

# #FutureFresenius: **Biopharma 'Meet the Management'**

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Conference call and webcast for investors and analysts

Bad Homburg, 15 December 2025



# Safe Harbor Statement

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This presentation contains forward-looking statements that are subject to various risks and uncertainties. Future results could differ materially from those described in these forward-looking statements due to a variety of factors, e.g., changes in business, economic, and competitive conditions, regulatory reforms, results of clinical trials, foreign-exchange-rate fluctuations, uncertainties in litigation or investigative proceedings, the availability of financing, and unforeseen impacts of international conflicts.

Financial figures on profit and profitability throughout this presentation, especially EBIT, EBITDA, and related margins, are generally reported "before special items". Hence, these figures exclude certain one-time effects. Regarding the definition of financial performance indicators, these refer to the most recent financial publications available on the Fresenius corporate website.

Fresenius does not undertake any responsibility to update the forward-looking statements contained in this presentation.



# Meeting agenda

#	Agenda	Presenter		
<b>I</b>	<b>#FutureFresenius: Rejuvenate in Biopharma</b>	 Michael Sen		
<b>II</b>	<b>Biopharma: Value creation strategy</b>	 Pierluigi Antonelli	 Sang-Jin Pak	
<b>III</b>	<b>Portfolio Rejuvenation for long-term growth</b>	 Fabrice Romanet	 Michael Hammer	
<b>IV</b>	<b>Cost Leadership: Reaping benefits of vertical integration</b>	 Yannick Sorlet	 Jurgen Van Broeck	
<b>V</b>	<b>Commercial Excellence: Balanced footprint across geographies</b>	 Sang-Jin Pak	 Molly Benson	
<b>VI</b>	<b>Q&amp;A</b>	 Michael Sen	 Pierluigi Antonelli	 Sang-Jin Pak
<b>VII</b>	<b>Wrap-up</b>	 Michael Sen		



**I**

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**#FutureFresenius:  
Rejuvenate in Biopharma**



# WE ARE COMMITTED TO LIFE

A man with short brown hair and a beard is sitting on a dark grey couch, smiling warmly at the camera. He is holding a sleeping baby in his arms. The baby is wearing a white long-sleeved shirt with thin blue stripes and blue pants. The background is a bright, out-of-focus indoor space with large windows showing greenery outside.

## OUR MISSION

We save and improve human lives with affordable, accessible and innovative healthcare products and highest quality in clinical care

## OUR VISION

We are the trusted, market-leading healthcare company that unites cutting-edge technology and human care to shape next-level therapies



# Addressing three structural healthcare challenges

## LONGEVITY GAP

**10+ disease-burdened life years**

BY 2030, 1.4B PEOPLE WILL BE OVER 60; 84% OF 67M DEATHS EXPECTED TO BE FROM CHRONIC DISEASE<sup>1</sup>

“**People are living longer, but spending more years in poor health**

## WORKFORCE GAP

**>10m health-care worker shortfall**

THE WORLD HEALTH ORGANIZATION ESTIMATES A PROJECTED SHORTFALL OF 10 MILLION HEALTH WORKERS BY 2030<sup>2</sup>

“**There are too few health workers to meet a growing demand for care**

## EFFICIENCY GAP

**>10% GDP on health expenditure**

HEALTH EXPENDITURE IS EXPECTED TO RISE TO MORE THAN 10% OF GLOBAL GDP BY 2030<sup>3</sup>

“**Healthcare spending is outpacing what's financially sustainable in the long term**

<sup>1</sup> Source: Global Burden of Disease, Institute for Health Metrics and Evaluation (2022) | <sup>2</sup> Source: WHO Health Workforce (2023) | <sup>3</sup> Source: OECD Health at a Glance (2019)



**Now simpler, stronger and more focused**



**Fresenius Kabi**

**Fresenius Helios**

**Pharma**

**Bio-  
pharma**

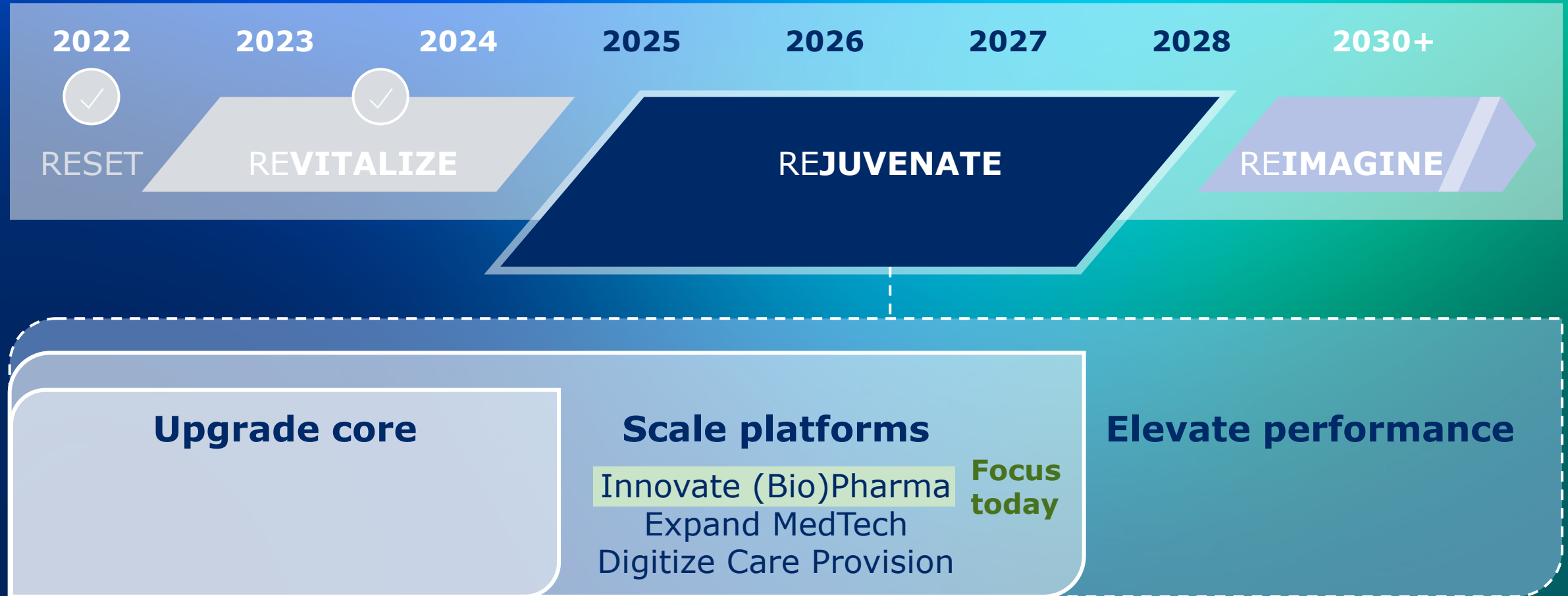
**Nutrition MedTech**

**Helios**

**Quirónsalud**



# Biopharma at the core of our Rejuvenate agenda





# Biopharma is the next frontier for growth and patient access

As a leader in affordable and innovative healthcare products and highest quality patient care, Fresenius is expanding its biosimilars business to provide more patients access to biologic therapies

**6x**

**Biosimilars market set to grow 6x by 2035 to >€180b<sup>1</sup>** based on increasing number of upcoming LoEs

**700m**

**Patient days of biosimilar treatment globally<sup>2</sup>** (2015-2023) prove broad adoption and patient access

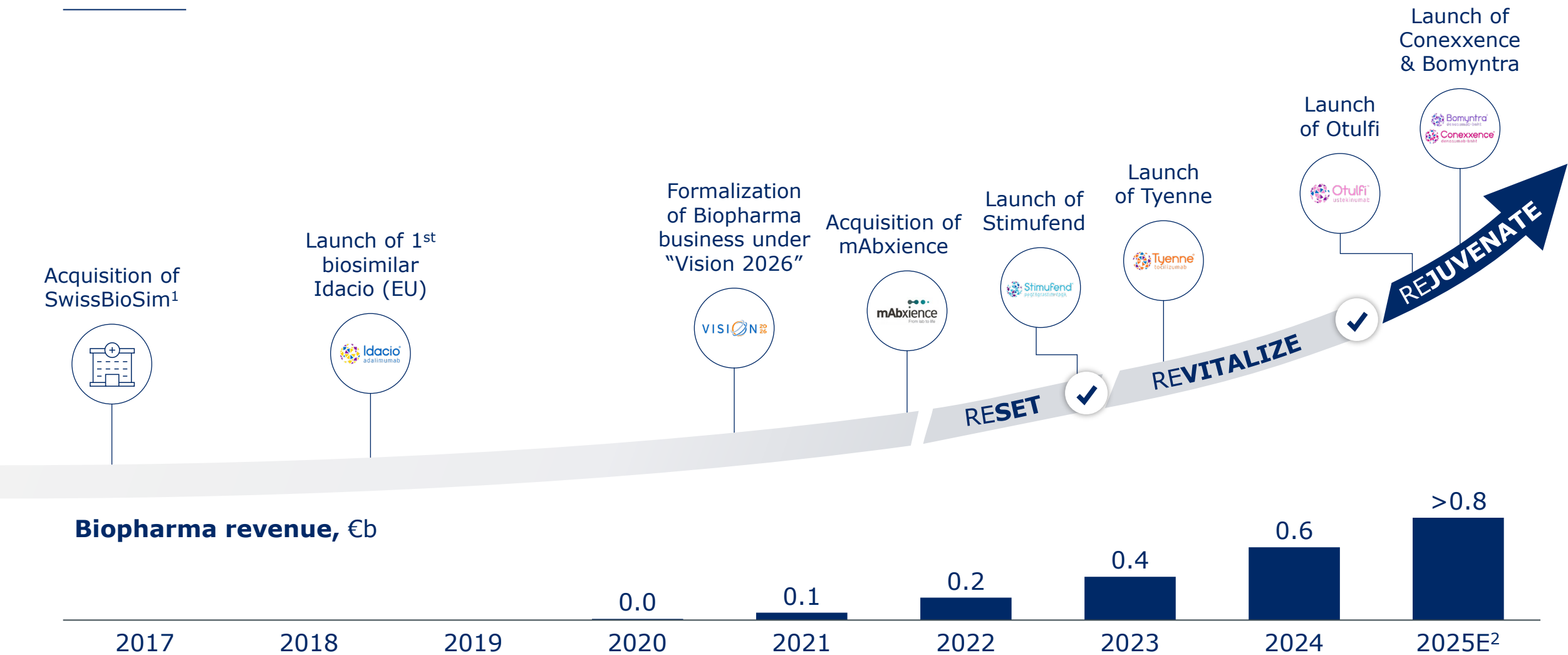
**€30b+**

**Annual savings across the EU and US** – expected to grow to >€100b by 2030<sup>3</sup>

<sup>1</sup> Source: IQVIA, excluding GLP-1 molecules | <sup>2</sup> Source: Biosimilars Council and US FDA | <sup>3</sup> Source: Biosimilars Council and IQVIA reports



# Biopharma is a rapidly scaling business within Fresenius



<sup>1</sup> Merck KGaA created biosimilars business unit in 2011 | <sup>2</sup> Vara consensus as of December 2025: ~€840m



# Strong and renewed management team focused on execution



**Leadership team** with deep pharma and biotech expertise delivered successful scale-up

**New governance and accountability structures** implemented, revamped financial KPIs

**Execution discipline** with milestone-driven culture



**Pierluigi Antonelli**

President and CEO of Fresenius Kabi



**Dr. Sang-Jin Pak**

President Biopharma



**Molly Benson**

SVP Biosimilars US



**Fabrice Romanet**

SVP Research & Development



**Michael Hammer**

SVP Head of Portfolio & Business



**Yannick Sorlet**

SVP Head of TechOps, Supply Chain & Projects



**Jurgen Van Broeck**

CEO mAbxience



**Laurent Rebier**

SVP Partnerships



**Niamh Furey**

SVP Commercial EU & RoW Biopharma



**Rachel Goode**

SVP Legal and Intellectual Property



**Michaela Rother**

VP Global Head of HR



**Sarah D'Orsie**

SVP Global Government Affairs & Policy



**Rolf Loesch**

VP Compliance & Process Excellence



**Tanja Greve**

EVP CFO BU Biopharmaceutical

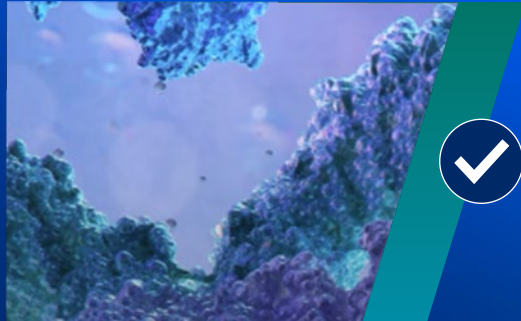


**Catherine Priestley**

VP Head of Communications Biopharma



# #FutureFresenius: Rejuvenate in Biopharma



**Biopharma is an attractive and rapidly scaling business within Fresenius**



**Fully vertically integrated Biopharma Powerhouse has the right levers to win in this highly attractive market**



**Capital allocation to drive further long-term profitable growth**



# II

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## **Biopharma: value creation strategy**



