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**ASSESSING THE SCOPE, STRATEGIES AND CHALLENGES IN THE MARKETING  
CONTEXT OF INDIAN BIOTECHNOLOGY SECTOR**

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**ABSTRACT**

*The biotechnology business has a notoriously high failure rate, even by the standards of its own field. The pharmaceutical business has been forecasted as the most capital-intensive market area in the current economy, yet there are significant obstacles to entering a career in biotechnology and establishing an industry in fundamental areas of biotechnology. The function of biotech sector in terms of commercial, industrial and economical grounds acquires relevance since it takes a lot of labour in the intellectual and in the commercial front. A success story of a biotech sector entails a lot of hurdles to be tackled. One of the main obstacles, any biotech business has is efficiently selling their medicines. In this post, we take a quick look at the Indian biotech market as it stands right now. Current Situation in Biotechnology business in India, methods utilised by biotech enterprises and marketing issues.*

**Keywords:** Scope, Firms, Challenges, Strategies, Biotech.

**I. INTRODUCTION**

Over three decades have passed since the new knowledge and technologies like genetics and biotechnology have evolved. Biotechnology is one of the cutting-edge technologies that countries are investing in to achieve sustainable development in the current century after passing through various periods in which labour force, resources, and capital, each at a certain time, have been comparative and competitive advantages for a more powerful economy. Knowledge-based sectors are playing an increasingly crucial role in the Indian economy. This increasing economy is the background against which both the government and the domestic business are putting major efforts in biotechnology sector. India wants to increase its biotechnology sector fivefold over next five years as part of an ambitious goal revealed at the BIO 2005 annual convention in Philadelphia, the world's largest biotech conference. According to a recent report, India is one of the four most desirable countries in Asia and the Pacific for biotechnology investment. In addition, a recent conference of the Indo-US High Technology Cooperation Group (HTCG) demonstrated that the USA and other industrialised countries are counting on India for high-tech

cooperation, especially in the field of biotechnology. The discussion was largely focused on concerns relating with data exclusivity in clinical trials in India and the movement of biological materials from the USA to India.

Various essential phrases that fall under marketing include flow of products/ services, transfer of ownership, communication, storage, distribution / transport of goods tasks. Marketing is an organisational function of maintaining customer interactions in such a way that benefits not only business but also its stakeholders. There are four primary components that make up marketing.

1. Identification and selection of customer needs and desires
2. Designing products or services that satisfies the customer desires with profits
3. Persuading customers to buy at the firm's offerings and
4. Storing, transporting, and displaying the goods after they leave the production site.

Marketing requires management Procedure comprising analysis, planning and control. The Voluntary exchange of values is a marketing strategy that is thoughtfully crafted, not merely a series of unrelated events. Instead of trying to win every market and please everyone, marketing's goal is to help a company accomplish its goals by strategically choosing its target markets. The marketing mix, which includes product design, price, distribution, and communication, is a collection of techniques used in marketing. The process through which a corporation or organisation chooses its target consumers or constituents, evaluates their needs and desires, then allocates resources to meet their needs and goals.

The Government of India has been consistently trying for the growth of the biotech sector ever since its start and there are several R&D institutes (scientific, medical, industrial and agricultural) that have been formed throughout the previous 30years. The previous rendition indicates that it has surpassed the extension rate of many other industries as a sequel of favourable national plans. The Biotech Consortium India Limited survey confirmed that there are 176 biotechnology firms present in India wherein 49 per cent companies are agriculture based companies, 25 per cent companies are in the health related medical activities and 26 per cent have interests in environmental biotechnology. In 1986, the business was given a boost by a series of pardons issued by the federal government and individual states through the Directorate of Biotechnology under the Ministry of Science and Technology. India's science minister originated a programme that offers tax advantages and endowments for biotech endowment and corporations probing to develop and entrench the Biotechnology Parks Society of India to brace biotech parks by the year 2010. Animal testing was confined to mice initially but subsequently extended to accommodate big mammals also.

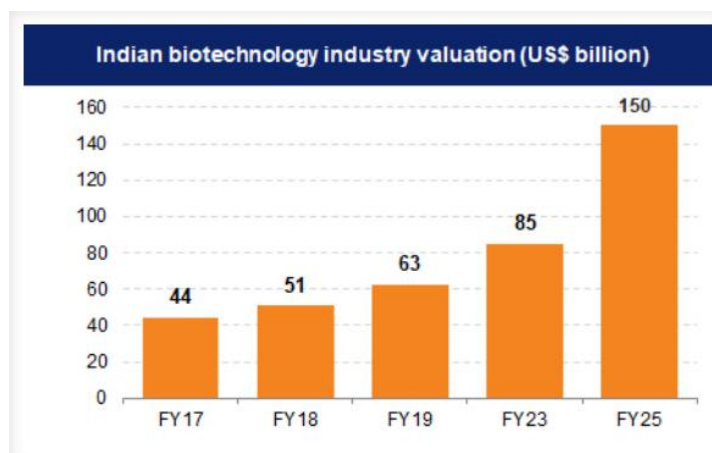
As a result, governments all over the world are embracing biotechnology as a significant engine of innovation and a catalyst for national economic progress. Yet, the risk of innovation and commercialization in this area arises due to uncertainties connected to markets, technology, and business. Moreover, biotechnology has been involved in problems, such as health safety worries.

