

An Introduction to China's Biotechnology Industry

By Sarah Xuan, Associate

MMLC Group

www.mmlcgroup.com

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Background and Development of Chinese Biotech industry

China has just seen double-digit growth in its biotechnology industry and has gone from being one of the slowest to one of the fastest nations in the adoption of new biotechnologies. The biotech sector is seen in China and internationally as a core area of national scientific and economic development, due to its potential to ease the food crisis, combat disease and hereditary problems. The Chinese biotech industry grew 30% annually to \$3 billion between 2000 and 2005. By 2010, the Chinese biotech market is projected to reach US\$9 billion.

While Chinese venture capital investment is currently limited, the Chinese government does invest in quasi-venture capital companies and helps attract capital from the private sector to support start-up and growth companies. In recent years, domestic and Western venture capital investments have contributed significant funding to China's biotech industry. In 2006, total VC investment in China grew by 22% over 2005. Multinational investment accounted for nearly 76% of this total.

The State Council, China's cabinet, publicized measures to boost biological industry in June of this year. The measures deal with policies for key fields for China's biotechnology industry, technology innovation, funding support and preferential tax incentives (50% tax deductibility).

Biotech companies in China

The biotech industry in China has been developing since the early 1980's. By 1997, the number of Chinese companies with business licenses including biotechnology activities, was around 200. Today, China boasts more than 580 biotech companies. The majority of these companies have net assets of less than US\$10 million. Chinese biotech companies are highly dependent on governmental funding. The two major state funding programs are The National High Technology Research and Development Program (a.k.a. the 863 Program) and the National Basic Research

Program (a.k.a. the 973 plan). The former is geared more toward applied research and commercialization, the latter toward early-stage research.

The following companies are the more well known biotech companies active in China:

Amoytop Biotech

Amoytop is a high-tech company devoted to discovering, developing and marketing recombinant proteins such as Granulocyte Macrophage Colony Stimulating Factors, and Granulocyte Colony stimulating Factors.

Beijing Pharma and Biotech Center (BPBC)

This is a consulting agency, which belongs to the Beijing Municipal Commission for Science and Technology (BMCST). BPBC is a non-profit organization (NPO) which is aimed at strengthening innovation in the pharmaceutical and biotechnology industry.

Beijing SL pharmaceutical Co., Ltd.

SL PHARM is a biotechnology-pharmaceutical company, mainly engaged in developing and marketing gene engineering drugs.

Shanghai ChemPartner Co., Ltd.

Shanghai ChemPartner is specialized in pre-clinical research in a number of life threatening diseases such as cancer, diabetes and arthritis.

Novozymes Biotechnology Co., Ltd

Novozymes is the world leader in bio-innovations and is very active in China.

Beijing WBL Peking University Biotech Co., Ltd

This is a pharmaceutical joint venture invested by the Asiapharm Croup Ltd, Beijing University and the Beijing Enterprise Holding Limited of Hong Kong. It is mainly engaged in research, development manufacture and marketing of natural medicines and modern Chinese medicines, in cooperation with biotechnology.

Relevant Laws and Regulations in China

The China National Center for Biotechnology Development (CNCBD) is the main policy body behind the biotechnology industry in China. The CNCBD was established on November 3, 1983 under the Ministry of Science and Technology with the approval of the State Council. In addition to the CNCBD, the Ministry for Health, the Ministry of Agriculture and the Chinese State Food and Drug Administration, are involved in regulating the industry as need be.

The major regulations applying to the biotechnology as a whole in China are:

The Measures for Promoting the development of Biotech Industry effective from 15 June 2009.

The measures encourage companies to increase their research input and enhance research infrastructure. It also urges firms to increase support for the industrialization of research for which the Chinese hold intellectual property rights. In the past, because of relatively low manufacturing costs and previous policies neglecting research and development expenditure, China's biotech and other high-tech companies often found they have to pay more tax because of the perceived higher profits. Now, the new measures allow companies to add 50 percent of their research spending to corporate costs so that they can pay less income tax..

Patent Law of the People's Republic of China (as Amended 2008) effective from 1985 as amended.

This law has just been substantially amended. Some of the amendments specifically impacting on the pharmaceutical and biotech industries, include those that allow compulsory licensing of pharmaceuticals and provisions requiring the description of sources “genetic resources” in relevant patent specifications. In an effort to protect ownership of China’s genetic resources, China has made it illegal to obtain a patent covering a genetic resource if that resource was not legally obtained. Under the new patent law, patent applications involving “genetic resources” must identify the source of the genetic material, be it of plant, animal, or microbial origin in the patent’s specification. Alternatively, the applicant will have to provide the reason why the source cannot be identified.

Other major laws relevant to the China biotechnology industry include special tax incentive laws, plant variety rights, quarantine laws and policy encouragement notices.

The future of the Chinese Biotechnology Industry

China's biotechnology sector is still maturing. On the one hand, foreign investment is encouraged, but on the other hand, intellectual property enforcement mechanisms are still relatively unpredictable. Chinese academic institutions are at the forefront of much of the research and development in this sector, and it seems that a better system for encouraging cooperation between private enterprise and the universities could be developed. The Australian Cooperative Research Centre system could well be an excellent model for application in China.

On the regulatory side, it seems that the framework is in place for fostering a strong biotechnology industry. Some conflict in regulatory powers continues to exist, however that is not peculiar to China. It is hoped that these conflicts will be ironed out in the near future, as investment continues to flow in to this sector.