

**September 26, 2022**

National Stock Exchange of India Limited,  
Exchange Plaza, Bandra Kurla Complex,  
Bandra (E), Mumbai-400051, MH.

BSE Limited  
Phiroze Jeejeebhoy Towers  
Dalal Street, Fort, Mumbai-400001

Symbol: ORCHIDPHAR

Scrip Code: 524372

**Subject: Intimation under Regulation 30 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.**

Dear Sir/Madam,

Pursuant to Regulation 30 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 we hereby inform you that Meetings of the Investors and Roadshow of Orchid Pharma Limited ("**the Company**") are scheduled to be held as per the details mentioned hereunder:

<b>Commencement Date</b>	<b>End Date</b>	<b>Place</b>	<b>Mode</b>
Monday, Sept. 26, 2022.	Friday, Sept. 30, 2022.	Mumbai	Physical

Copy of the presentation to be presented and discussed during the said events is enclosed herewith for your reference.

Further, the presentation is also available on Company's official website i.e., [www.orchidpharma.com](http://www.orchidpharma.com)

Kindly note that the above schedule may undergo change due to unforeseen exigencies on the part of Investors/Company.

Please take the above information in your record.

Thanking You,

For **Orchid Pharma Limited**

MANISH  
DHANUKA

Digitally signed by  
MANISH DHANUKA  
Date: 2022.09.26  
14:00:14 +05'30'

**Manish Dhanuka**  
**Managing Director**

DIN: 00238798

*Encl. as above*



# The Road Ahead

# Company overview

1

## **PIONEER IN CEPHALOSPORIN ANTIBIOTICS**

R&D Focused, Inventor of  
Enmetazobactam (Ph.-3 Trials done in US  
& EU)  
Acquired by Dhanuka Group through CIRP  
Process on 1st April 2020

2

## **ABOUT DHANUKA GROUP**

~ 2500 Crore diversified group. Interests in  
Crop Care and Pharma  
Dhanuka Laboratories is the Pharma arm.  
>20 years in Antibiotics space

3

## **INTEGRATED CEPHALOSPORIN API COMPANY SPREAD OVER 60 ACRES**

Worldwide approvals from USFDA, EU,  
ANVISA, PMDA  
Widest Portfolio of > 25 products across  
Oral and Sterile Cephalosporins

4

## **PROFESSIONAL & EXPERIENCED BOARD WITH STRONG MANAGEMENT TEAM**

Over 200 years experience in the board.  
Over 1000 strong team, with Managers  
having 15 years experience at Orchid.

5

## **STRONG R&D CAPABILITIES**

Capability to file Para IV applications with  
USFDA with 8 FTF till date  
More than 10 process patents and 13  
product patents

6

## **GLOBAL PRESENCE WITH A WIDE CUSTOMER BASE**

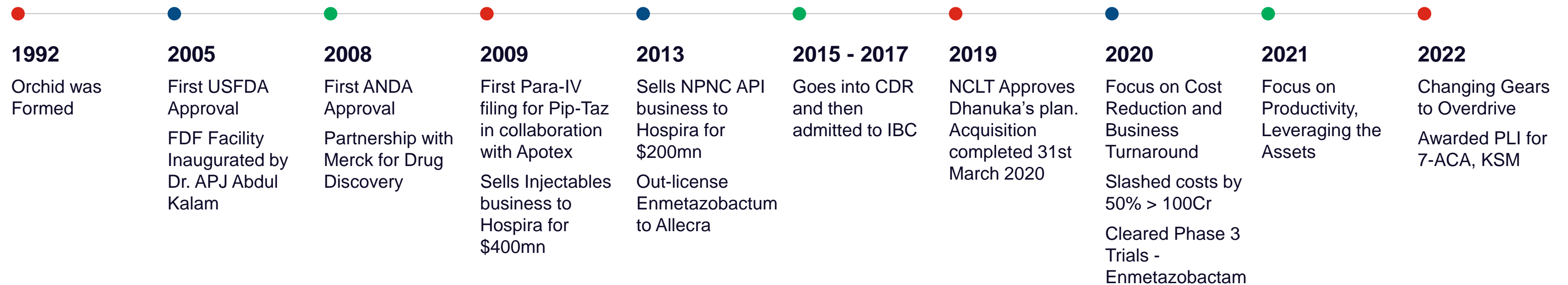
Present in more than 60 Countries  
More than 200 Customers across US,  
Europe and Emerging Markets

7

## **FOCUS ON ESG**

Highest Standards of Air – Water Emission  
Control – ZLD – 70% Recycle  
Community development programs for  
villages around the company

# History



# Background and Pedigree

## Dhanuka Agritech Ltd.

- Flagship of the Group founded in 1980.
- Listed on Stock Exchanges for 35 years with a Market Cap of USD 600mn
- Manufactures a wide range of farm input products
- The Company has pan India presence with a network of more than 6000 distributors reaching out to more than 10 million farmers
- The Company has technical tie ups with 4 American and 6 Japanese companies

## Dhanuka Laboratories Ltd.

- Pharmaceutical arm started in 1998
- Leader in Cephalosporin Antibiotics in Emerging markets
- JV with Otsuka - Japan, for manufacturing advanced intermediates
- 2 API Manufacturing Facilities, both Cephalosporin and NPNC

# Key Rationale for Acquiring Orchid Pharma

**Orchid and Dhanuka  
complement each  
other to become a  
formidable force in  
Antibiotics**

## Orchid

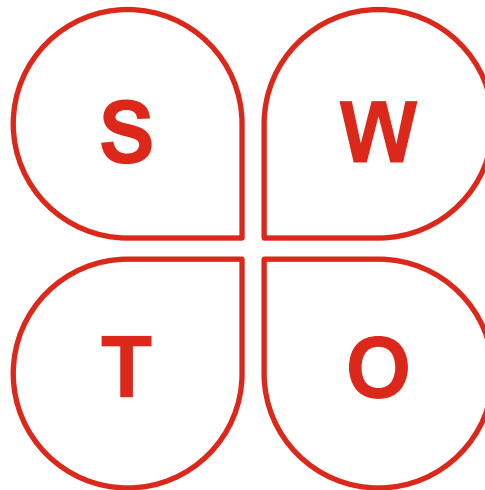
**World Leader in Cephalosporin  
Antibiotics focused on regulated  
markets**

### Strengths

Regulatory Approvals –  
US / EU / Japan /  
LATAM  
Widest Range

### Weaknesses

High Cost Structure  
Lack of focused  
Management



### Threats

Financial Stress  
Competition from Low  
Cost Chinese  
Players

### Opportunity

Build on Strengths to  
be a World Leader

## Dhanuka Group

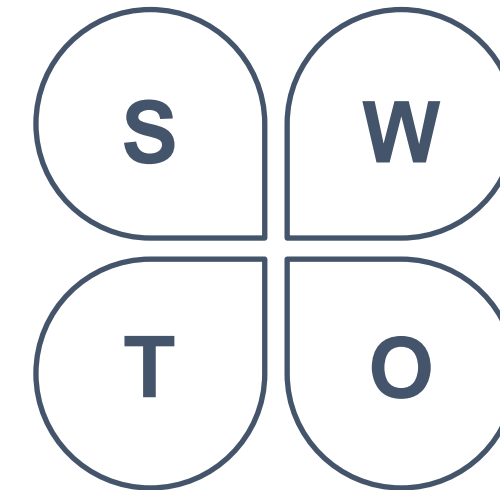
**Leader in Emerging Market space,  
with a strong R&D for new  
products**

### Strengths

Cost Efficient  
Management  
Strong R&D  
Execution Capabilities

### Weaknesses

Only present in  
emerging markets



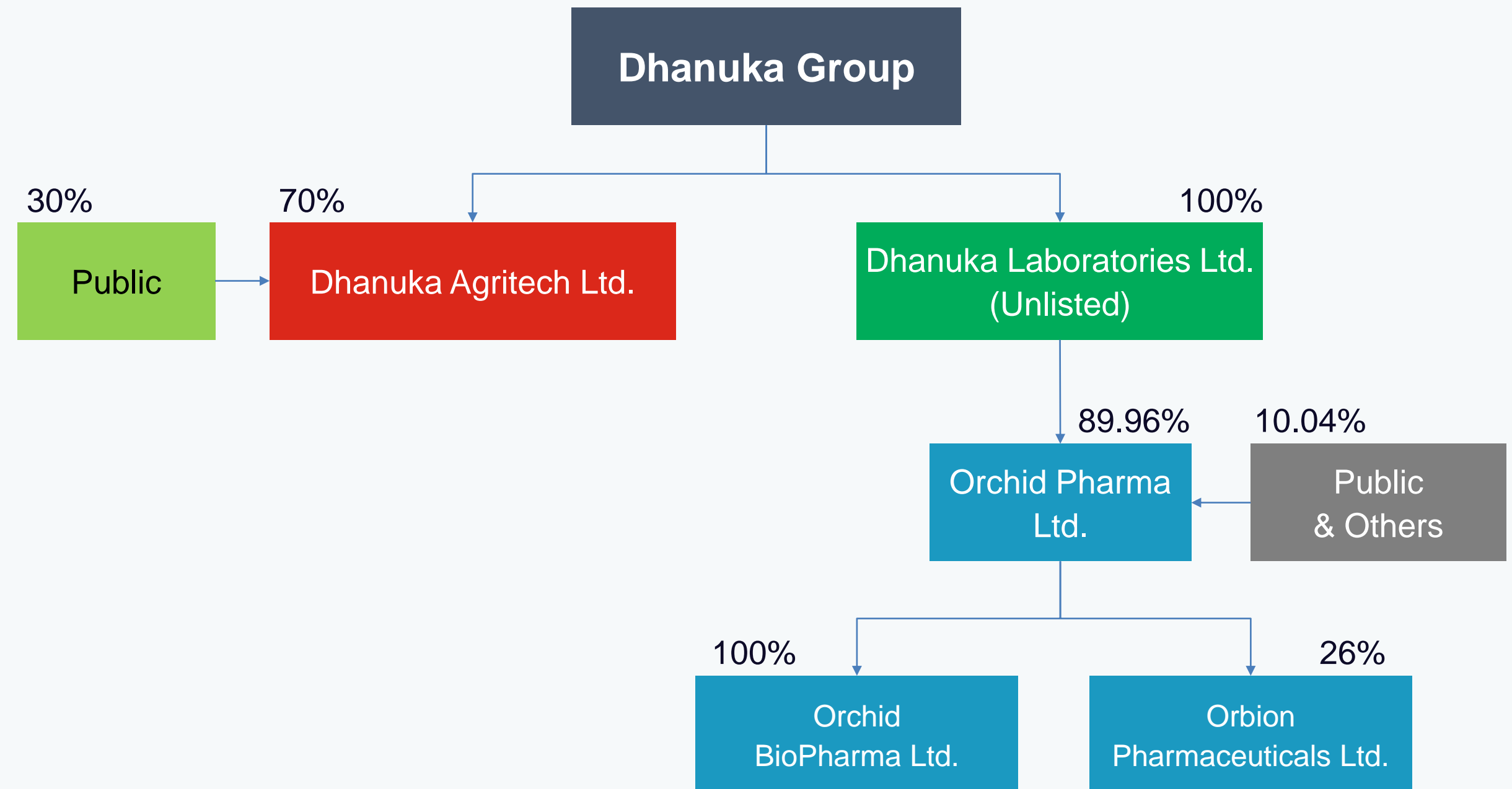
### Threats

Emerging Markets  
High Competition

### Opportunity

Growth by Inorganic  
Route

# Current Corporate Structure



Other insignificant subsidiaries in US / EU are non operative and were linked to non-core business which was sold off to Orbion.

