Overview of Singapore's Pharmaceutical and Biotechnology Industry

SINGAPORE – THE BIOPOLIS OF ASIA

The global biomedical sciences industry is confronted with the need to improve R&D productivity and address unmet healthcare needs in fast-growing regions such as Asia. At the same time, companies need to navigate Asia’s complexities and diversity to effectively tap into the region’s markets.

For companies looking to improve R&D productivity and accelerate commercialisation, Singapore is the Asian location from which to develop solutions to impact the future of global healthcare because of its strong R&D capabilities, central location and networks with regional markets.

As a trusted location with a proven manufacturing track record for speed and quality, Singapore enables companies to manufacture high quality drugs and medical devices across various modalities.

Currently, global companies and Asian enterprises alike use Singapore as a base to drive expansion in Asian and international markets.

Accelerating Drug Discovery & Development in Asia

Asia’s rapidly growing economies and populations are driving increased demand for novel and more effective therapies. Biomedical companies worldwide seeking to capitalise on this rapid growth are racing to elucidate the differences in Asian disease biology, and develop new medicines closer to market. Concurrently, biomedical companies are grappling with the increasing complexities of discovery and development, as they delve deeper into human biology.

As a result, companies are expanding their network of external partnerships to improve decision-making, R&D productivity and to accelerate the commercialisation of therapeutic assets.

Given these industry-wide challenges, the Singapore Government has set aside more than S$3.7 billion over the next five years (2011–2015) to enhance its existing biomedical R&D infrastructure, integrate multi-disciplinary research and translate basic science into tangible outcomes.
Over the past ten years, Singapore has invested to build up key R&D infrastructure and capabilities to support the country’s biomedical initiative. These investments include the Biopolis – Singapore’s flagship biomedical research campus, home to public research institutes and corporate laboratories; and Academic Medical Campuses, comprising tertiary hospitals, medical institutes and medical schools, situated in the vicinity of the Biopolis. The co-location of academia and clinical sciences, as well as various awards and training programmes, is part of Singapore’s ongoing efforts to nurture top-notch scientific talent with an appreciation of Asia’s clinical needs. Today, there are more than 4,000 researchers in public and private sector organizations, spending in excess of S$1.3 billion on biomedical R&D annually.

To further facilitate the translation of science into viable therapies via public-private partnerships, Singapore has brought together its research institutes, universities, medical schools, hospitals and specialty medical institutes into one integrated network. The Biomedical Sciences Industry Partnership Office (IPO) has been set up to serve as a single point of contact for matching companies’ needs with expertise in Singapore’s academic institutes. For example, Roche established a 100 million Swiss franc (S$130 million) Translational Medicine Hub to partner Singapore’s scientific and medical institutions. The multi-disciplinary team aims to develop new standards and strategies in drug development and personalized healthcare.

Besides public-sector institutes, companies can also tap Singapore’s growing community of discovery, niche and clinical CROs to support their drug discovery and development activities. Singapore’s base of leading CROs (e.g. Quintiles, Covance, PPD, ICON) offers a wide range of services - from Phase I to pharmacovigilance studies, regional clinical trials, and even innovative biomarker discovery and validation services. For example, Maccine Pte Ltd, a leading preclinical contract research organisation, is co-developing a state-of-the-art array of preclinical imaging resources with A*STAR’s Singapore Bioimaging Consortium to form the Translational Imaging Industrial Lab to offer a suite of preclinical imaging services in one location.

Singapore can be the location for global biomedical companies joining the race to develop the next breakthrough product for Asia.
World-Class Manufacturing Site in Asia

Singapore’s strong intellectual property laws, excellent logistics connectivity with target markets, world-class infrastructure, exemplary safety and regulatory record, and a highly-skilled 13,000-strong biomedical workforce have allowed the country to become a key global biomedical manufacturing site. Leading pharmaceutical companies manufacture some of their best-selling products here, including GlaxoSmithKline’s Advair/Seretide (respiratory illnesses), Merck Sharp & Dohme’s Vytorin, Zetia, Tredaptive (cholesterol) and Pfizer’s Lyrica (neuroscience). Today, biomedical companies manufacture about S$23 billion worth of medicines, nutritional products and medical devices for global markets from Singapore annually.

More recently, Singapore has seen an influx of companies manufacturing new treatment modalities for global markets. In May 2010, Roche commenced commercial production of Lucentis, a microbial-based macular degeneration treatment. Besides Lucentis, Roche will also be producing Avastin and Herceptin – two of its most innovative products, from Singapore. Other companies with significant commercial-scale biologics facilities here include Baxter, GlaxoSmithKline (GSK) and Lonza. Lonza has extended its manufacturing capabilities into cell-therapy and bioprocess development, with the construction of its first in Asia cell therapy and bioprocess development facility.

Looking ahead, the global pharmaceutical industry is faced with a myriad of challenges - increasing cost pressure brought on by upcoming patent expiry of blockbuster drugs, increased government scrutiny on healthcare spending, and the need for more environmentally-sustainable manufacturing practices; all this while maintaining high quality and safety standards in production.

Singapore is committed to growing our talent and deepening our capabilities to partner companies as they address these challenges. A key initiative is the GSK-Singapore Partnership for Green and Sustainable Manufacturing. Under the partnership, GSK and EDB awarded $8 million of funding to support fourteen green manufacturing research projects.

Together, these advantages enable companies to manufacture their most innovative products developed for Asia’s fast-growing markets.
Home to Drive Expansion in Asia

Presently, 30 of the world’s top pharmaceutical, biotechnology and medical technology companies have their regional and international headquarters in Singapore. These companies leverage the city-state’s global connectivity and its workforce’s intimate understanding of regional markets, to identify new strategic business opportunities, accelerate new product introduction, as well as manage regional clinical trials and supply chains in Asia.

We are committed to building the networks to support countries and companies’ ambitions to deliver better healthcare access into the emerging Asia-Pacific region. To enhance the knowledge of Asia’s diverse and unmet healthcare needs, the National University of Singapore (NUS) launched the NUS Initiative to Improve Health in Asia (NIHA) in 2010. Through multidisciplinary research, high-level policy forums and leadership programmes, NIHA seeks to contribute to thinking and policy formulation in public health and health systems development in Asia. In November 2011, NIHA welcomed a suite of regional government and private sector participants from 13 countries in Asia where they debated pressing healthcare issues, such as non-communicable disease prevention, facing the region in Singapore.

Beyond oversight on business activities, companies are increasingly looking at Singapore for financing solutions to ride the growth of Asia. Most recently, Lonza Group, one of the world’s leading biopharmaceutical contract manufacturers announced its secondary listing of the Singapore stock exchange to harness support from regional investors.

The pharmaceutical and biotechnology business is innovation-driven, fueled by talent with exceptional business and scientific acumen. Singapore continues to deepen its partnerships with companies to develop talent and solutions for the future. At present, top biomedical companies like GSK, Novartis and Merck Sharp & Dohme are examples of companies with essential business activities spanning across regional headquarters, R&D and manufacturing activities in Singapore. At the same time, regional pharmaceutical players such as Indonesia-based PT Kalbe Farma and Philippines-based United Laboratories have increased and strengthened their business and R&D activities in Singapore.

Companies can draw on Singapore’s networks, talent, pro-business environment and financing opportunities to strengthen and grow their business in Asia.

Contributed by Singapore Economic Development Board