



Biotech Industry

India

Opportunities for Missouri Businesses
India Market Report: Biotech Industry Edition



Contents

🌐 Global Biotech Industry - Industry Overview	3
🌐 Biotech Industry in India - An Overview	4
🌐 Key Facts	5
🌐 Government Initiatives	6
🌐 Leading Biotech Institutes	7
🌐 Growth Drivers in Biotech Sector	7
🌐 Opportunities	8
🌐 Challenges	8
🌐 Key Trade Show	8



Global Biotech Industry - Industry Overview

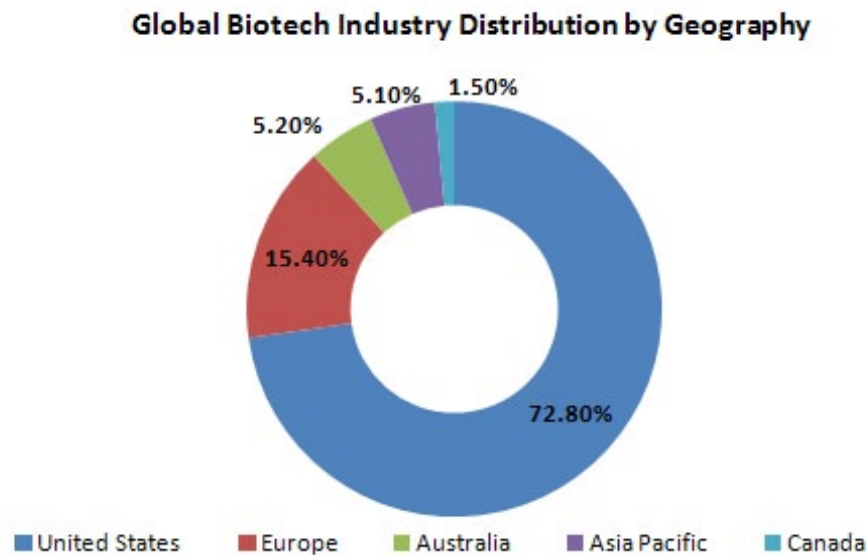
The global biotech industry, led by the United States, was \$84.6 billion in 2010 and is expected to grow at a 7% CAGR to \$103 billion by 2013, as a result of the following primary drivers:

- 🌐 Active participation by private players.
- 🌐 Rising information technology innovations.
- 🌐 Improving healthcare infrastructure worldwide.

Despite the recent economic downturn, there was only a 10% decrease in the number of biotechnology companies worldwide through September 2010 from the year prior, a modest decline largely attributed to the stimulus of the United States. The United States remains the bedrock of the biotech industry, though Europe and Asia are fast growing international markets.

Several European biotechnology companies have announced plans to outsource their manufacturing through collaborations with international partners, increasing production efficiencies and adding to corporate earnings growth.

Global Biotech Industry Distribution by Geography:



The Asia-Pacific biotech market is projected to grow at a CAGR of 16% between 2010 and 2012.

Biotech Industry in India - An Overview

The Biotechnology sector in India is one of the fastest growing sectors of the Indian economy. As the sector is mainly based on knowledge, it is expected that it will play an important part in shaping the Indian economy, which is developing at a rapid pace. The products and services in the biotech sector in India cater across sub sectors such as biopharma, agricultural biotechnology, bioindustrial, bioservices and bioinformatics.

The products and services in the biotech sector in India cater across sub sectors such as:

Biopharma Sector:

Biopharma market comprises primarily of vaccines, therapeutic drugs, insulin, animal biologicals, stations and diagnostics. The biopharma market accounted for roughly 61 percent of market share in 2010-2011.

Bioservices Sector:

The bioservices sector clocked 19 percent of the total biotech industry revenue in 2010-2011 registering a growth of 20 percent.

Bioagri Sector:

This accounts for 14 percent of the total biotech revenues.