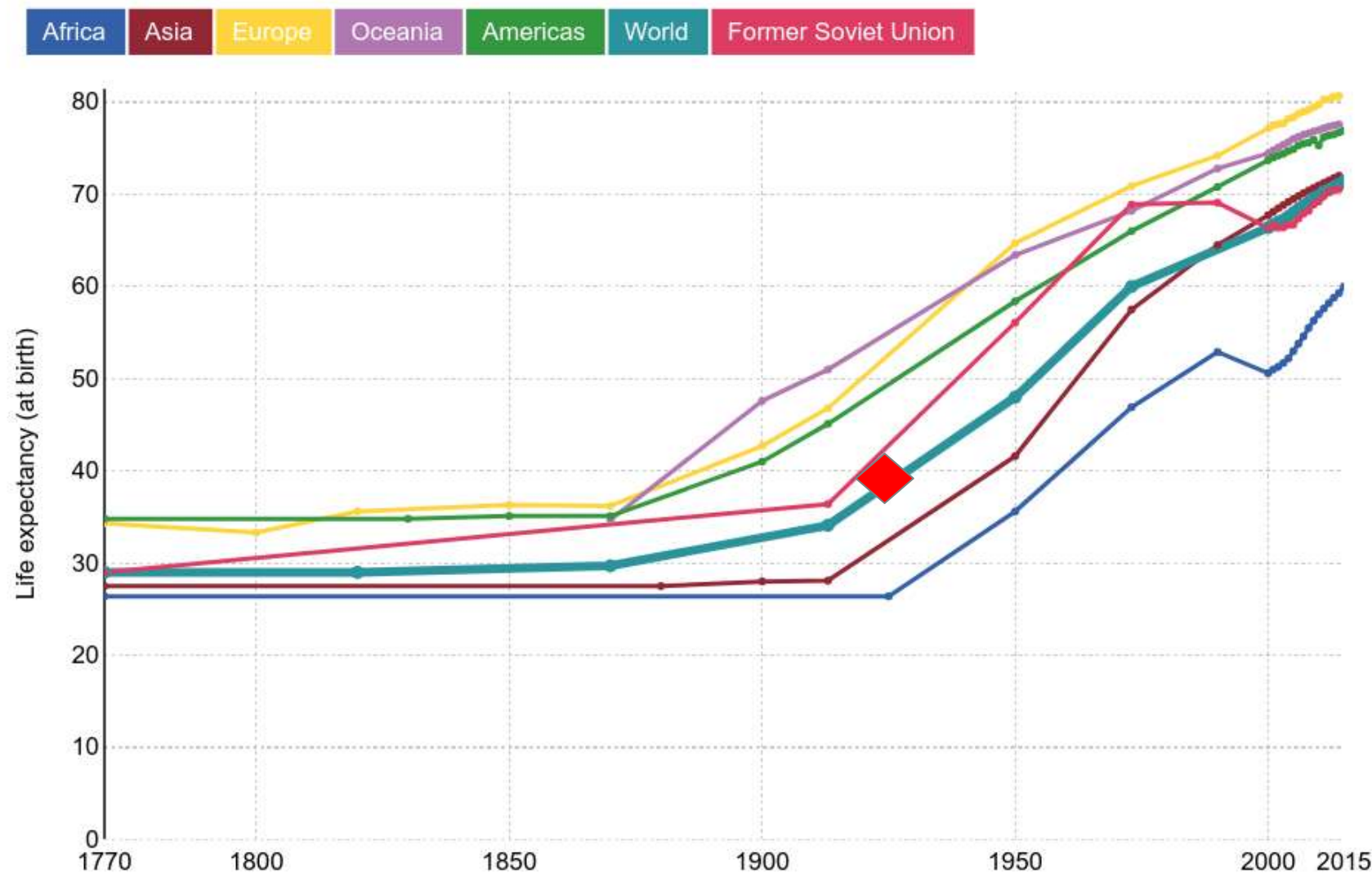
# About Antibiotics





# What are Antibiotics

Life expectancy globally and by world regions since 1770



Source: Life expectancy – James Riley for data 1990 and earlier; WHO and World Bank for later data (by Max Roser) OurWorldInData.org/life-expectancy/ • CC BY-SA

Life Saving Drugs used to fight infections

Before Penicillin by Alexander Fleming, average life expectancy was 40 years

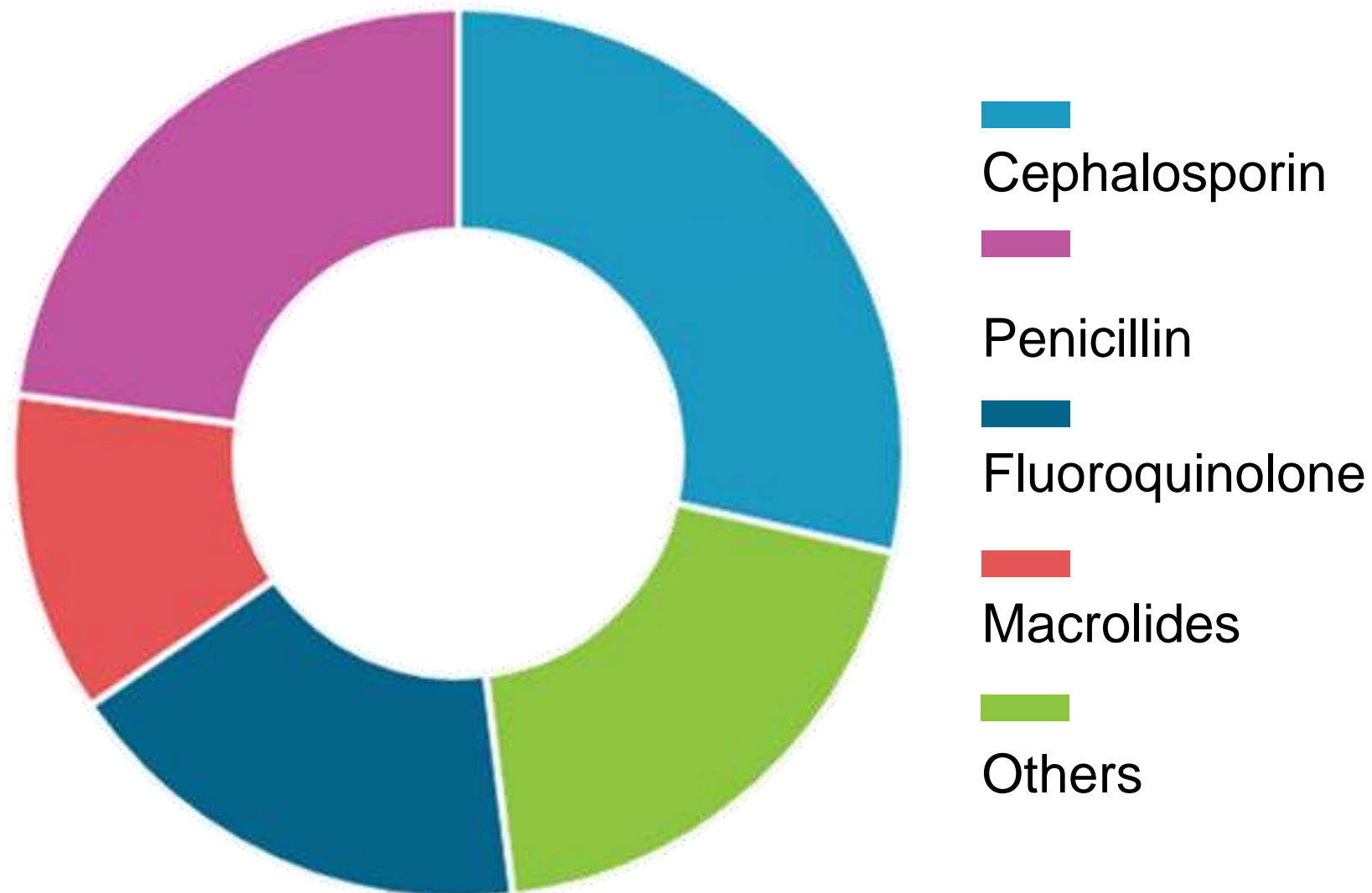
After Antibiotics, basics like child-birth, injuries, pneumonia and stomach infections were tackled which reduced preventable deaths

Advanced procedures like open heart surgery, organ transplant and cancer treatment, were only possible after Antibiotics

Now the life expectancy is 70 years

# Antibiotics Market

**Global antibiotics market share,  
by drugs class**



➤ Global Antibiotics Market in 2020 – USD 40 bn.

➤ Cephalosporins is the largest class with 30% share.

➤ Fastest growing at ~ 8% CAGR

➤ Widest product range with more than 30 products approved worldwide

➤ Ceph's have excellent safety profile and wide coverage of bacteria

➤ Newer Class, less resistance to bacteria

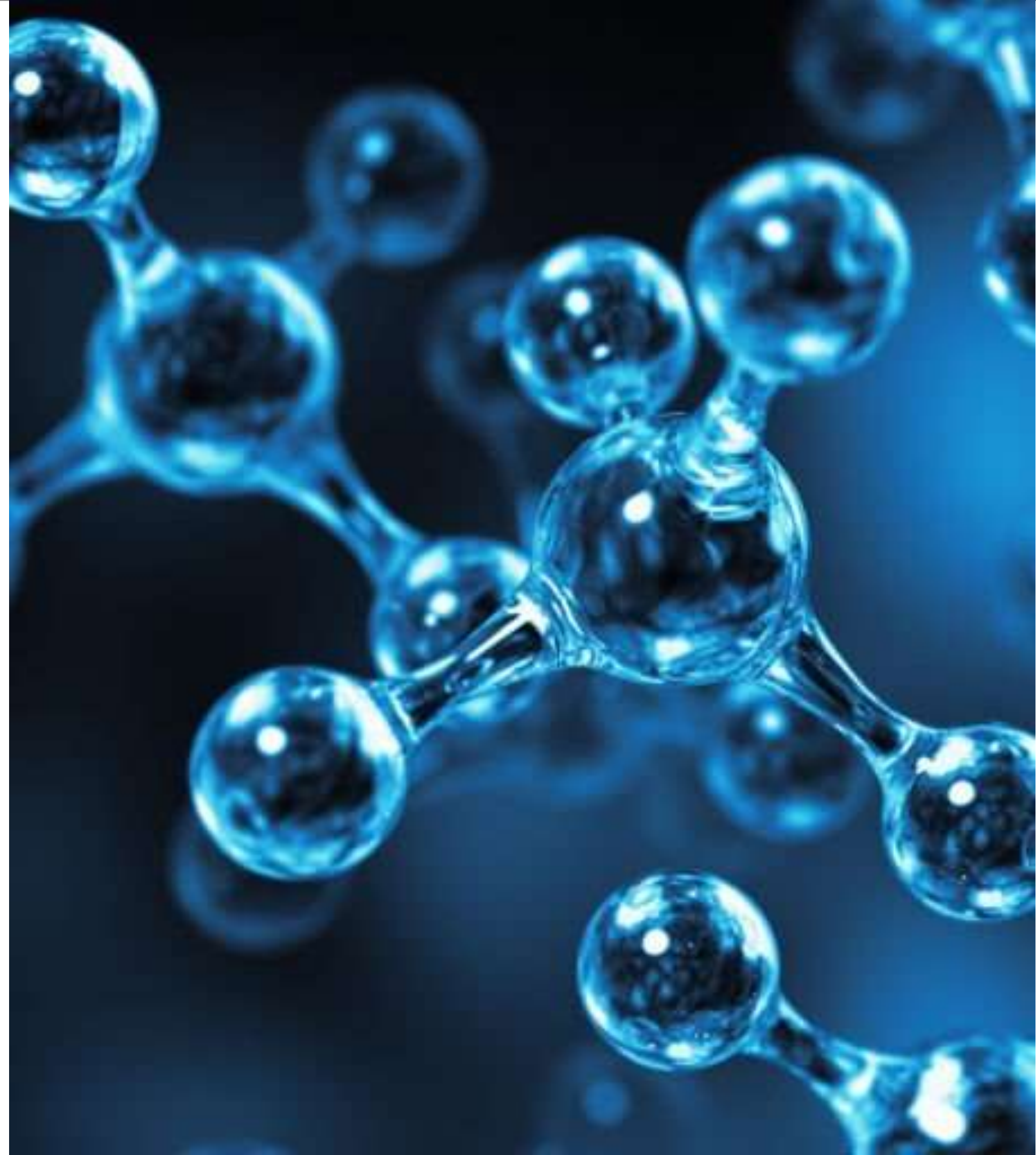
➤ Volumes will see further growth as population increases.

➤ Next decade will add ~600mn people in Asia and Africa where access to medicine will improve with rising incomes.

➤ Indian Domestic Size ~ 20,000 Cr

➤ Indian Exports of API and FDF ~ 20,000 Cr

# Why Orchid



# Strong R&D capabilities

Orchid pharma has been focused on R&D, will continue to invest in it



Orchid's expertise encompass the entire spectrum of Pharmaceutical R&D

1. Synthesis R&D
2. Analytical R&D
3. Intellectual Property Management

More than 900 patents filed internationally

8 FTF till date for Orchid

All these combined, give us the strength and ability to file First to File Para 4 applications for US and other regulatory markets.