# Our right to win

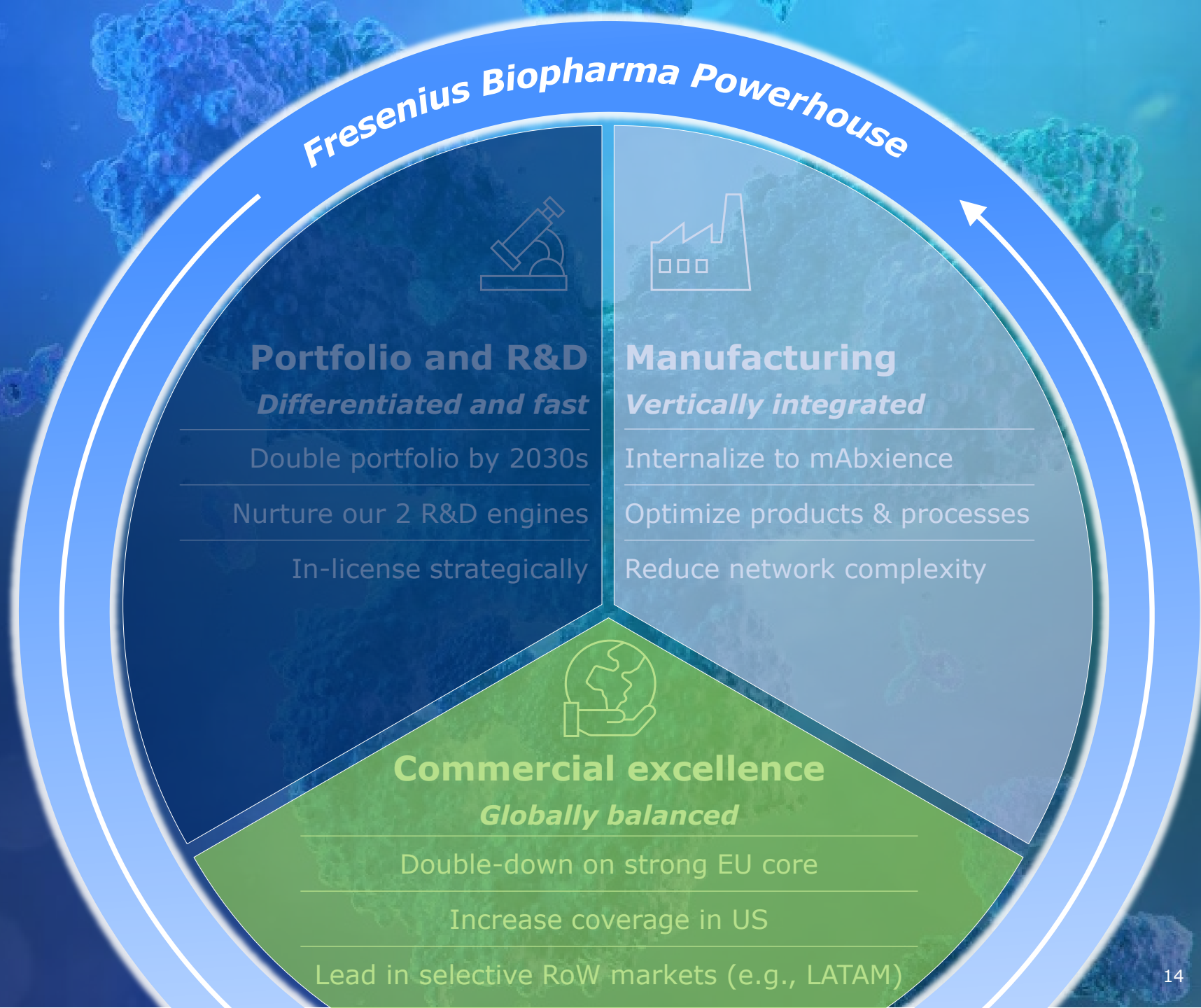


P. Antonelli



S.-J. Pak

## Biopharma: value creation strategy

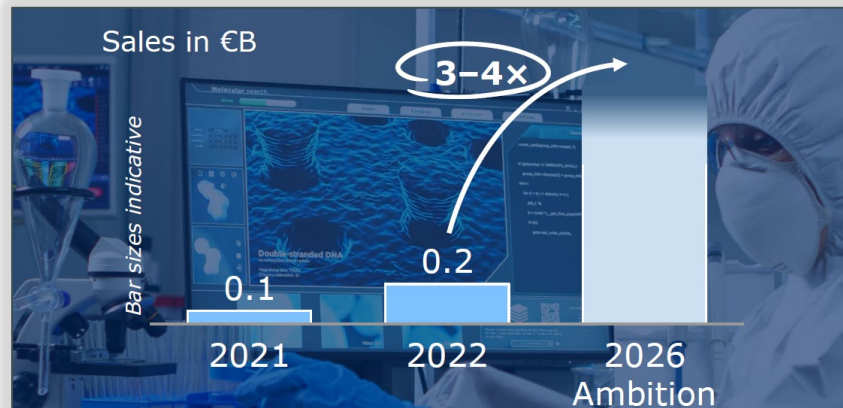




# Biopharma Powerhouse fully established – targets overachieved

## Capital markets day 2023

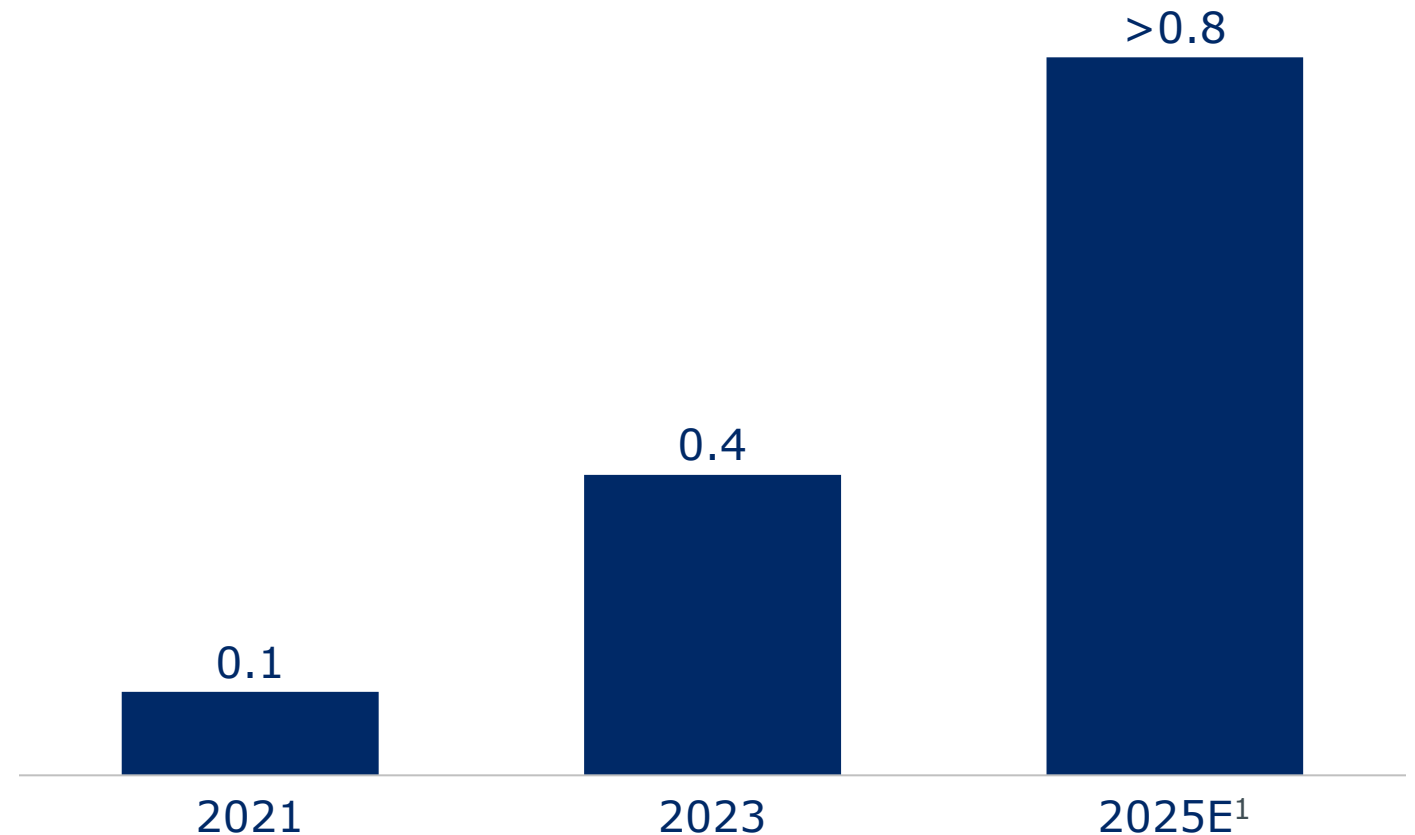
## Biopharma revenue, in €b



**Revenue ambition 2026**  
already reached in 2025E<sup>1</sup>



**EBITDA break-even target**  
overachieved in 2024



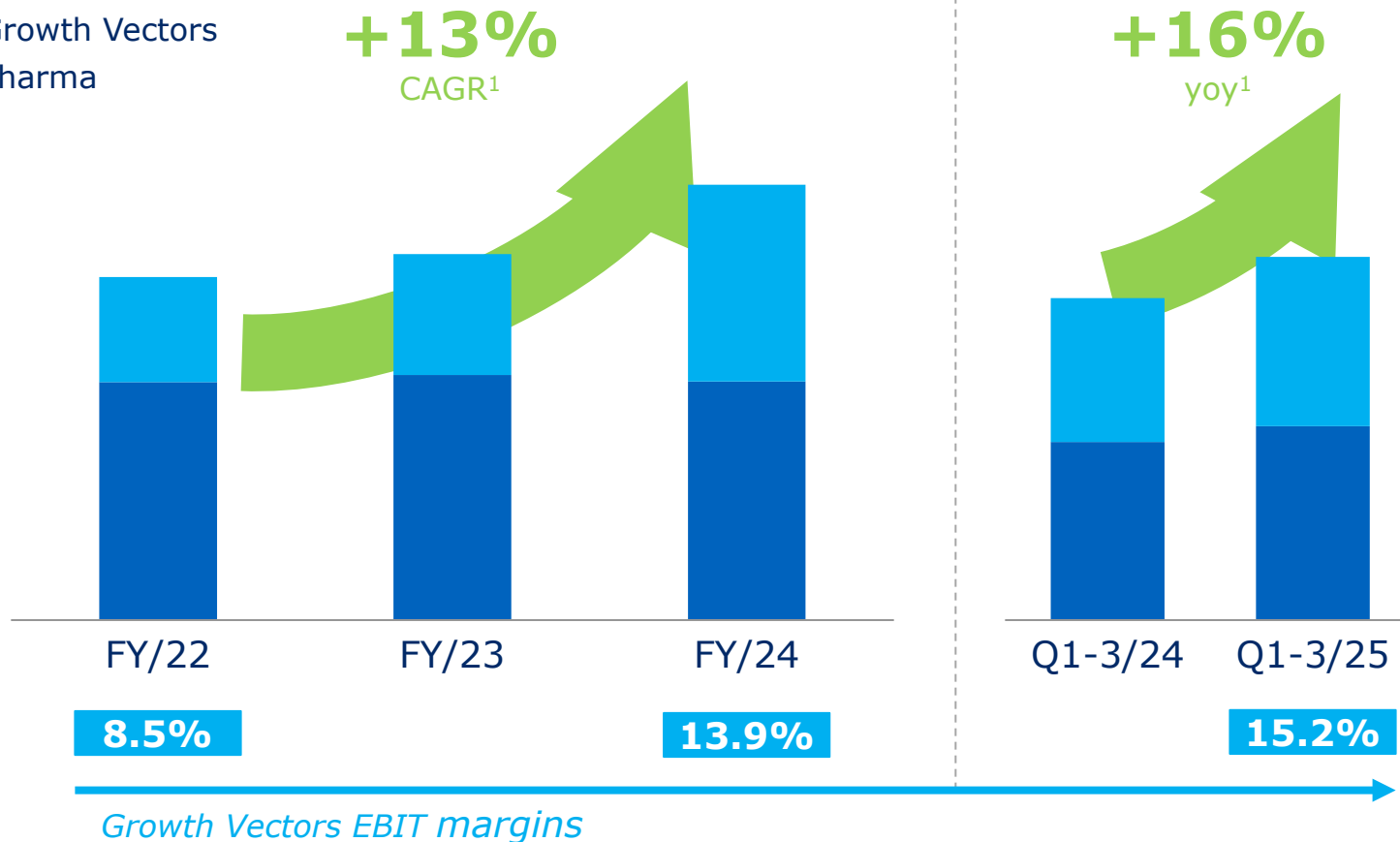
<sup>1</sup> Vara consensus as of December 2025: ~€840m



# Biopharma is significantly contributing to EBIT growth

## Fresenius Kabi EBIT

 Growth Vectors  
 Pharma



**Positive EBIT profile,** step change in margins over recent years, moving towards Kabi's structural margin range<sup>2</sup>



**Strong operating leverage** as scale effects materialize

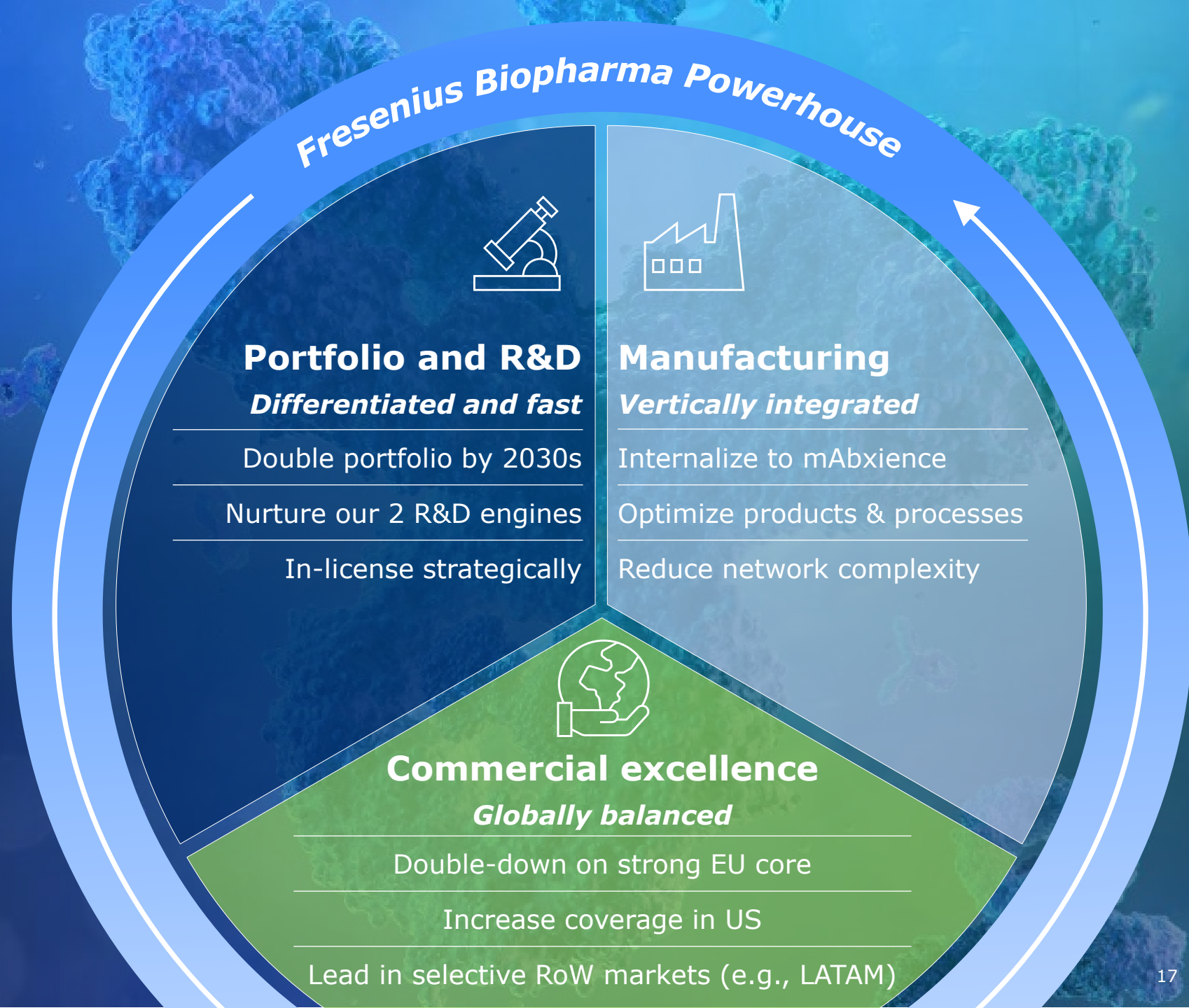


Pipeline ensuring **sustainable mid-term growth momentum**

<sup>1</sup> At constant currency and excluding Corporate | <sup>2</sup> Margin band of 16-18%  
Note: All figures before special items



