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ASIA EDITION

"Australia is poised to establish itself as a global life sciences hub"

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Synthetic biology markets are experiencing a surge in demand for molecular diagnostics and technological advances in molecular biology, spurring growth in the Assay and Reagent market in Asia Pacific. A shift towards molecular diagnostics and personalised medicine has further motivated bioscience entrepreneurs to develop new assay methodologies. The Australia and New Zealand biotech commercial space is also stimulated by increasing demands for reagents in the clinical trials and diagnostics arena over the rapid growth of molecular biology applications in the region. A Melbourne-based biotech company, Assay Matrix Pty Ltd was founded by Santosh Nambiar, who supports Australia and New Zealand biomedical research. Nambiar shares his insights about the Assay and Reagent market with Biospectrum Asia

How would you describe the assay and bioreagents market in Australia and New Zealand? What impact does the Assay Matrix have on the region?

The biotech industry in Australia experiences a gap in the industry for the reliable supply of antibodies, assay kits and reagents. Assay Matrix was set up to close this gap. Australia and NZ being island nations separated from the world by ocean, often face difficulties obtaining these products (Assay Kits, antibodies, and reagents, including recombinant proteins) for research, especially as we lack local manufacturing. Not only are these products temperature and time sensitive, but the strict customs in Australia and NZ can also make the importation of these products challenging. Therefore, researchers may have to wait for weeks and months to get their products from overseas. Unfortunately, this does not promote a level playing field for researchers in Australia and NZ. While a researcher in the US, UK or Europe can order their products and receive them on the same day or the following day and progress with their research, a researcher in Australia is at a disadvantage by having to wait weeks or even months to receive their product. Assay Matrix over the years has streamlined this process.

At Assay Matrix, we make available a wide range of antibodies for research in Australia and New Zealand. Assay kits, particularly ELISA kits and Antibodies are our primary focus of business, mostly used by universities and government-funded research organisations. Nevertheless, of late there are a lot of startup biotech companies creating significant demand for biotech research and resources in Australia. However, these products are not as highly sought after by the pharma market as they are in academia.

Eventually, we also plan to expand into cell culture products, including primary cells. However, Customs delays are a constant challenge in Australia for transporting cell lines in liquid nitrogen or dry ice across the supply chain.

How would you evaluate opportunities and challenges across the bioscience assay products market in Australia and NZ? What is your outlook for the market's growth?

In Australia and NZ, there's a lot of emphasis on basic research, however, when it comes to patenting and commercialisation most of it happens outside of Australia.

Although Australia and NZ foster a vibrant life-sciences ecosystem with a strong track record of basic research, it is 'behind the world' in commercialisation. My observation is that most startups are developed outside of Australia despite the initial basic research being developed by universities in Australia. Key challenges include difficulties in translating research intangible products, disruptions in the supply chain, inflexible regulatory and tax policies, difficulties in obtaining investments and support for skills development.

However, with the rising demand for medical care and solutions, including developing domestic and international vaccine production capacity, I strongly believe that the federal and state government will put a lot of emphasis in the future on providing a robust ecosystem for commercialisation within Australia. Especially with increasing local demand for 'Australian-made' biopharmaceuticals, Australia is demonstrating its interest and potential to expand its manufacturing and supply chain capabilities to establish itself as a global life sciences hub.

The biotechnology sector relies on a highly skilled workforce that can respond to global development and changes in market trends. Building and maintaining a successful biotechnology sector in Australia requires the availability of a skilled workforce. The government is focusing on nurturing the required skills locally within Australia, while also considering the possibility of drawing in foreign talent. This will ensure that Australia develops self-sufficient capabilities within the biotechnological sector without depending on other nations, especially in situations of crisis and supply-chain disruptions.

What is driving the reagents and kits market in APAC? How large and conducive is the Australian market?

According to market data, the global biotechnology reagents and kits market size was valued at $337.28 billion in 2020 and is forecast to grow at a compound annual growth rate (CAGR) of 16.5 per cent from 2021 to 2028. Increasing demand for reagents from academic and research institutions, rising R&D expenditure by biotech companies and technological advancement in the field are key factors driving market growth.

Currently, the Asia Pacific is the fastest-growing market for bioreagents, with India and China providing the highest revenue contributions. Specifically, these regions offer significant opportunities for biotechnology companies in the global market due to the significant population base and rising investments in life science research.

The life science research market in Australia, although small compared to the global market, predominantly uses assay kits and bio-reagents such as ELISA kits, detection kits, CLIA kits and metabolism kits. Australia is now a hub for leading life science R&D and manufacturing, where universities and private institutions are conducting ground-breaking research to prevent, diagnose and treat diseases. Specific research areas include cancer research, immunology, neuroscience, and neurology as well as cell and molecular biology. Internationally sourced Assay kits and bio-reagents are widely accepted and utilised for domestic research; however, it requires stringent protocols and documentation for the products to be used.

What would bring in more bioscience entrepreneurs in Australia?

Entrepreneurship, specifically in Australia is a new yet thriving area with a lot of future potential. After a successful career within the Indian biotech industry, I moved to NZ/Australia in 1996. Before starting Assay Matrix many years ago, I could see a widespread perception that starting a business requires a large team, huge investments, and minimal odds of succeeding.

This notion has since been changed, with businesses in most industries being established with a minimal initial investment.

The Australian government has helped by injecting millions to further propagate the initiation of new businesses by providing grants, investments and even tailored programmes allowing entrepreneurs to connect with experts. Local universities also support entrepreneurs by providing an atmosphere like incubators and accelerators to fast-track their ideas and connect with investors and launch their products within the market.

Presently, entrepreneurial activity is booming in Australia. COVID-19 has also been a catalyst in creating more entrepreneurs, inspiring citizens to take risks and challenge themselves. Since 2020, the number of startups in Australia has risen significantly making it a hotspot.

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