



Biotechnology Sector in India – Investment Outlook

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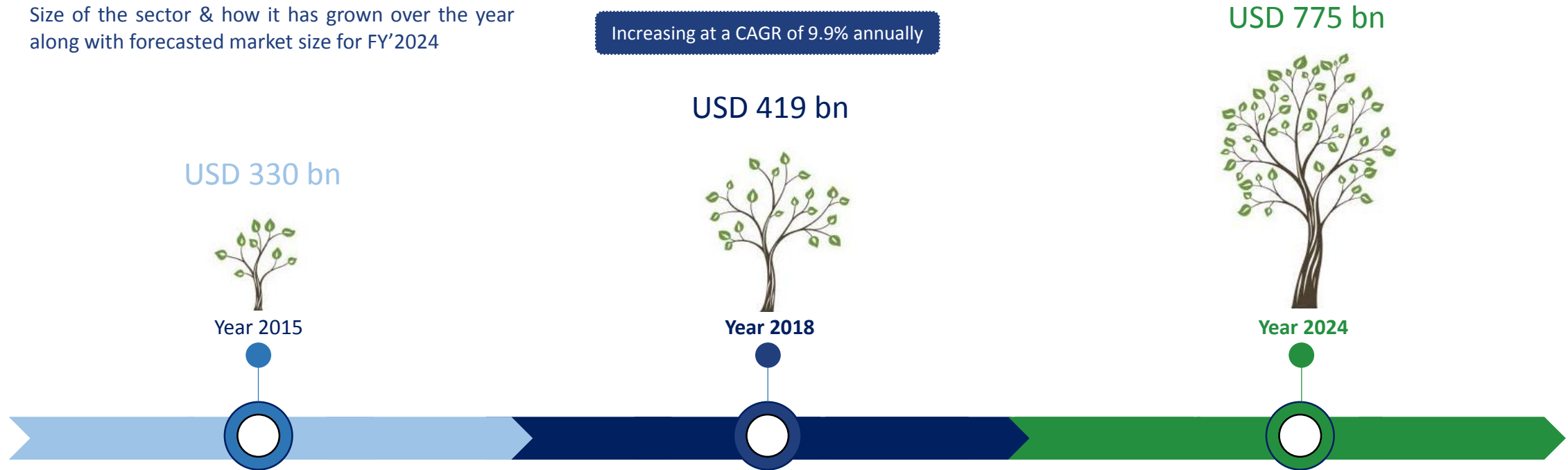
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How Big is this Sector (Globally) & its Branches ?

A. Size of the sector & how it has grown over the year along with forecasted market size for FY'2024



B. Bio pharmaceutical segment is largest in this sector with ~61% market share as of 2018

~61% Market Share

Bio-pharmaceutical

Biosimilars

Vaccines

Insulin

Regenerative Medicine

Bio-industrials

Bio-Fuels

Industrial Enzymes

Bio Polymers

Bio-agriculture

Hybrid Seeds

Bio-fertilizers

Bio-pesticides

Bio-IT

Bio-Informatics

Big Data

Precision Medicine

Bio-services

Clinical Research

Contract manufacturing

BioTech Sector in India – An Overview

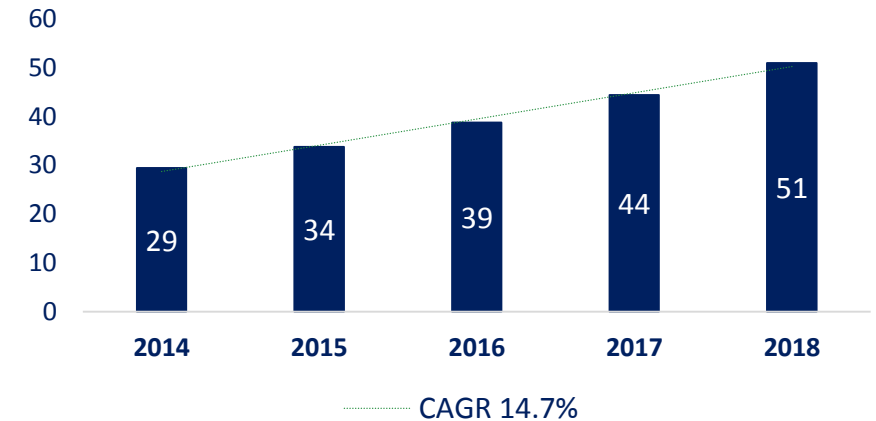
Key Numbers & Facts

- India is among the top 12 destinations for biotechnology in the world, with approximately **3% share in the global Biotechnology industry**. India is also the leader in the global supply of DPT, BCG and measles vaccines.
- India has the **second-highest number of US Food & Drug Administration (USFDA)-approved manufacturing plants** outside the US. The country is currently home to more than 523 USFDA approved drug manufacturing facilities.
- The Indian Biotechnology industry that was **valued at USD 51 billion in 2018**, growing at 14.7% year-on-year & expected to **reach USD 100 billion by 2025**.
- The sector is divided into five major segments- Bio-pharma, Bio-services, Bio-agri, Bio-industrial, and Bio-informatics.
- India currently has **4,50,000+ sq. ft. of incubation space**.
- 41 bio-incubators have been supported by BIRAC** (Biotechnology Industry Research Assistance Council) and established since 2014, with more planned across the country.