Non – Infringing Process Development

Impurity Qualification

Impurity Characterization

Patent Invalidation Strategy

# Widest range of Cephalosporins

Ready to launch

Under development

	Generation 1	Generation 2	Generation 3	Generation 4	Generation 5	Generation 6
<b>Oral</b>	<ul style="list-style-type: none"> <li>→ Cefadroxil</li> <li>→ Cefalexin</li> <li>→ Cefradine</li> </ul>	<ul style="list-style-type: none"> <li>→ Cefprozil</li> <li>→ Cefuroxime</li> </ul>	<ul style="list-style-type: none"> <li>→ Cefdinir</li> <li>→ Cefditoren</li> <li>→ Cefixime</li> <li>→ Cefpodoxime</li> <li>→ Ceftibuten</li> </ul>			
<b>Sterile</b>	<ul style="list-style-type: none"> <li>→ Cefalonium</li> <li>→ Cefalothin</li> <li>→ Cefazolin</li> </ul>	<ul style="list-style-type: none"> <li>→ Cefoxitin</li> <li>→ Ceforanide</li> <li>→ Cefotiam</li> </ul>	<ul style="list-style-type: none"> <li>→ Cefotaxime</li> <li>→ Ceftiofur</li> <li>→ Ceftizoxime</li> <li>→ Ceftriaxone</li> <li>→ Cefoperazone</li> <li>→ Ceftazidime</li> <li>→ <b>Cefovecin</b></li> <li>→ <b>Cefcapene</b></li> </ul>	<ul style="list-style-type: none"> <li>→ Cefepime</li> <li>→ Cefpirome</li> <li>→ Cefquinome</li> <li>→ <b>Cefiderocol</b></li> </ul>	<ul style="list-style-type: none"> <li>→ <b>Ceftaroline</b></li> <li>→ <b>Ceftobiprole</b></li> <li>→ <b>Ceftolozane</b></li> </ul>	<ul style="list-style-type: none"> <li>→ <b>Cefepime + Enmetazobactam</b></li> <li>→ <b>Ceftazidime + Avibactam</b></li> </ul>

# Leading - Integrated Cephalosporin API company

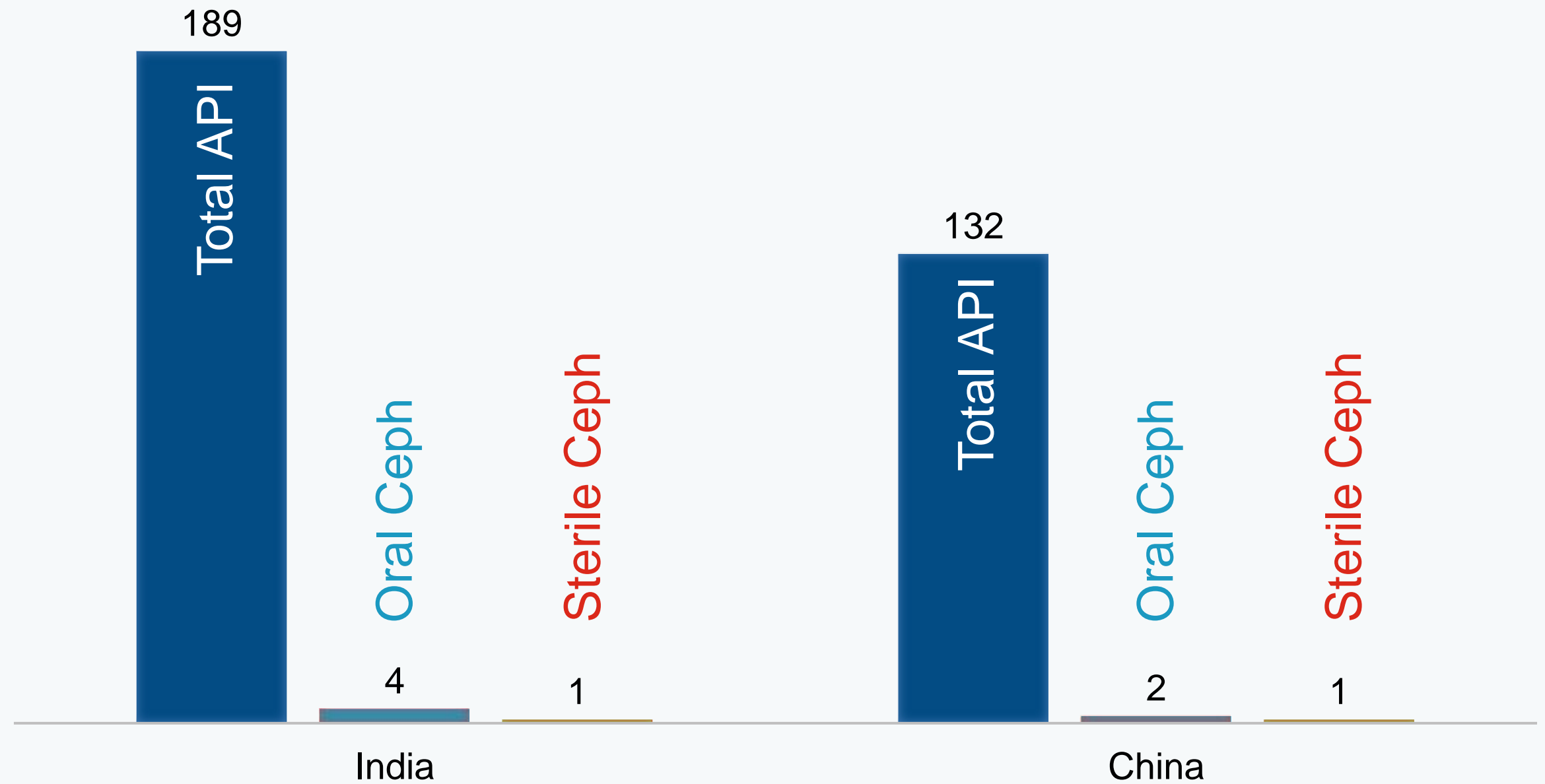


- ❑ Vertically integrated with credentials in research, development, manufacturing and marketing
- ❑ Integrated facilities from Intermediates to API spread across 60 acre, approved worldwide
- ❑ Presence across the antibiotic domains spread across oral and sterile categories of more than 30 products
  
- ❑ Multiple Blocks
  - ❑ Sterile – 3 Crystalline and 1 Lyophilized
  - ❑ Oral – 7 Blocks
  - ❑ Intermediates – 5 Blocks
- ❑ Footprint across 60 countries through direct presence, alliances and partnerships



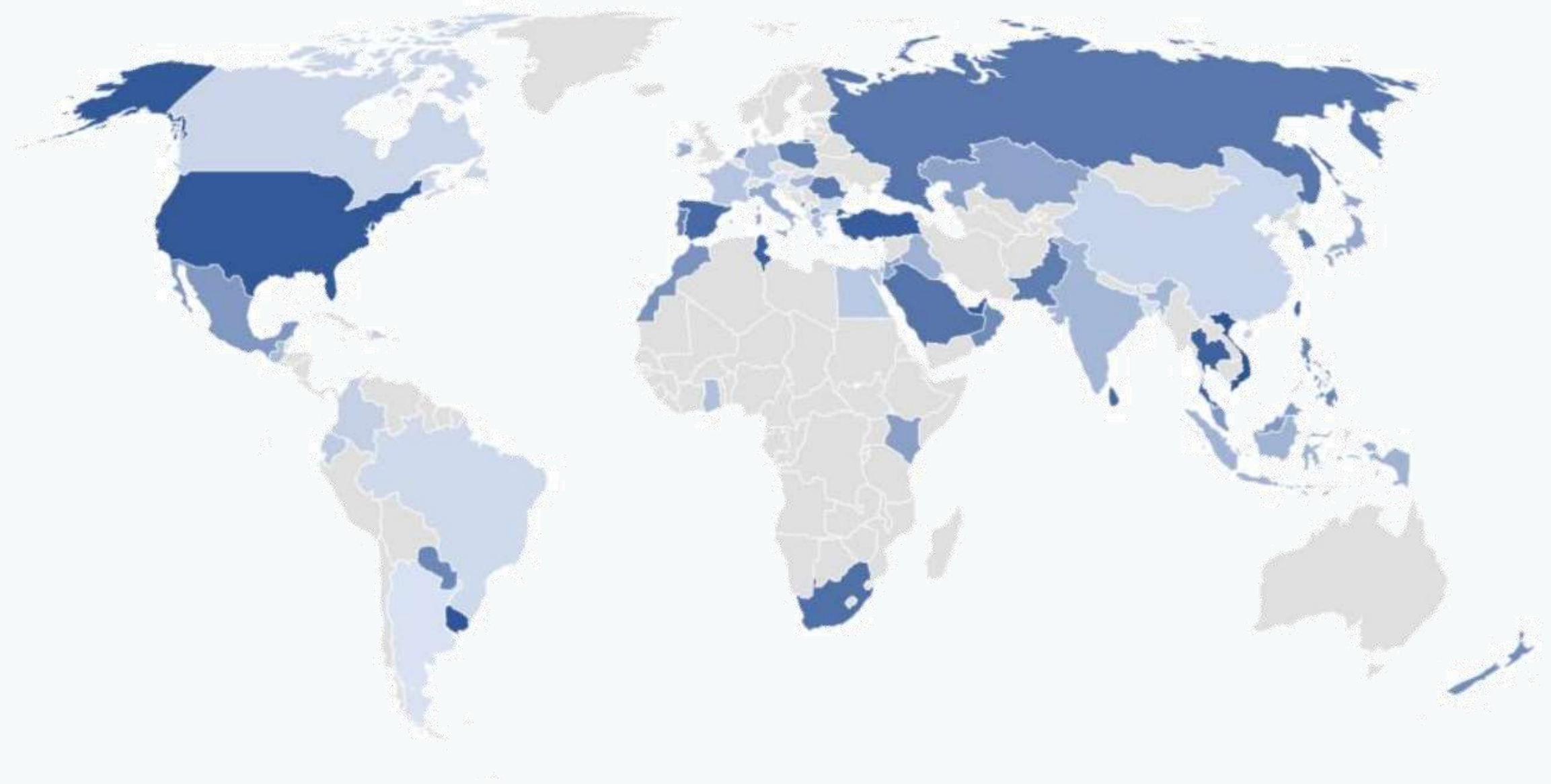
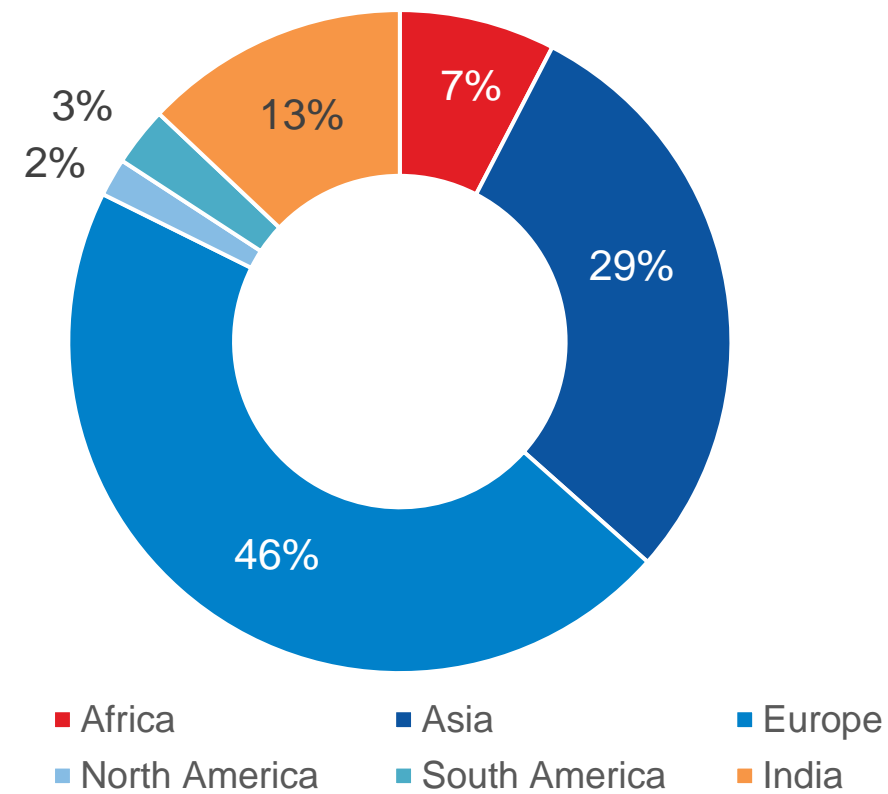
# Unique Fact about **Orchid's** **Facilities**

## USFDA APPROVED API SITES



# Global Presence with a Wide Customer Base

Revenue Breakup by  
Geography (FY-22)





# Experienced Board & Management Team



**Mr. Ram Gopal Agarwal**

Chairman and Non-Executive Director  
Founder Chairman of Dhanuka Group with over 5 decades of leadership experience  
Chairman of FICCI Crop Protection Committee



**Mr. Manish Dhanuka**

Managing Director  
Visionary Leader at the helm of affairs of Pharma Division.  
An IIT'ian with 25+ years in Pharma Industry  
Director at JV with Otsuk, Japan



**Mr. Arun Dhanuka**

Non-Executive Director  
Director at DLL, DAL and Orchid with over 4 decades of experience  
In-charge of commercial matters of the Pharma Division



**Mr. Mridul Dhanuka**

Whole-Time Director  
Chemical Engineer & MBA; Associated with Dhanuka Group Ltd. since 2005.  
Operations Head at Dhanuka Agritech, now moved to Orchid.



**Dr. Dharam Vir**

Independent Director  
Ph.D. in synthetic chemistry with more than 3 decades of R&D experience at various Pharma majors



**Mr. Mudit Tandon**

Independent Director  
Graduate of ISB and worked in Venture Capital field  
Runs a large fashion accessory company



**Ms. Tanu Singla**

Independent Director  
Qualified Company Secretary, L.L.B and She has expertise in Business Management, Finance, Accounts, Audit, real estate



**CA Manoj Goyal**

Independent Director  
Practicing CA and an auditor of banks and other large businesses.  
He was a Statutory Auditor of different Banks, Insurance Companies and public sector undertaking



**CA Sunil Kumar Gupta**

CFO  
CA, with 36 years of experience in varied industries as financial controller



**Dr. S Srinivasan**

Head CTD & IPM  
Ph.D. in Synthetic Organic Chemistry. 26+ years of experience in new product development for small molecule APIs, Process development & optimization.