# Our right to win





# Increasing Biopharma ambition for long-term profitable growth

**~2x**

**Revenue<sup>1,2</sup>**



**~20%**

**EBIT margin<sup>2</sup>**

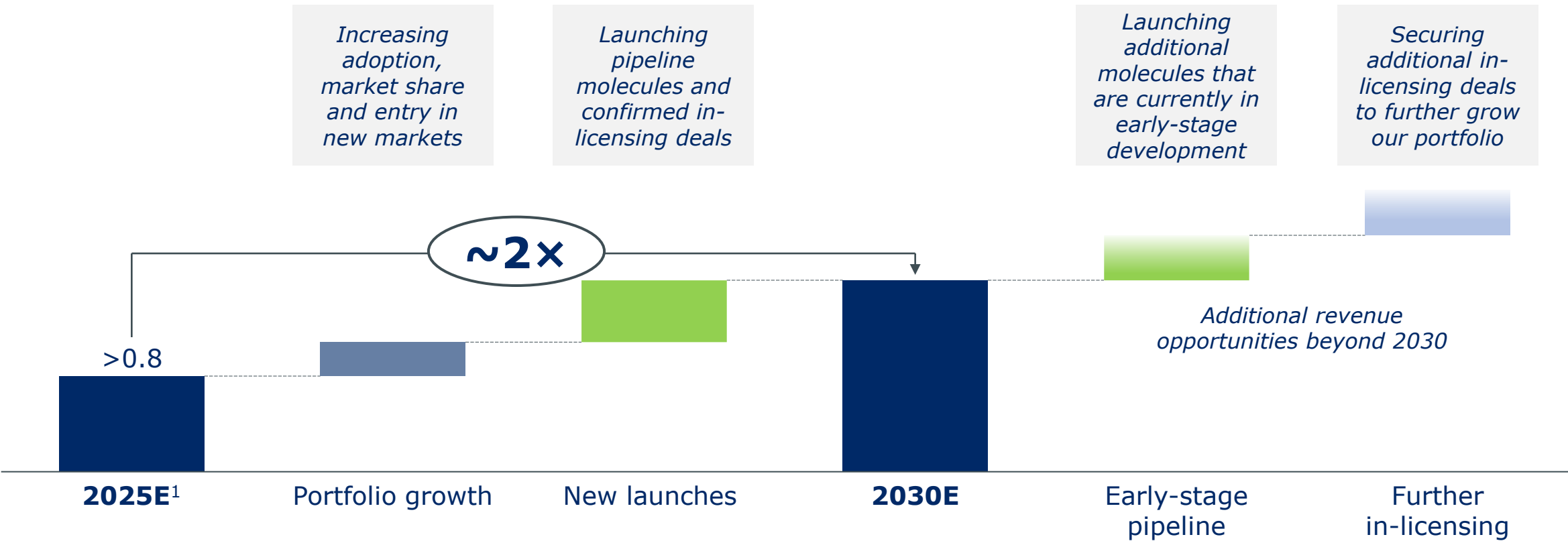
**...by 2030**

<sup>1</sup> Basis: FY/25 revenue; Vara consensus as of December 2025: ~€840m | <sup>2</sup> Based on certain pipeline, portfolio, pricing, and market share assumptions



# Poised to deliver upgraded ambition

## Revenue building blocks, in €b

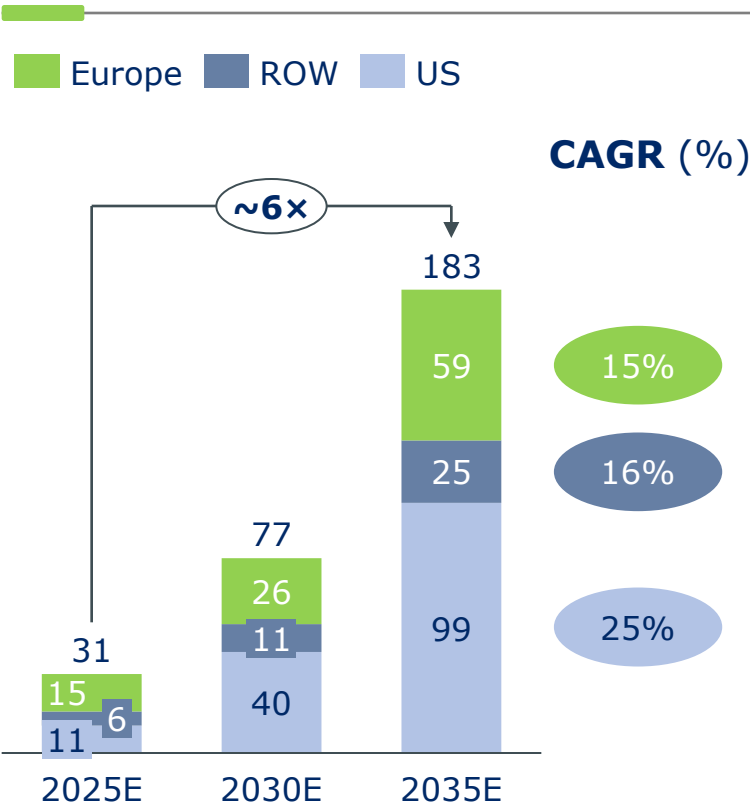


<sup>1</sup> Vara consensus as of December 2025: ~€840m  
Note: Numbers are indicative

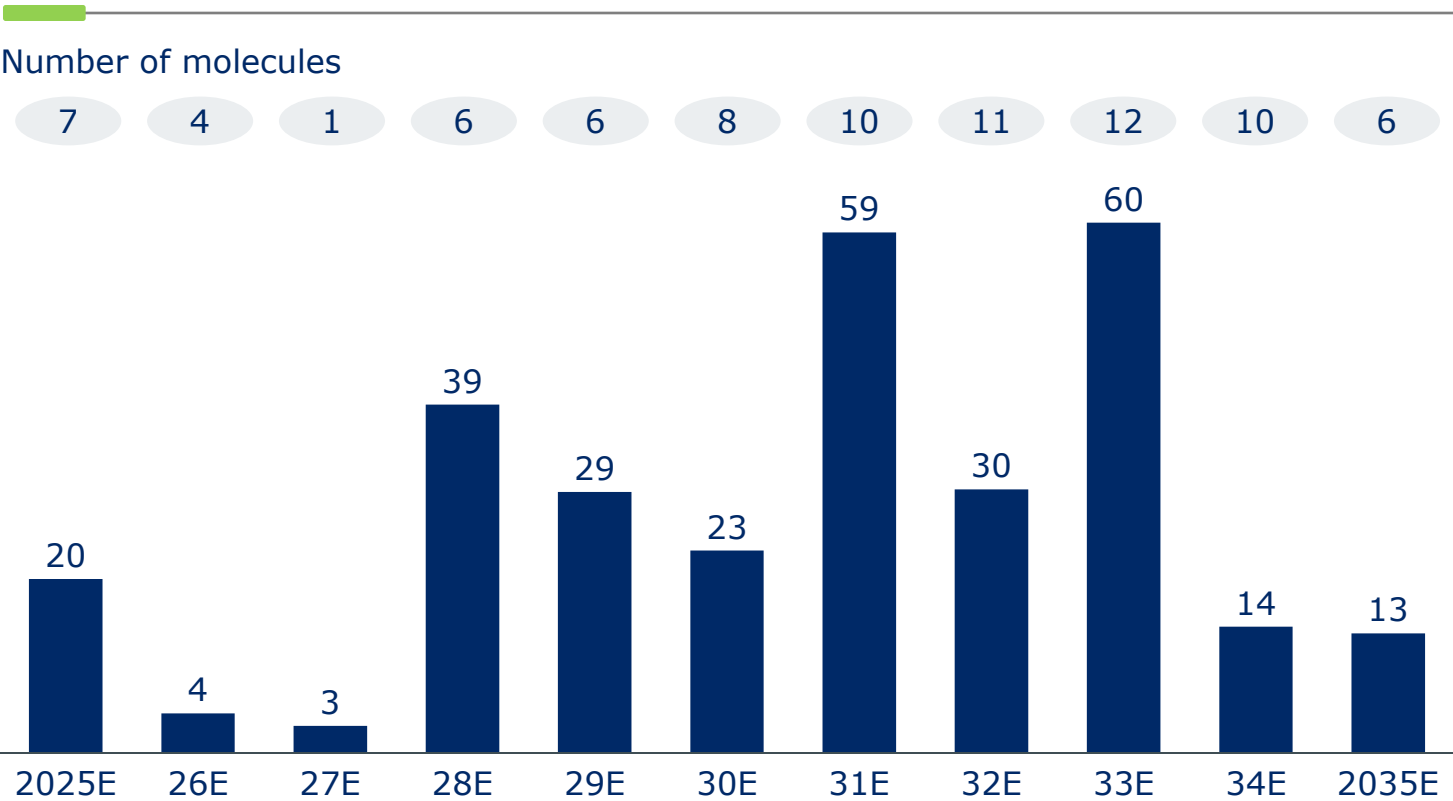


# Global €31b biosimilar market set to grow 6x by 2035

## Global biosimilar market<sup>1</sup>, in €b



## Worldwide originator sales facing Loss of Exclusivity, in LoE-1 sales per year<sup>2</sup> in €b



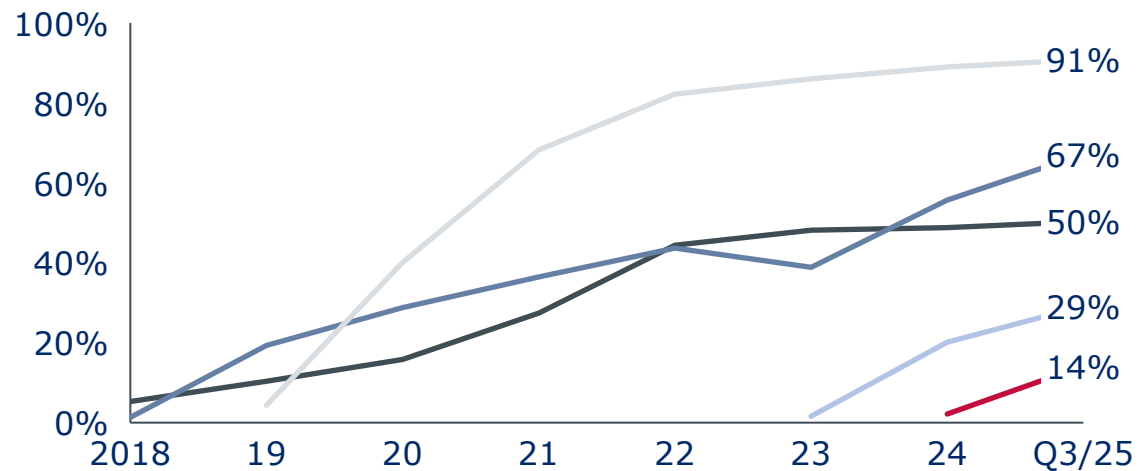
<sup>1</sup> Source: IQVIA. Excluding GLP-1 molecules. H2 2035E not available in IQVIA and forecasted based on CAGR 2030E - H1 2035E | <sup>2</sup> Source: Evaluate Pharma. Evaluate Pharma considers the LoE year of the most critical patent (multiple patents with different LoE dates per molecule). Assuming Exchange Rate of €0.87 = \$1, including LoE-1 sales >€1b. Excluding GLP-1 molecules



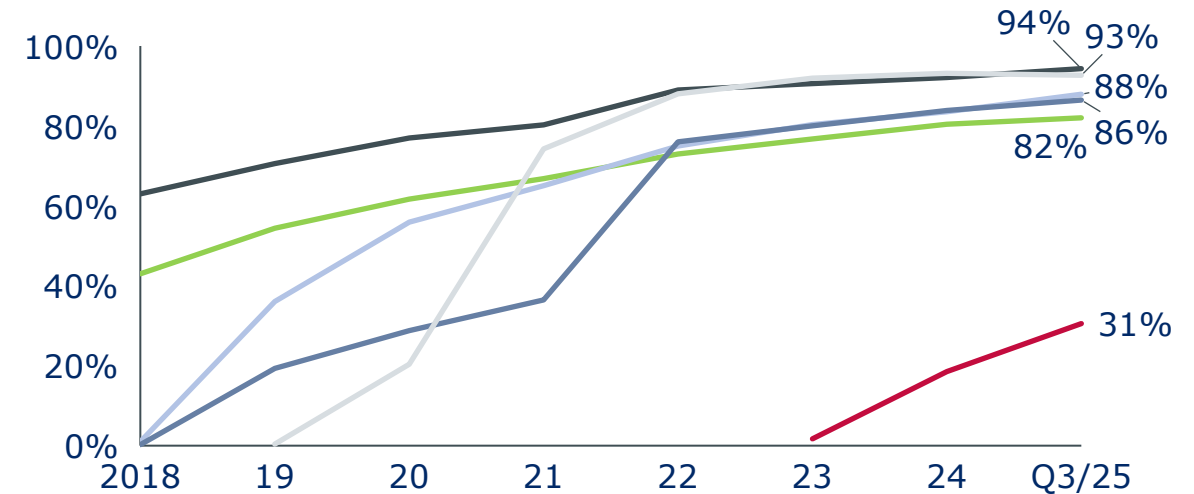
# EU biosimilar adoption reaching >90% with US accelerating

