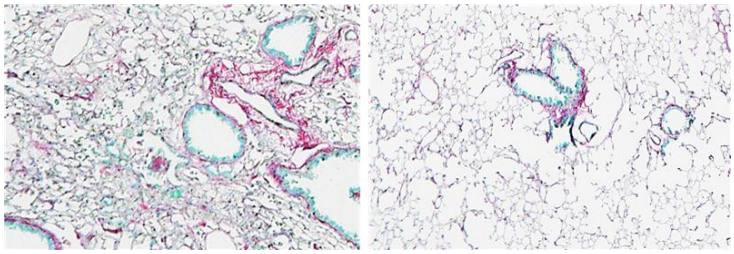
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Singapore's Duke-NUS secures $1.5 M from 65LAB for antifibrotic drug discovery

13 August 2025 | News

The project is a bold step towards the development of new drugs for lung disease and discovering new targets for kidney disease



Singapore's 65LAB has awarded US$1.5 million (approx. S$1.9 million) to Professor Enrico Petretto to advance a breakthrough drug discovery platform developed at Duke-NUS Medical School. The project aims to deliver first-in-class antifibrotic therapies for lung and kidney diseases—conditions that currently have no effective treatment. The platform, known as Systems Genetics, integrates computational biology with Artificial Intelligence (AI) algorithms and is being enhanced with emerging quantum computing approaches.

65LAB is a unique partnership of global investors ClavystBio, Leaps by Bayer, Lightstone Ventures, Polaris Partners and the Polaris Innovation Fund, as well as global life science company Evotec, set up to drive scientific advancement and create new biotech ventures from Singapore. 65LAB Expert-in-Residence Stephen Courtney will provide venture-building guidance to Professor Petretto to develop a commercialisation strategy and advance the project towards company formation.

This award is further supported with a US$390,000 (approx. S$500,000) investment from Duke-NUS' early-stage innovation fund and incubation programme, LIVE Ventures, which helps bridge the gap between academic discovery and commercial development.

Professor Enrico Petretto, Director of Duke-NUS' Centre for Computational Biology, said, "The pre-clinical studies are impressive, indicating at least a 50% reduction in fibrosis in scarred tissues treated with our newly discovered molecules. These compounds work by blocking the activity of a key gene that drives tissue scarring in various diseases. 65LAB's award and the additional funding from LIVE Ventures will enable my team to accelerate the development of these molecules as antifibrotic drugs for clinical testing and future therapeutic use."

Dr Chen Huimei, Principal Research Scientist at Duke-NUS' Centre for Computational Biology and co-Principal Investigator on the project, said "Using our computational platform, our team can quickly identify optimal drug targets for complex diseases. We can also widen our candidate pool, improving our chances of discovering molecules that can effectively block the WWP2 gene."

As a next step, Prof Petretto's team intends to work with partners to test and develop its small-molecule inhibitors into antifibrotic drugs.

Image Caption: *Lung tissue showing scarring in an induced fibrosis model (right); while WWP2 inhibition protects tissue structure from fibrosis (left)*