**Dr. RJ Sarangdhar**

Site Head of Ceph API  
3 decades of experience in process development, technology transfer and more than 10 patents to his credit



**Mr. D Chellapandi**

SGM-Engineering  
35+ years of experience in operation, maintenance of engineering functions, energy conversion, solvent recovery and environment management

# Competitive Advantage

**Orchid** →

**Legacy**



## Complexity

- Chemistry of Cephalosporins
- Sterile Manufacturing



## High Entry Barrier

- Cross Contamination Barrier
- High Capital Costs

**Dhanuka** →

**Created**



## Cost Leadership

- Lowest Cost of Management
- Low Cost of Operations



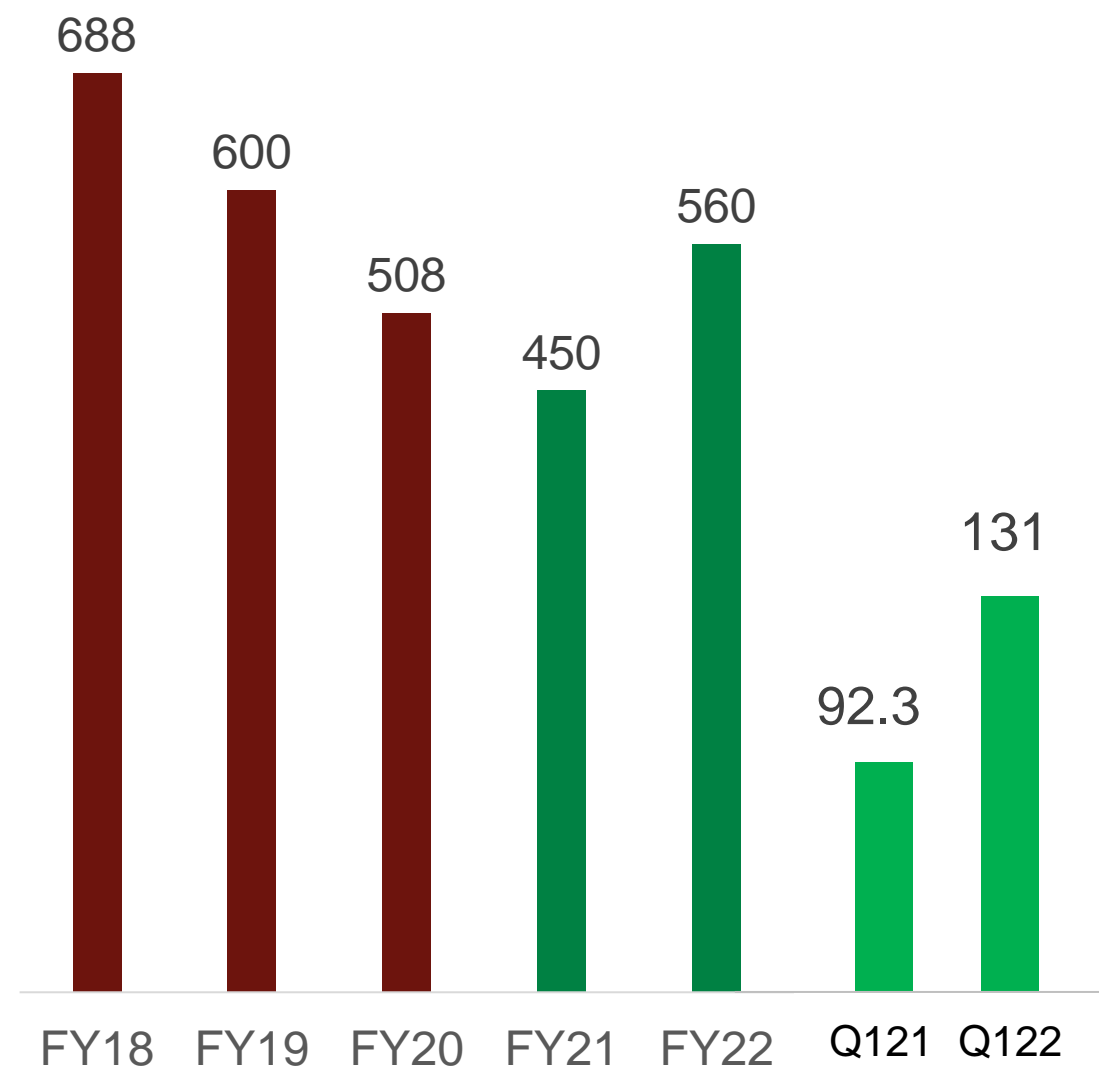
# Progress So far



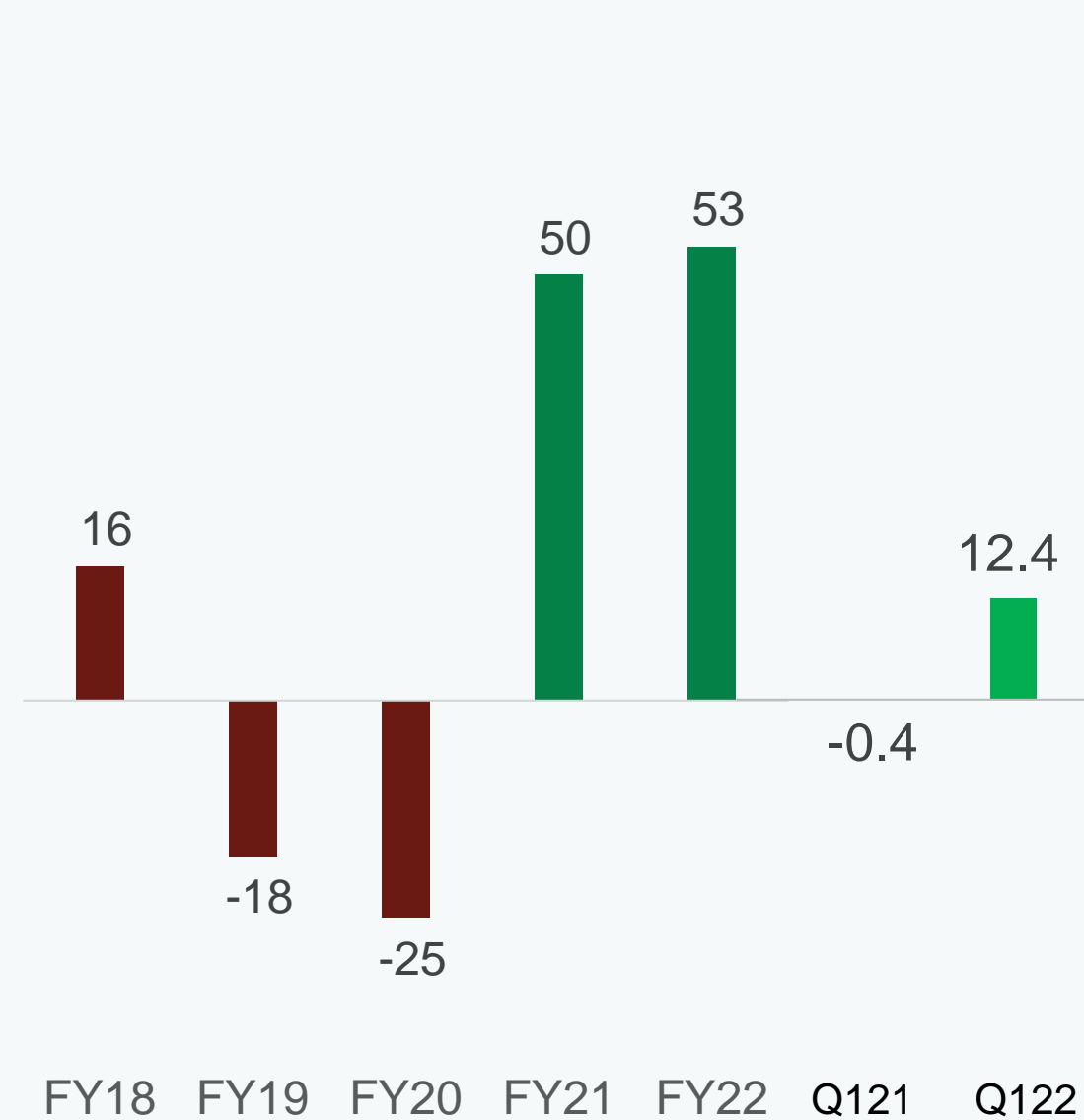
# Progress of Turnaround

■ Before takeover  
■ After takeover

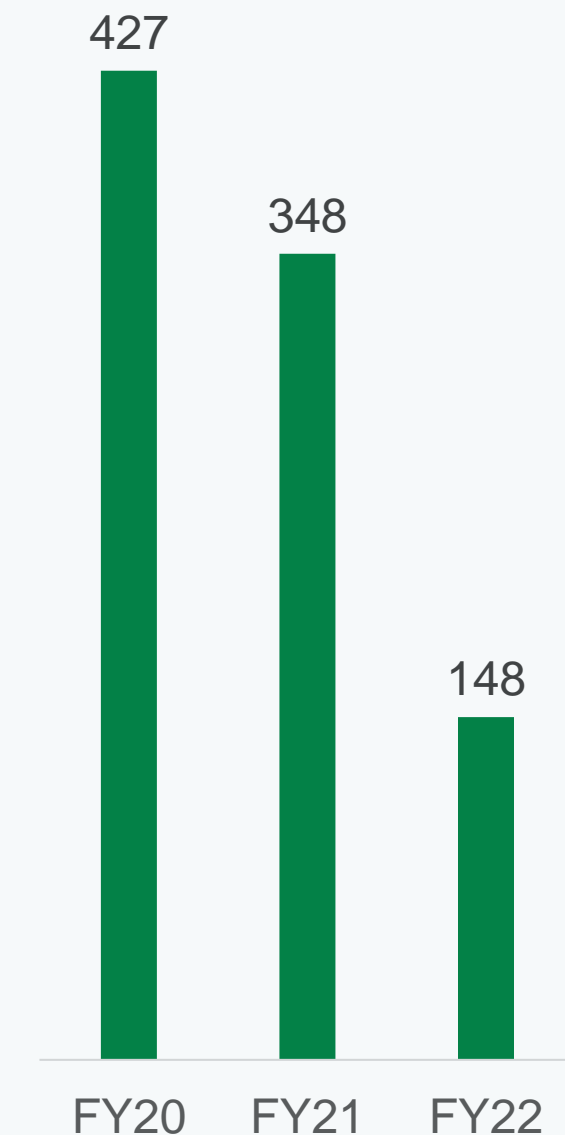
## Revenues



## EBITDA



## Term debt

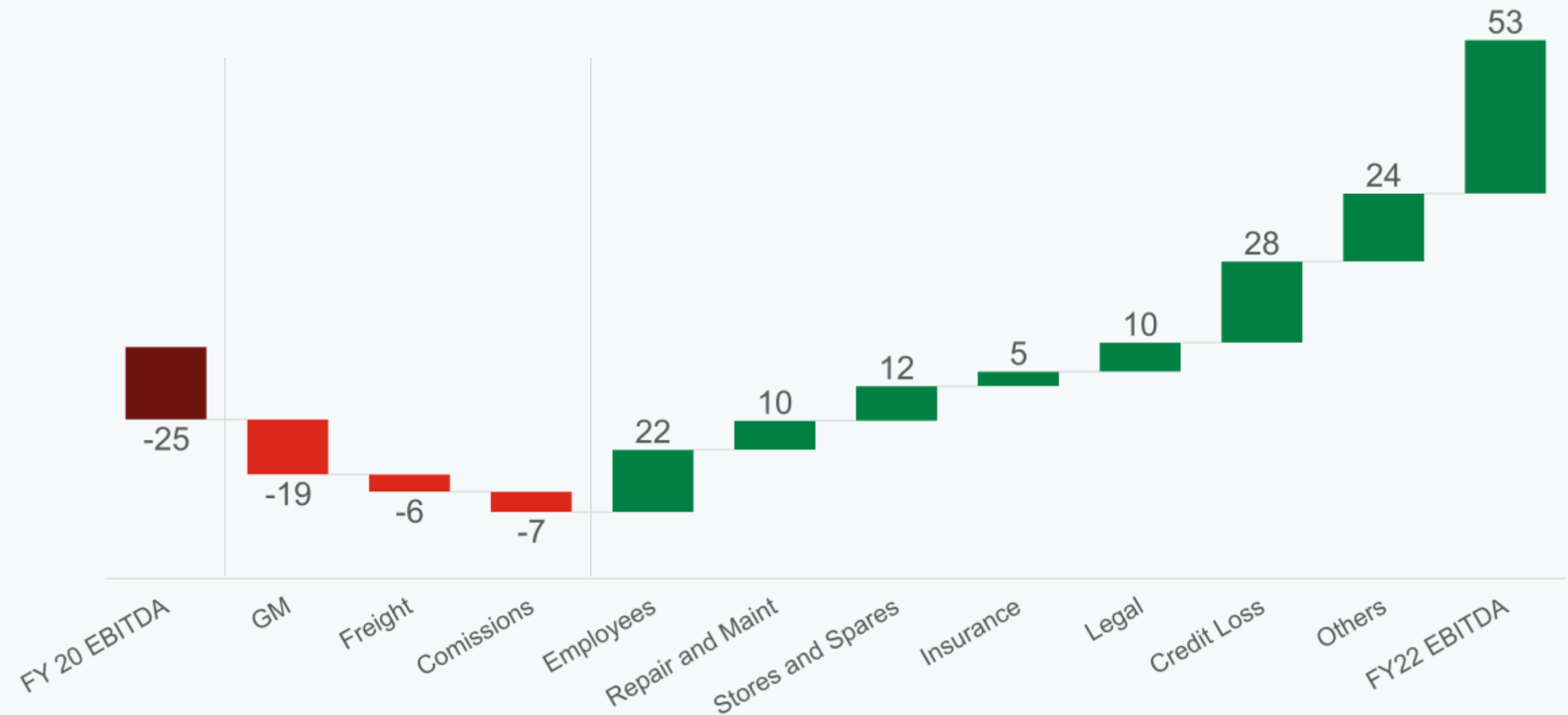


# Cost control measures have increased Efficiency and Profitability

## Headwinds

- Covid struggle
- Poor demand from Europe
- Energy
  - Coal pricing more than doubled
  - Electricity costs increased

