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Pengfei Chen Highlights Singapore's Opportunity In The Next Phase Of Biomanufacturing

March 10, 2026 | Analysis | By Ankit Kankar | ankit.kankar@mmactiv.com

Speaking at the APAC Biomanufacturing Leadership Summit 2026 presented by Charles River, the Singapore Economic Development Board outlined how resilience, AI driven automation and advanced manufacturing technologies are reshaping biopharma production and strengthening Singapore's role as a global and regional biomanufacturing hub.



Opening the keynote session of the APAC Biomanufacturing Leadership Summit 2026, Pengfei Chen highlighted the rapid transformation underway in global biopharmaceutical manufacturing and the strategic role Singapore is positioning itself to play in this evolving landscape. He emphasised that biomanufacturing is entering a new phase where resilience, digitalisation and advanced technologies are becoming central to competitive advantage.

Chen noted that biopharmaceutical companies are gradually shifting towards more agile, technology enabled production networks. Increasing demand for biologics, antibody drug conjugates and oligonucleotide based therapeutics, alongside cell and gene therapies, is pushing manufacturers to adopt flexible production platforms, modular facilities and advanced analytics to accelerate development timelines and improve manufacturing reliability.

A central theme of the keynote was the rise of Biopharma 4.0, a global trend transforming pharmaceutical manufacturing through digital integration, automation and intelligent process control. Chen explained that automated production lines, advanced robotics and AI driven manufacturing platforms are enabling biopharmaceutical companies to build more responsive and resilient production systems. Predictive maintenance powered by machine learning is helping facilities anticipate equipment failures before they occur, reducing downtime and improving operational efficiency across complex biopharmaceutical manufacturing environments.

He also highlighted the growing adoption of digital technologies such as AI powered process optimisation, predictive quality systems and digital twins that replicate manufacturing processes in real time. These technologies allow companies to simulate production scenarios, optimise process parameters and maintain consistent product quality while reducing operational risk.

Chen pointed out that Singapore has emerged as a strategic node in the global biomanufacturing network. The country hosts major manufacturing investments from leading global biopharmaceutical companies including Pfizer, Amgen, Roche, Sanofi, GSK, Novartis and Lonza, all of which operate advanced production facilities in Singapore. These investments demonstrate the country's ability to combine strong regulatory frameworks, world class infrastructure and a highly skilled talent pool to support complex biopharmaceutical manufacturing.

He emphasised that strengthening biomanufacturing resilience has become a global priority following pandemic driven supply chain disruptions. As pharmaceutical companies diversify manufacturing networks, Asia Pacific is becoming an increasingly important pillar of global biopharmaceutical production, with Singapore positioned as a reliable hub connecting regional innovation with global supply chains.

Chen further highlighted Singapore's continued investment in emerging manufacturing technologies including continuous bioprocessing, AI enabled process development and advanced manufacturing systems for next generation therapeutics such as cell and gene therapies. These capabilities are expected to attract additional biopharmaceutical investments and reinforce Singapore's role in advanced biopharmaceutical production.

Another key priority discussed was workforce transformation. As biomanufacturing becomes increasingly digital and automated, the sector will require a new generation of engineers, bioprocess specialists and data scientists capable of managing intelligent manufacturing environments and highly integrated production systems.

Chen concluded by noting that Singapore's ambition is not simply to expand manufacturing capacity but to strengthen its position as a global innovation driven biopharmaceutical hub. By integrating advanced infrastructure, regulatory excellence and emerging technologies, Singapore aims to play a central role in shaping the future of biopharmaceutical manufacturing across Asia Pacific and the broader global pharmaceutical ecosystem.

About The Event

This session was part of the APAC Biomanufacturing Leadership Summit 2026 presented by Charles River, a leadership forum bringing together biopharmaceutical manufacturers, CDMOs, biotechnology innovators, investors, and regulatory experts from across the Asia Pacific region.

The summit focuses on advancing discussions around next generation biomanufacturing, regulatory readiness, advanced analytics, and global collaboration required to support the rapidly evolving biologics and advanced therapy landscape.

Through keynote presentations, expert panels, and technical sessions, the event highlights strategies that strengthen Asia Pacific's role as a critical node in the global biopharmaceutical manufacturing ecosystem.

For more information visit https://events.criver.com/event/APAC2026/summary.