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Japan can combine biotech with other advanced technologies

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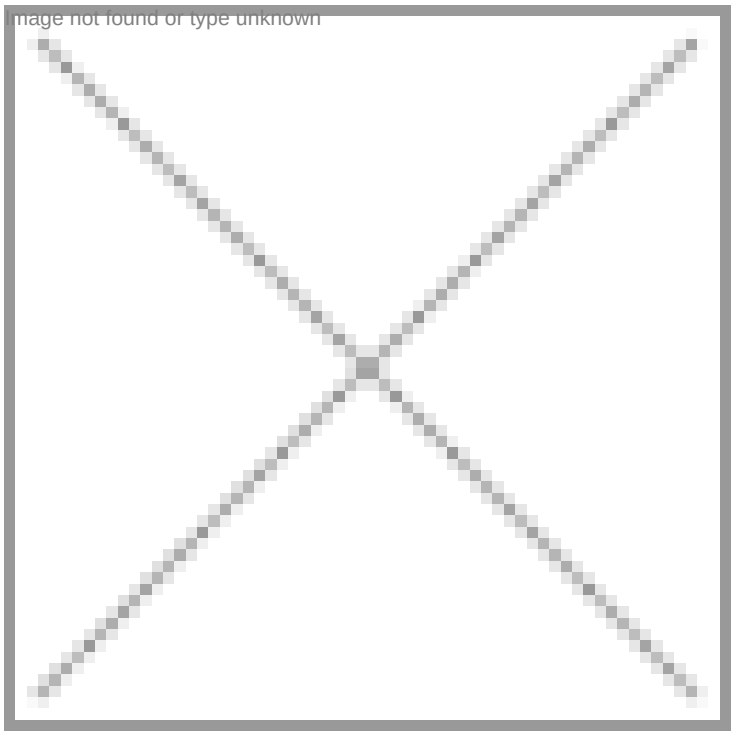

'Japan can combine biotech with other advanced technologies'

-Seizo Sumida, MD, Japan Bioindustry Association

Japan Bioindustry Association (JBA) traces its roots 50 years back to the Japanese Association of Industrial Fermentation, its predecessor organization. JBA is a non-profit organization dedicated to the promotion of bioscience, biotechnology and bioindustry in both Japan and the rest of the world. Established through the support and cooperation of industry, academia, and government, JBA functions as a think tank and platform for communication between scientists, technologists, policymakers and managers. In an e-mail interview with BioSpectrum, Seizo Sumida, managing director, JBA throws light on the state-of-affairs in the life sciences industry in Japan.

What is the size of the Japanese biotechnology industry?

The modern biotechnology-based market in Japan was worth approximately $17 billion in 2004. It has grown more than eight-fold over the past 16 years. Biopharmaceuticals account for 31 percent of the market, transgenic agro-foods for another 31 percent, chemicals (enzymes, diagnostics, etc.) for 26 percent, and others (analytical equipment, bioinformatics, etc) lay claim to the remaining 12 percent. We expect that the biotechnology market will continue to grow steadily in Japan.

What are the areas of focus and how are those sectors growing?

Pharmaceutical sector is one of the focused areas. Japanese pharmaceutical industry has been facing a number of challenges in recent years. First, the government has continued to lower official drug prices to slow the increase of the healthcare budgets. Second, the ICH guidelines that harmonize international pharmaceutical regulations have intensified competition within the Japanese market, because of intensified sales efforts by foreign multinationals. Third, the new good clinical practice guidelines have made it more complicated to conduct clinical trials in Japan. And fourth, pharmaceutical companies have had to increase their R&D expenditures dramatically since the advent of genomics. Japanese pharmaceutical companies have been coping with these challenges by strengthening their R&D and sales capabilities at home and abroad. Mergers and acquisitions have become more common in Japan these days.

Functional foods sector is another focused area. Functional foods are items such as cooking oil that is not fattening, allergen-free foods, foods that activate the immune system, and foods that help prevent cancer. Functional foods are finding an increasing size of market in Japan, because Japanese consumers have been getting increasingly health conscious. Biotechnology can revolutionize food industry though its contribution to the development of functional foods.

What are the incentives that are being offered to the biotech companies?

The government created Biotechnology Strategy Council (BTSC) in 2002. Chaired by Prime Minister Koizumi, BTSC consists of cabinet members along with experts from academia and industry. BTSC addresses R&D, commercialization and public understanding of biotechnology. In December 2002, BTSC announced a comprehensive "National Strategy on Biotechnology" outline comprising 200 detailed action plans that cover a wide range of areas.

Under the auspices of Japan's Parliamentarians Life Science Promotion Alliance, "Life Science Summit" meetings have been convened every year since 2000. Parliamentarians, government officials, academics and industry leaders have gathered together to discuss Japan's national strategy on biotechnology. Industry participants take this occasion to make sure that the BTSC's action plans are correctly implemented.

What are the strengths that Japan has in biotechnology?

Japan has shown her strengths in a number of areas of biotechnology, such as sequencing of human full-length cDNAs, glyco-chain technology and bioinformatics, in addition to fermentation technology, enzyme engineering and environment-friendly products. Japan also has strengths in combining biotechnology with other advanced technologies such as nanotechnology, robotics, and electronics to create a new generation of advanced technologies.

There is sudden rise in the number of bio companies in the last seven-eight years in Japan (from 10 companies in 1998 to 450 in 2004). What prompted Japanese entrepreneurs to look at entering biotechnology, a niche market space?

In 1990s, Japan was experiencing a prolonged economic recession. A number of reforms were tried to overcome the recession. To give you an example, legislation to corporatize all the national universities was one of them. The law took effect in April 2004. Today, faculty members can be involved in entrepreneurship. The creation of spin-off bioventures involving universities has been increasing nationwide. Their contribution to strengthening of R&D capability of Japanese bioindustry is likely to become more significant in the coming years.

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