## Biosimilars share of total molecule volume<sup>1</sup>, in %

US



EU5<sup>2</sup>

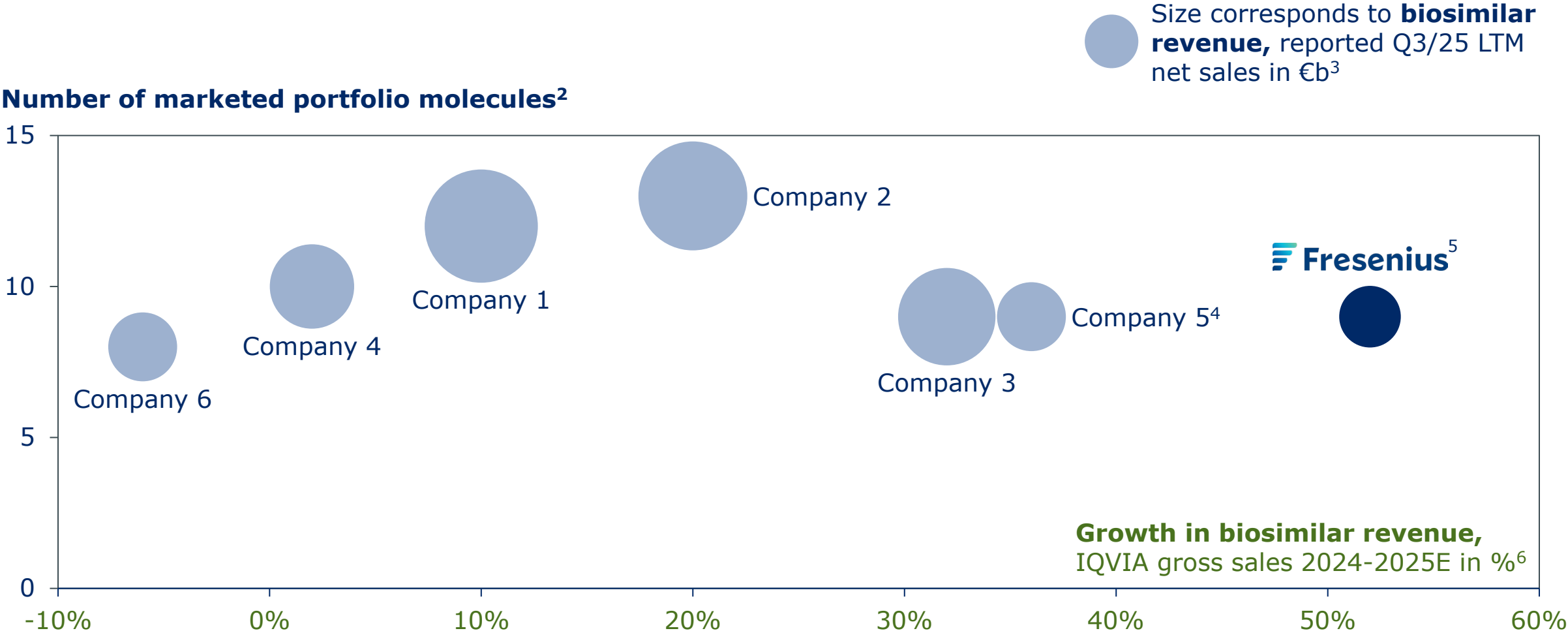


As **familiarity** with biosimilars has **increased**, **adoption has accelerated** benefiting overall patient access and affordability

<sup>1</sup> Source: IQVIA – selective molecule examples | <sup>2</sup> Includes Germany, UK, Italy, France, and Spain



# Fresenius is the fastest growing<sup>1</sup> biosimilar company globally

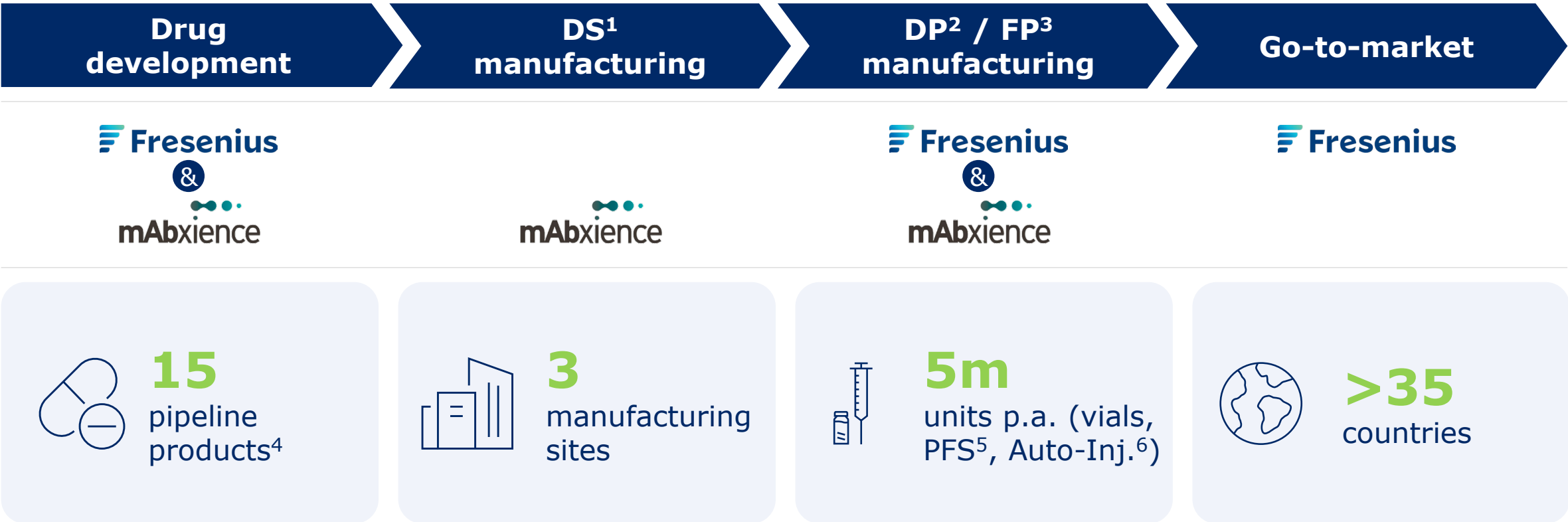


<sup>1</sup> Growth based on top-7 companies | <sup>2</sup> Source: Company websites. Distinct molecules only - not counting multiple products per molecule | <sup>3</sup> Source: Company websites, assuming Exchange Rates of €0.87 = \$1, €0.0097 = ₹1, and €0.00059 = ¥1 | <sup>4</sup> Company 5 does not report biosimilar revenue, therefore IQVIA gross sales data is used | <sup>5</sup> Counting both Fresenius and mAbxience | <sup>6</sup> Source: IQVIA



# Creating a leading end-to-end biosimilar business

## Biopharma value chain



<sup>1</sup> Drug Substance (DS) | <sup>2</sup> Drug Product (DP) | <sup>3</sup> Finished Product (FP) | <sup>4</sup> 15 products including 5 in registration/clinical, 4 in CMC/preclinical, 6 in early stage (6 not included in competitor comparison for consistency) |

<sup>5</sup> Pre-filled syringe (PFS) | <sup>6</sup> Auto-Injector



# Building a Powerhouse with broad portfolio of biosimilar brands

**11 marketed products across 9 molecules**



**Idacio®**  
adalimumab



**Stimufend®**  
pegfilgrastim-fpgk



**Tyenne®**  
tocilizumab



**Bomynta®**  
denosumab-bnht

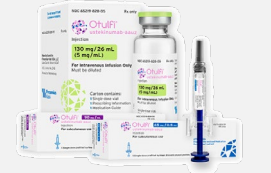


**Conexxence®**  
denosumab-bnht



**Otulf®**  
ustekinumab

In-licensed



**rituximab<sup>1</sup>**

Out-licensed



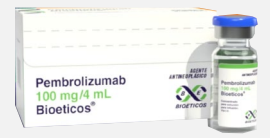
**bevacizumab<sup>2</sup>**

Out-licensed



**pembrolizumab**

Out-licensed



**denosumab<sup>3</sup>**  
(osteoporosis)

Out-licensed

**denosumab<sup>4</sup>**  
(oncology)

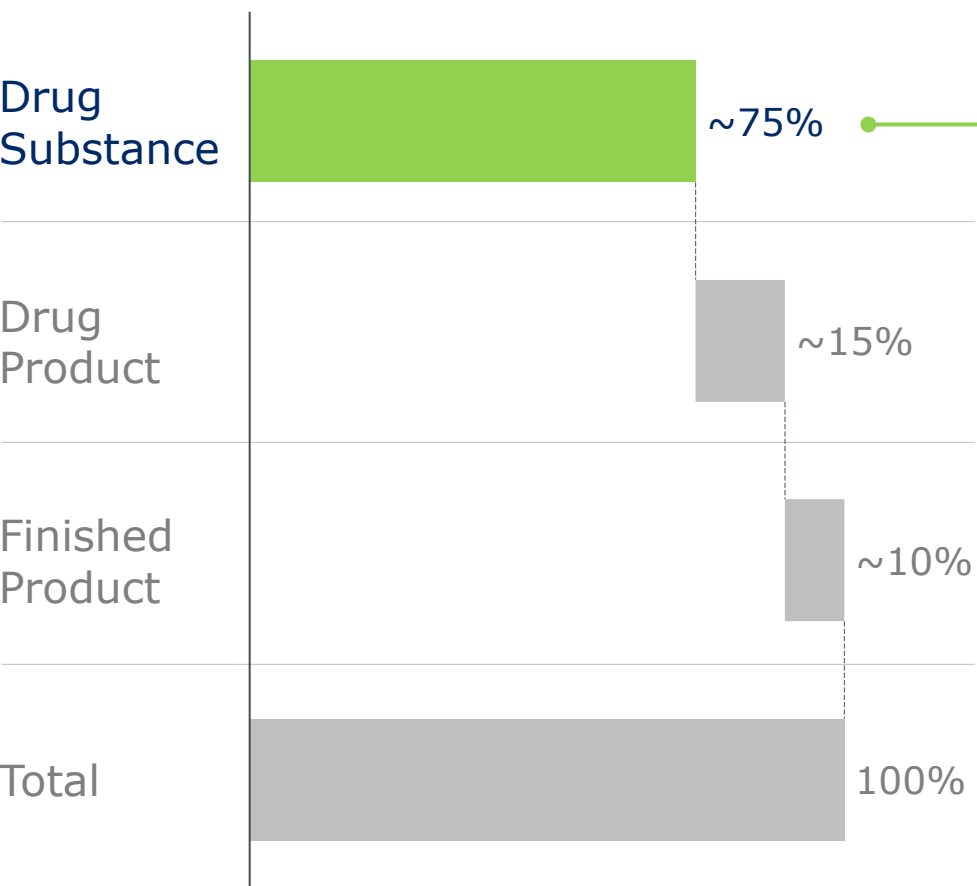
Out-licensed

<sup>1</sup> Referenced as Novex® in LATAM | <sup>2</sup> Referenced as Almysys®, among other names, in Europe, US and RoW | <sup>3</sup> Indicated for osteoporosis and referenced as Izamby® in Europe | <sup>4</sup> Indicated for oncology and referenced as Denbrayce® in Europe



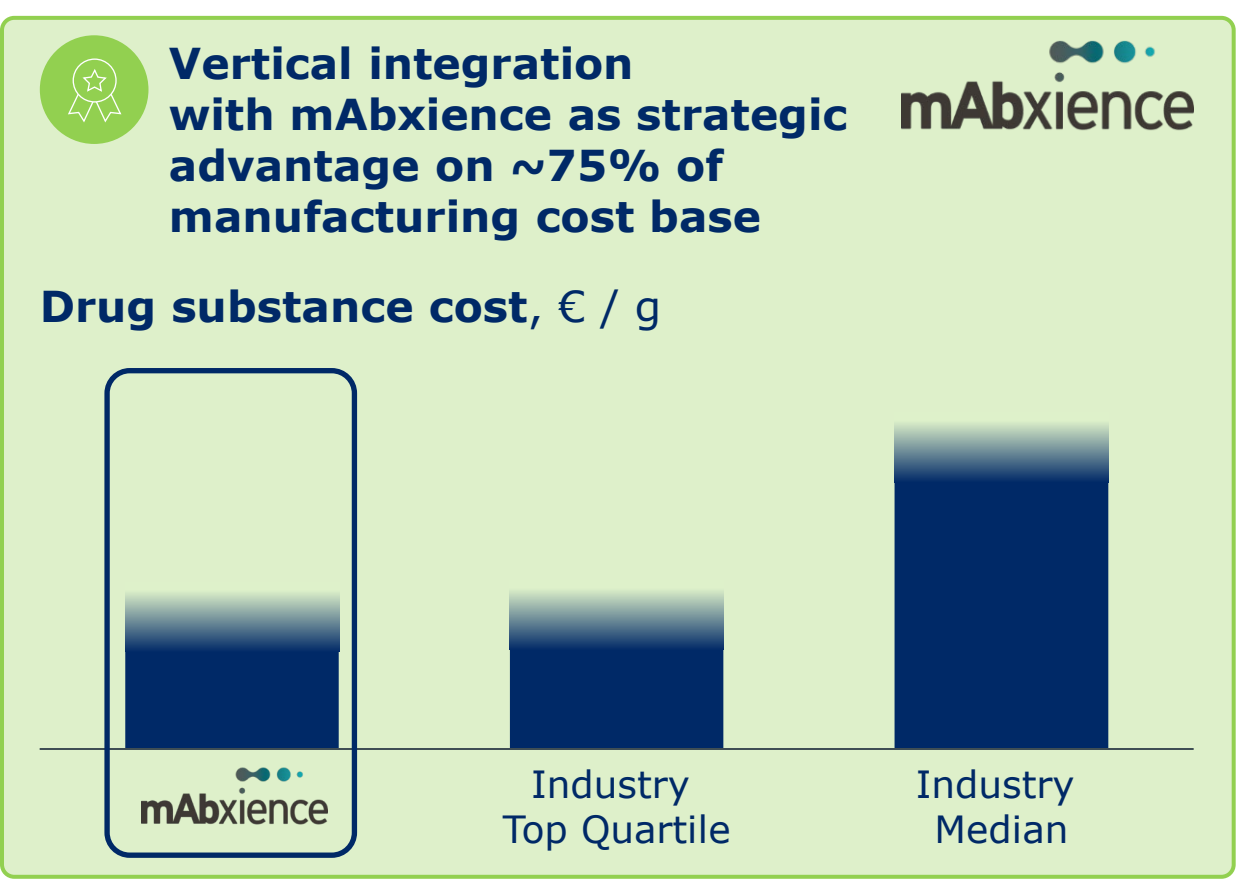
# Vertical integration driving significant strategic cost advantages

