



India Pharma Archives:

History of Manufacturing Practices in India



Image Source: Merck KGaA Archives, Lupin.

Chinmay Tumbe

IIM Ahmedabad

Oct 9, 2026

11th Advanced GMP Workshop
(Online)

Indiapharmaarchives.com

- 20+ Rare Documentaries
- 250+ Video Stories
- 100+ Case Studies
- 200+ Journal Articles
- 400+ Books
- 1000+ resources

The screenshot shows the India Pharma Archives website. The header is dark blue with the IPA logo (Indian Pharmaceutical Alliance) on the left, the site name 'India Pharma Archives' in the center, and social media icons and a search bar on the right. Below the header is a navigation bar with links for 'About', 'Timeline', 'IPA Firms', and 'Collections'. A prominent '+ Advanced Search' button is located below the navigation bar. The main content area features a horizontal menu with tabs for 'Oral Histories' (highlighted in orange), 'Video Gallery', 'Visual Gallery', 'Document Gallery', and 'Other Resources'. Below the 'Oral Histories' tab, there is a 'Reset' button and a 'Sort by' dropdown menu. The content is organized into two columns. The left column lists 'IPA Companies' (Abbott India, Ajanta, Alembic, Alkem, Aurobindo Pharma) and 'Non-IPA' (Wockhardt, Biocon, ACG, Narayana Health, Sarabhai Chemicals), each with a checkbox and a 'View more' link. Below this is a 'Format' section with a checkbox for 'Oral History'. The right column displays two video thumbnails. The first video features Dr. Yusuf Hamied, Non-Executive Chairman of Cipla, and is titled 'The Indian Pharma Landscape: The Indian Patent Act of 1970'. The second video features Dilip Shanghvi, Executive Chairman of Sun Pharma, and is titled 'Growth & Building Institutions: Critical Milestone Moments'. Both videos are part of the India Pharma Archives Oral History Project.

India Pharma Archives

Search...

About | Timeline | IPA Firms | Collections

+ Advanced Search

Oral Histories | Video Gallery | Visual Gallery | Document Gallery | Other Resources

Reset

Sort by

IPA Companies

- Abbott India ☐
- Ajanta ☐
- Alembic ☐
- Alkem ☐
- Aurobindo Pharma ☐

[View more](#)

Non-IPA

- Wockhardt ☐
- Biocon ☐
- ACG ☐
- Narayana Health ☐
- Sarabhai Chemicals ☐

[View more](#)

Format

- Oral History ☐

Dr. Yusuf Hamied,
Non-Executive Chairman, Cipla

The Indian Pharma Landscape: The Indian Patent Act of 1970

In an interview for the India Pharma Archives Oral History Project

1 minute 44 seconds

Dilip Shanghvi,
Executive Chairman, Sun Pharma

Growth & Building Institutions: Critical Milestone Moments

In an interview for the India Pharma Archives Oral History Project

3 minutes 18 seconds

P C Ray and Bengal Chemical & Pharmaceutical Works (estd. 1901)