Bioindustrial Sector:

The bioindustrial market in India clocked US\$142.3 million in 2010-2011 and accounts roughly for 5 percent of revenue in the biotech industry.

Bioinformatics Sector:

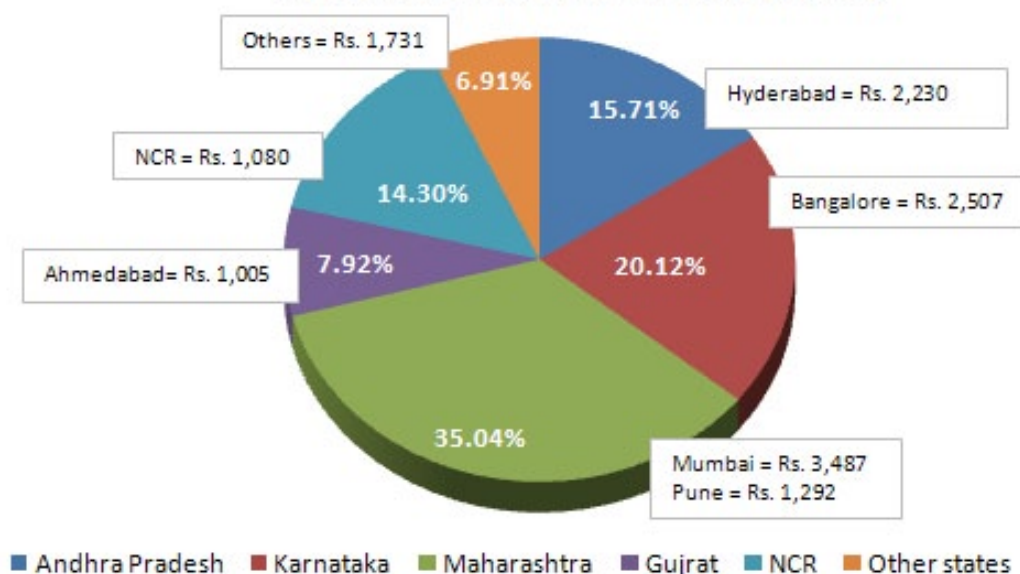
This is the smallest segment contributing roughly 2 percent of the total industry revenue.

The Indian Biotechnology sector holds immense potential in terms of research and development, skill and cost effectiveness. The sector grew threefold in five years and reported revenue of US\$3 billion during 2009-2010 with a 17 percent rise as compared to the previous year. The quantum surge in terms of growth can be attributed to:

- 🌐 Large pool of scientific talent
- 🌐 World-class information technology industry
- 🌐 Vibrant biopharmaceutical sector
- 🌐 Government initiatives, such as setting up more biotech parks and more encouragement of public-private-partnerships.

The state government initiatives over the past few years have resulted in developing Biotech industry clusters in the states of Maharashtra, Andhra Pradesh, Karnataka, Gujarat and National Capital Region (NCR), which are major contributors for the industries revenue. Following is the distribution for their market share in 2010:

Top Biotech Clusters & Cities (Fig in Cr)



- 🌐 Maharashtra (Mumbai and Pune): 35%
- 🌐 Gujarat (Ahmedabad): 8%
- 🌐 Andhra Pradesh (Hyderabad): 16%
- 🌐 Karnataka (Bangalore): 20%

Key Facts

Following are the key facts for an overview of the Indian biotech industry:

- 🌐 Currently India's share which is only \$4 billion out of the \$180 billion global biotech industry is negligible.
- 🌐 The sector saw a growth of 30% in the last fiscal year, from \$3 billion in the fiscal year 2009.
- 🌐 According to a report by Frost and Sullivan (F&S), the size of the global biotechnology industry is set to reach \$433 billion by 2015.
- 🌐 The Indian biotech industry has to achieve the \$10 billion mark in the next three years, the industry has to grow at more than 40%, year-on-year.
- 🌐 Biopharmaceuticals contribute 62% of the Indian biotech industry.
- 🌐 The global biopharmaceutical market, which is worth about US\$137 billion today, is expected to touch US\$319 billion by 2020 according to industry estimates. Of this, the market share of Indian biopharmaceuticals is a miniscule 1.4 percent (at around US\$2 billion), even though it is recording a growth rate of over 30 percent.

