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R&D dominates Indo-Aus collaborations

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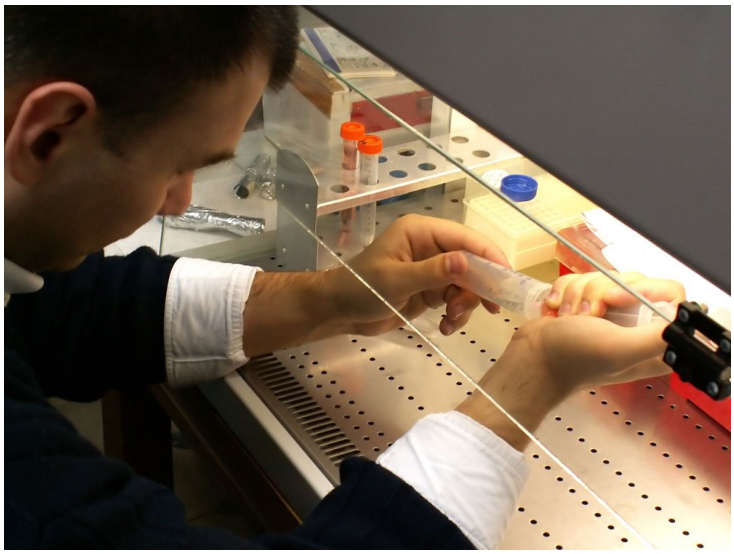

There has been a significant increase in industry-to-academia and industry-to-industry interactions between Indian and Australian counterparts. Last five years have witnessed many steps taken by the respective industries and governments to strengthen mutually beneficial partnerships in the area of biotechnology.

In 2007, Australia's Deakin University in Victoria signed a memorandum of understanding (MoU) with India's Biocon for joint multidisciplinary research focused on biotechnology and bioscience. Another notable example of Indo-Australian collaborations is between Strides Arcolab and Melbourne-based Ascent Pharmahealth. Strides first invested in Ascent Pharma in 2008 and in January 2012 sold Ascent to Watson Pharma. Strides-Ascent deal could be a good case study for what Indian and Australian companies have gained from mutual collaborations.

Indian healthcare leader Zydus Cadila and Australia-based Symbion have signed an MoU for construction and operation of manufacturing facilities in India. The Indian diversified major ITC acquired Australian agri-biotech company Technico as part of its strategy to strengthen its foods business.

Mumbai-based Ipca Laboratories acquired Australian formulation product dossier registration-cum-distribution company (now Ipca Pharma Australia) to enable it to register formulations in Australia.

The clinical trial companies based in Australia seem to be much interested in utilizing the offerings of the Indian market. Lisa Nelson, deputy CEO, Nucleus Network, says, "India offers very good opportunity for clinical trial companies. We have collaborated with many big pharma companies in India such as GlaxoSmithKline, Novartis, and others. At present our India focus is more on the early phase clinical trials and healthy volunteers because of safety considerations. We are currently doing groundwork in India and are on the lookout for potential partners. Compared to China, where it takes almost 12 months, India is much better in terms of regulatory approvals. India is slowly and steadily reforming its existing structure whereas China is a closed market."

Also, medical technology companies such as Muranex, are on a lookout for Indian investments. Dr Maurice Fabiani, CEO and MD, Muranex says, "In India we are trying to tie up with the potential strategic partners to ally and raise investment capital. We are well aware that Indian market is doing quite well and has registered a lot of growth and experience over the passage of time. However, a bit more seems to be required at the regulatory front."

Complementary research benefits

India and Australia share challenges in areas such as agriculture, water, energy, and healthcare and have complementary strengths in other fields as well, including nanotechnology and astrophysics. There are a significant number of research collaborations between Australian and Indian universities, including programs at the University of Melbourne, Monash University, Queensland University of Technology, and Queensland Institute of Medical Research. (List of projects under Indi-Australia Biotechnology Fund)

A good example of successful research collaboration is Deakin India Research Initiative (DIRI), an expansion of Deakin University's ongoing development of research models to bridge the gap between academia and industry. This initiative plans to enable the rapid increase in manufacturing and knowledge industries which is needed for growing India's economy.

Under the DIRI model, higher degree by research (HDR) candidates are based at an Indian research institution with day-to-day supervision provided by a local researcher and a Deakin academic staff who serves as principal supervisor. The candidate visits Australia for a period of six months to conduct research. DIRI has been working with 13 Indian research partners, including companies such as Biocon, Indian Oil, Vimta Labs, and labs of Council of Scientific and Industrial Research.

According to professor Peter Hodgson, director, Institute for Technology Research and Innovation (ITRI), Deakin University, Australia, "With strong biotech and information technology skills, India has enormous potential. By shifting the focus on future technologies such as bionanotechnology, India can leapfrog China in development. Australia has developed one of the best healthcare systems in the world that spread over a large area.

Extensive work is happening at Deakin in lifestyle-related diseases such as diabetes and obesity. India has to face the lifestyle-related issues as the young population in the country is more prone to these diseases due to their affinity towards Western food habits."

Deakin University has also entered into a research partnership with The Energy and Resources Institute (TERI) and has established TERI Deakin NanoBiotechnology Research Centre in New Delhi. Researchers at Deakin University's ITRI bring excellence and expertise in the design and characterization of novel nanomaterials to the center, while TERI researchers in the Biotechnology and Management of Bioresources Division (BMBD) bring extensive experience in biotech applications in the field of pharmacology, food, agriculture, and environment. Within five years, the center will have about 70 researchers, including 50 PhD students enrolled at Deakin and co-supervised by Deakin and TERI staff.

At the government level, Australia-India Strategic Research Fund (AISRF) is Australia's largest fund dedicated to bilateral research and one of India's largest sources of support for international science, providing $65 million over eight years from 2006-07.

The Indo-Australian Biotechnology Fund (IABF) is a significant component of the AISRF and so far five rounds have gone through. The priority areas for the projects include neutraceuticals, vaccines and medical diagnostics, stem cells, transgenic crops and marker assisted breeding, and bioenergy. In May 2011, AISRF announced the sixth round with eight new projects within the IABF (see Indo-Australian Biotechnology Fund Project). Under the program, the Department of Biotechnology

(DBT) and Australia's Department of Innovation, Industry, Science and Research will soon start joint research in the defined priority areas mentioned above.

Australia's strength

Australia offers high quality science, capacity for international partnerships and a transparent and efficient regulatory regime. The country has a strong culture of research and, thus, can train large numbers of Indian nationals in its biotech programs. On the regulatory front, Australia's fast tracked regulatory approval process could be a major plus for Indian companies.

India advantage

India is a capable and increasingly dynamic player in international science, technology and research, both in publicly-funded research and in the private sector. The Indian biotechnology industry comprises over 300 companies, and has been growing at a rate of 20-25 percent per annum for the last three years. The easily available, cost effective and knowledgeable resources also make India an attractive destination for outsourcing research activities.