



सत्यमेव जयते

Department of Pharmaceuticals
Ministry of Chemicals and Fertilizers
Government of India

Strengths of the pharmaceutical and vaccine production sector in India

10th June, 2022

Department of Pharmaceuticals,
Ministry of Chemicals and Fertilizers,
Government of India.

Industry Overview

India Ranks

1st Largest supplier of low-cost Generics, Vaccines and Affordable HIV medicines

2nd Highest FDA approved plants outside of the USA

3rd Largest in terms of Volume



Exports to top 25 destinations



\$11 Bn Annual trade surplus



2.7 Mn jobs created (Direct and Indirect)

Sector Highlights

- 60,000 generic brands across 60 therapeutic categories
- Manufactures 500+ APIs
- 7 NIPERs* across India

FDI Investment in India



UK



USA



GERMANY



JAPAN



FRANCE



SPAIN

One of the top 10 sectors attracting FDI into India

\$18.12 Bn

FDI
(Apr'00- Jun '21)

\$50 Bn

Market Size
FY21

\$130 Bn

Expected
Market Size
by 2030*

Source: IPA Report

*NIPER- National Institute of Pharmaceutical Education and Research

Industry- Achievements

Shaping global vaccination



60%

Global vaccine production



90%

WHO demand for measles vaccine



40-70%

WHO demand for DPT (Diphtheria, Tetanus and Pertussis) and BCG (Bacillus Calmette-Guierin) vaccines

Driving access of medicines globally



25%

Medicines made in UK are made in India



40%

Pills consumed in US is produced by Indian generic manufacturer



37%

AIDS patients receiving treatment in 2009, vs 2% in 2003 in Africa

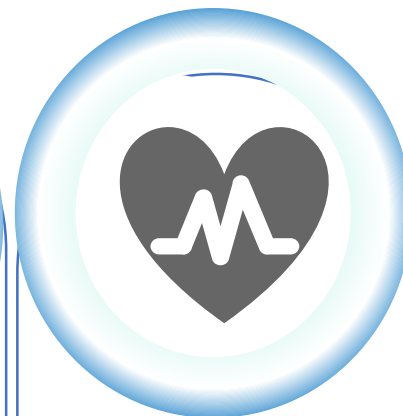
Vaccines



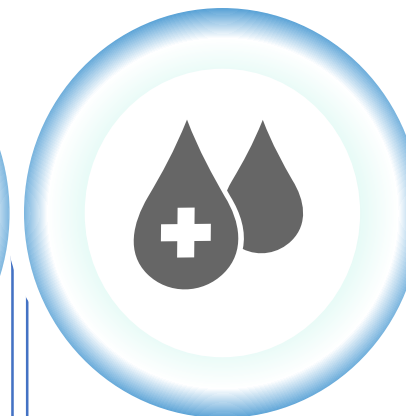
Biggest volume supplier to public market, fulfilling over **60%** of global vaccine requirements



USD 1.45 Bn vaccine market IN 2020, expected to reach **USD 2.9 Bn** by **2025**



Indian animal vaccine market is projected to reach **USD 232 Mn** by **2026**



Key contributor to **70%** of WHO's vaccines



Top supplier of COVID-19 vaccines to developing countries



Exported 230 million COVID vaccines doses to more than 97 countries till date.



Immunization doses in India – 2 billion doses

- Indian vaccine industry developed Covid vaccine with indigenous technology in collaboration with India's research institution like ICMR and NIV within shortest time on par with highly developed countries like America and EU.

**Source: WHO*

COVID-19 Vaccine in India

Nine COVID-19 Vaccines Approved for Use in India

Vaccine	Manufacturer/Importer	Type of Vaccine
Covishield (Oxford/AstraZeneca formulation)	Serum Institute of India	Non-replicating Viral Vector
Covaxin	Bharat Biotech	Inactivated virus
Sputnik V	Gamaleya Institute in Moscow & Importer-Dr Reddy's Laboratories Limited, Panacea Biotech Ltd, Hetero	Non-replicating Viral Vector
ZyCoV-D	Zydus Cadila	DNA-based
Moderna-mRNA-1273	ModernaTX, Inc, Importer -Cipla Ltd	mRNA-based
Ad26.COV2.S	Janssen Pharmaceuticals Companies of Johnson & Johnson	Non-replicating Viral Vector
Sputnik Light	Gamaleya Institute in Moscow & Importer - Dr Reddy's Laboratories Limited	Non-replicating Viral Vector
Covovax (Novavax Formulation)	Serum Institute of India	Protein subunit
Corbevax	Biological E Ltd	Protein subunit