Government Initiatives

Some of the initiatives taken by both Central government and State governments that have provided a big boost to the biotech industry in India are:

- 🌐 Setting up a venture capital fund, to support small and medium enterprises.
- 🌐 Good regulatory framework has been set up for approval of GM crops and rDNA products.
- 🌐 India has a sound and widely acknowledged framework of biosafety guidelines to deal with evaluation, monitoring and release of genetically engineered organisms and there are more than 106 institutional biosafety committees.

The setting up of a separate Department of Biotechnology (DBT), under the Ministry of Science and Technology, has been a significant move by the government. The department has been instrumental in accelerating the pace of development of biotechnology in the country in several ways. It has launched schemes to promote innovations in biotechnology in India like:

BIPP (Biotechnology Industry Partnership Programmes) for advanced technology.

It is a scheme focused on frontier technology for environment, health, agriculture, bio-energy and bio-manufacturing. The scheme allows private industries to undertake research and share the related costs with public research centers, while retaining the intellectual property of the results, with re-payment of a royalty to the public institution. The scheme is reserved for Indian companies by joint-venture with foreign partnership is eligible, provided the share of the latter does not exceed 49%.

SBIRI (Small Business Innovation Research Industry)

A scheme to support innovation for the Small-Medium Enterprises of the biotech sector, with provision for grant of 80% of the total cost of the research project if it is below 2.5 million Indian Rupees, and 50% for any amount up to 10 million Rupees. Beyond this ceiling, it is possible to obtain an interest-free loan up to 5 million Rupees and 1% up to 10 million Rupees.

BIRAC (Biotechnology Industry Research Assistance Council)

This has been activated to support and assist start-ups, especially SMEs, to catalyze biotech in the private sector and promote PPP projects.

BIO-TECH PARKS

There are 27 biotech parks across India. The largest are located in Hyderabad and in Pune. Important biotech parks are located also in Lucknow and Chennai. Typically, biotech parks are meant to provide the following facilities and services:

- 🌐 Research
- 🌐 Incubation
- 🌐 Clustering of private industries

Leading Biotech Institutes

Indian Biotech companies are earning huge profits and are using these profits for further investments considering the overall promising market scenario, e.g.

- 🌐 Wockhardt acquired Pinewood Laboratories.
- 🌐 Reliance Life Sciences took staked control of GeneMedix Plc.
- 🌐 Cipla has invested in its biotech ventures with smaller companies overseas.
- 🌐 Dr. Reddy's Lab primarily, a strong player in chemical research has moved into biotech research.
- 🌐 Biocon Limited reported better-than-expected net profit for the quarter ended March 2012.

Leading Biotechnology Companies in India:

- 🌐 Biocon
- 🌐 Serum Institute of India
- 🌐 Panacea Biotec
- 🌐 Reliance Life Sciences
- 🌐 Syngene International
- 🌐 Bharat Biotech
- 🌐 Indian Immunologicals

Growth Drivers in the Biotech Sector

- 🌐 Public Private Partnership (PPP) route to innovation
- 🌐 Upgrading facilities and capabilities to global standards, for better access to partnerships
- 🌐 Direct investments from international biotech firms
- 🌐 Collaborations and alliances in Biotech Education and Research & Development
- 🌐 Increasing government support
- 🌐 Strengthening confidentiality and IP protection

Opportunities

- 🌐 Large domestic market and huge export potential
- 🌐 Low cost research base for international companies in comparison with other countries
- 🌐 Vast and diverse disease based patient populations provide unique opportunities for clinical research and clinical trials
- 🌐 Supportive Government policy on embryonic stem cells research provides a useful opportunity for international companies to pursue such research in India
- 🌐 Plant and microbial bio-diversity provides vast prospecting opportunities for new drugs
- 🌐 Conducive Government policy on GM crops provides useful opportunities for agri-biotech companies