## Manufacturing cost<sup>1</sup>



<sup>1</sup> Typical manufacturing cost split in Biosimilars industry

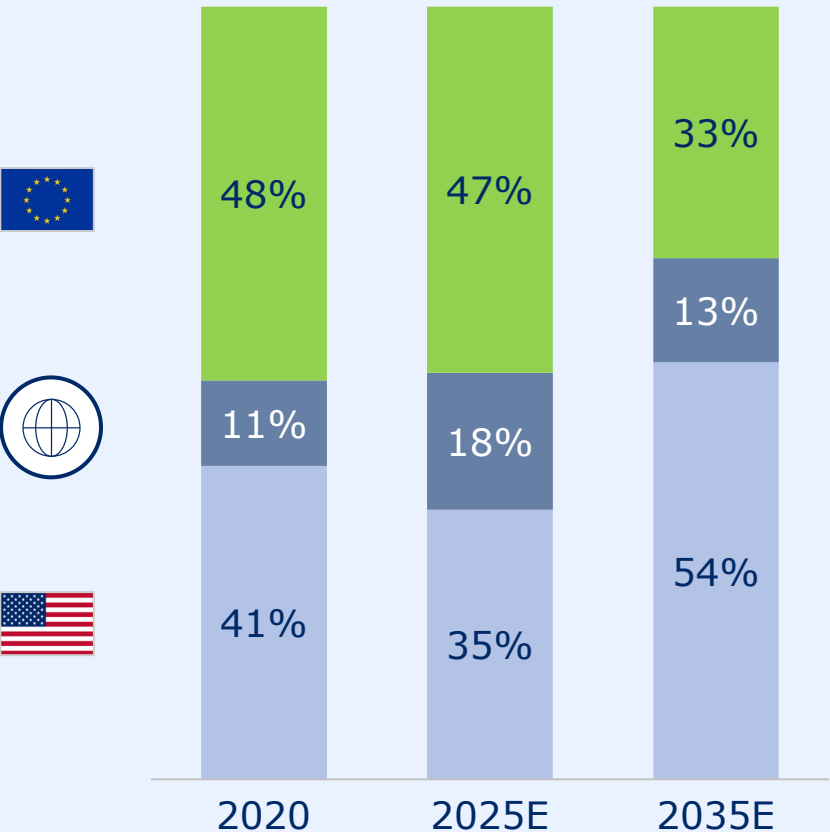
## Our competitive advantage





# Strong commercial presence across key geographies

## Global biosimilar market<sup>1</sup>



## Our commercial coverage



### Strong European core:

Direct-sales model in >20 markets and deep payer access (e.g., 95% tender win rates in France for tocilizumab, 100% of statutory sick funds contracted in Germany)



### Leadership in LATAM:

Extensive commercial footprint across >10 countries and stronghold in Brazil and Argentina with favorable biosimilar regulation enabling early launches; ambition to opportunistically expand to selective MENA and APAC countries



### Ambition to increase US:

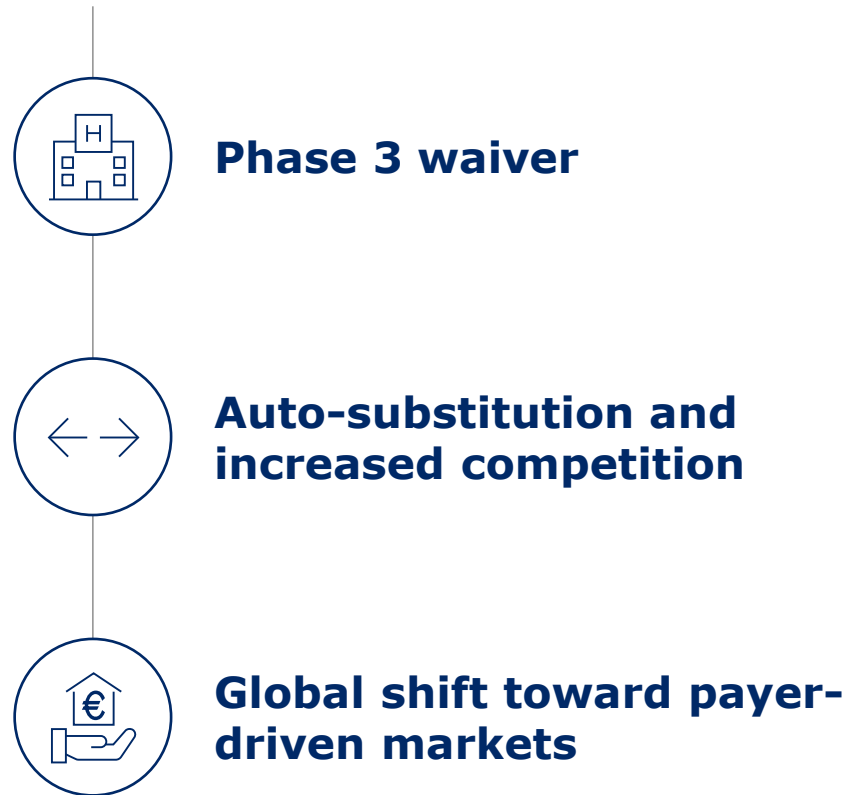
Continued portfolio expansion with recent US FDA approvals including novel commercial approaches to penetrate the market

<sup>1</sup> Source: IQVIA. Excluding GLP-1 molecules. H2 2035E not available in IQVIA and forecasted based on CAGR 2030E - H1 2035E

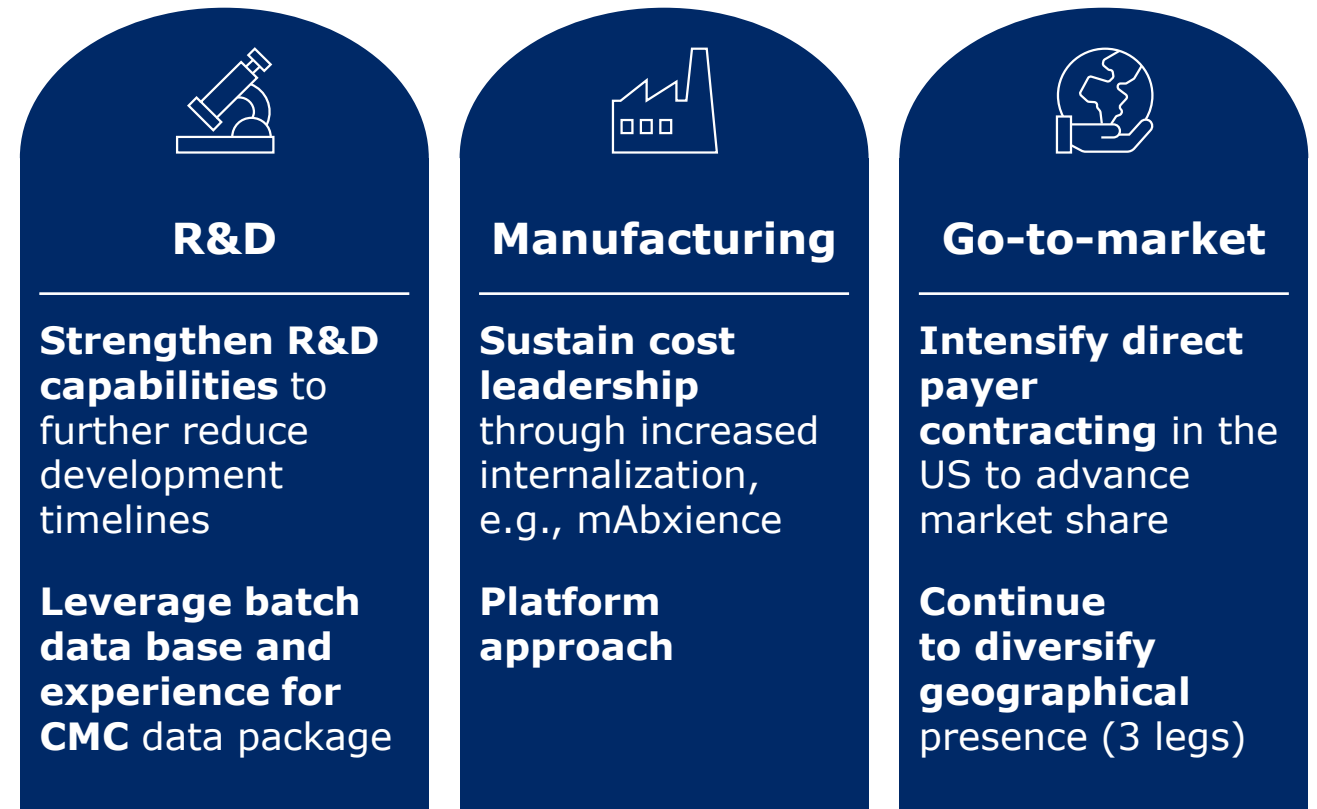


# Fresenius is positioned to address key shifts in biosimilar market

## Market dynamics and shifts



## Fresenius strategic response





# Biopharma: value creation strategy



✓ **We operate in a dynamic market that is expected to grow sixfold over the next 10 years with increasing biosimilar adoption**

✓ **We have established a global Powerhouse with a track record of successfully launching & scaling biosimilar brands over the last 6 years**

✓ **We run an efficient R&D machine that delivers differentiated products at speed and continue to focus on selecting the right pipeline assets**

✓ **We drive vertical integration incl. internalization of capacity, enabling cost leadership**

✓ **We demonstrated the ability to penetrate key markets with tailored access strategies and geographic diversification**



# **III**

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**Portfolio Rejuvenation  
for long-term growth**



# Our right to win

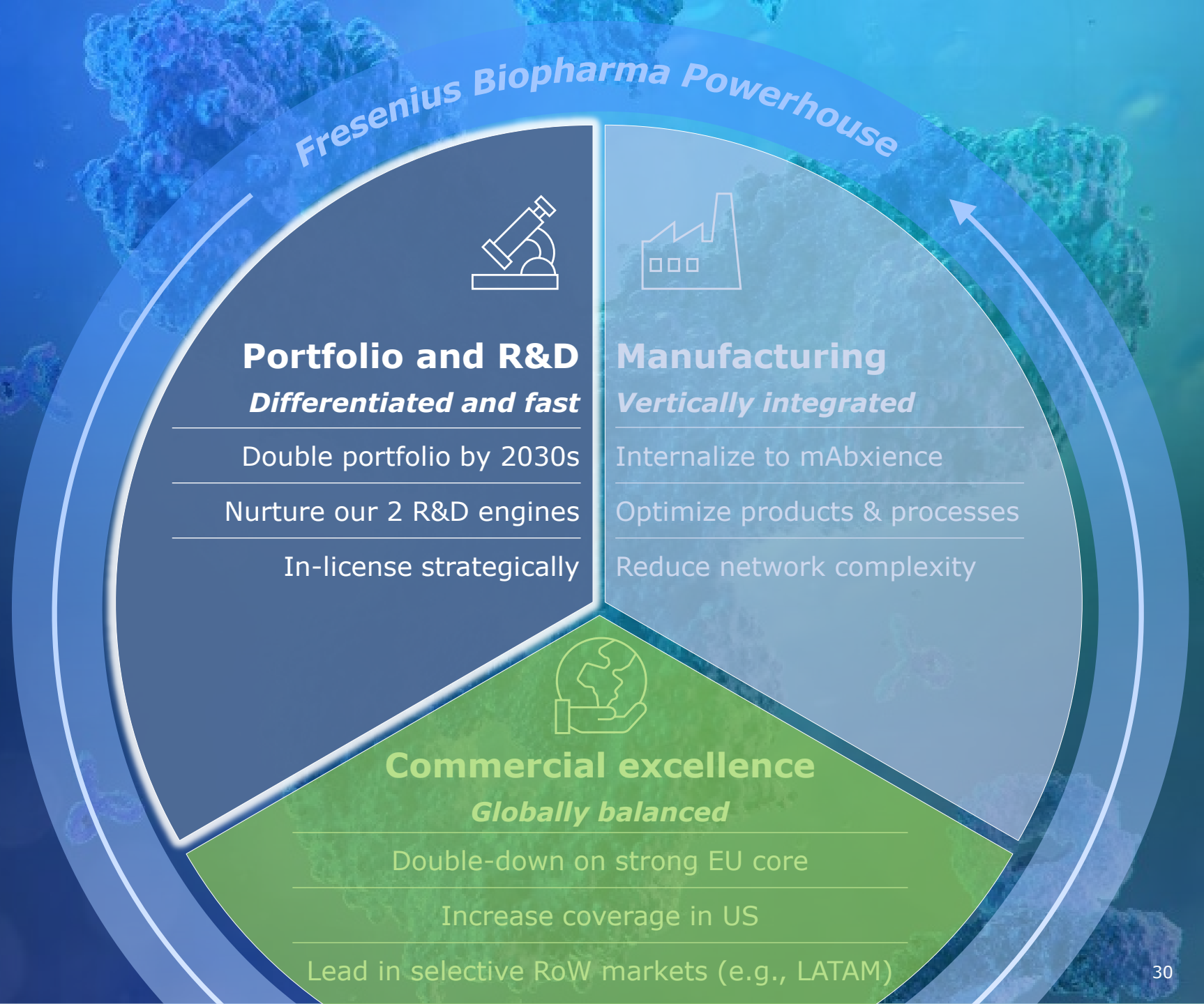


F. Romanet



M. Hammer

## Portfolio Rejuvenation for long-term growth





# Portfolio Rejuvenation for long-term growth



**We have demonstrated both speed (e.g., tocilizumab first-to-market) and differentiation (e.g., denosumab pre-filled syringe) in R&D**



**We have built a competitive portfolio and pipeline covering €200b in originator sales**



**We will continue to deliver on our pipeline through our proven R&D engines, leveraging complementary in-house R&D hubs and selective in-licensing**



