



BIOSANAPHARMA AND A*STAR'S BIOPROCESSING TECHNOLOGY INSTITUTE COLLABORATE TO ADVANCE CONTINUOUS BIOMANUFACTURING

Singapore/Leiden/Sydney, 15 November, 2019 –BiosanaPharma (Biosana) and A*STAR's Bioprocessing Technology Institute (BTI) signed a research collaboration today to bring continuous biomanufacturing to the next level. Biosana's proprietary 3C process will be used as the model for:

- Downscaling of continuous processing to facilitate fast-track process development for innovator and biosimilar monoclonal antibodies (mAbs),
- In-line and at-line process analytical monitoring of continuous process to bring parametric release closer to reality,
- Modelling of continuous processing for easy scale up and
- High throughput process development of Biosana's mAb antibody candidates to validate the achievements

The parties will establish a Joint Laboratory for Continuous Biomanufacturing located at the Centros building in Biopolis, Singapore, where staff from both parties will collaborate to mature and optimize the continuous process. Biosana will incorporate a local entity to support the collaboration.

To address the current challenges of diverse product pipelines and competition from biosimilars, companies are looking for highly flexible and cost effective manufacturing processes, traits that continuous biomanufacturing can offer. Continuous biomanufacturing can directly lower the costs of mAb therapeutics to benefit patients and reimbursement bodies.

Ard Tijsterman, CEO of BiosanaPharma commented "We are very happy to start this Joint Laboratory in collaboration with BTI. In the past years we've been working with BTI, we are impressed by their dedication, expertise and enthusiasm for our joint process development activities. We look forward to mature our 3C technology in order to increase accessibility and affordability of mAb medicines".

"We are pleased to be a partner in setting up this Joint Laboratory, leveraging BTI's expertise in bioprocessing science and engineering. This affirms our commitment to work with international enterprises to develop innovative biomanufacturing solutions, meet the demands of the global biopharmaceutical industry, and add to the vibrancy of Singapore's R&D ecosystem", said Professor Lam Kong-Peng, Executive Director, Bioprocessing Technology Institute, A*STAR.



Prof Lam Kong Peng, Executive Director of BTI (L) and Ard Tijsterman, CEO of BiosanaPharma (R)

About BiosanaPharma:

BiosanaPharma is a Dutch/Australian biotechnology company with a disruptive approach to the manufacture and delivery of monoclonal antibody therapeutics (mAbs). BiosanaPharma's "3C process" offers a 90% reduction in the cost of developing and manufacturing EMA/FDA quality mAbs. The 3C process is a fully-continuous, single use, small footprint platform process that has delivered Biosana's first mAb candidate Omalizumab BP001, currently in Phase I clinical research. BP001 is a biosimilar version of Xolair, which is marketed for allergic asthma and chronic urticaria.

BiosanaPharma is also developing a platform for *oral delivery* of biologicals via its subsidiary BiOraliX (a JV between BiosanaPharma and InProPharma BV), which has delivered successful preclinical results. With this technology, Biosana will formulate BP001 for oral delivery, followed by other blockbuster mAbs in the near future.

About Bioprocessing Technology Institute:

Bioprocessing Technology Institute (BTI) is a member of the Agency for Science, Technology and Research (A*STAR). Established in 1990 as the Bioprocessing Technology Unit, it was renamed the Bioprocessing Technology Institute (BTI) in 2003. The research institute's mission is to develop manpower capabilities and establish cutting-edge technologies relevant to the bioprocessing community. Some of the key research areas include expression engineering, animal cell technology, stem cell research, microbial fermentation, downstream purification and analytics.

For more information, please have a look at:

- <https://www.biosanapharma.com> and
- <https://www.a-star.edu.sg/bti/>

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