Taking these risks into consideration, it is not a surprise that most inventions fail or do not attain commercial success. The process of bringing biotech breakthroughs to market is fraught with challenges. Pre-seed funding shortfalls and inadequate government funding are not always to blame. Inadequate commercialization expertise and unorthodox funding resources may be to blame for the biotechnology industry's failure to generate considerable value. The growth and development of biotechnology spin-offs is primarily dependent on financial resources, but a supportive environment is also required.

## II. NEED AND SCOPE OF MARKETING IN BIOTCHNOLOGY

To ensure that consumers are well-informed, companies in the biotechnology industry must use marketing strategies that compare and contrast their products' pricing, advantages, and drawbacks to those of competitors. India is one of the top 12 countries in the world for biotechnology. The Department of Biotechnology (DBT), under the Ministry of Science and Technology, has placed tremendous focus on building an environment for the growth of excellence and research in a range of biotechnology sectors in India.

By producing and employing a number of instruments at its disposal, like as vaccinations, antivirals, diagnostic tests, and other tools, the biotechnology sector has been at the vanguard of the fight against the Covid-19 epidemic. The pandemic has helped the nation create the optimum environment for manufacturing, sourcing, and exporting medical gadgets and vaccines.



**Figure 1: Valuation of Biotechnology industry**

The number of biotech start up registrations has surged throughout the nation in 2021, with around 1,128 new start-ups registered, which is the highest in a single year since 2015. Estimates put the total number of biotechnology start-ups at 5,365, as of 2021. The number of start-ups is expected to touch 10,000 by 2024.

## **Need of Marketing in Biotechnology**

Biotechnology is recognised as the key pillar of economic growth in many countries. Huge number of therapeutic biotechnological pharmaceuticals and vaccines are now accessible in market, but these items not even known to the average man. Thus, there is a big demand for marketing in biotechnology. There is considerable need of biotechnology for society since it gives employment, growing business prospects, intellectual wealth generation. The effective marketing methods are applicable to any biotechnology business resulting the revenues and branding to the host organisation.

## **Scope of Bio-Marketing**

Bio-marketing leads to the marketing of the new biotech goods into their respective markets with the elaboration of characteristics of products with efficient marketing techniques. The efficient marketing of the items leads to the profits consequently the organisation benefits thus; there is a potential of launching new products. It paves the way for an equally dramatic shift in the advertising of goods and services in response to shifting market conditions.

### **III. WAYS OF MARKETING IN BIOTECHNOLOGY INDUSTRY**

Marketing in the sector of biotechnology is divided into 2 categories inbound marketing and outbound marketing.

#### **1. Inbound Marketing:**

Inbound marketing tactics centre more or less around attracting visitors to your website and inducing a sale or lead. Let me break it down further for simple understanding. The number one inbound marketing media you should be focused is GOOGLE.

a. **SEO:** Search engine optimisation (SEO) refers to a group of techniques aimed at improving a website's visibility in search engines such as Google. Search is used by billions of people every day to find services and goods. By implementing the appropriate SEO approach, you may rank in the top page of Google for relevant keywords like “Liquid biopsy kits, Proteins or Reagents” etc.

b. **PPC:** By putting your advertising on search, partner websites, YouTube, Gmail, etc. you may sell your products and services on them and pay a little amount for every click that leads to your website through these channels. Because it offers the highest return on investment for the Biotechnology sector, I concentrate on the search network.

c. **Content Marketing:** Content marketing is currently the most popular marketing strategy. A well-written piece of content automatically establishes your credibility and establishes your expertise in the field. When you develop content that addresses majority of user concerns and uncertainties, your target clients perceive you as an industry authority. This method works in

every business notably in Biotechnology. Aside from blogging, content might mean movies, press releases, infographics, etc.

## 2. Outbound Marketing:

Outbound marketing is interruptive and pushes itself at an audience. Examples of outbound marketing are cold phoning, email blasts, TV and Radio Advertising. These kinds of outbound marketing will not be effective in the Biotechnology sector. The Biotech audience is intelligent and does their research online before making a purchase. We recommended outbound strategy for the Biotechnology industry is using LinkedIn to prospect and connect with key decision makers. LinkedIn's internal search engine is quite effective, but paying to Sales Navigator unlocks additional capabilities and filters that are helpful when focusing on decision makers.