**We target 2+ molecules p.a. entering development based on our competitive portfolio selection approach**

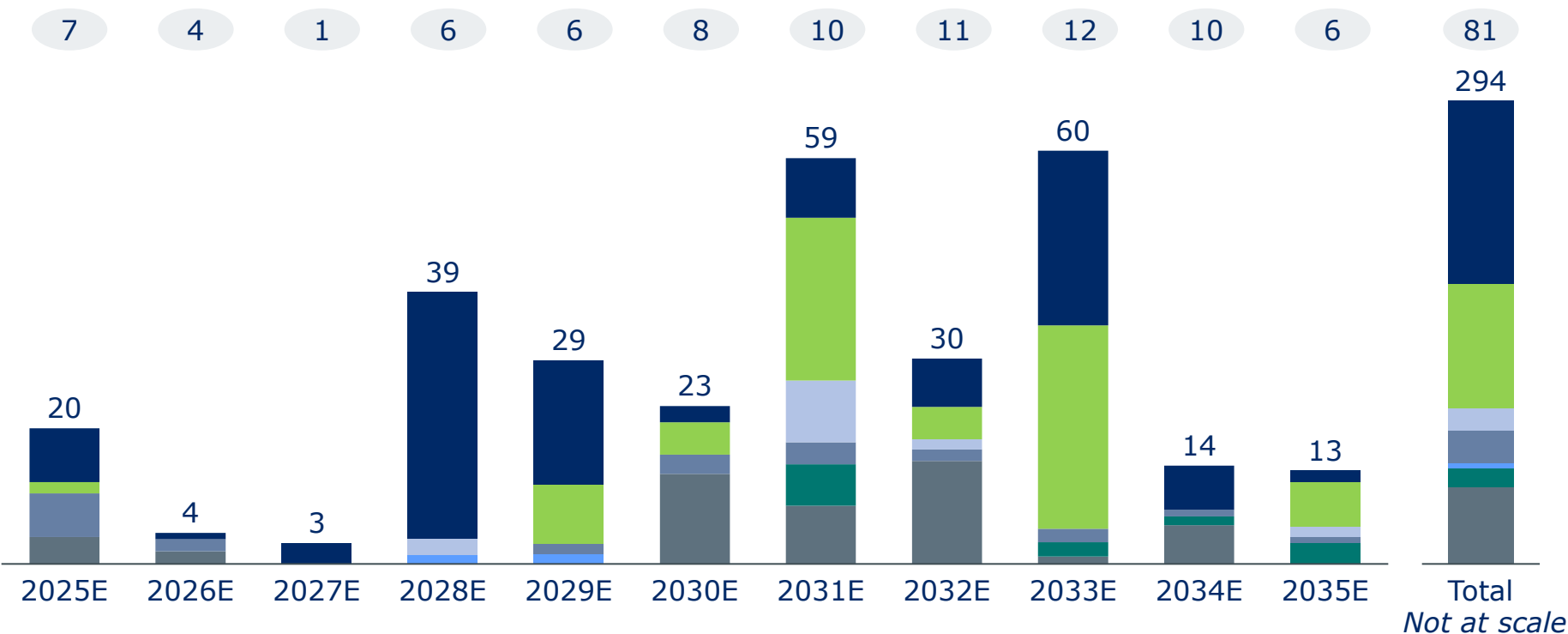


# Significant opportunity ahead from upcoming biologic LoEs

## Therapeutic Areas (TAs)



## Worldwide originator sales facing Loss of Exclusivity, in LoE-1 sales per year, in €b<sup>1</sup>



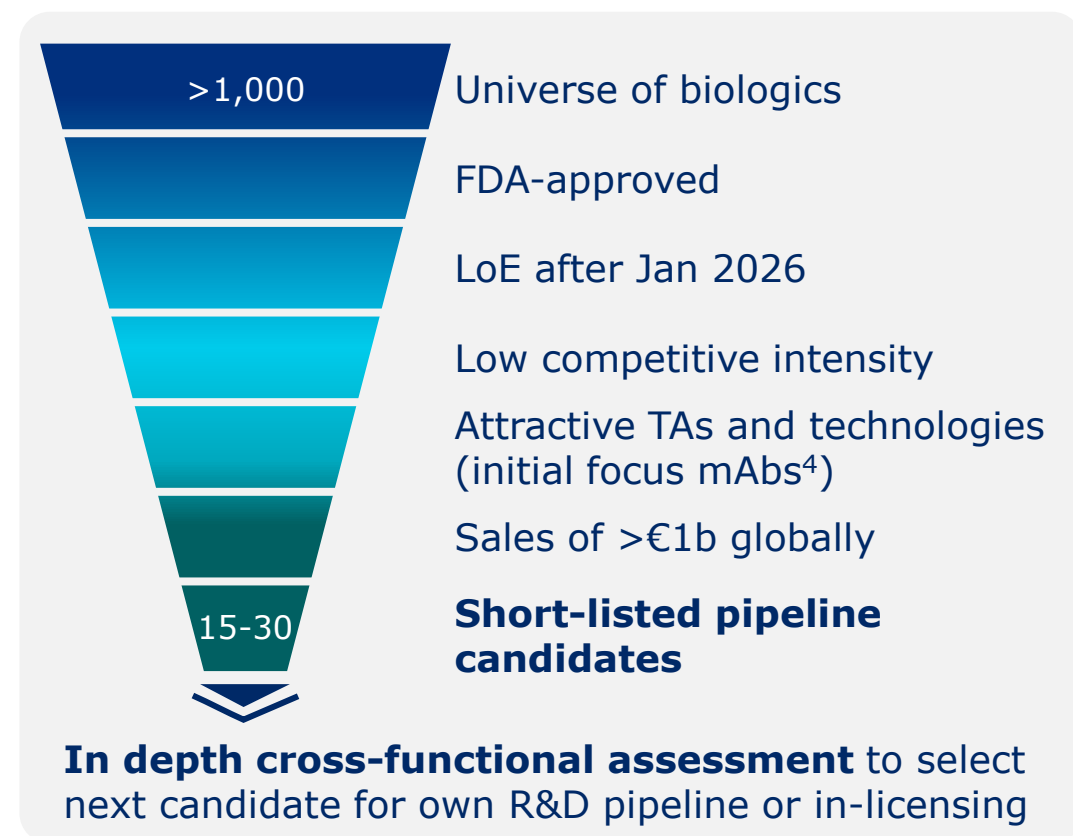
- >60% of LoE-1 sales from Oncology and Immunology
- Experience in Oncology and Immunology enables strong positioning for upcoming launches
- Selective expansion into other attractive Therapeutic Areas

<sup>1</sup> Source: IQVIA. Assuming Exchange Rate of €0.87 = \$ 1, including LoE-1 sales > €1b. Excluding GLP-1 molecules



# Targeted portfolio strategy and selection approach

## Portfolio strategy and selection approach



**Leveraging synergies** between the immunology and oncology portfolio and **TA-agnostic expansion** through in-house development and partnerships



**Strong portfolio execution** prioritizing speed, best-in-class COP<sup>1</sup>, full TPP<sup>2</sup>, and reliable supply

**2+**

Molecules entering development p.a.

**€200b**

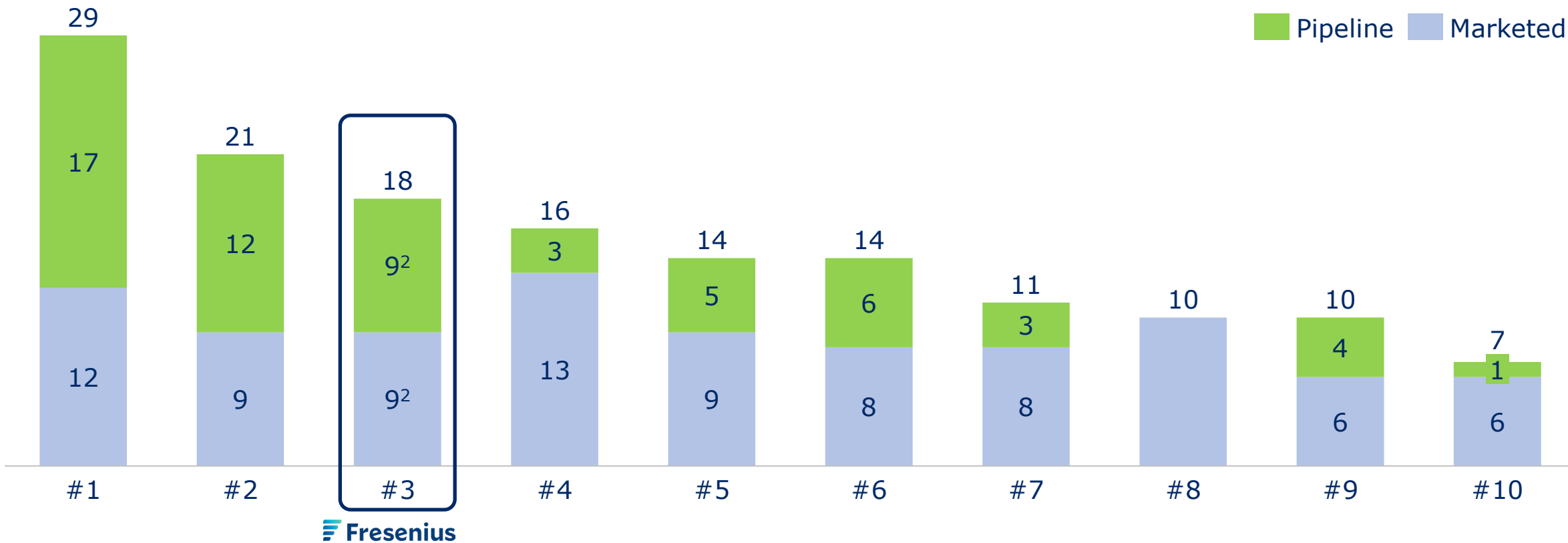
Portfolio & pipeline coverage of pre-LoE originator sales<sup>3</sup>

<sup>1</sup> Cost of Production | <sup>2</sup> Target Product Profile | <sup>3</sup> Source: Evaluate Pharma | <sup>4</sup> Molecular Antibodies



# Competitive portfolio across pipeline and marketed molecules

Number of portfolio molecules of top competitors globally<sup>1</sup> (excluding early-stage candidates)



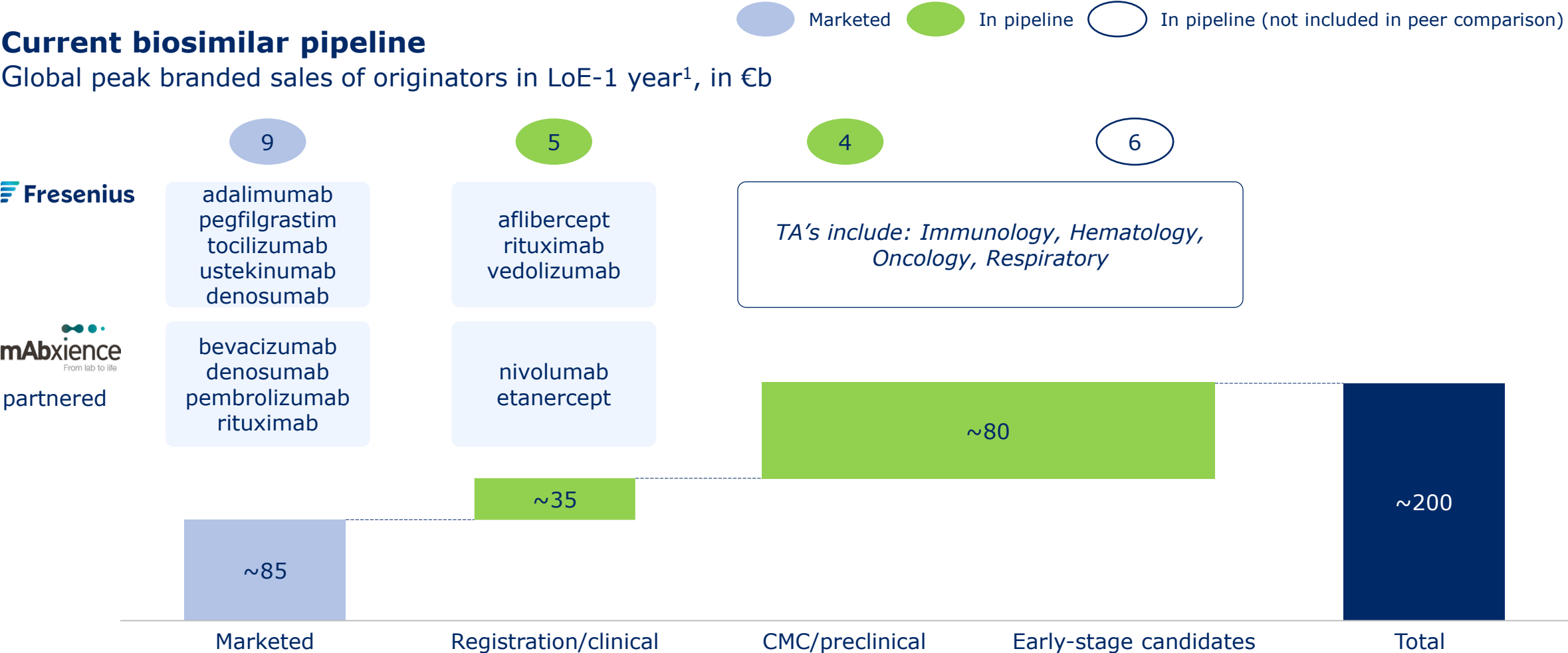
<sup>1</sup> Source: Company websites for pipelines from publicly disclosed information (December 2025). Disclosed pipelines only - actual pipelines might be larger. Distinct molecules only - not counting multiple products per molecule | <sup>2</sup> Counting both Fresenius and mAbxience, excluding 6 early-stage candidates



# Our portfolio & pipeline address €200b originator sales

## Current biosimilar pipeline

Global peak branded sales of originators in LoE-1 year<sup>1</sup>, in €b



<sup>1</sup> Source: Evaluate Pharma (accessed Jul 2025). LoE-1 year reflects timing of loss of exclusivity, sales figures may include molecules with LoEs pre-2025 where current market size has already declined



