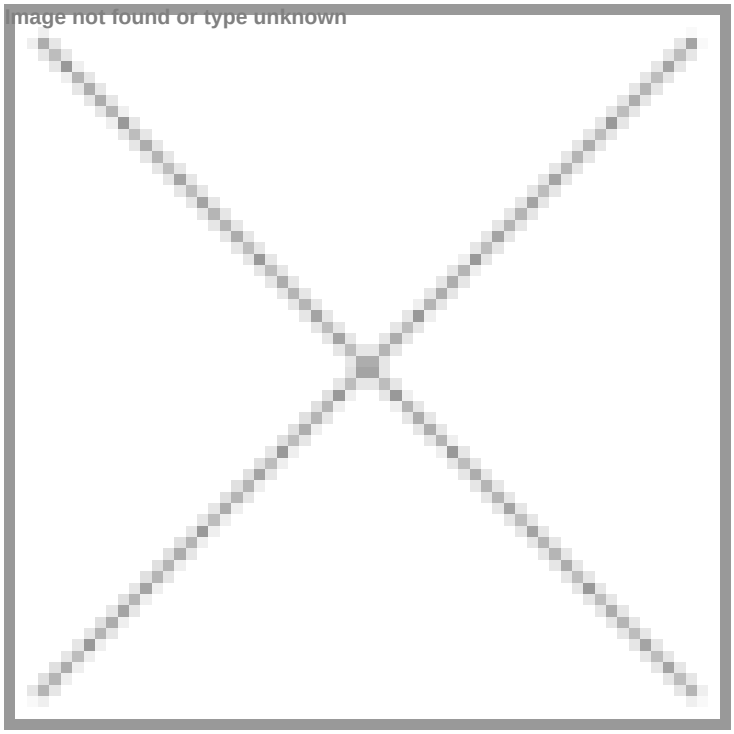
BioSpectrum the business of Bio & Health Sciences ASIA EDITION

Singapore's A*STAR BTI spinoff AuctuCel launches AI platform to slash cell medicine production costs by 80%

09 September 2025 | News

Enterprise Singapore's Startup SG program has awarded AuctuCel $50,000 to develop an innovative platform built on BTI's expertise in culture media development, bioprocess analytics, and computational modeling.



AuctuCel, a biotech spin-off from Singapore's A*STAR Bioprocessing Technology Institute (BTI), has officially launched with its proprietary Fluxperior platform — an artificial intelligence-powered system designed to dramatically reduce the cost and time required to develop nutrient “recipes” for growing cells used in medical treatments.

Developed by A*STAR BTI researchers, Fluxperior combines computer modelling with AI to predict exactly what nutrients cells need to thrive, replacing the traditional trial-and-error process that typically takes more than six months. Proven results show Fluxperior can cut development costs by up to 80%, speed up timelines by 83%, and boost cell productivity by more than 20%.

Among the key features of the Fluxperior are:

- **AI-Powered Culture Media Optimisation:** Uses computer simulations to model cell nutrient consumption, predicting optimal formulas without extensive lab testing.
- **Cross-Application Versatility:** Works across CAR-T and CAR-NK therapies, stem cell treatments, cancer

immunotherapies, vaccines, and antibody medicines.

- **Efficiency Gains:** Reduces development costs by up to 80% and time from 6 months to as little as 1 month, with a 20%+ increase in productivity.

AuctuCel achieved significant milestones in the past one year advancing its mission to revolutionize biomanufacturing through precision and innovation. AuctuCel strives to tackle long-standing challenges in cell culture media and has secured strategic partners and investors, bolstering its growth. AuctuCel has established its headquarters and warehouse in Singapore. Strengthening its industry presence, AuctuCel has further collaborated with Cellaax, NIBM, UKM, UPM, Welala, TCELS, and Shimadzu, as well as expanding its reach across Singapore, Malaysia, and Thailand by bolstering its rapid commercialisation capabilities. AuctuCel has extensive involvement with universities and industry partners to support life science R&D activities. The company also supports the establishment of three patient-derived organoid (PDO) biobanks in Malaysia, reflecting its dedication to advancing innovative bioprocessing solutions. Additionally, AuctuCel announced the upcoming launch of Minr?, an advanced skincare range powered by exosome science, as its first consumer-facing spin-off.

Founded by Dr Chee Wai Fhu and Dr Zach Pang, AuctuCel's innovation is built on A*STAR BTI's expertise in culture media development, bioprocess analytics, and computational modelling. Entrepreneur Singapore's Startup SG scheme has awarded S$50,000 in grant.

Image Caption: On 9 Sep, AuctuCel one year accomplishemnet was witnessed by Prof Andy Hor, Deputy Chief Executive (Research), ASTAR, and A/Prof Andre Choo, Deputy Executive Director, Bioprocessing Technology Institute, ASTAR