EBITDA Build up (Cr)



## Last Year

- 36% Increase in Sales Qty
- 12% Increase in Expenses

\*groupings not as per FS

# Future Strategy



# Growth Drivers



**01**

**Scale**

**02**

**7 ACA and Downstream Products**

**03**

**New Products**

**04**

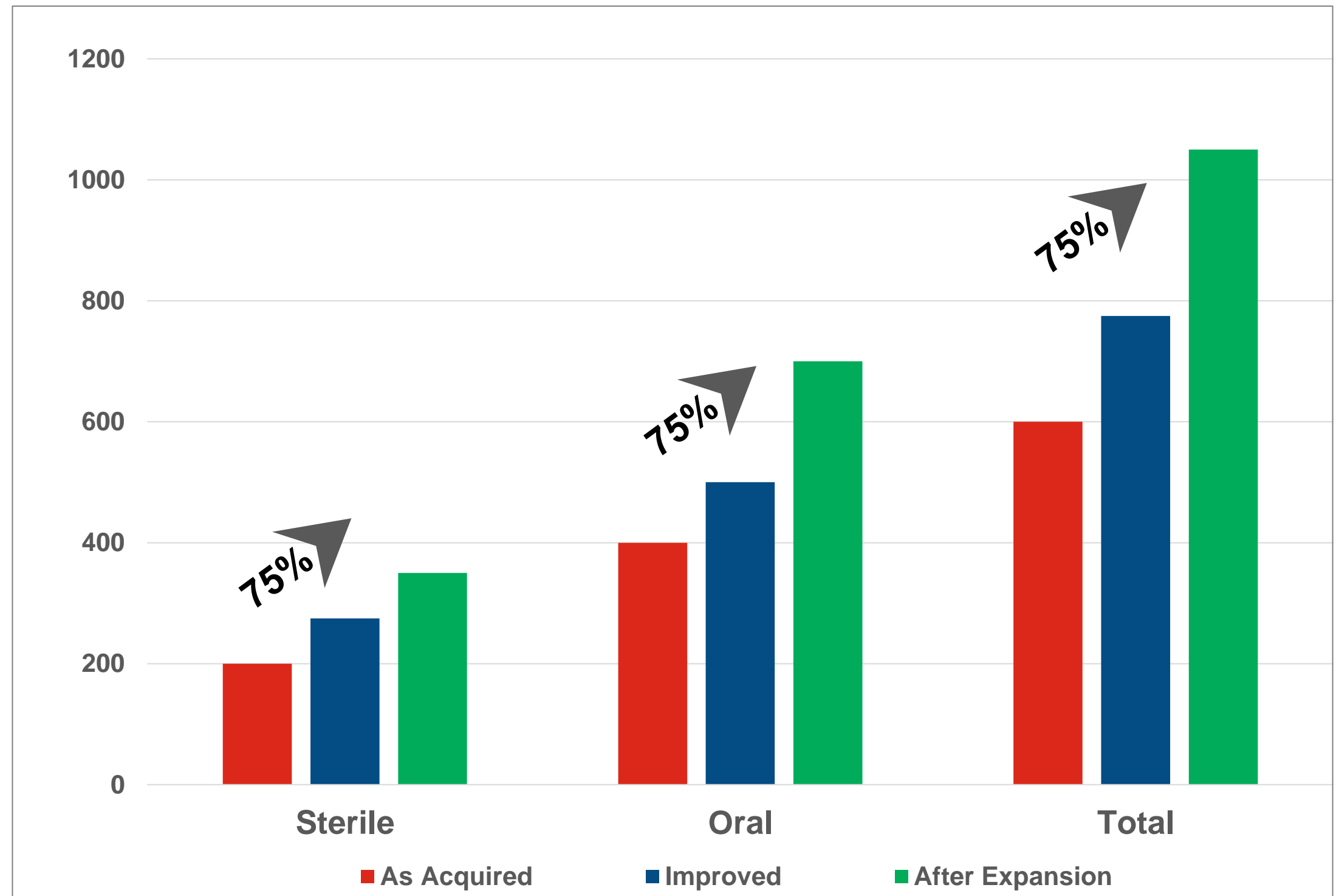
**New Chemical Entity –  
Enmetazobactam**