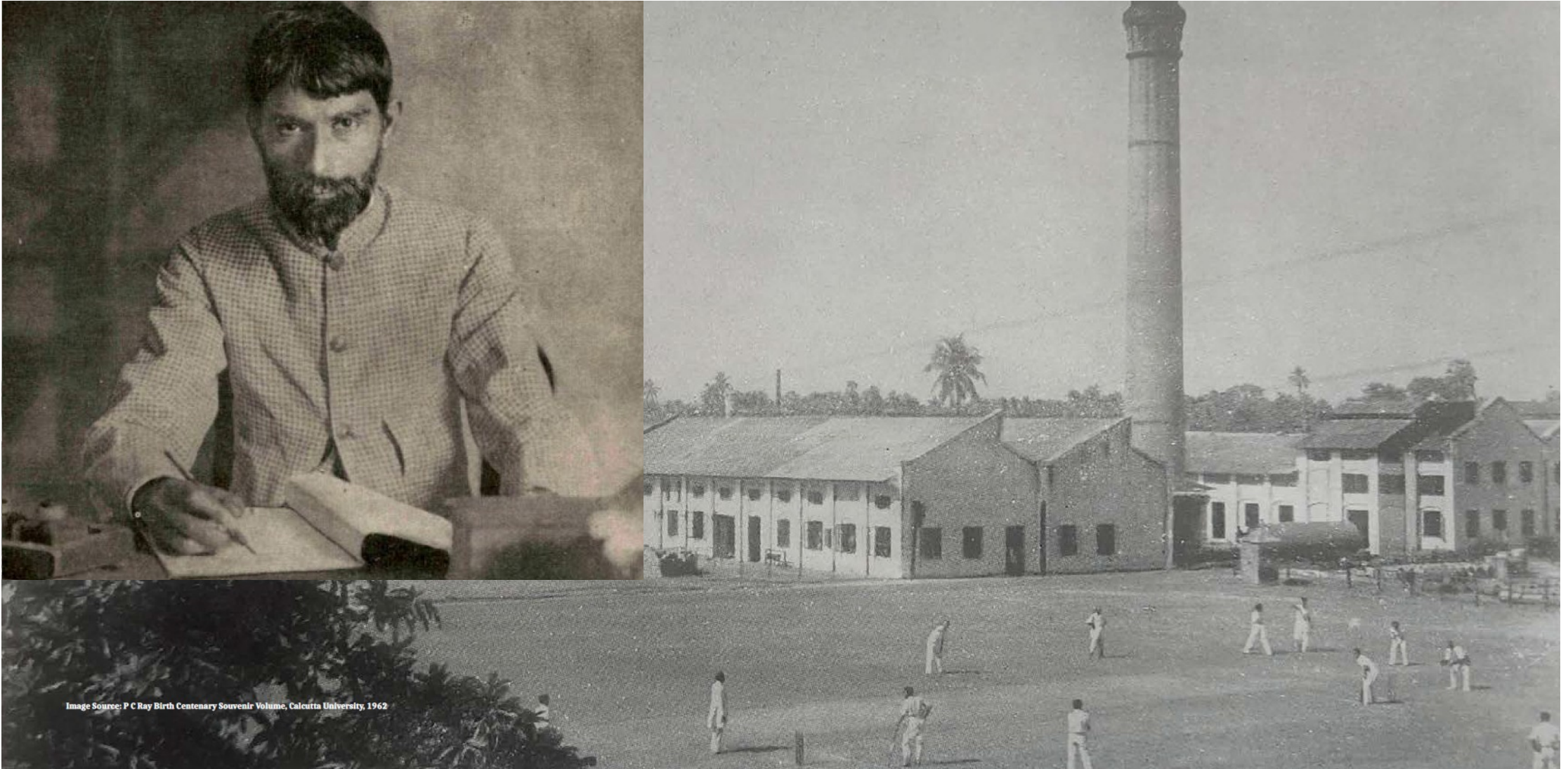
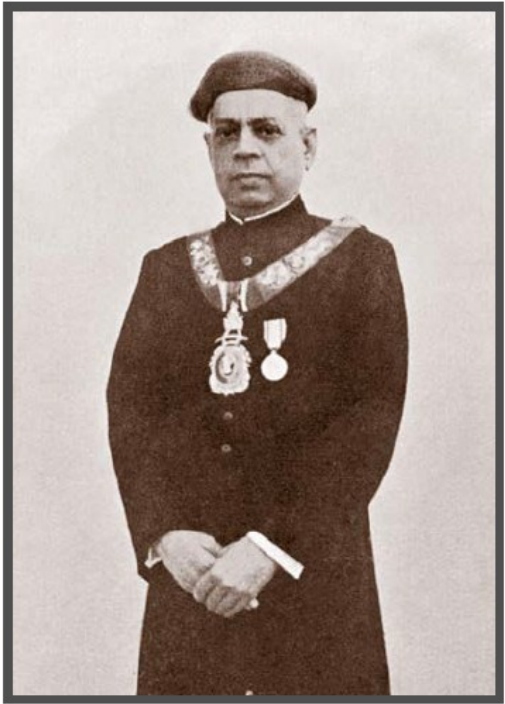


