Distinguished guests
Friends and colleagues
Ladies and Gentlemen
A very good morning to all of you!

Let me first welcome you to the “Future of Biologics” Conference 2015!

With the increased application of biologics in the treatment of human conditions, the approval of the first biosimilar drug by the US FDA, and the expanded repertoire of biologics drugs, it is timely to convene such a global conference to chart the direction of this exciting field of research.

This Conference is not just timely but meaningful for us as it coincides with the 25th Anniversary celebration of the Bioprocessing Technology Institute.

Let me take this opportunity to congratulate BTI for reaching an important milestone and to Prof Lam Kong Peng and his team for their excellent work over the years.

Singapore has also reached an important milestone as we celebrate our 50th birthday this year and there is much for us to celebrate.

A*STAR, naturally, is proud to have contributed to Singapore’s success through science and technology, be it pushing frontiers in the medical realm, or improving productivity and lives through strong engineering expertise.
A*STAR’s 18 research institutes and units have built up a strong foundation in a spectrum of capabilities and have brought both societal benefits and economic impact to Singapore.

In this regard, BTI has contributed to the highly specialised field of bioprocessing science and engineering, and catalysed the growth of the Singapore’s biologics industry sector.

It is widely recognised that biologics, as a new class of therapeutics, is gaining increasing importance in the treatment of human diseases previously treated either with small molecule drugs, or those previously classified as untreatable.

The global biologics market is expected to reach about US$240 billion by the end of 2015.

This is a very impressive Compound Annual Growth Rate (CAGR) of nearly 10% from 2010-2015.

Driving this growth is the identification of more drug targets, the development of drug pipelines, a push to pursue biosimilars and biobetters, and innovation in manufacturing technologies that could increase yield, reduce cost and enhance the quality of products.

In Singapore, the biologics sector has grown steadily over the last decade.

This is through the concerted and coordinated efforts of both A*STAR and the EDB to attract the biopharmaceutical manufacturing facilities to our shores.

From 2006 to 2010, Singapore attracted investments from Baxter, GSK, Lonza and Roche, and this was quickly followed by Novartis in 2012, Amgen in 2013 and AbbVie in 2014.
To date, Singapore has attracted S$2.7 billion in investments and is hosting 9 biomanufacturing facilities that together employ close to 2,000 people.

The local workforce is set to expand further by another close to 1,000 high-value jobs over the next 3 years.

Amidst this strong growth in the biologics sector, BTI has contributed significantly and is well positioned to continue leading the bioprocess R&D effort in Singapore and the Asia Pacific region.

From its humble beginnings as a 10-man unit at the National University of Singapore led by then Founding Executive Director, Professor Miranda Yap, to its current strength of 180 led by Prof Lam Kong Peng, BTI continues to be at the forefront of innovation as it embarks on new initiatives that stay at the forefront of emerging industry trends.

As illustrations, the institute has developed a disruptive antibody purification technology that is Protein-A independent and also put together a Glycomics programme to better characterise glyco-protein drugs to tackle the evolving regulatory space for biosimilars.

These are just a few examples of how BTI remains relevant and attractive to the pharmaceutical companies.

In addition, the Stem Cell Group in BTI led by Dr Steve Oh has been inventing 3D biomanufacturing technologies for stem cell therapy.

We believe the technologies developed are now ready for engagement with the industry as regenerative medicine becomes a reality in clinics.
To translate such capabilities to market, BTI has inked several research collaborations with companies that include AbbVie, GSK Biologicals, J&J, and Roche. Interestingly, there is also increased interest from instrumentation companies to partner BTI in developing analytical platforms that could be used in the manufacturing process or in the characterization of the final products.

In addition, BTI has been training a stable pool of industry-ready graduates through its Bioprocess Internship Programme (BIP), or through spinning out its scientists and technical officers to the industry. The availability of skilled manpower is critical to the manufacturing sector. To date, a total of 140 research scientists and interns had been trained and spun out to the industry, and some of them have assumed senior positions within the companies.

The outlook for biologics appears bright and biologics will continue to be an important contributor to the growth of Singapore’s biomedical sciences sector. As we gather here to look ahead to the future of biologics, I am particularly excited to see the excellent line-up of presentations for today and tomorrow, starting first with our Keynote Speaker Dr Uwe Gottschalk, Chief Technology Officer of Lonza. He will be sharing some interesting perspectives on the global outlook of the biologics sector from an industry angle.

Over the next two days, topics in the bioprocessing R&D innovation value chain would be discussed and, in the process, stimulate deep scientific exchanges.
Let me thank the many speakers who are well-known experts in their field for their participation in this Conference.

At the same time, I would also like to acknowledge the presence of the 250 industry and academic delegates coming from 10 different countries seated among the audience, of which many of you are valued partners for A*STAR and BTI. This is also a testament to how our biologics sector had matured over the years, as companies choose to set up manufacturing and R&D bases in Singapore to leverage on our capability and skilled workforce.

In closing, I would like to encourage all the participants here to spend time to get to know each other better and to seek out collaborative opportunities. More importantly, I hope that this will mark the beginning of many more of these interactions in the years ahead to fuel a vibrant biologics sector in Singapore.

Let me thank our valued partners Agilent, Merck Millipore, Thermo Fisher Scientific and other sponsors for their support to make this Conference possible. We look forward to establishing even more meaningful and long-lasting partnerships with you.

I would also like to wish BTI a very happy 25th anniversary and I look forward to many more successful years ahead!

Thank you very much.