# Scale Growth Driver





# Scale – Capacity Addition

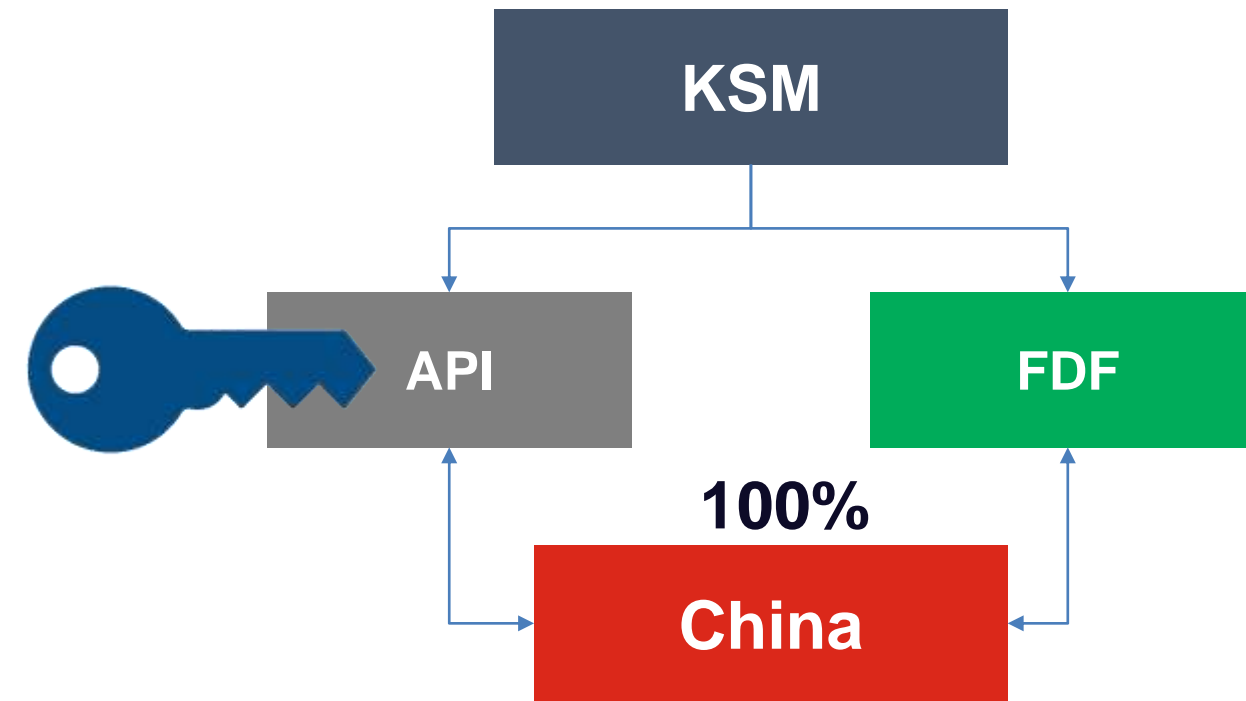


# 7ACA and Downstream Products

## Growth Driver



# Pharmaceutical Business

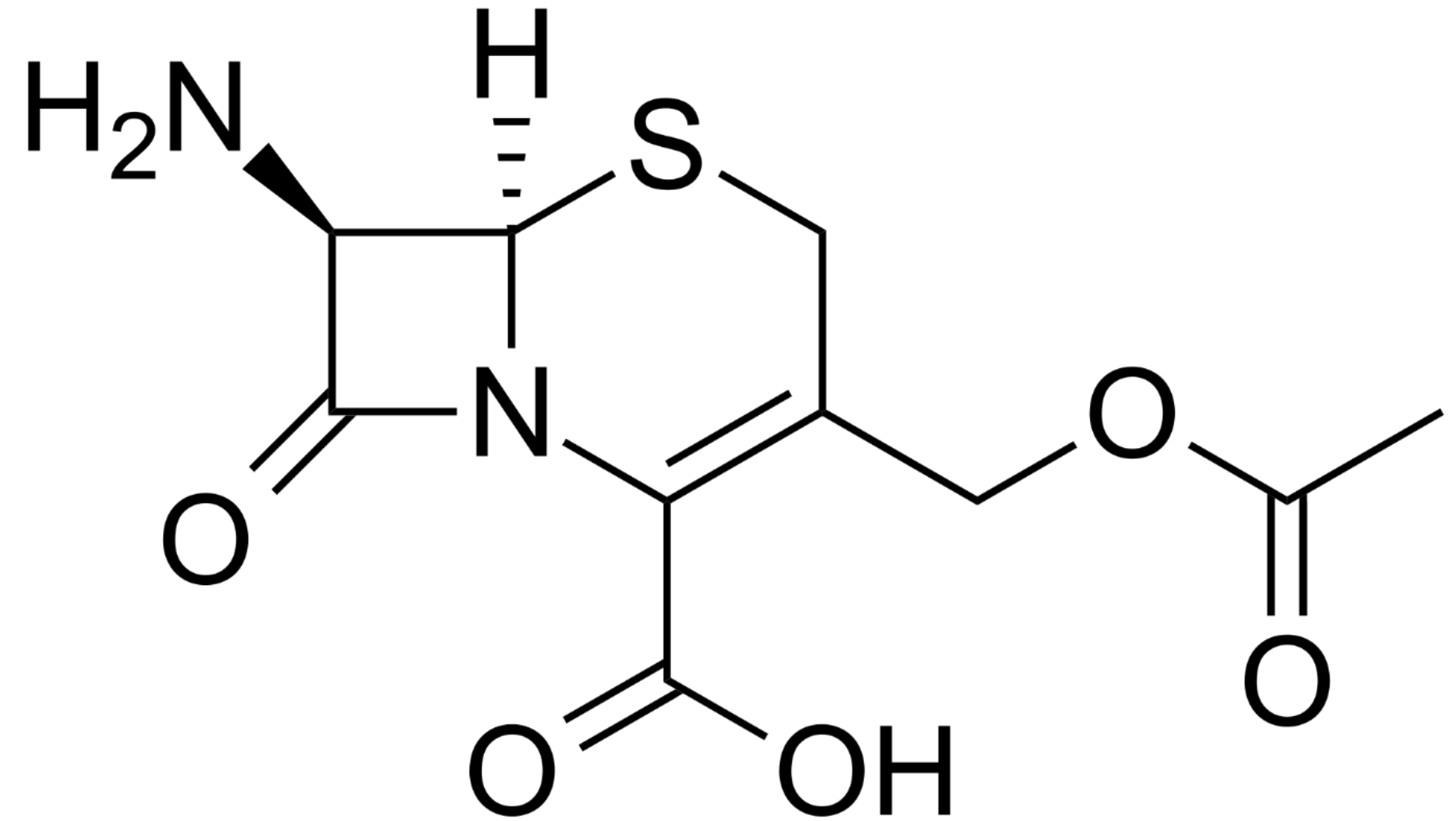


## Government PLI Scheme



# 7ACA

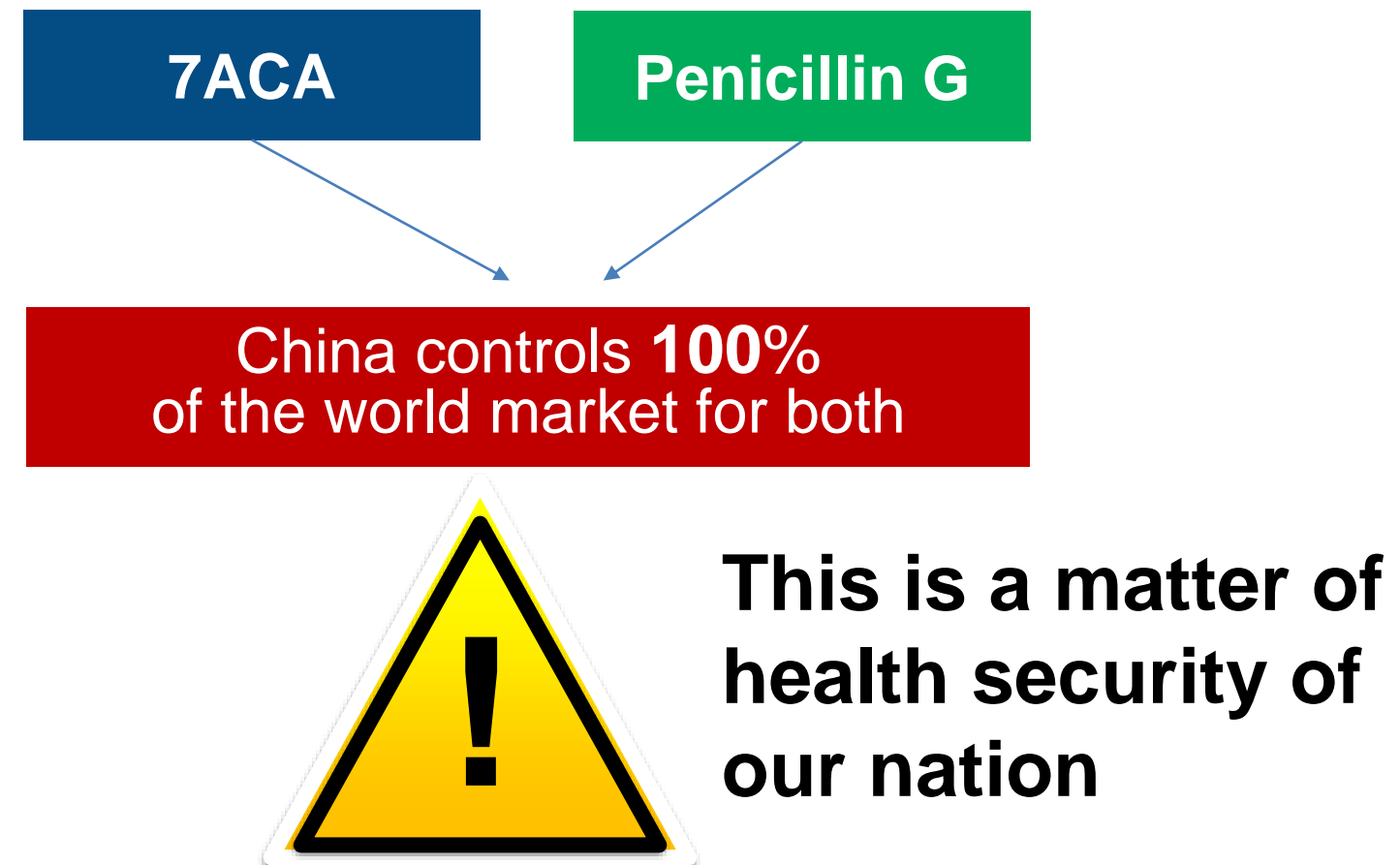
## 7 Amino Cephalosporanic Acid



# Importance of 7ACA

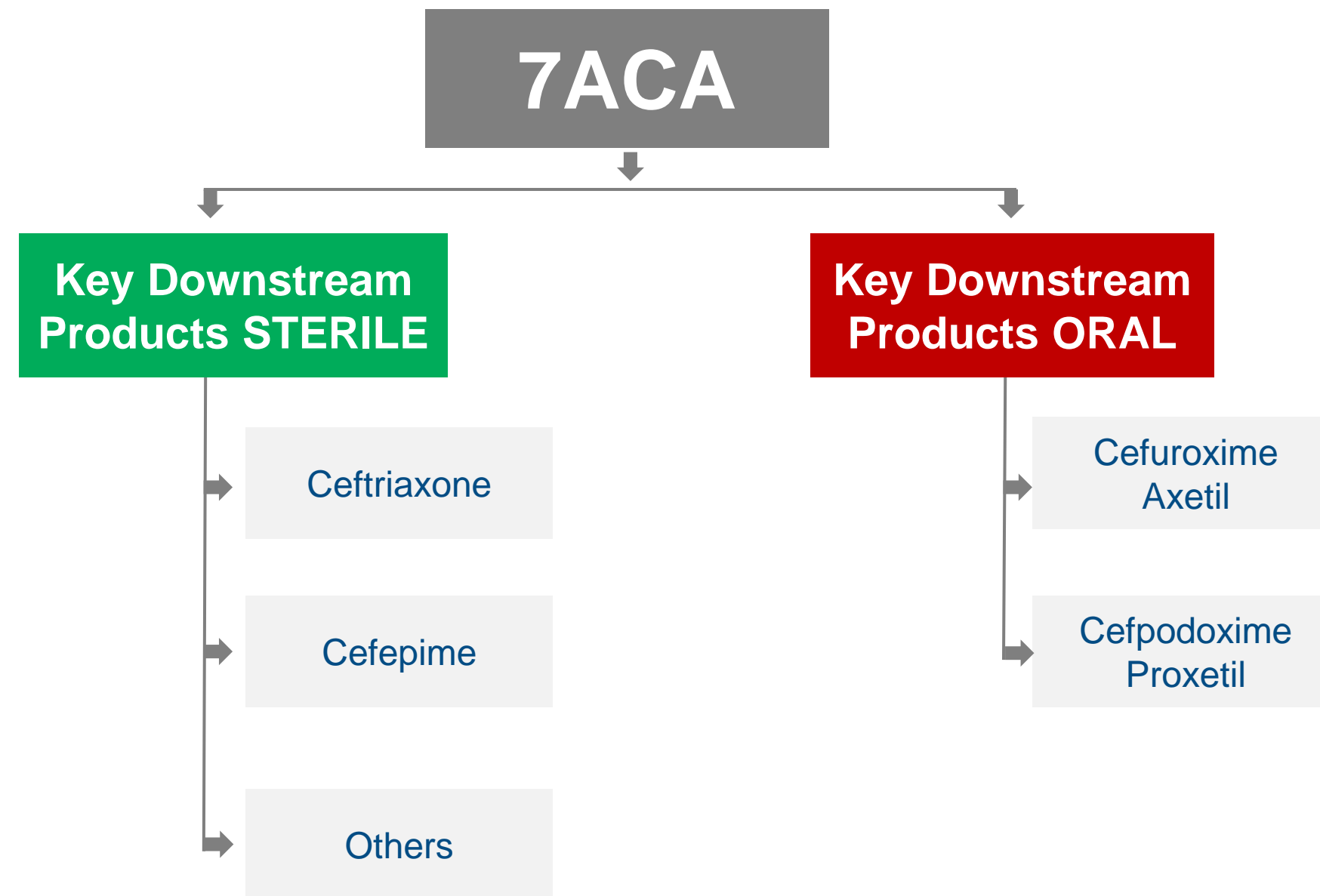
- 7ACA is not just another pharma intermediate
- All Cephalosporin Antibiotics are manufactured from 2 Key Starting Materials which are produced through fermentation
- Without Antibiotics, infection fighting is impossible

## Key Starting Materials



# Uses of 7ACA

- ~ 30 Cephalosporin APIs approved worldwide
- More than 20 have 7ACA as the KSM



# Size of 7ACA Market

(including downstream products)

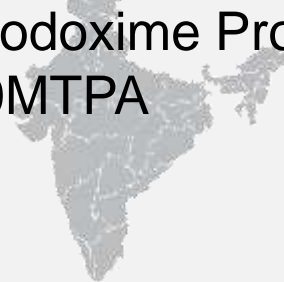
## World Market

- ~ **10000MT ~ \$600mn** growing at **5% CAGR**
  - Adding 500MT demand per year.
- **China controls 100% world market**



## India Market

- **India Market Size ~ 4000MT of 7ACA**
  - **Key Downstream Products – Sterile**
    - Ceftriaxone – 6000MTPA world market,
    - 2000MTPA Imports into India
  - **Key Downstream Products - Oral**
    - Cefuroxime Axetil and Cefpodoxime Proxetil – 1500MTPA



## Orchid

- **1000MTPA per annum**



# PLI – A Step towards



**AATMA-NIRBHAR  
BHARAT**

- Orchid has received 1000MTPA approval from Government of India in its WoS – Orchid BioPharma Ltd. (OBPL)
- ~ Price of 7ACA = \$63
  - PLI from GOI @ 20%

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## Location – Jammu

- Benefits under New Central Sector Scheme for Industrial Development of Union Territory of Jammu & Kashmir
- 18% GST Refund

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## Current Status

- Land under Acquisition Stage in Jammu
- Pilot Plant setup at Orchid, Chennai started
- Commercial Production – Jan 2025



# 7ACA Downstream Products

**80%** will be used by Orchid-in-house

- 55% shall be used to make **1000MT** of **downstream products** at an average price of \$85
- 25% is Orchid's current self Imports

**20%** will be sold in the open market

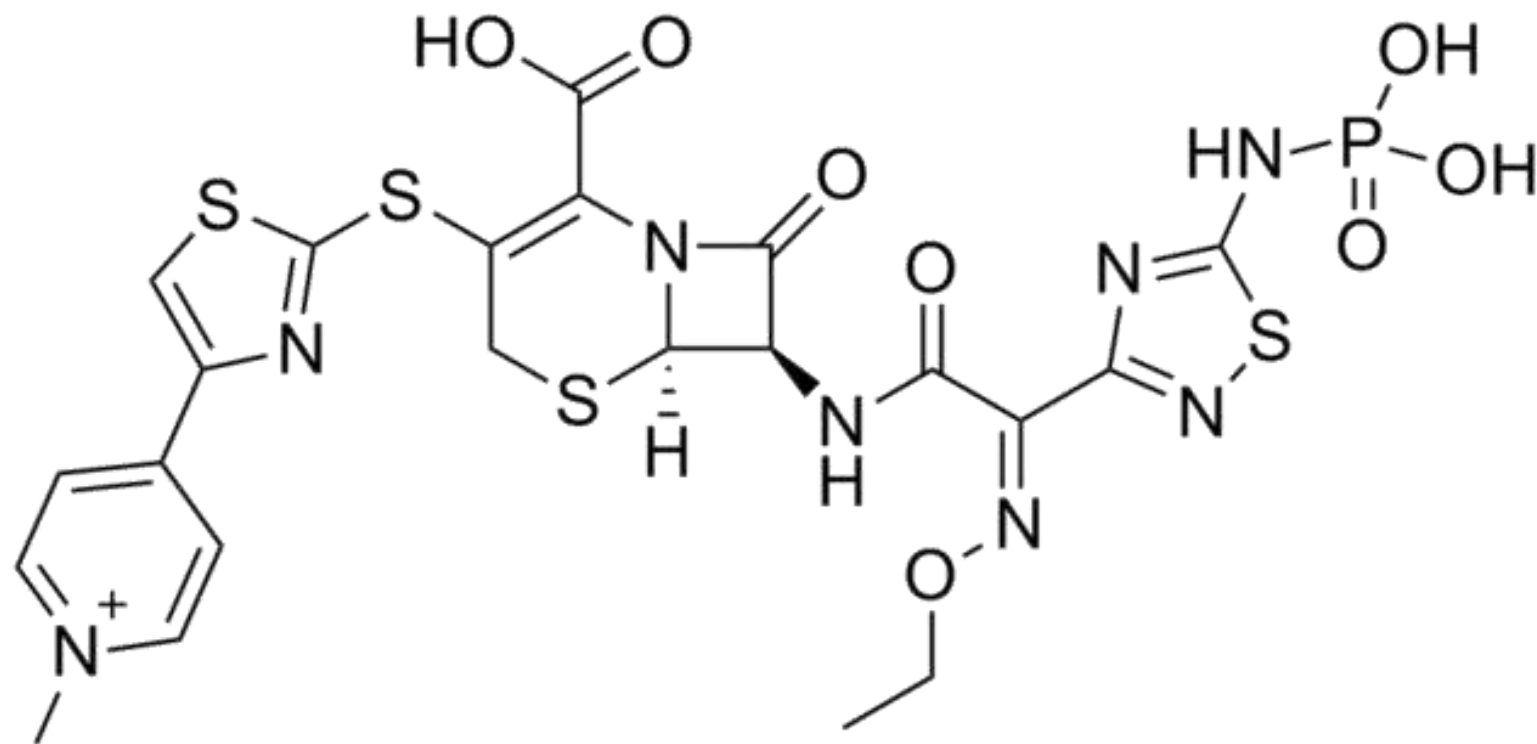


# New PRODUCTS

## Growth Driver



# Ceftaroline



## → ORIGINATOR

- Forest Labs (Allergan)

## → MARKET SIZE

- US - USD160mn
- ~ INR 1250 Crore
- After Patent Expiry in 2023, volume will multiply and price will reduce
- We estimate a net market size multiplication by 2x after Genericization ~ 2500 Cr