Image Source: P C Ray Birth Centenary Souvenir Volume, Calcutta University, 1962

Alembic 1938 Quality Statement



Rajendra B D Amin



"So much stress is laid on low price by many that the really vital question of Quality is ignored... this has never been and will never be our policy"

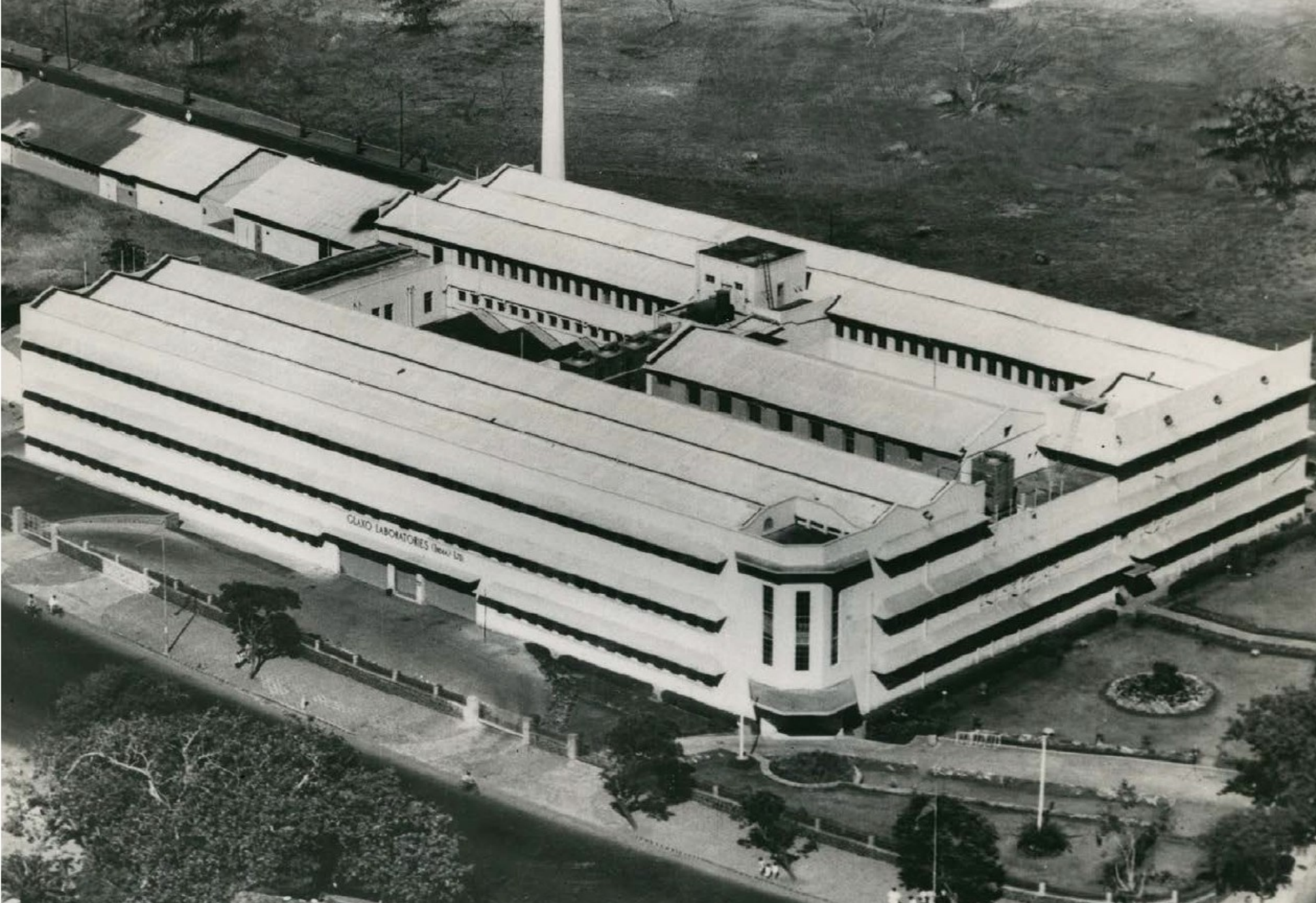
"So much stress is laid on low price by many that the really vital question of Quality is ignored. This never has been and will be our policy. Our first consideration is Quality and only when that has been attained does the matter of price come in. We apply searching test for purity and strength to all our products, and this, coupled with modern methods in manufacture, ensure an unvarying high standard. The result has been an increasing demand which has enabled us to produce economically, so that, while our ideal of Quality is maintained, we can offer you terms which compare favourably with any others. You are certain of Quality. We think you may be equally certain of Price."