## **IV. STRATEGIES FOR DEVELOPMENT OF MARKETING IN FIELD OF BIOTECHNOLOGY**

Employ these strategies to improve your biotech firm's market share.

### **Market Analysis**

Like any other business, biotech companies benefit from a flourishing market. Owing to the unique nature of the things biotech businesses manufacture, it is hard to begin production without first determining a target market. This figure can only be arrived at after comprehensive market research has been undertaken in partnership with the marketing and research departments.

### **Give Your Business a Face**

While this insightful guidance is relevant across sectors, it is especially crucial for the biotech business because of the delicate nature of the health care sector. Companies that provide a warm and welcoming image to their clients are more likely to retain their custom. That assures them that they are in capable hands. Put your R&D department in the limelight to demonstrate to customers that you're serious about the quality of the medications you're generating. To reach this stage, though, you must first assemble a strong team. There's no space for discussion there.

### **Analysis of the Competition**

The best way to win in business is to study your rivals and imitate their strategies. So, researching the rivals' ads will become crucial to your own strategy. Finding all the other companies developing a comparable product is the first step. If your company manufactures IV drips for any reason, you should investigate the market for comparable products. After your competition has been identified, you can begin to learn from their marketing strategies and implement them into your own.

## **Promote Your Company's Certifications**

The biotechnology sector is not available to everybody and everyone because of this. Consequently, it is logical to suppose that if you have founded your biotech business, you have also secured the essential authorizations. There is a variety of certificates that indicate your devotion to your subject. Customers may rest easy knowing that this company has been vetted and found worthy of these awards.

## **Make a Professional Website.**

These days, a company that wants to flourish must invest extensively in its internet presence if it is to attract clients. Your website is a representation of your company's brand; as such, it should contain all the information your clients can possibly require. Under the "about" section, you may likely discover information about the company's background and the researchers who conducted the study.

## **Social Media Marketing**

If you want to double your business using social media, you need to know what you're doing. Consumers want to do business with a well-known brand. Given that we dwell in a period of heightened individuality; it stands to reason that buyers would like to see their favourite brand distinct from the competitors. The social networking sites are perfect for this. These days, organisations have a whole social media team dedicated to tracking and analysing their marketing activities. You may attract more clients by developing a reliable and novel social media marketing strategy.

## **Push and Pull Marketing Techniques**

Push and pull marketing strategies are used by companies in the biotech sector to increase customer base. Pull strategies entail establishing your biotech company so that the strategies you implement will unavoidably draw in customers. Using push methods, you'll advertise your company to new audiences in the aim of attracting new customers.

## **V. CHALLENGES OF BIOTECHNOLOGY MARKETING**

Vaccines, biopharmaceuticals, monoclonal antibodies, and heterologous proteins are all examples of pricey biotech goods. Thus, marketing of these relatively expensive items became problematic. Despite the commercial enzymes, biofuels, food items are less expensive increasing competitiveness in market became hard. Before being released into the market, some health products, including vaccinations, must complete all of the necessary clinical studies, which can take more than 5 years. The release of various biotech items like BT Brinjal, some vaccinations are tough in field of biotechnology.

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Biotechnology firms are confronting the realisation that increased attention must be made on getting goods to markets as companies become increasingly judged on their profitability. Possible hazards associated to markets and technology ought to be examined as realistically as possible to avoid blunders. Time is the biggest challenge for the creation of a new product or a creative product from fundamental notions. The time necessary for a concept to be demonstrated, prototyped and developed into helpful invention also influences the success of the product as there are various rivals present in the market. The market is the effect on the success of the product. When it comes to developing product brands and generating interest and publicity for them, biotech firms have certain requirements. The issues we see product marketing teams routinely encounter are: complicated feature sets, various teams, reduced schedules, worldwide rollouts, and varying audiences.

In order to be recognized as a leading biotech company in today's online world, you need a strong online presence, yes. But more importantly, you need to first, stick out, and second, make your company and products irreplaceable

## VI. CONCLUSION

Indian biotechnology is fast getting respect in terms of the skills and capabilities available in the nation. Investments in innovation are incremental and are allowing the sector to establish a healthy pipeline of high value goods and technology. The biotech sector is still growing and in need of numerous initiatives from the government and the public. Overall, India is establishing a dominant position as an outsourcing location for foreign pharmaceuticals corporations. Aside from being a worldwide player for contract research, bespoke synthesis of intermediates and creation of candidate pharmaceuticals for pre-clinical and clinical testing and clinical research are areas where great advances are feasible.

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