Medical Technologies:

- Co-WIN platform is the first of its kind software to implement the world's largest immunization program for COVID vaccination in India.
- Transparent system to monitor each dose of vaccine supplied to vaccination facilities and recording the fulfilment of demand at a grassroots level.
- It has enabled the administration of over **2 billion doses of COVID-19 vaccination** that are registered on the platform.
- The platform takes pride in its simplicity and ease of use. For registration on the platform, the beneficiary is provided three media – **walk-in (offline), online portal and assisted through helplines and CSCs (Common Services Centres).**



Co-WIN

Covid Vaccine Intelligence Network

A tech-based platform facilitating the planning, implementation, monitoring, and evaluation of Covid-19 vaccination in India

Guiding Principles



Equitable and Inclusive

Equitable vaccination across multilingual states, with multiple modes for registration to ensure accessibility for all



Single Source of Truth

Unbiased distribution of vaccines through a single source of data to remove information asymmetry and align stakeholders



Evolvability and Scalability

Dynamic architecture capable of evolving and accommodating changes as per circumstances, built for a scale of a billion plus citizens



Feedback and Analysis

Data on vaccination and recording of AEFI helps form data-driven public health policy and evaluate the efficacy of different vaccines

Leading Generic and Vaccine players

DOMESTIC PLAYERS



FOREIGN PLAYERS



INDIA-GLOBAL GENERIC LEADER

India Based Companies Featuring among Top 20 Generic companies \$ Million

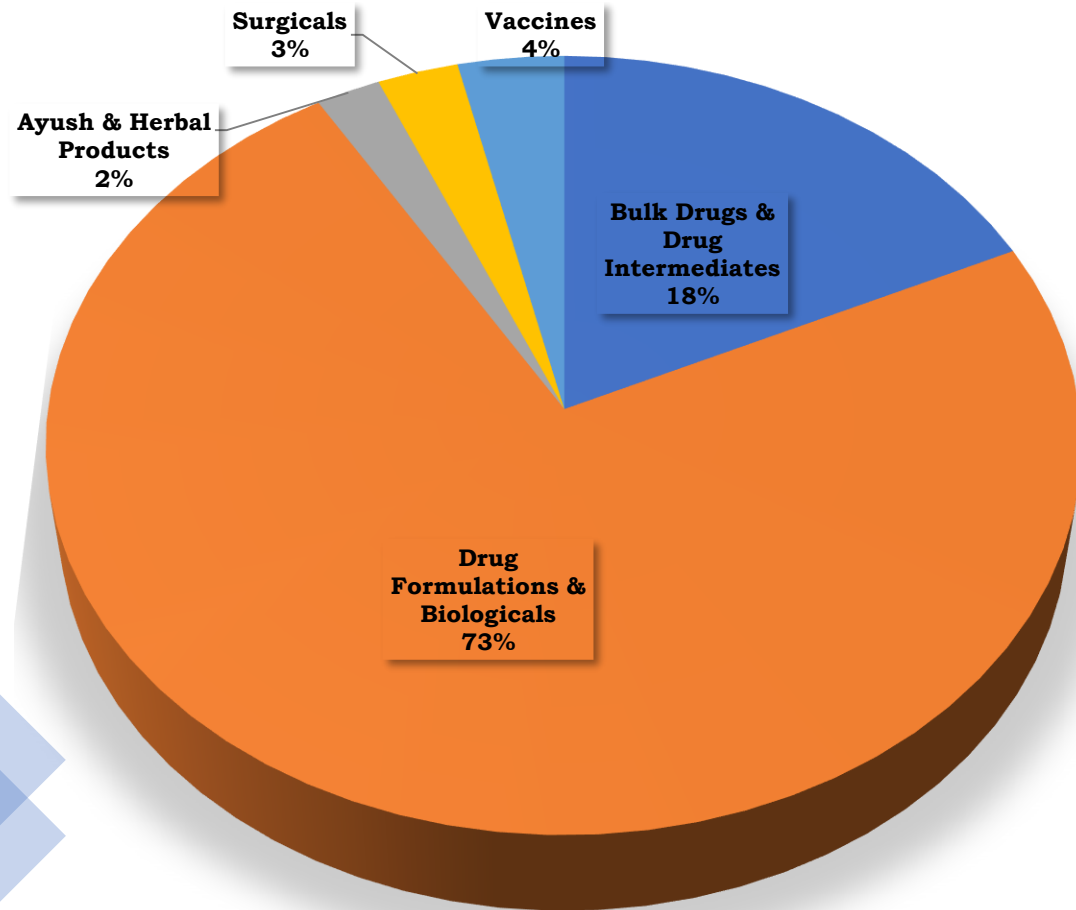


AYUSH: Traditional Medicine System of India

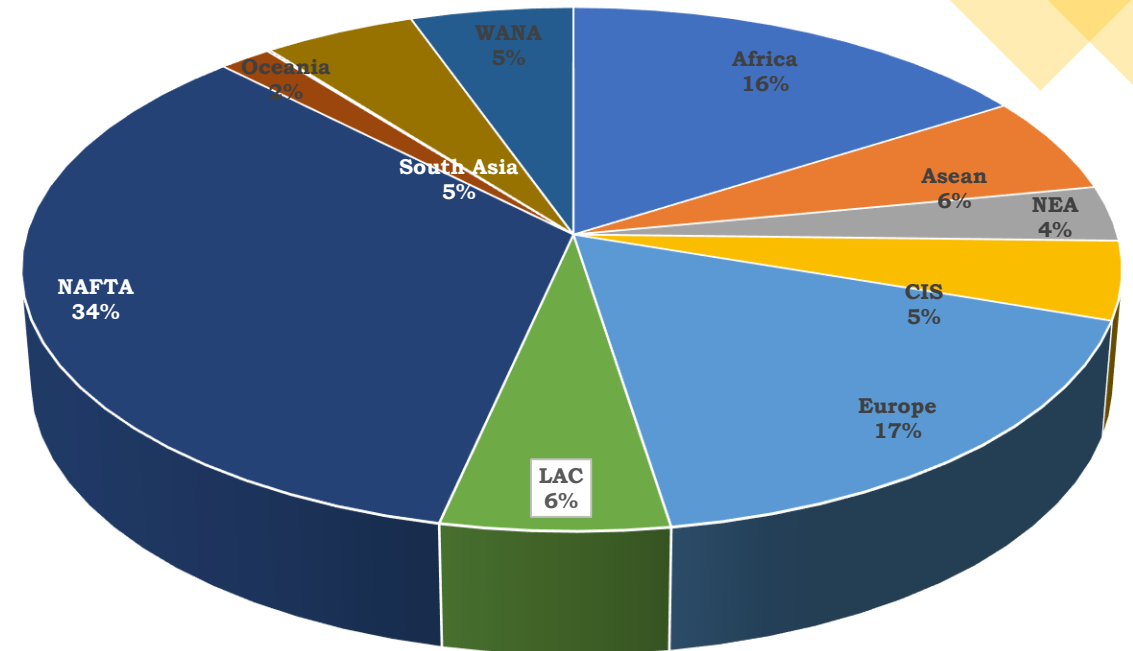
- The Ministry of AYUSH and the World Health Organization (WHO) are establishing world's first and only Global Centre for Traditional Medicine (WHO GCTM) in **India**: recognition of India's contribution and potential in this field.
- India's traditional medicine system is not limited only to treatment, it is a holistic science of life.
- The **primary objective of WHO GCTM** is to harness the potential of traditional medicine from across the world through modern science and technology and improve overall health of the communities' world over. The Centre will highlight the potential of traditional medicine and utilize technological advancements to promote its safe and effective use.
- On this occasion, **Director-General, World Health Organization (WHO)** said, *“Traditional medicines products are abound globally and the centre will go a long way in bringing the promise of the traditional medicine to fruition. The New Centre will focus on data, innovation and sustainability and will optimize the use of traditional medicine. Through this center India will be able to take its knowledge of traditional medicine to the world and similarly world will come to India”.*