Source: Alembic (1939), Alembic (2007).

Roche in Mumbai, 1940s



Source: Roche
Archives



Glax
o/
GSK
• 1950s
Worli
Factory
in
Mumbai

- Largest factory in India at that time

Source: GSK Archives.

Homi Ruttonji Nanji and Italab, 1948

Quality Control Services

Dr. Homi Ruttonji Nanji (PhD, B. Pharm-London, FRIC, FRSA) set up Italab or Industrial Testing and Analytical Laboratories in 1948, after a Professorship in Pharmaceutical Chemistry at the University of Bombay. He also managed the pharmaceutical firm, Pharmed, with Swiss collaboration, became president of prominent pharmaceutical industry associations, and was appointed to numerous government committees.

Italab opened branches across India and even set up Italab (Japan) in 1961, one of the earliest overseas ventures by an Indian pharma entrepreneur. The high standards of quality control measures set by Italab with its motto of providing “Accurate, Impartial and Reliable Services” has led to the creation of a dynamic quality control service industry in India today.

Italab Private Ltd.



Dr. Homi Ruttonji Nanji
(1909-1967)

Source: IPA (2025). *The Alchemy of Cure*.

The Sarabhai SOPs, 1950s-60s [Squibb, Merck, Geigy]



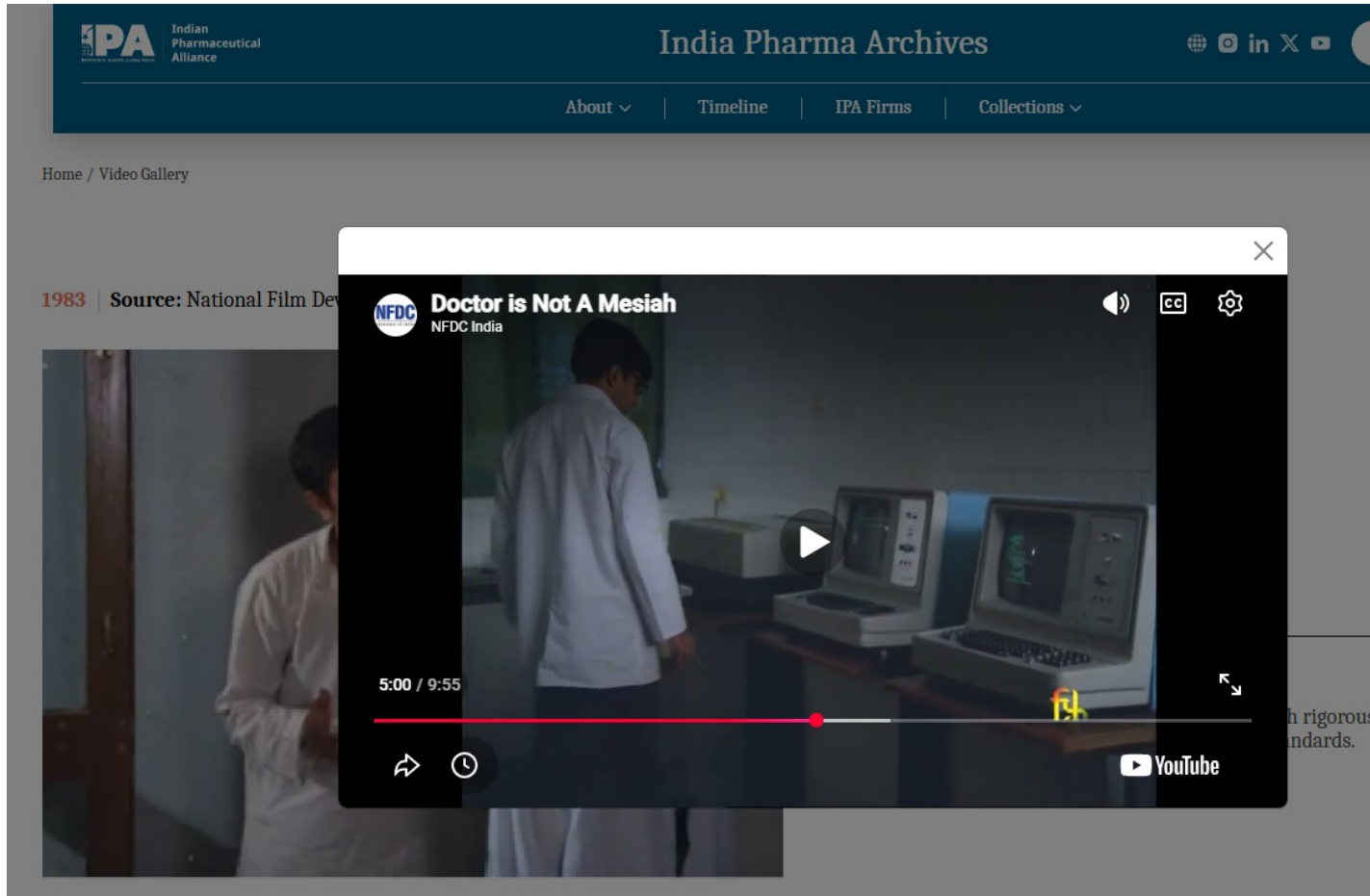
1961: "Ascorbic acid [Vitamin C] is a very sensitive product, sensitive against all impurities and heat. That is why the crew must learn to keep rooms and equipment (outside and inside) clean.