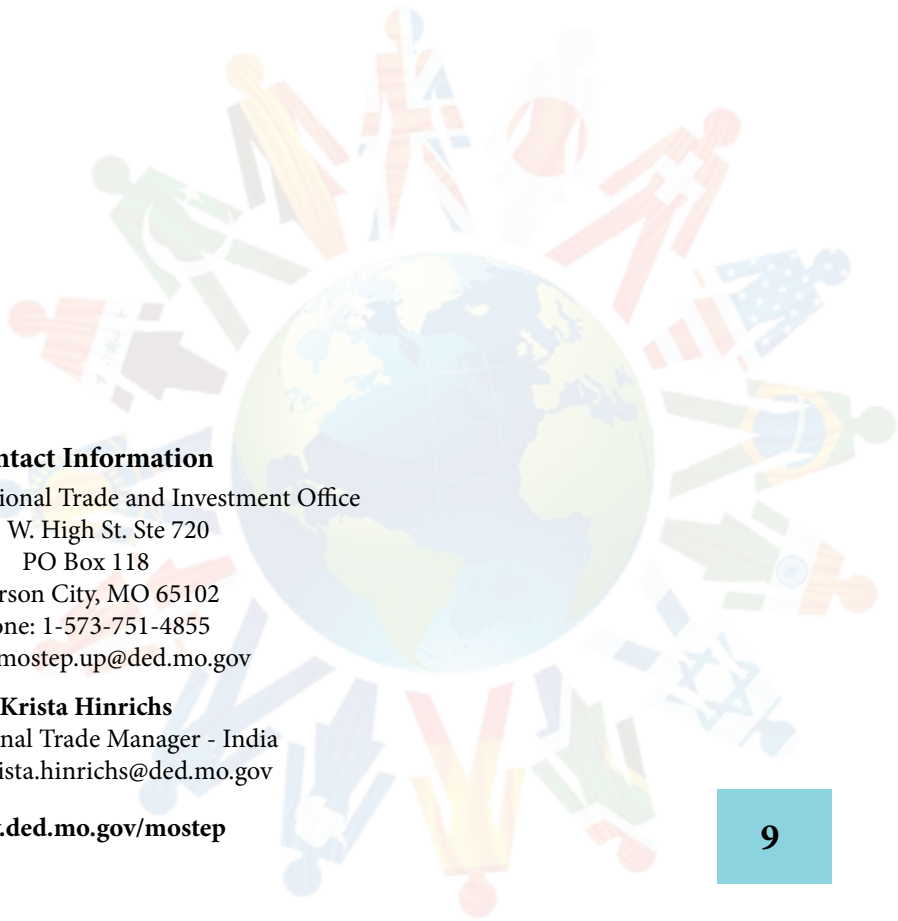
Challenges

- 🌐 Lack of public private partnership
- 🌐 Risk averse nature of industry
- 🌐 Necessary international funding required for Indian companies to be able to invest in cutting edge research
- 🌐 Streamlining India's regulatory framework to meet global standards
- 🌐 The Indian market being price sensitive, the industry is still learning to be cost effective
- 🌐 Partnership with pharmaceutical industry

Key Trade Show

India bio 2012

Annual event organized by Department of Information Technology, Biotechnology and Science & Technology, Government of Karnataka, Vision Group on Biotechnology and MM Activ Sci-Tech Communications with support from ABLE (Association of Biotechnology Led Enterprise).



Contact Information

Missouri International Trade and Investment Office
301 W. High St. Ste 720
PO Box 118
Jefferson City, MO 65102
Phone: 1-573-751-4855
Email: mostep.up@ded.mo.gov

Krista Hinrichs

International Trade Manager - India
Email: krista.hinrichs@ded.mo.gov

www.ded.mo.gov/mostep