India's Global trade- Exports in 2021

Category wise Exports



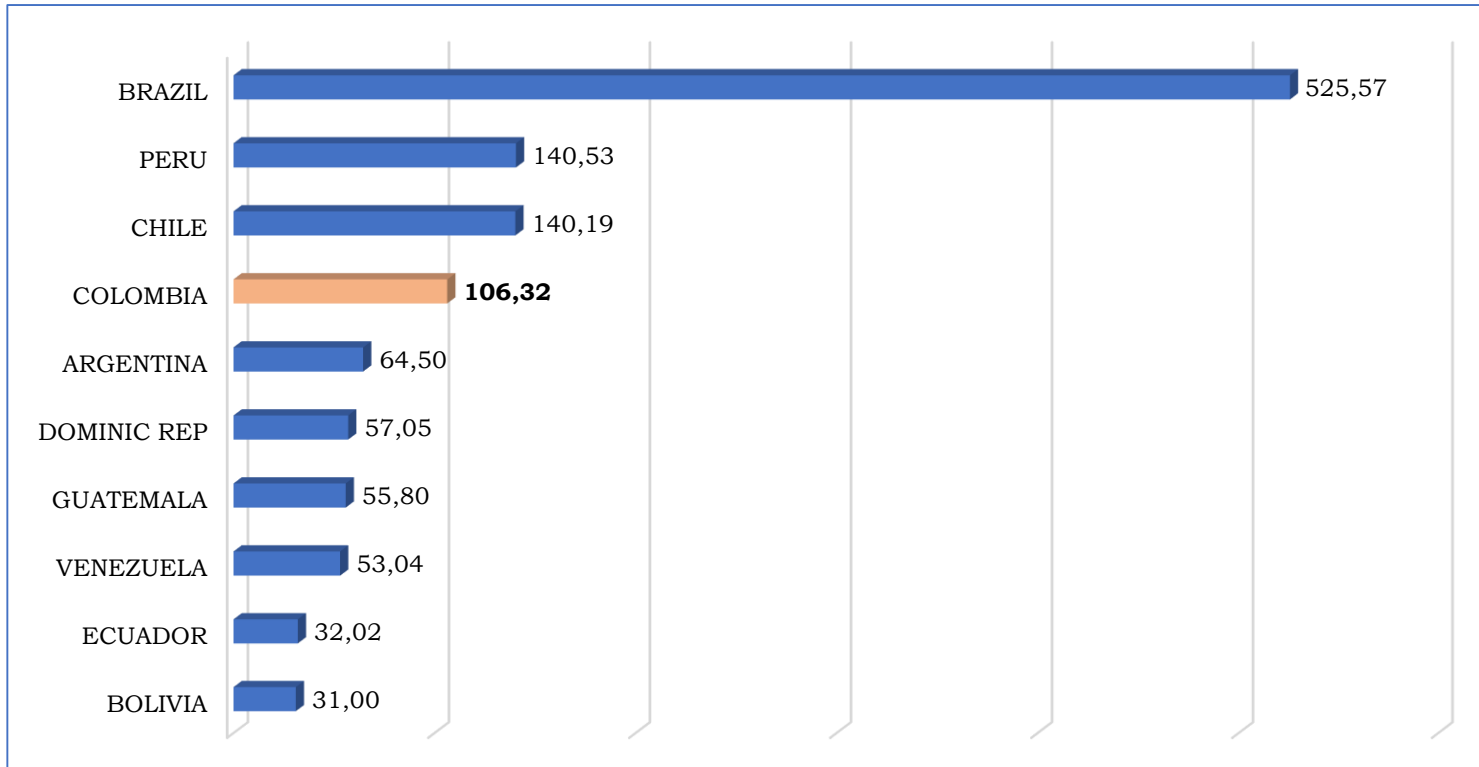
Region-wise Share of Pharma Exports



- Africa
- Asean
- NEA
- CIS
- Europe
- LAC
- NAFTA
- Oceania
- Others
- South Asia
- WANA