'Clean' means the superlative of all cleanliness...All work in production should be done in the way, that always 'thinking why' is not forgotten. All instructions about temperature etc. should be written into the report as they are. (There should never be noted an improved figure). **Orders should be executed and not shifted to another man!** The execution must be checked by the orderer if it is finished all right. All work which was begun should be finished without intervals. **A man who is doing a job should not get a new order before he has ended his work."**

Dr. Vikram Sarabhai and Dr. Hans Harms, CEO of Merck, in Vadodara factory, c. 1960.

Source: Merck KGaA archives.

IDPL (Indian Drugs and Pharmaceuticals) and the Bulk Drugs Industry of Hyderabad



1950s-1980s

Rare documentary videos on the India Pharma Archives website show detailed production processes of IDPL and Hindustan Antibiotics



Dr. Yusuf Hamied
(b. 1936).

Early evolution of 'Quality' at Cipla

- 1970s
 - Internal quality unit
 - Buys HPLC
 - QA team moves to production site
 - Stops lab burners to be used for cooking food!
- 1980s
 - 1984: QA and QC separated from each other
 - 1985: USFDA 'approval'

Dr. Parvinder Singh (1943-1999), Ranbaxy



Malaysia, 1980s:
“that little country of 15
million people taught
us our first lesson in
quality”



Dr. K Anji Reddy on the cover of Forbes magazine, December 10, 2001

Dr. K Anji Reddy (1941-2013) quote in 1992

"It is gratifying to note that about 20 bulk drug manufacturing plants in the country have already received the US-FDA approvals and a few more units are awaiting such approvals. Furthermore, there may arise a need for approvals by similar agencies of other nations e.g., DHSS approval in UK, ISO-9000 registration in Europe. Indian pharmaceutical industry must therefore continue to upgrade its GMP [Good Manufacturing Practice] systems so as to meet the ever-demanding requirements of the international agencies."

The Rise of GMP [Good Manufacturing Practice]

- 1963 GMP by USFDA
- 1969 GMP by WHO
- **Mid-1980s, first USFDA inspections in India**
- 1988 GMP in Schedule M, Drugs and Cosmetics Rules (1945)
 - 2005 and 2023 revisions
- 2002 USFDA: Pharmaceutical cGMPs for the 21st Century: A Risk-Based Approach'