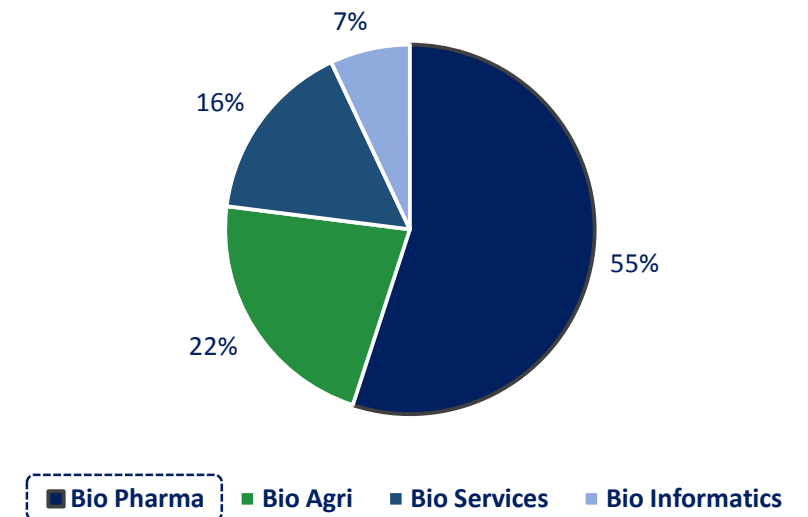
BIRAC's role in Scaling Bio-incubators in India through

- The Startup India Action Plan announced in 2016 is aimed to **have at least 2000 startups by 2020** which would necessitate creation of new bio-incubation space.
- Through BioNEST, **BIRAC has supported 20 bio incubators** that are at various stages of operation with the cumulative area of 200000 sq.ft. Out of this approximately 100,000 sq. ft. space is currently active for incubation.

Market Size in USD billion







Revenue Share



Who are the leading Players in India?

Some Notable Big Indian Players

Figures in INR Cr

	Foundation Yr	HQ	Sales (FY'19)	Market Cap
 LUPIN	1968	Mumbai	16,718	33000+
 Biocon	1978	Bangalore	5,514	31,500+
 Zydus dedicated to life	1952	Ahmedabad	13,165	23,700+
 Panacea Biotec Innovation in support of life	1984	New Delhi	456	800+

Other Known Players in the Market



Past Notable Transactions in this sector

A. Listed Entities

Acquiring Co.



M&A Transaction

Target Co.

MONSANTO

Transaction Summary:

- Bayer AG acquired Monsanto for USD 63 bn in 2018
- Acquisition for the operational arm of Monsanto India Limited was completed in 2019.
- Exchange ratio of 2 shares of Bayer CropScience Ltd for 3 shares of Monsanto India Ltd.

Acquiring Co.



Divestiture Transaction

Target Co.



Transaction Summary:

- Lupin sold its entire 99.82% stake in Kyowa Pharmaceutical Industry for an EV of 57.4 Bn Yen to an Unison Capital in 2019.
- The deal, awaiting regulatory approvals, was aimed to strengthen the balance sheet of Lupin and would bring down the net debt to INR 1,129 Cr from INR 4,361 Cr in September, 2019.

Acquiring Co.



Divestiture Transaction

Target Co.

SANDOZ A Novartis Division

Transaction Summary:

- Aurobindo pharma has acquired Novartis' generic pills and dermatology business Sandoz Inc. for USD 1 Bn.
- This acquisition would make aurobindo pharma the 2nd largest dermatology and 2nd largest generic business company in the us by prescriptions, the deal is awaiting regulatory approvals.

B. Private Entities

Acquiring Co.



Divestiture Transaction

Target Co.

CHIRON BEHRING

Transaction Summary:

- Bharat Biotech acquires Chiron Behring Vaccines from GSK in 2019
- The deal was an all cash transaction
- The acquisition is aimed for growth, Bharat Biotech will become the worlds largest manufacturer of rabies vaccine

Acquiring Co.



Acquisition Transaction

Target Co.