# Complementary in-house R&D engines & strategic in-licensing

**Complementary in-house R&D engines**  
increase portfolio breadth and competitive strength...



**...enhanced by  
in-licensing**

 **Fresenius**  
*Inhouse  
R&D*

  
**mAbxience**  
From lab to life  
*Inhouse  
R&D*

**Strategic  
in-licensing**



**Differentiation:** Enabling launches with TPP differentiation



**Speed:** Enabling launches in first wave or first-to-market





# Our in-house R&D engines enable increasing number of launches



## Technical Development

**15+ years of biosimilar development;**  
9 molecules launched,  
9 in pipeline + 6 in early stage

**Early-stage hubs** in Eysins and León and **Scale-up hubs** in Garín, Munro, León



## Clinical Development

**Internal capabilities** for pharmacokinetics, immunogenicity and biostatistics

**Implementation of *estimands framework*<sup>1</sup>** in all biosimilar study protocols since 2020



## Regulatory & Quality

**8 US FDA BLA approvals 2022-2025** – highest among competitors<sup>2</sup>

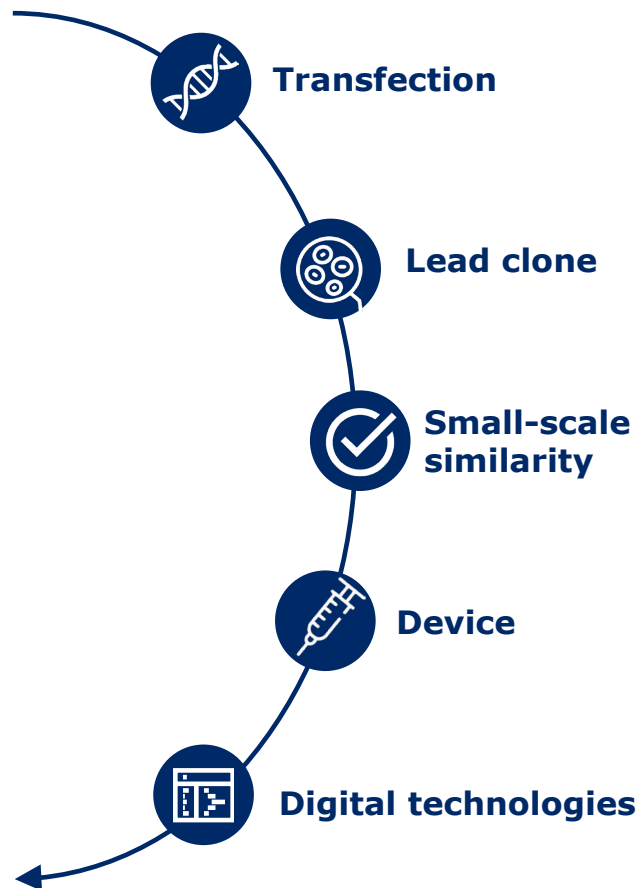
**Leading voice in negotiating science-led adjustments** of regulatory guidelines (e.g., BSUFA3<sup>3</sup>)

<sup>1</sup> An estimand is a precise description of the treatment effect reflecting the clinical question posed by the trial objective (as defined in ICH E9 R1) | <sup>2</sup> Source: FDA BLA database | <sup>3</sup> Biosimilar User Fee Act 3



# Our technical development allows differentiated & fast launches

## Technical development steps



## Shortening development cycle and ensuring high quality

- **Cell line development toolbox** proven to manufacture commercial products
- **State-of-the-art technologies** to pick the best producers and demonstrate clonality under industry-standard timelines
- **Combination of cell culture, media screening, and high-throughput analytics platforms** to select the lead clone, balancing quality, titer, and "clone plasticity"
- **Early establishment of the CMC blueprint** increases efficiency and accelerates timelines
- **Integrated CMC and IP experts** identify optimal manufacturing and formulation development
- **15 years of experience** allows to shorten development timelines with DOE and understand regulator expectation of right at first time approach
- **Platform approach for devices** reduces CDMO & internal development costs
- **Parallel development of multiple delivery technologies** enhances patient usability
- **Digital systems** (ELN, LIMS) ensure full data integrity and quality
- **Instrument connectivity and automated workflows** accelerate batch review & release



# denosumab biosimilar is differentiated through pre-filled syringe

## denosumab biosimilar overview of product differentiation

	 Fresenius	Originator	Competitor 1	Competitor 2	Competitor 3
<b>Launch (US)</b>	<b>Jun 25</b>		<b>Jun 25</b>	<b>Jul 25</b>	<b>Nov 25</b>
<b>Dosage form</b>					
Oncology PFS <sup>1</sup>	✓	✓			
Oncology vial	✓	✓	✓	✓	✓
Osteoporosis PFS <sup>2</sup>	✓	✓	✓	✓	✓
<b>Device specs</b>	<b>Latex-free</b>	<b>Latex-free</b>	<b>Latex-free</b>	<b>Natural rubber latex</b>	<b>Natural rubber latex</b>

- 1 First-wave launch** securing early market entry and competitive positioning
- 2 Differentiated vs biosimilar competitors** through PFS<sup>1</sup> in oncology (e.g., solo bidder in UK tender in this category)
- 3 Prevents allergic reactions** through use of latex-free device

<sup>1</sup> 120mg | <sup>2</sup> 60mg

Note: Additional competitors expected to launch in 2026



# R&D speed showcased by first biosimilar launch of tocilizumab

## Our US tocilizumab biosimilar launch



### First-to-market launch through

- > Continuous regulatory dialogue
- > Parallelized clinical trials
- > Accelerated delivery of clinical study reports
- > Rolling publishing enabling fast delivery of final dossier



# We in-license strategically to complement our internal pipeline


## We are partner-of-choice

- ✓ **Deep expertise for development & regulatory**
- ✓ **Broad market access and trusted brand reputation**
- ✓ **IP & launch excellence**

## Case Study: vedolizumab biosimilar in-licensing

### Key information

Developer:  **polpharma**

Reference brand:  **Entyvio**

Therapeutic area: **Immunology**  
Disease: **Inflammatory Bowel Disease (IBD)**

2024 global sales: **€5.8b**

Peak global sales: **€6.5b**

LoE: **2029**

### ✓ Fulfills program evaluation criteria

<b>Portfolio fit</b>	Therapeutic Area focus
	Global agreement
	Number of competitors
<b>Program</b>	Peak sales
	First-to-market potential
<b>Partner</b> 	EMA & FDA track record
	Established supply chain



# We shape and capitalize on the biosimilar regulatory landscape

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## Regulatory paradigm shifts

(incl. Phase 3 waivers)

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Shorter **development timelines** and increasing **expectations for CMC analytical data package**

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Increased need for **continuous FDA/EMA engagement**

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Move towards **Phase 1 PK/PD focus**

## Our competitive edge

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**40%** faster development **timeline** achieved, and 15+ years of biosimilar expertise

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**10+** successful filings and AI-enabled regulatory tools

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**10+** robust **Phase 1 studies** with proven execution



# Portfolio Rejuvenation for long-term growth



**We have demonstrated both speed (e.g., tocilizumab first-to-market) and differentiation (e.g., denosumab pre-filled syringe) in R&D**



**We have built a competitive portfolio and pipeline covering €200b in originator sales**



**We will continue to deliver on our pipeline through our proven R&D engines, leveraging complementary in-house R&D hubs and selective in-licensing**



**We target 2+ molecules p.a. entering development based on our competitive portfolio selection approach**



# IV

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**Cost Leadership:  
reaping benefits of vertical integration**



# Our right to win



Y. Sorlet



J. Van Broeck

**Cost Leadership:  
reaping benefits of  
vertical integration**





# Cost Leadership: reaping benefits of vertical integration



**We operate a cost-leading manufacturing Powerhouse across Drug Substance, Drug Product, Finished Product - with global certifications**



**We achieved significant COGS reduction through internalization and will continue to leverage our full vertical integration**



**We target additional COGS reduction through product and process optimization initiatives on capacity, productivity, and supply chain efficiency**











**With our end-to-end manufacturing network established, we are investing >€300m over the next 5 years to expand capacity and drive growth**



# Our industry-leading manufacturing capacity & capabilities

## Global manufacturing footprint

<b>León</b> 		<b>24 kl</b> Bioreactor cell culture capacity	<ul style="list-style-type: none"> <li>✓ 2 industrial lines and cGMP<sup>1</sup> pilot facility</li> <li>✓ Single-use technology</li> </ul>
<b>Garín</b> 		<b>24 kl</b> Bioreactor cell culture capacity	<ul style="list-style-type: none"> <li>✓ 2 independent industrial lines</li> <li>✓ Single-use technology</li> </ul>
<b>Munro</b> 		<b>400 l</b> Bacterial fermentation capacity	<ul style="list-style-type: none"> <li>✓ Dedicated process optimization lab</li> <li>✓ Single-use technology</li> </ul>
<b>Graz</b> 		<b>5 m units</b> Finished product capacity p.a.	<ul style="list-style-type: none"> <li>✓ Semi-automated assembly of devices</li> <li>✓ Single-use and isolator technology</li> </ul>

<sup>1</sup> Current Good Manufacturing Practice



# We continue to invest in expanding our capacity

CapEx  
investment  
of >€300m  
over the  
next 5  
years



**León**

**Increased bioreactor size and additional production line:** DS in new building, doubling capacity



**Munro**

**New microbiological site:** Capability added to manufacturing network



**Graz**

**Additional production line:** Compounding & filling for vials and syringes, more than doubling capacity



**Graz**

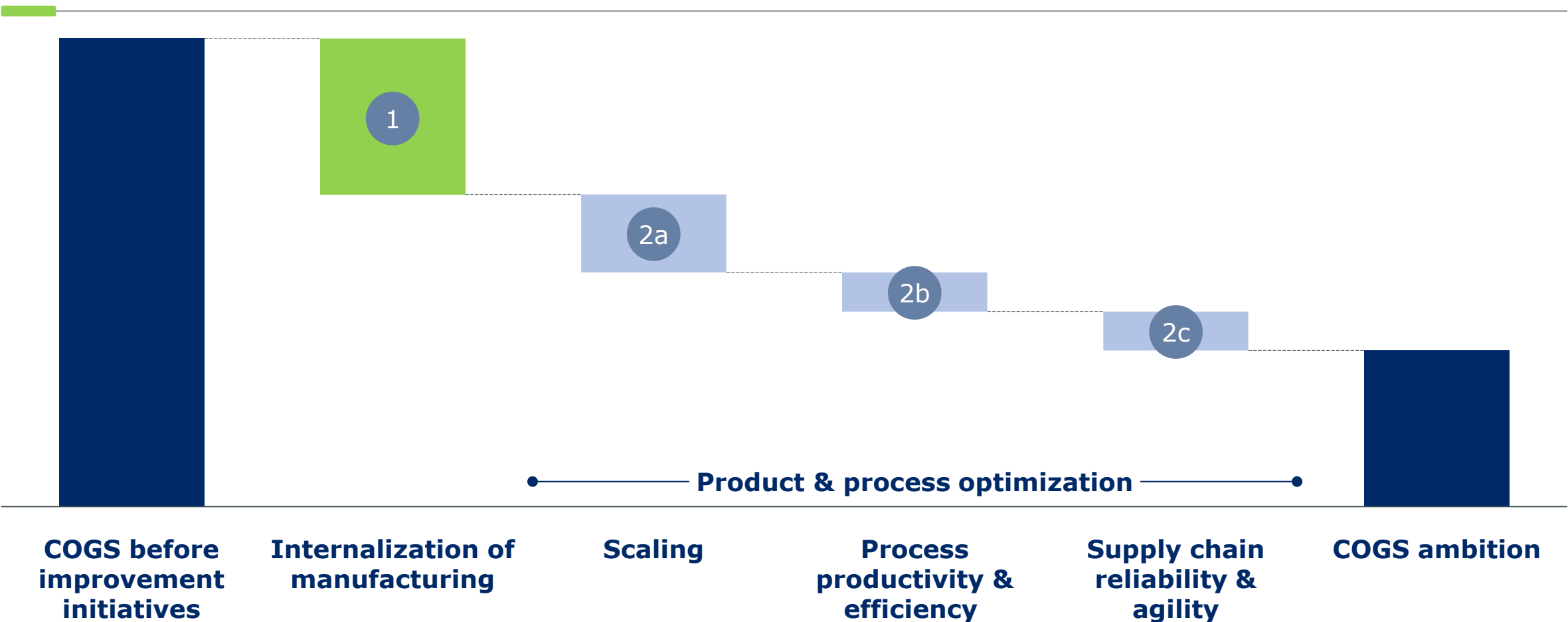
**Additional production line:** Automated packaging for Auto-injector/PFS, more than doubling capacity and reducing costs

<sup>1</sup> Additional investment in additional capacity/technology not included in CapEx number above