From License Raj to Dossier Raj

1970 Process Patent Regime

- Reverse Engineering

1978 New Drug Policy

- API and Bulk Drugs Manufacturing

Pre-1991 License Raj

- Contract Manufacturing

1984 Hatch-Waxman Act in US

- Rise of Indian Exports to US
- 'Quality' and USFDA regulations

Post 1980s

- Rise of dossiers submitted to international regulators

REGULATIONS AND LEGISLATIONS

1911	Indian Patents and Designs Act
1940	Drugs and Cosmetics Act
1948	Pharmacy Act
1954	Drugs and Magic Remedies (Objectionable Advertisement) Act
1962	Drugs (Display of Prices) Order
1966	Drugs Prices Display and Control Order
1970	The Patents Act - Replaced product patents with process patents
	Drugs (Price Control) Order
1978	Drug Policy
1979	Drugs Prices (Control) Order
1984	Hatch-Waxman Act in USA established the generic drug approval process
1986	Drug Policy
1987	Drugs Prices (Control) Order
1994	New Drug Policy
1995	Drugs Prices (Control) Order
2005	The Patents (Amendment) Act - Re-established product patents



Foreign MNC Share in Indian Pharmaceutical Retail Market has gone down from 70% in 1971 to 15% in 2024.

Table 5: Foreign Firms in the Indian Pharmaceutical Market, 1920-2024

Year	Top firm's sales (Rs. Million)	Top 30 co. sales (Rs. Million)	No. of foreign firms in Top 30 List	MNC Market Share, % of Indian Market
1920	2*		16	
1971	160	1,310	24	70
1996	4,840	40,570	12	34
2004	11,280	1,33,440	7	22
2014	72,710	6,54,350	7	19
2024	1,80,670	16,61,720	6	15

Notes: *Paid-up capital. Source: Same as for Tables 2 and 3.

Largest Pharmaceutical Firms of the World and India, 2024

Rank	Global Big Pharma	Total Pharmaceutical		Total Revenues (\$ Billion)
		Sales (\$ Billion)	Indian Big Pharma	
1	Pfizer	64	Sun Pharma	6.1
2	Merck & Co	58	Dr. Reddy's Laboratories	3.8
3	Johnson & Johnson	57	Aurobindo Pharma	3.7
4	AstraZeneca	55	Cipla	3.2
5	AbbVie	55	Zydus Lifesciences	2.7
6	Roche	55	Lupin	2.6
7	Novartis	52	Intas	2.6
8	Bristol Myers Squibb	50	Biocon	1.8
9	Sanofi	48	Glenmark	1.6
10	Eli Lilly	45	Alkem	1.5
11	Novo Nordisk	42	Mankind Pharma	1.4
12	GSK	40	Torrent Pharma	1.4
13	Amgen	33	Serum Institute of India	1.1
14	Takeda	30	Piramal Pharma	1.1
15	Gilead Sciences	29	Divi's Laboratories	1.1
16	Boehringer Ingelheim	24	Macleods	1.0
17	Bayer	19	Emcure	0.9
18	Teva	17	Jubilant Pharmova	0.9
19	CSL	15	Alembic	0.8
20	Viatis	15	Ipca	0.8

Source: Scrip 100 Rankings, data for 2024; Annual reports of Indian firms; In 2026, Sun Pharma acquired Organon pushing its sales to over \$12 billion.

Table 2: Top Ten Countries by Net Exports of Pharmaceuticals

Rank	Country	Pharma Net Exports, USD Billion, 2022	Per Capita Income, USD, PPP, 2023
1	Ireland	73	115,401
2	Germany	54	63,098
3	Switzerland	45	81,684
4	Belgium	27	62,876
5	India	19	9,160
6	Italy	13	52,589
7	Denmark	13	71,390
8	Singapore	9	127,544
9	Sweden	8	62,665
10	France	6	53,969

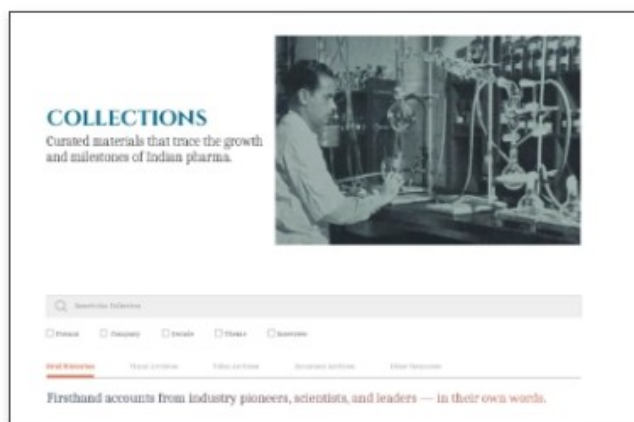
Source: Observation for Economic Complexity, World Bank Development Indicators. PPP=Purchasing Power Parity.

