Singapore has mapped its strategy to establish itself as a global hub for life sciences research in the Asia Pacific. Since biotechnology innovation is one of the keys to the Singapore's growing economy, Singapore government has established physical infrastructure and the stimulating macroeconomic policies that effectively enhance and reward Singapore biotechnology innovation. Singapore's rapid advancement in biomedical research is mainly due to public funds which are being directed to the research institutes, hospitals, worldclass centers and universities.

The KPMG's guide to international business costs, 2006 edition, titled "Competitive Alternatives" reports that Singapore (72.7) is the overall cost leader around all cities examined in the study (population over 1.5 million), with business costs more than 22 percent below the US average, and more than 30 percent below Yokohama (108.3). Furthermore the report highlights Singapore biotechnology sector along with high tech manufacturing and telecommunications equipments/services as the emerging industries in Singapore.

The Agency for Science, Technology and Research's (A*STAR) comprises the Biomedical Research Council (BMRC), Science Engineering Research Council (SERC), the A*STAR Graduate Academy (A*GA), the Corporate Planning and Administrative Division (CRAD) and a commercialization arm Exploit Technologies Pte Ltd (ETPL). BMRC and SERC fund and manage the development of 12 public research institutes in areas such as bioinformatics, genomics, molecular biology, bioengineering, bioprocessing technology, chemical sciences, materials, high performance computing, information technology and communications, manufacturing technology, microelectronics and data storage. The Biopolis was built to oversee the growth of Singapore's biomedical research and development. The Biopolis is a vibrant hub as it has attracted multinational companies and international investments.
Singapore’s intellectual property (IP) laws are recognized for their robust nature by the many countries including ASEAN. Singapore IP laws are regulated by the Intellectual Property Office of Singapore (IPOS). The IPOS enforces its IP law to obtain maximum benefits to Singapore biotechnology sectors. Singapore IP sector has a portfolio of more than 1700 filed or granted patents passed over 700 unique technologies. A*STAR is the owner of the largest pool of intellectual property in Singapore. A*STAR’s commercial arm, Exploit Technologies, licensed more than 80 cutting edge technologies (in both science, engineering and biomedical sciences) to companies which cover the wide spectrum from small and medium enterprises to multinationals, thus providing them with a competitive edge to stay ahead in the global biotechnology race. Furthermore, Exploit Technology has created numerous spin-off companies, therefore, maximizing the commercialization and benefits of IP.

IPOS has also developed additional protocols that are suited for patent owners to manage their IP more efficiently. A national IP management program SCOPE (Strategies for Creation, Ownership, Protection and Exploitation) has been set up to assist Singapore biotechnology companies to better manage their intellectual assets to produce IP and to effectively deploy that IP asset for maximum value.

Manpower training programs for the Singapore biotechnology industry have been developed by Singapore universities and polytechnics. More manpower is required for the different sectors of the Singapore biotechnology including pre-clinical, clinical and other post clinical support services, healthcare, pharmaceuticals, biomedical device manufacturing, bioengineering, tissue engineering, biofermentation, bioinformatics and information technology. Although Singapore was able to attract many world-class luminaries, it is vital that the growing Singapore biotechnology sector should enrich the diversity of local talent for the future. A*STAR has developed many scholarships with Singapore universities and institutes to meet some of the requirements.

In this special issue titled “Singapore Biotechnology Boom Indicators”, we are presenting a wide range of articles from various biotechnology industry players in Singapore. In addition, a market audit survey on the Singapore biotechnology was sent to various stakeholders and the results are being presented in this issue. Most stakeholders and market analysts expect Singapore to have the competitive advantage in biomedical research in ASEAN countries by 2010. The potential competition in biotechnology will come from China and India in Asia by 2010. Therefore, the Singapore biotechnology should be prepared to embrace ASEAN and Australia’s growing biotechnology competition in the region.

Contact Details:
Dr Morley Muralitharan
Senior Lecturer in Biotechnology,
School of Life and Environmental Sciences, Deakin University
Address: Deakin University, Geelong, Victoria 3217, Australia
Email: morleym@deakin.edu.au