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ASIA EDITION

BIO Asia–Taiwan 2024 Innovation Forum

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New Post-Pandemic Treatment Prospects: mRNA Therapy and Gene Therapy Usher in the Era of Personalized Medicine

The **BIO Asia–Taiwan 2024 Exhibition** was held at the Taipei Nangang Exhibition Center Hall 1 (TaiNEX 1), from 26th to 29th July. The exhibition featured more than 900 companies exhibiting at more than 2,200 booths, of which more than 40 percent of attendees being international participants majorly from Japan, the United States, and South Korea. The forum organized exclusive “BIO One-on-One Partnering” business matching meetings, with around 70% surge in meeting scheduling activities compared to previous year. On an average this year more than 8,000 sessions were scheduled.

The **theme for BIO Asia–Taiwan 2024** was ‘*Global View, Asian Touch*,’ showcasing the breakthrough advancements in novel drugs, innovative therapies, and regenerative medicine in Asia and Taiwan reflecting on the region’s exponential industrial development.

BIO Asia–Taiwan 2024 Innovation Forum

A number of industry-prominent topics were discussed at the BIO Asia–Taiwan Innovation Forum 2024: The development prospects for new mRNA therapeutics in the post-pandemic era; critical chemistry, manufacturing, and controls (CMC) in biological development; and translational medicine, which bridges laboratory innovations with clinical development.

In addition, the Taiwan BIO Awards winners shared their development strategies, technical highlights, and winning innovations with attendees.

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‘***mRNA and New Therapeutic Modalities’:*** mRNA technology that came to prominence during the COVID-19 pandemic.

Yusuke Nakamura, President of the National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN) in Japan, shared insights on mRNA cancer vaccines designed to target tumor neoantigens for each patient, aiming to overcome the

challenges of immunotherapy.

John Tsai, former Head of Global Drug Development and Chief Medical Officer at Novartis, currently a Partner at Syncona, discussed the regulatory challenges faced by popular gene therapies and the future development trends in this field.

Eric Huang, Partner at Delos Capital and former General Manager and Chief Scientist of Moderna Genomics, shared insights on mRNA as cancer vaccines, nucleic acid drugs, and the latest global advancements in gene editing therapies.

Kevin Chan, Director of Commercial Strategy and Business Development at Kudo Biotechnology, analyzed the practical challenges of mRNA products in process development, quality management, and transportation from a Contract Development and Manufacturing Organization (CDMO) perspective.

'Taiwan BIO Awards – Successful Stories,'

The winning 19 companies from this year's Taiwan BIO Awards presented short presentations on their development strategies, technological highlights, and latest innovations.

These included: Lotus Pharmaceutical, PharmaEssentia, Bonraybio, Pharmosa Biopharm, TSH Biopharm, Steminent Biotherapeutics, Onyx Healthcare, BenQ Dialysis, Acepodia Biotechnologies, ImmunAdd, Sunhawk Vision Biotech, Elixiron Immunotherapeutics, BioGend Therapeutics, Braxx Biotech, Protect Biotech, Formosa Pharmaceuticals, TaiGen Biotechnology, HippoScreen Neurotech, and Syngen Biotech.

From CMC to Translational Medicine: Two Key Elements Essential to Taiwan's Biotech Development.

Strategic Insights into CMC Project Design: Advancing Biologics Development Success.

An expert panel of four biologics manufacturing experts provided insights into Chemistry, Manufacturing, and Controls (CMC).

Friedmund Bachman, Vice President of OncoOne Research & Development, Germany, outlined the numerous details to consider in CMC process development during biologics R&D.

Hsing-Mao Chu, CEO of T-E Meds, discussed how his company develops complex next-generation antibody-drug conjugates (ADCs) through innovative multi-arm linker and proprietary drug bundle technologies.

GeneQuantum Healthcare Chief Scientist Paul Song shared the development story of his company’s ADC technology and the manufacturing advantages brought by its unique antibody drug conjugation technology.

Taron Solutions CEO Alan Chang shared global trends and observations in drug CMC design, pointing out that failed drugs are often due to design issues. Therefore, the earlier problems in drug development are identified and resolved, the higher the success rate of the drugs.

'Translational Medicine: A Journey from Novelty to Commercial Success,'

Jingrong Jean Cui, President and CEO of BlossomHill Therapeutics, discussed three oncology drugs she led in development—crizotinib, lorlatinib, and repotrectinib—that were approved by the US FDA, detailing her approach from drug design to commercialization.

Boyu Zhong, President and Chief Scientist of Tyligand Bioscience, shared the company’s process of developing the oral highly-selective c-Met inhibitor Bozitinib from experimental research to clinical trials. He stated that the drug not only shows that c-Met is a promising cancer treatment target but also demonstrates in translational medical research that it can be used to treat non-small cell lung cancer (NSCLC) and glioblastoma multiforme (GBM).

David Chang, CEO of Taiwan Bio-Pharmaceutical Manufacturing Corp. (TBMC), detailed the CMC-related difficulties that new drugs might encounter when transitioning from the preclinical stage.

Under the moderation of Hsing-Pang Hsieh, Distinguished Research Fellow and Director of the Institute of Biotechnology and Pharmaceutical Research at the National Health Research Institutes, the three speakers also engaged in a comprehensive panel discussion on patent applications for translational drugs, clinical trials, and practical experiences in GMP manufacturing.