Export Destinations in Latin American Region for Indian Industry

EXPORTS IN 2020-21: US\$ 1607.81 MILLION WITH 19.86% GROWTH



**TOP 10 EXPORTING DESTINATION IN LAC FOR INDIAN PHARMA
(VALUES IN USD MILLION)**

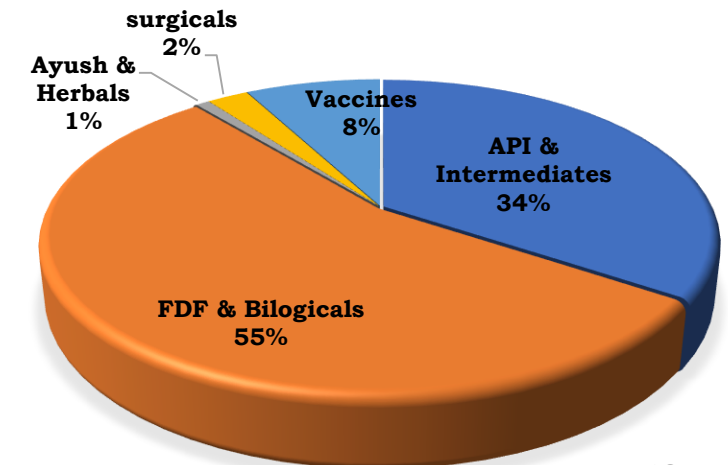
Pharma Exports to Colombia

FY-20 - USD 96.34 mn

FY-21- USD 106.32 mn (10.35%)

FY 22 - USD 150.42 mn (41.48%)

Exports by Product Category



Pharma Market of Colombia

Overall Pharma Market

- Market Size (2020) – USD 4.6 bn
- Projected Market Size (2025) – USD 6.2 bn at growth rate of 6.2 % CAGR

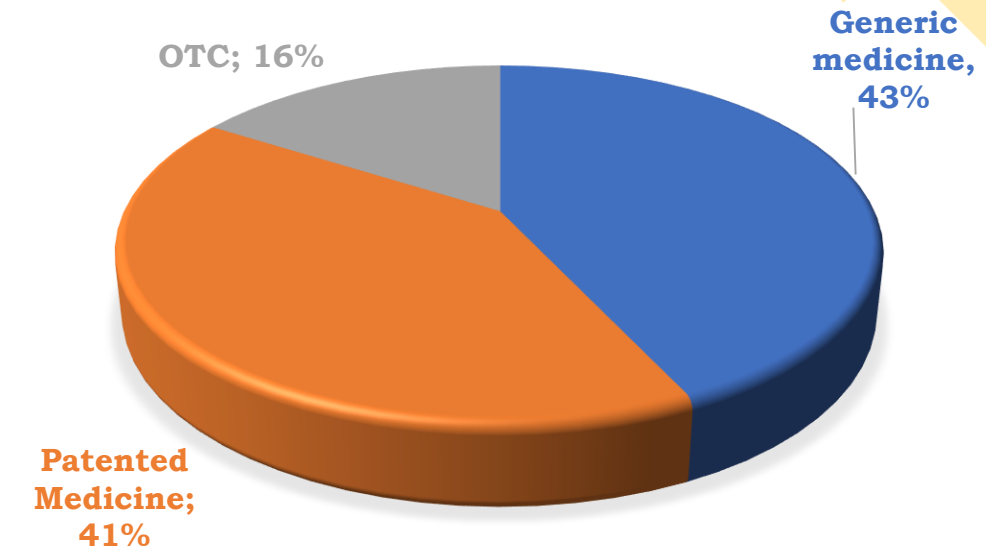
Generic Market

- Generic Market Size (2020) – USD 1.9 bn
- Projected Generic Market Size (2025) – USD 2.4 bn to reach at growth rate of 4.9%.

Top Ten formulations Importing Partners of Colombia \$ Mn

Rank	Country	2017	2018	2019	Change%	Contbn%
1	USA	331.04	347.67	398.39	14.59	19.68
2	Germany	258.77	290.89	325.51	11.9	16.08
3	France	117.88	122.1	136.7	11.96	6.75
4	Switzerland,	113.57	122.46	122.03	-0.35	6.03
5	Mexico	100.87	97.81	106.93	9.32	5.28
6	Belgium	78.39	78.32	85.23	8.83	4.21
7	Italy	86.63	76.33	84.97	11.32	4.2
8	Brazil	69.87	68.7	78.85	14.78	3.9
9	India	72.75	76.66	75.57	-1.42	3.73
10	Spain	48.21	49.61	63.67	28.36	3.15
	World	1727.38	1826.19	2024.06	10.84	100