## Orchid Target Dates

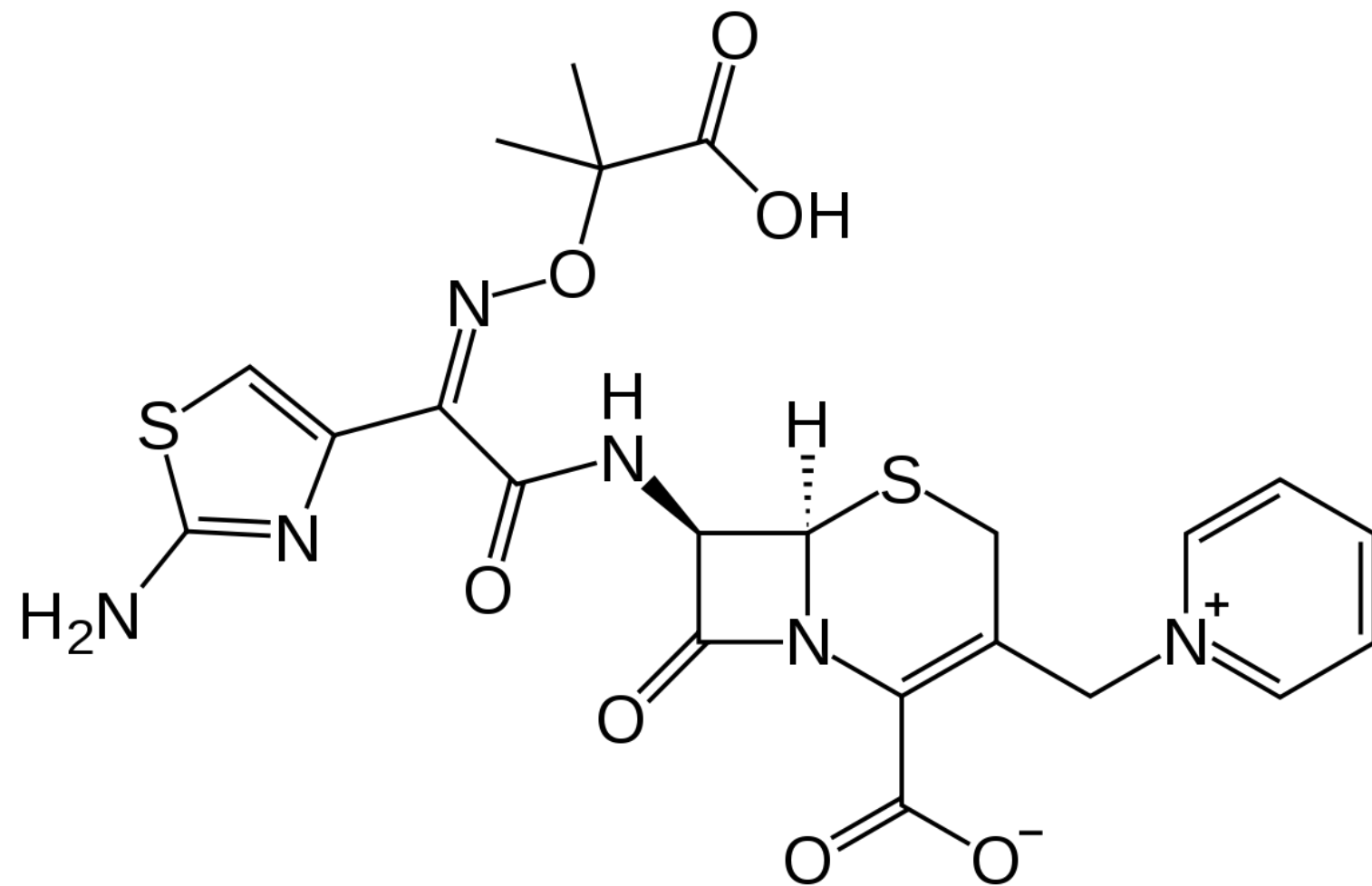
### US Market

- DMF Filing – June 2023
- ANDA Filing – Jan 2024

### Other Markets

- Product Available in Jan 2023

# Ceftazidime/ Avibactam



## → ORIGINATOR

- Allergan / Pfizer

## → MARKET SIZE

- USD 450 Mn
- ~ INR 3600 Crore

## → PATENT STATUS

- US – November 2026
- Emerging Markets – January 2023

→ After Patent Expiry, volume will multiply, and price will reduce

→ We estimate a net market size multiplication by 1.5x after Genericismation ~ 5400 Cr

## Orchid Target Dates

### US Market

→ FTF Para IV - ANDA Filing – Feb 2024

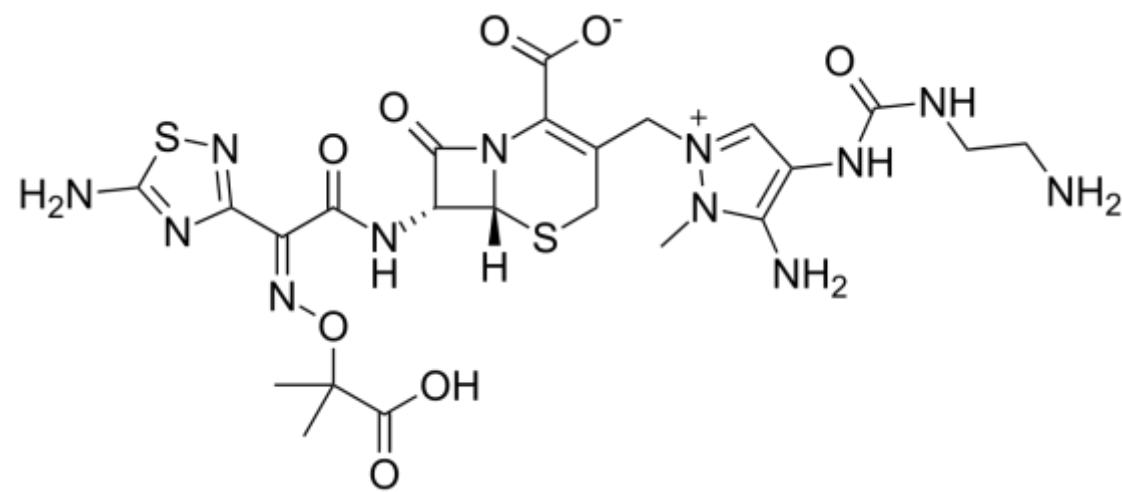
### Emerging Markets

→ Product Available in Jan 2023

# Future Products Pipeline

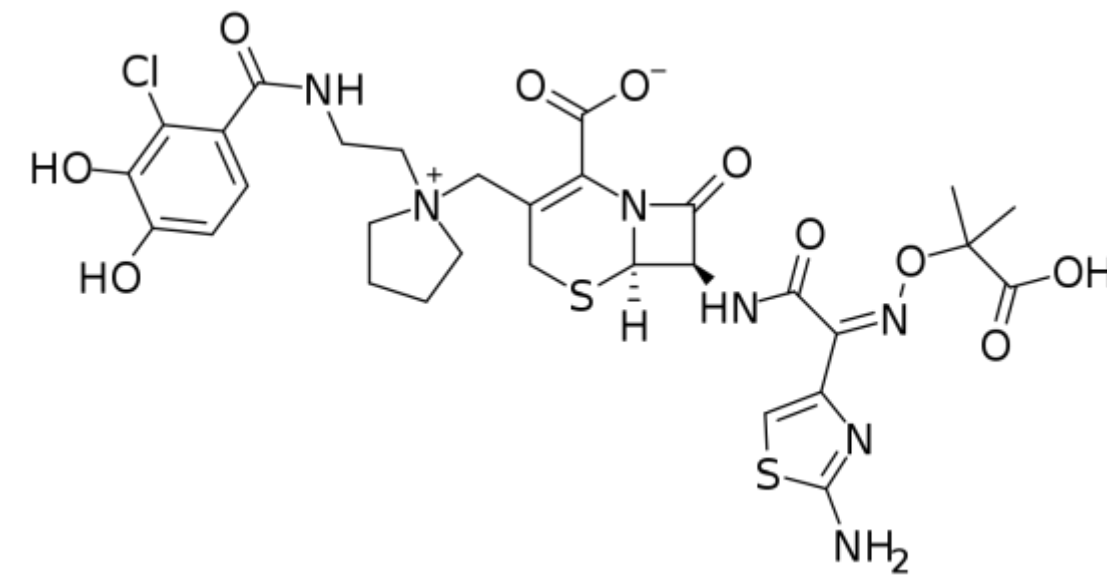
## Ceftolozane - Tazobactam

- Originator – Merck
- First Approved in US Jan 2016



## Cefiderocol

- Originator Shionogi
- First Approved in US Nov 2019



# NCE Enmetazobactam Growth Driver



# Antibiotic Resistance – The challenge



Poor infection control in hospitals and clinics



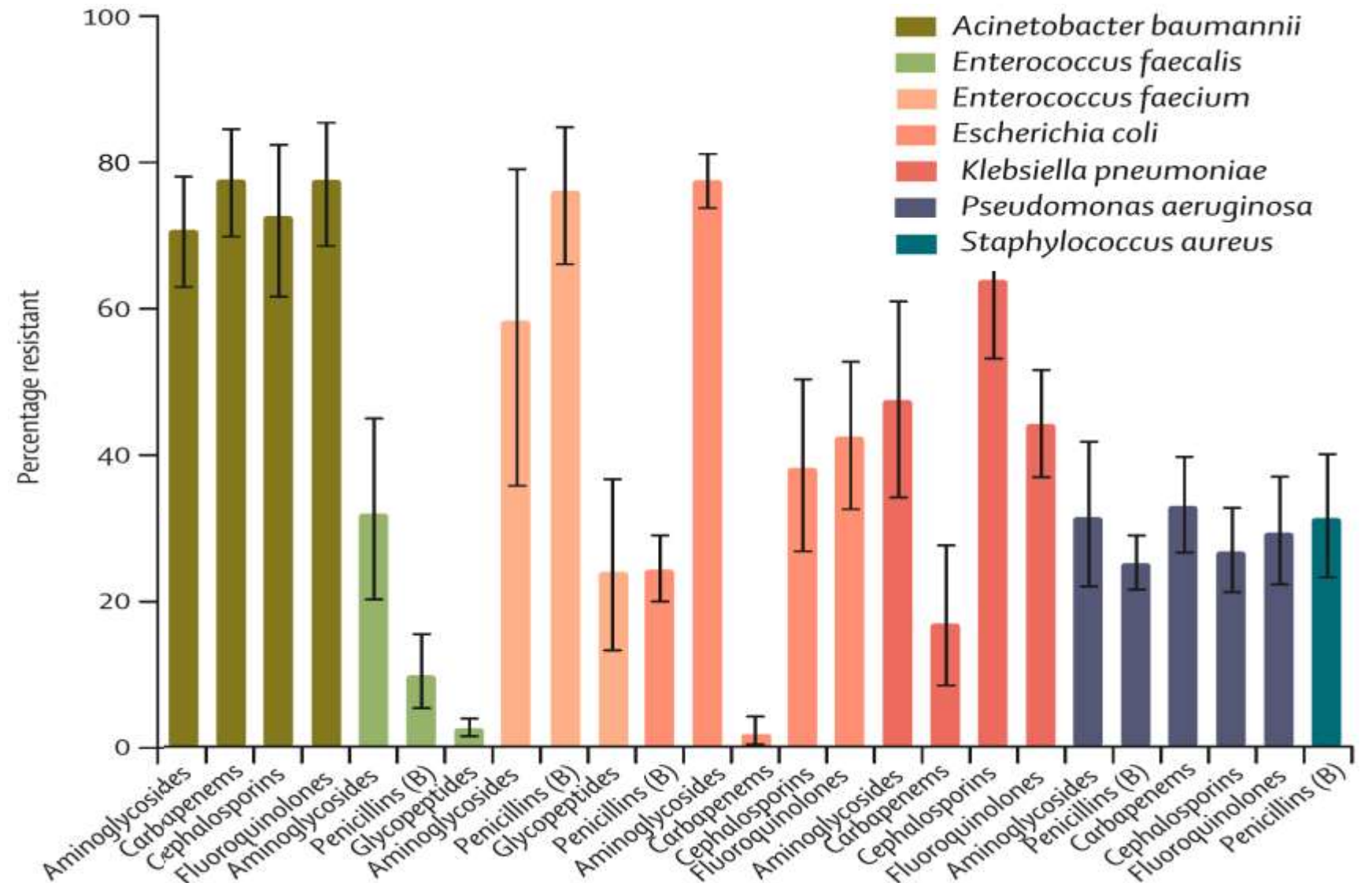
Over-prescribing of antibiotics



Unnecessary antibiotics used in Animal Husbandry



Patients not taking antibiotics as prescribed



# Importance of Enmetazobactam



- Enmetazobactam – a Beta Lactamase Inhibitor (BLI), lowers the resistance of the Antibiotic to make it effective again
- Best example – Augmentin of GSK, a 50-year-old drug. Combined with BLI, is largest selling Antibiotic in the world today
- Phase 3 Clinical Trials were cleared in December 2020
- Compared with Piperacillin – Tazobactam (BL-BLI combination just like Cefepime – Enmetazobactam and std of care for UTI)
- Against 59% Efficacy of Pip-Taz, Enmetazobactam is **79%** effective



# World Market Estimation Indicators

PIP-TAZ market  
~ **\$1bn**  
at Patent Expiry

AVYCAZ market of  
~ **\$450mn**

CEFTRIAXONE  
**6000MT**  
worldwide market

## Looking at its Potential,

- December 2020, out-licensed to Shanghai Haini Pharmaceuticals for Greater China at a value of USD 78 Mn plus royalties
- Jan2022, out-licensed to Advanz Pharma for Europe, for milestone payments, in addition to double-digit royalties

- Estimated annual global sales of USD 200 Mn –300 Mn pa (10Y Avg)
- Orchid entitled to Royalty from Allecra ~ USD 16 Mn – USD 25 Mn pa
- Orchid has rights to develop and commercialize the molecule in India



# Enmetazobactam - Domestic

Domestic Injectable Antibiotic Size 7000 Crore

## Largest Products

**PIP-TAZ**

**800 ~ 1000 Cr**

20% Better Efficacy

**CEFTRIAXONE**

**1200 ~ 1500 Cr**

Bacteria are already  
resistant

**MEROPENEM**

**~ 1000 Cr**

This is a Carbapenem.