From License Raj to Dossier Raj

- India has built significant pharma manufacturing capabilities since 1970s
- 'Quality' needs continuous learning to stay ahead
- Awareness of BMP [Bad Manufacturing Practice]
 - Bad quality culture: "Chalta hai" attitude
 - Environmental fallouts

India Pharma Archives

At a Glance



Digital Archive

An accessible, searchable platform featuring company profiles, oral history interviews, archival visuals, and primary documents.

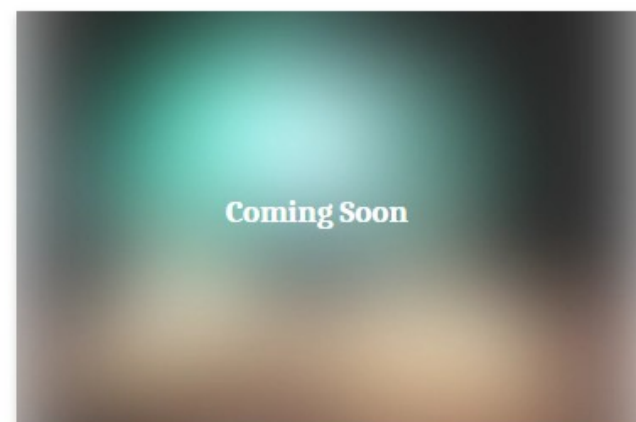
[Explore the Archives >](#)



The Alchemy of Cure: An Illustrative Book

A richly designed coffee table book offering a curated narrative of the industry's growth, through milestones, voices, and images.

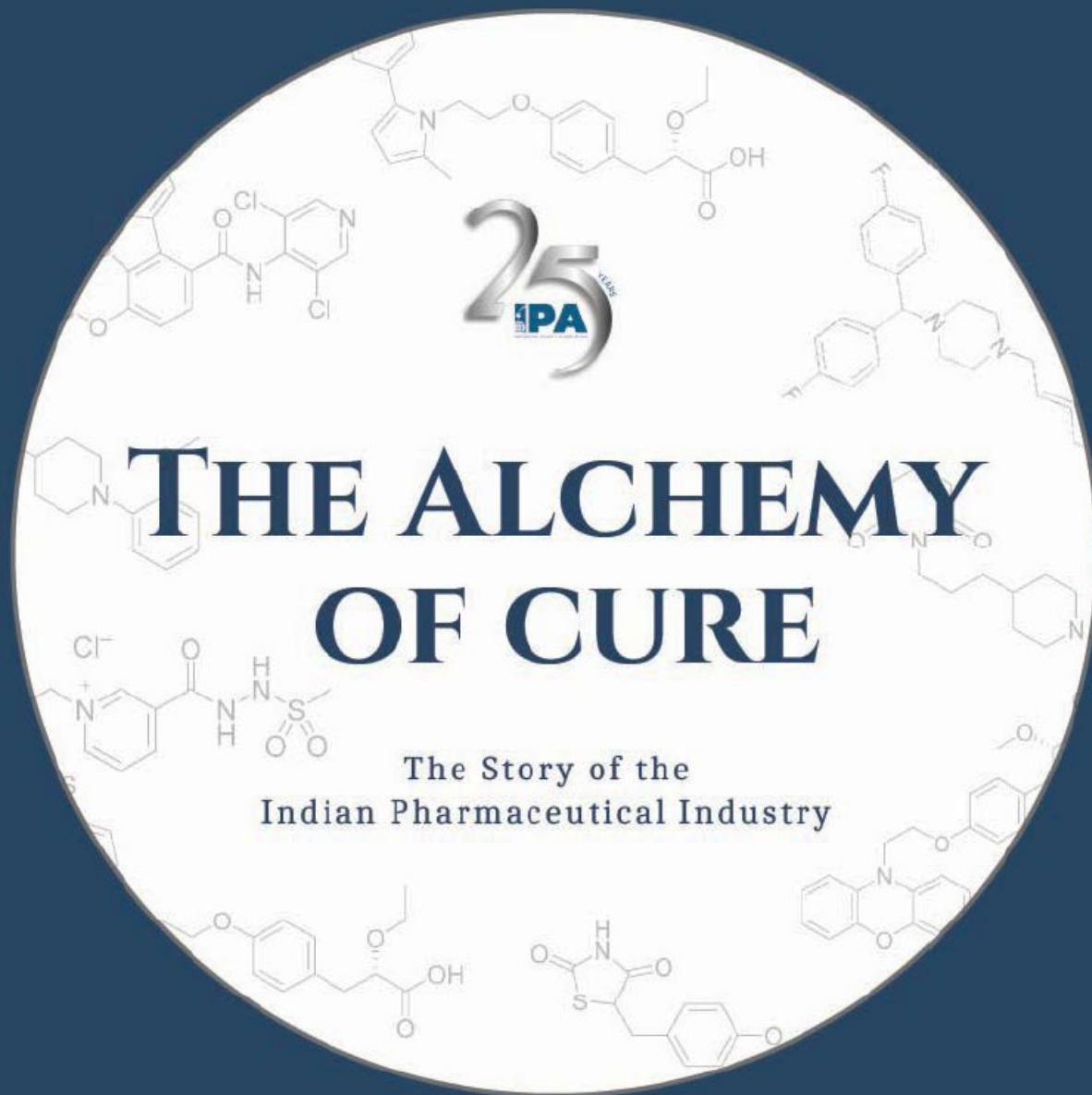
[Read The Alchemy of Cure >](#)