EnergyBin

Transaction Summary:

- Blue Planet Environmental Solutions Pte has acquired Xenon Waste Managers LLP
- The technology of Xenon that converts organic waste into energy was in line with the core business plan for Blue Planet and was also the motivator for the acquisition

Investor



Private Equity Investment

Investee



Transaction Summary:

- ChrysCapital, GIC, CPPIB have bought a stake of 10% in the company in a private equity round for USD 350 mn
- This is the second time that ChrysCapital has decided to invest in the company after selling an 11% stake in 2015

The Emerging Startups

Seed



Elucidata

USD 1.7 mn in 2018

Hyperplane Venture Capital



USD 1.6 mn in 2013

Aramante Shipping PTE



USD 1.1 mn in 2015

Aarti Grover & Rajan Anandan

Series A



Bugworks

USD 9 mn in 2018

UTEC, CARB-X



USD 6.1 mn in 2016

Dream Incubator, BEENEXT



USD 5.6 mn in 2016

Accel, Aarin Cap, Chiratae

Series B+



USD 40 mn in 2018,
Series C

Northpond Ventures,
Sequoia, Accel



USD 35 mn in 2018,
Series B

Strides Pharma Science



USD 22 mn in 2019,
Series D

Iron Pillar, Romulus

Other Rounds



USD 30 mn in 2010,
Venture Round

Summit Partners



Magellan Life Sciences

USD 250 k in 2017,
Incubator

SOSV, IKP Knowledge Park



USD 154 k in 2017,
Debt Round

Omnivore Partners

Funds Raised

Lead Investor

Funds Raised

Lead Investor

Funds Raised

Lead Investor

Challenges for Startups in this Sector



Regulatory Hurdles

Clinical trials & approvals from regulatory authorities delay the launch of product even if it is ready.

Investors are not willing to lock in their capital for R&D that might not be successful



Payback period

Biotechnology has a longer payback period than a tech company

Lack of skilled manpower and veterans in the industry due to low R&D expenditure and lack of professional institutes



Talent Pool Shortage



Funding

Funds (VC/PE) betting on this sector in India



500



Concluding Remarks

- ❑ Indian biotech industry is the fastest growing sector in India & is expected to touch USD 100 bn market value by 2025. Already ~USD 3 billion of investments have been attracted by the Indian bio-tech startups in past 5 years & considering the growth of this sector, more aggressive investments can be seen in this sector.
- ❑ Biopharma is the largest sector contributing about 62 per cent of the total revenue followed by bio-services (18 per cent), bio-agri (15 per cent), bio-industry (4 per cent), and bio-informatics contributing (1 per cent). The split will remain more or less same as people are getting more conscious towards their health & hygienic foods, so the major investments can be expected in the bio-pharma & bio-agri startups in the coming years.
- ❑ Further, to support the biotech startups, BIRAC in collaboration with World Bank has launched Birac (i3) USD 250 mn innovation fund to accelerate innovation in the area of Vaccines, bio-therapeutics & medical devices in India.
- ❑ It is worth noting that India's R&D expenses budget is only ~0.6% of GDP, which is very low as compared to China (~2%), America & Japan (~3%). However, in the coming years we can expect some major improvements on this part by the govt. to support the growth of this sector. Already, many states (like Andhra Pradesh, Telangana, Gujarat & Rajasthan) in India have released their own biotechnology policies to promote the investment in their state.
- ❑ Further, Hybrid seeds, including GM (Genetically Modified) seeds & IVF technology represents new business opportunities in India. Even, many startups have started working on animal genetics side in collaboration with International Organizations like, Transova Genetics, Genus ABS, Benchmark etc. Though, players like Venky's & Avanti are already there in the market but still we can expect some more funding in animal genetics startups in the coming years.

About Transjovan Capital

TRANSJOVAN CAPITAL is a premier new-age Board Advisory firm, focused on providing advice to clients pertaining to Corporate Strategy, Mergers & Acquisitions (M&A), Joint Ventures (JV), Capital-raising (Equity & Debt) and Organization Development.

With offices in New Delhi and Mumbai, the Firm is a preferred Board-advisor to emerging as well as established corporates. The Firm's team has advised clients spread across SMEs, large Indian Conglomerates, Institutional Investors, Fortune 500 Corporations, Government Authorities and New Ventures.

The Firm has received top industry recognition, some of them being:

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'Most Promising M&A Advisory Companies in India' - 2015

'Most Promising Financial Consulting Companies in India' - 2014

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- ✓ Collective deal experience of USD 1+ Bn in the transaction advisory space.
- ✓ Access to 200+ PE/VC/Corporate investors
- ✓ Advised 4 of the top 10 largest Indian conglomerates in the areas of M&A advisory and business strategy.
- ✓ Advised across various geographies in India (i.e., Metros, Tier-II & Tier-III locations, etc.).
- ✓ Advised on India entry strategy and JV advisory to various MNCs.
- ✓ Extensive relationships with major Financial Institutions, Private Equity funds and various Institutional Investors - in India and globally.

For more info about the company, you may refer to: <http://www.transjovancap.com>

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