COLOMBIA'S PHARMA MARKET COMPOSITION IN 2019



India's contribution to Global Health- Access

- Generics represent **60-80% of all medicine volume sales** in key markets globally, with penetrations in many countries at even higher levels (e.g., **90%+ in the US, 80%+ in Australia, 90%+ in India and ~85% in Jordan**).¹
- Scale combined with ability to maintain cost-effective prices has enabled the industry to expand reach and access of several therapies globally
 - generic HIV therapies have helped increase treatment coverage 3-fold since 2010 in **Eastern and Southern Africa** and reduce the number of deaths by 44%²
 - similarly, within a year of launch of generic antivirals for hepatitis C, the number of people who initiated treatment rose by 50%³. Over a decade (2006-2016), therapy volume in 7 therapy areas has doubled in **Europe**, while lowering spend on these treatments significantly at the same time.
 - **India's** per person disease burden measured as Disability Adjusted Life Years (DALYs) dropped by 36 percent between 1990 and 2016 after adjusting for changes in the population age structure.
 - similarly, in **Africa** the burden of disease measured in DALYs dropped by 30% in the same period⁴.

Source: 1 IGBA, The positive impact that generics and biosimilar medicines have on patients and health systems. 2020.

https://www.igbamedicines.org/doc/20191025_Data.pdf

2 Avert, HIV and AIDS in East and Southern Africa Regional Overview, 2020. <https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/overview>

3 WHO, Progress on the access to Hepatitis C Treatment, March 2018. <https://www.who.int/hepatitis/publications/hep-c-access-report-2018/en/>

4 Our World in Data, Burden of Disease, 2016. <https://ourworldindata.org/burden-of-disease>

India's contribution to Global Health- Affordability

- Generics and Biosimilars also create **substantial cost savings for patients and health systems globally.**
 - Patients and the healthcare system in the **US saved approx. USD 313 billion** in 2019 through use of generics and an additional **USD 2.2 billion in 2019** through use of biosimilars medicines¹.
 - Over the last decade, savings add up to **USD 2.2 trillion and USD 4.5 billion through use of generic and biosimilar medicines respectively.**
 - In Europe, biosimilars represent a market of **EUR 8.4 billion and represent 8% of biologics market volume.**²
 - **Granulocyte-Colony Stimulating Factors (G-CFS)**, the medicine class with the longest use of Biosimilars, have grown substantially since the introduction of Biosimilar competition. Visible list price reductions of Biosimilars have reduced budgets for medicines by approximately 5% since 2014 overall, and up to 67% for established classes such as Erythropoetin.

Source:

1 Association for Accessible Medicines, 2020 Generic Drug & Biosimilars Access & Savings in the US Report. <https://accessiblemeds.org/2020-Access-Savings-Report>

2 IQVIA, The Impact of Biosimilar Competition in Europe, 2020. <https://www.iqvia.com/library/white-papers/the-impact-of-biosimilar-competition-in-europe>

Collaboration in Trade/Investment with Colombia

- **Market access to safe and affordable drugs by Colombia**
 - Drug regulator of Colombia provides for registration for Indian products with in 90-180 days.
 - **Collaboration:** Fast Track registration of Indian products having approvals from Stringent Regulatory Authorities.
- **Strategic collaboration: Industry-to-Industry**
 - Need to know the incentives for establishment of industry offered by Colombia.
 - **Collaboration:** Some Indian companies are in touch with the Embassy of Colombia in India for preliminary talks.
 - A business delegation with participation from Indian Govt. can visit Colombia if required.

Collaboration in Academics and Research

- Indian Technical and Economic Cooperation (ITEC) is one of the major bilateral assistance program for developing countries focused on innovative technological cooperation.
- National Institutes of Pharmaceutical Education & Research (NIPERs) are Indian institutes of national importance, which offer courses at master's and doctorate level in various streams of pharmaceutical sciences For instance, one of the NIPER at Mohali has run various courses for more than 630 participants from more than 70 countries.
- NIPERs and other Institutions of Higher Learnings can collaborate with national and other universities in Colombia.
- Further, there is scope for undertaking collaborative research in areas of mutual interest.

Collaboration: Can be explored further.

GRACIAS....