Last Resort Antibiotic.

Should be saved for more  
serious diseases.

## Orchid Target Dates

- Filing of Application – Jan 2023
- Clinical Trial Complete – Jan 2024
- Approval of Drug and Launch – April 2024



# Future Direction



# Building Competitive Advantage



## Complexity

- Chemistry of Cephalosporins
- Sterile Manufacturing



## High Entry Barrier

- Cross Contamination Barrier
- High Capital Costs



## Backward Integrated



## Cost Leadership

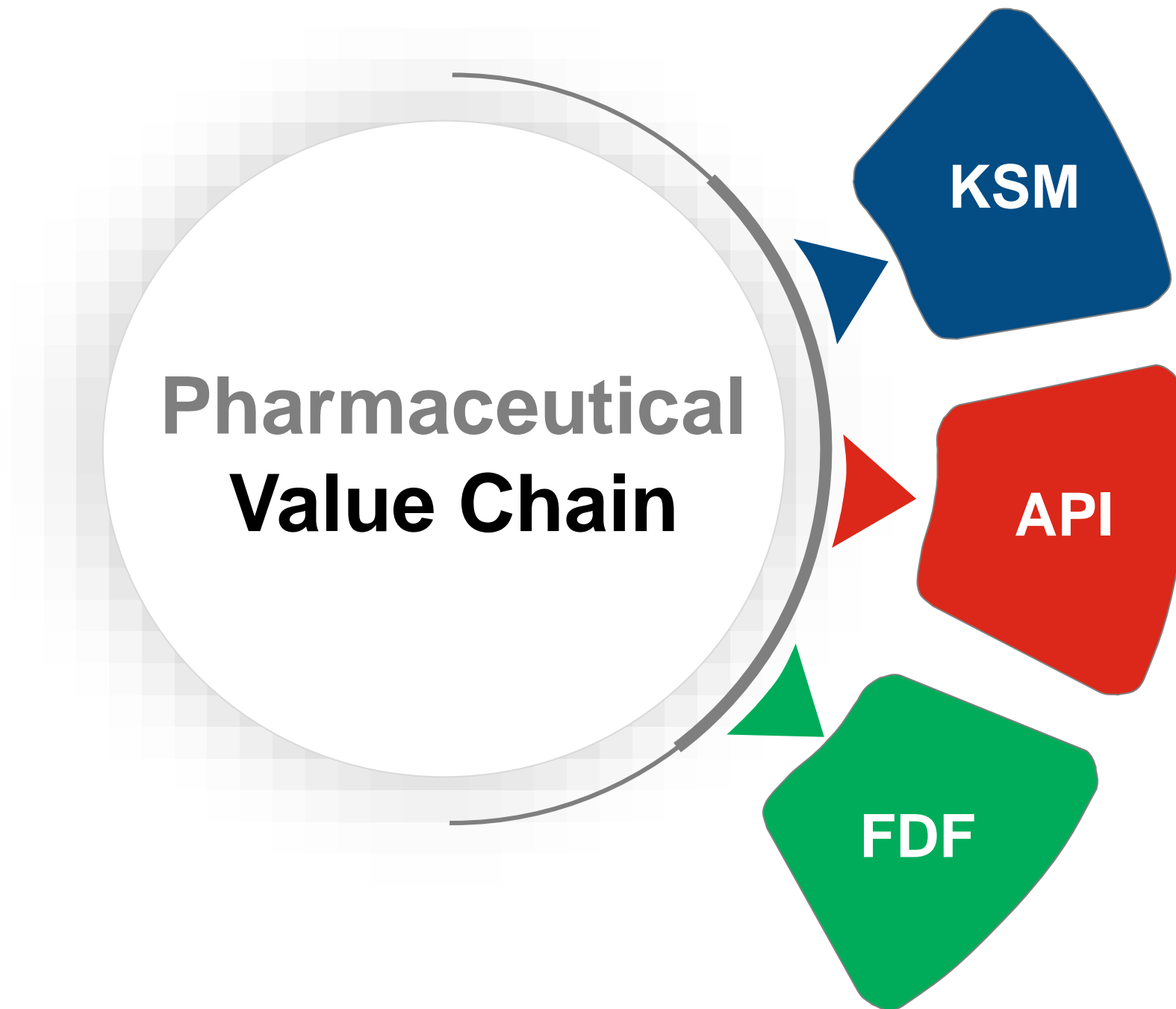
- Low Cost of Management
- Low Cost of Operations
- Scale
- Low Dependence on China

# New Possibilities

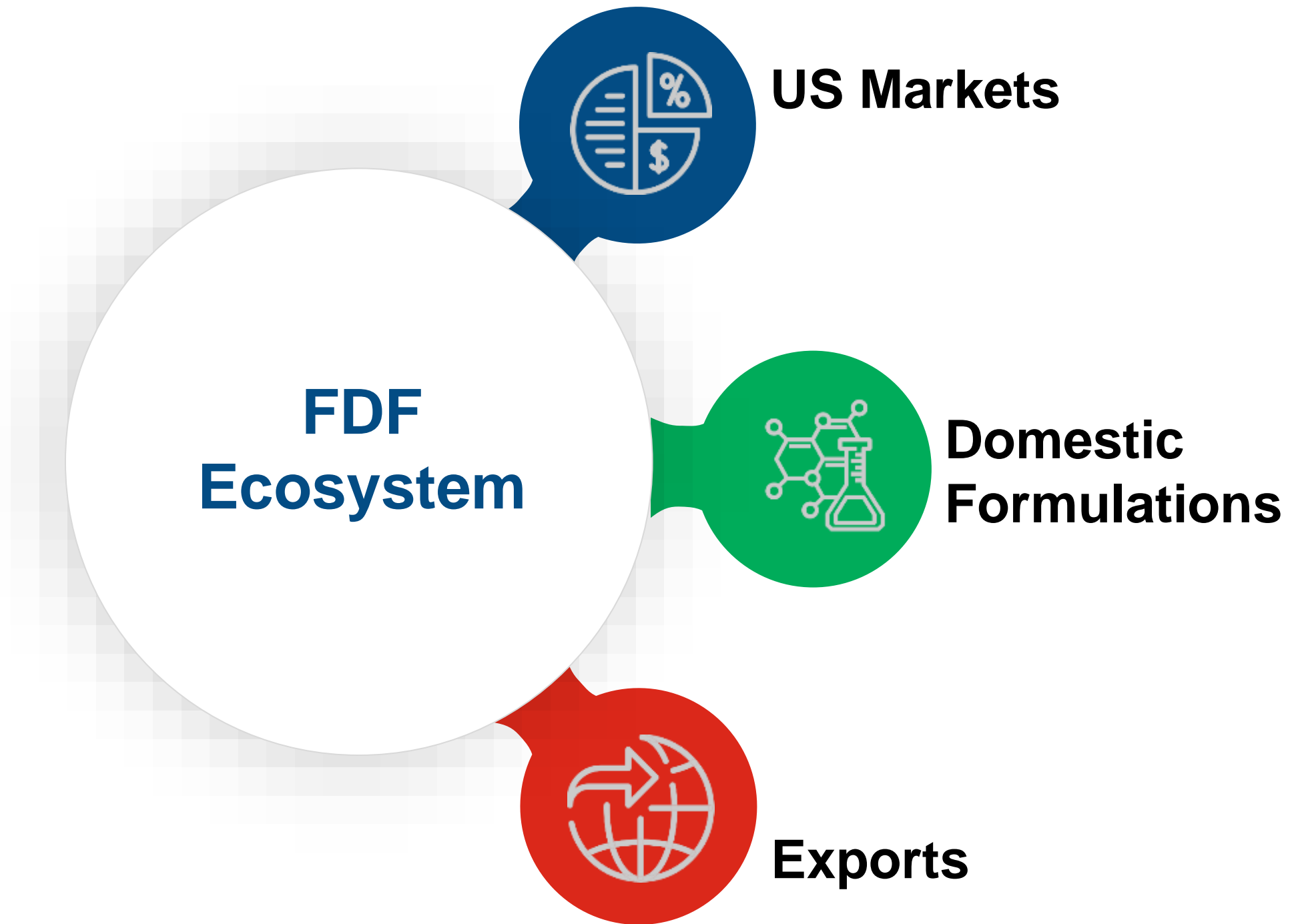
**01** Building on the Backward  
Integration Strength

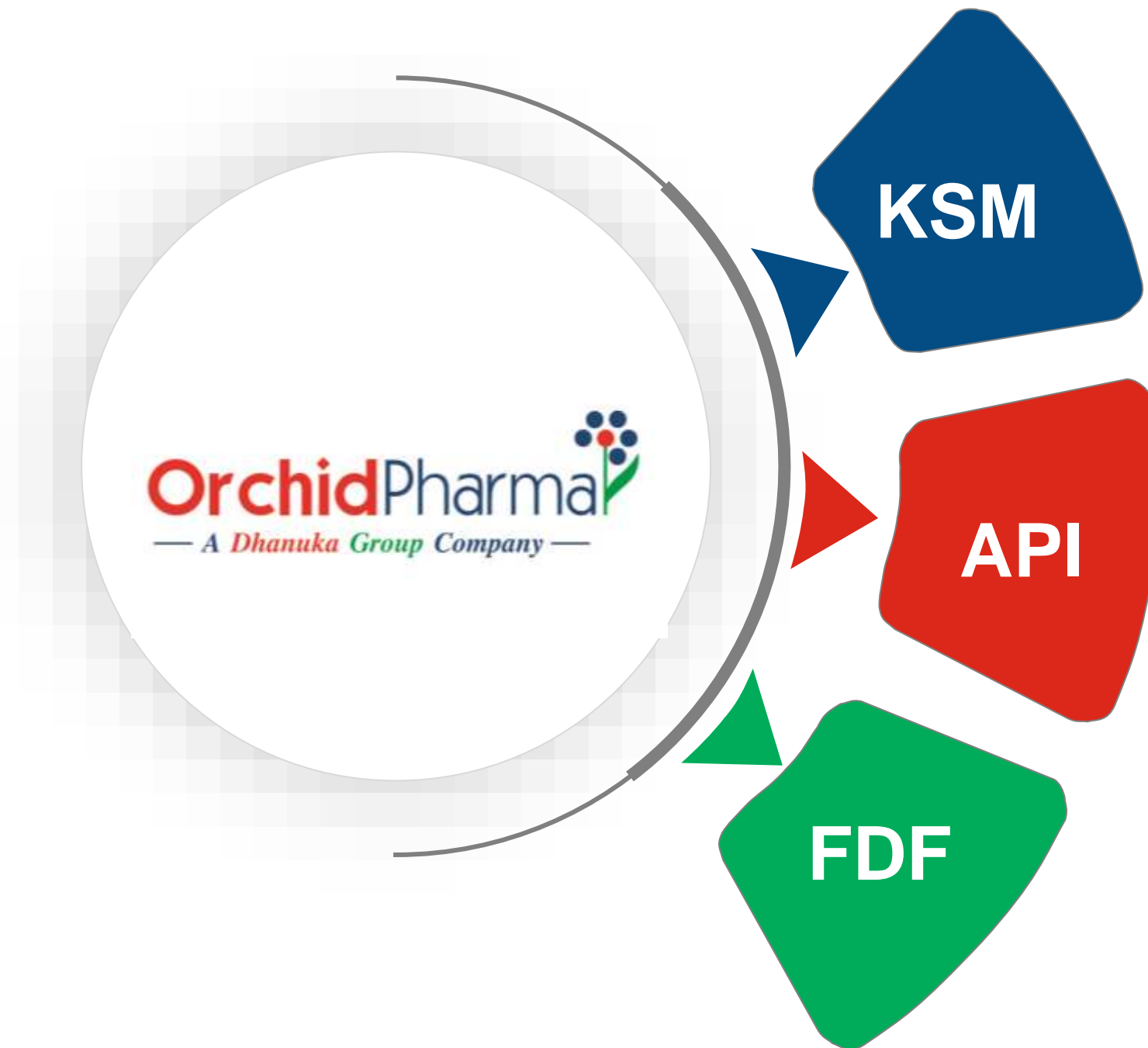
**02** Start work on Forward  
Integration





# FDF Ecosystem







# Thank You!