Pharmacy to the World

A forthcoming scholarly publication aimed at advancing research in business history, public health, and industrial policy.

[Read about the Book >](#)



- Released back in Jan 2026
- Book freely available on the India Pharma Archives website



India Pharma Archives

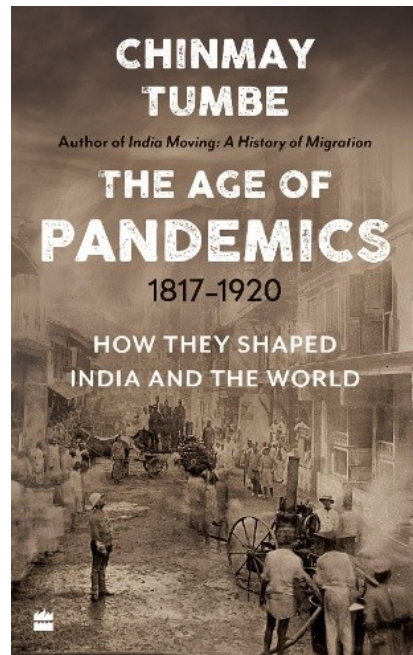
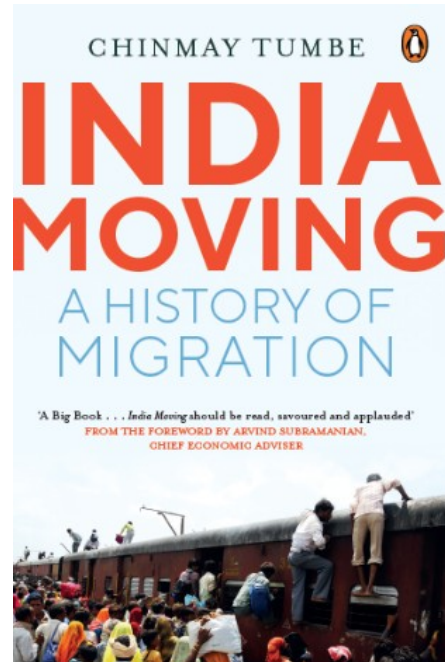
Do check it out!

Indiapharmaarchives.com

You can also contribute!

Thank You!

Do read my
upcoming
book...



***Pharmacy to the
World:***

***A History of the
Indian
Pharmaceutical
Industry***