# Improving COGS through internalization & process optimization

## COGS reduction initiatives (indicative)

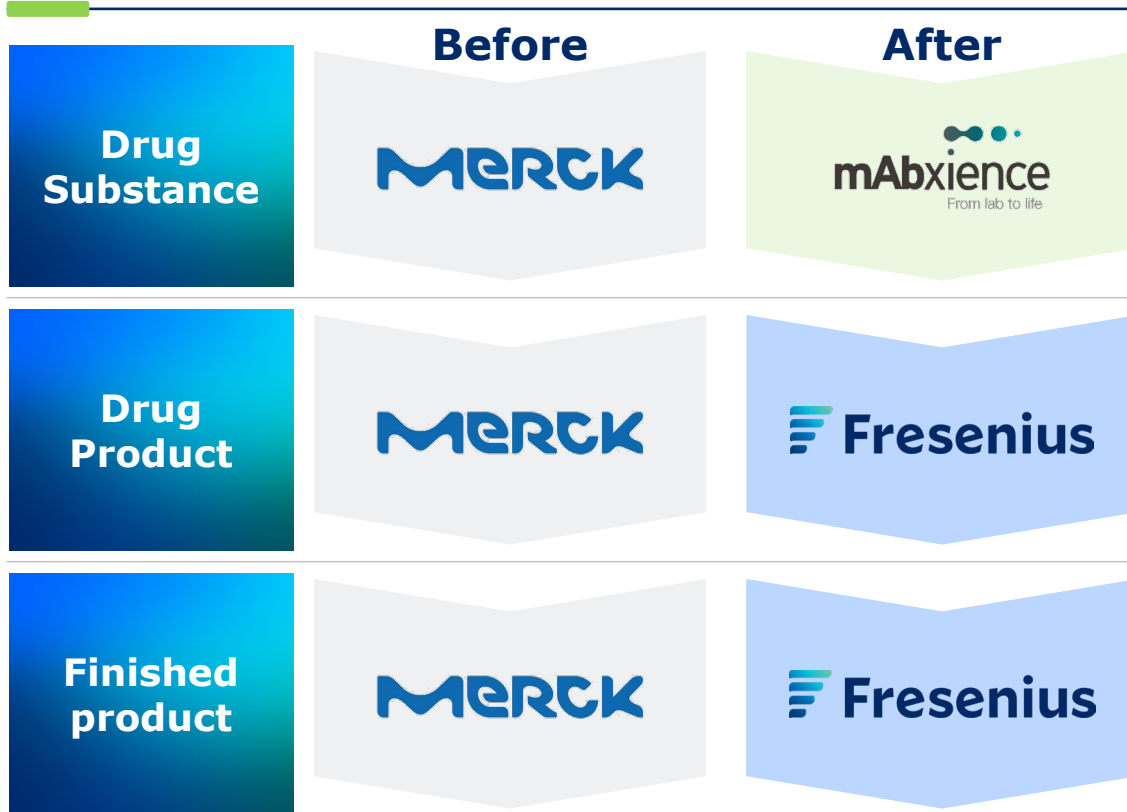




## 1 Internalization

# We are on track to further insource to our internal sites

### Supply chain internalization (example tocilizumab biosimilar)



### Internal manufacturing capacity coverage (across portfolio)

#### Internal DS, in % of total capacity required



#### Internal DP, in % of total capacity required



#### Internal FP, in % of total capacity required

**>80%** of capacity already in 2025



## 1 Internalization

# mAbxience as our core platform for internal DS manufacturing

Integration on track, with additional opportunities for further improvement

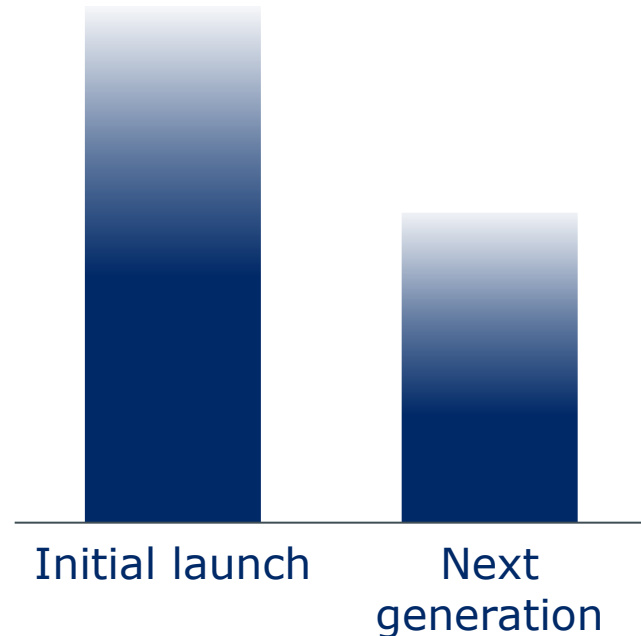




## We continuously improve productivity even within same scale

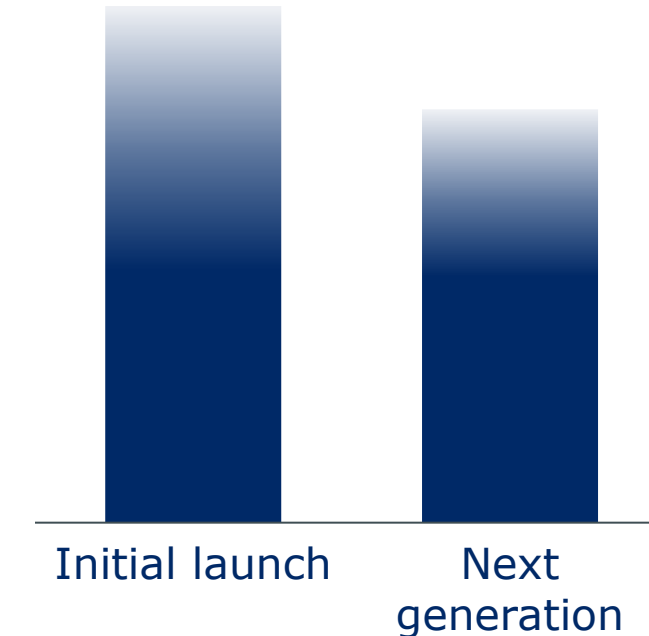
### DS cost reduction bevacizumab biosimilar

#### Drug substance costs



### DS cost reduction tocilizumab biosimilar

#### Drug substance costs



**Improvements of productivity** and costs in each process iteration – even within same scale

- > Enhancement of cell productivity
- > Increase in yield
- > Reduction of raw material costs



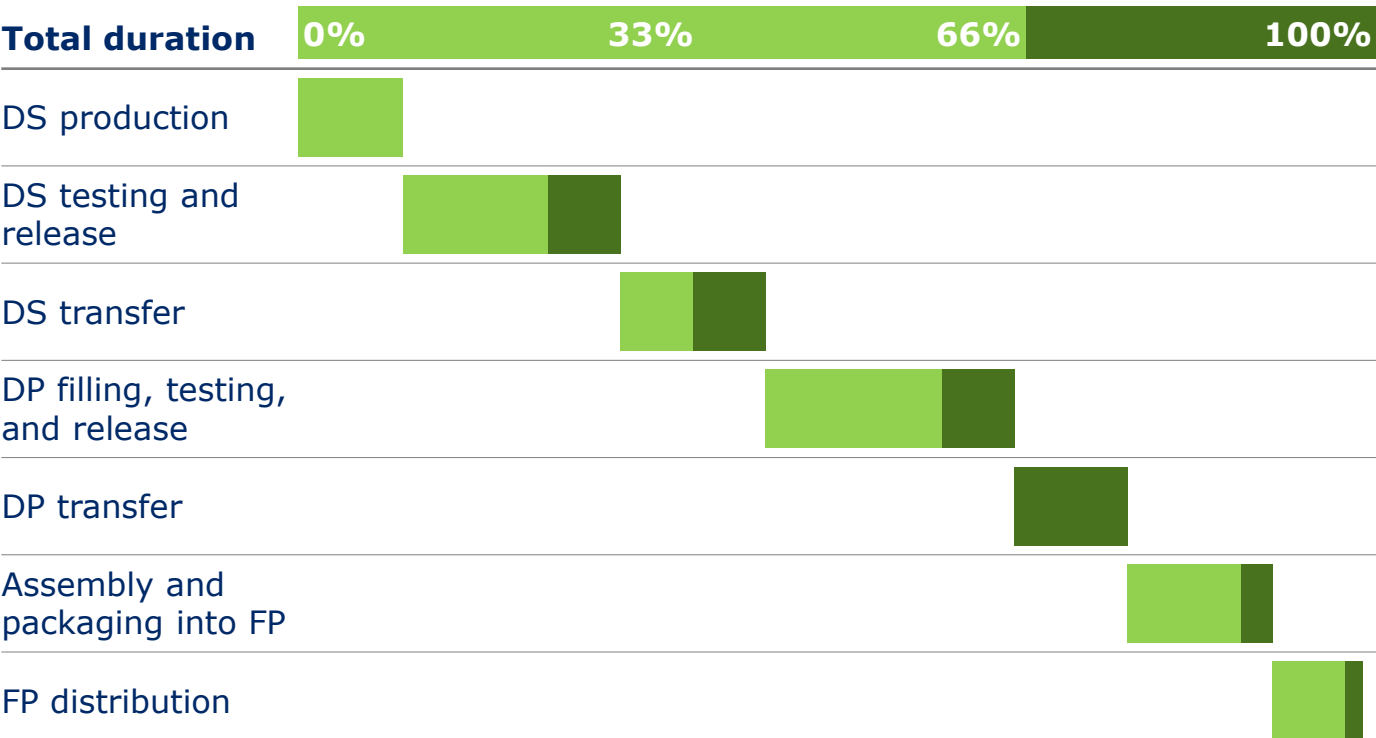
# Relentless execution to reduce lead time by 33%

## Increased supply chain agility

- > Manufacturing products closer to market demand
- > Reducing cycle stocks, inventory levels and value, as well as inventory risks
- > Shortening the end-to-end production timeline

## Lean manufacturing (lead time reduction by 33%)

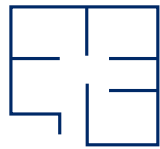
Duration of processing steps (indicative): ■ Ambition ■ Reduction





# We will be at the forefront for future manufacturing

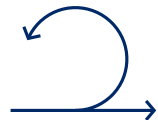
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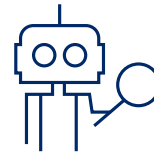
**Flexible capacity model** (e.g., different scales)



**Geographic footprint expansion** for DS/DP capacity



**Manufacturing technology**, e.g., continuous manufacturing



**Automation & digital manufacturing**, e.g., for sampling, material flow, packaging



# Cost Leadership: reaping benefits of vertical integration



**We operate a cost-leading manufacturing Powerhouse across Drug Substance, Drug Product, Finished Product - with global certifications**



**We achieved significant COGS reduction through internalization and will continue to leverage our full vertical integration**



**We target additional COGS reduction through product and process optimization initiatives on capacity, productivity, and supply chain efficiency**



**With our end-to-end manufacturing network established, we are investing >€300m over the next 5 years to expand capacity and drive growth**





**Commercial excellence:  
balanced footprint across geographies**



# Our right to win



S.-J. Pak



M. Benson

**Commercial  
excellence:  
balanced footprint  
across geographies**





# Commercial excellence: balanced footprint across geographies

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**We execute successfully across key regions: deep payer access in EU, gaining traction in US, leader in LATAM, scaling access in other regions**

---



**We have a targeted go-to-market strategy molecule by molecule and have shown first-to-market ability with Tyenne, the leading tocilizumab biosimilar**

---



**We will continue to de-risk our revenue streams through our commercial network and selected partners with milestone payments**



# Continue targeted mix of direct sales & out-licensing partners

## Revenue split by channel (indicative)

2023



2025E



2030E



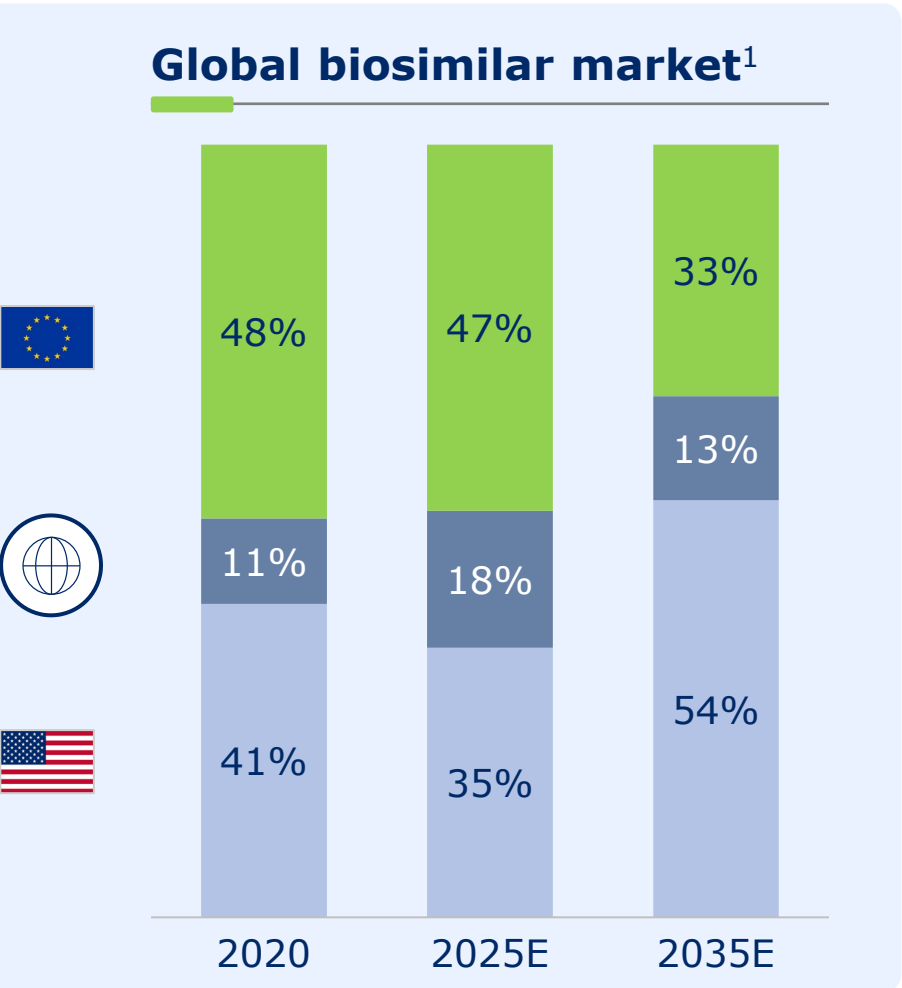
■ Fresenius direct sales ■ mAbxience out-licensing partnerships

As our commercial network expands, **we will increasingly generate revenues through our own sales engine** – raising margins and reducing dependence on milestone payments

**We will continue to leverage out-licensing partnerships** selectively and strategically



# Strong commercial presence across key geographies



## Our commercial coverage



### Strong European core:

Direct-sales model in >20 markets and deep payer access (e.g., 95% tender win rates in France for tocilizumab, 100% of statutory sick funds contracted in Germany)



### Leadership in LATAM:

Extensive commercial footprint across >10 countries and stronghold in Brazil and Argentina with favorable biosimilar regulation enabling early launches; ambition to opportunistically expand to selective MENA and APAC countries



### Ambition to increase US:

Continued portfolio expansion with recent FDA approvals and use of novel approaches to penetrate the market

<sup>1</sup> Source: IQVIA. Excluding GLP-1 molecules. H2 2035E not available in IQVIA and forecasted based on CAGR 2030E - H1 2035E



# Spotlight EU: Building a scalable, integrated commercial model

## Well established direct presence

- ✓ Direct presence in >20 European markets in both public and private provider systems
- ✓ Experienced regional key account management with direct engagement model with hospital procurement & clinical stakeholders

**25+** leading hospitals and hospital purchasing groups for Tocilizumab



## Competitive Edge in Tenders

- ✓ Pan-European tender framework harmonizing tender management system
- ✓ Expertise in multi-country, multi-channel bidding

**40+** tenders won in 2025

## Strong performance management

- ✓ Analytics solution combining, e.g., external sales data, customer facing team metrics
- ✓ Optimization of resource allocation, messaging, and actions

**32%** market share in tocilizumab biosimilars



# Spotlight LATAM: Fresenius leads the adalimumab market

## Capabilities demonstrated in Brazil



- ✓ **Incubator market** for piloting ahead of global launch (e.g., adalimumab biosimilar)
- ✓ **#1 biopharma market** in LATAM
- ✓ **#1 market position** based on >40 years of Fresenius presence
- ✓ **Productive Development Partnership (PDP)** with 10-year supply agreement and 40% minimum public market share

## Capabilities demonstrated in Argentina



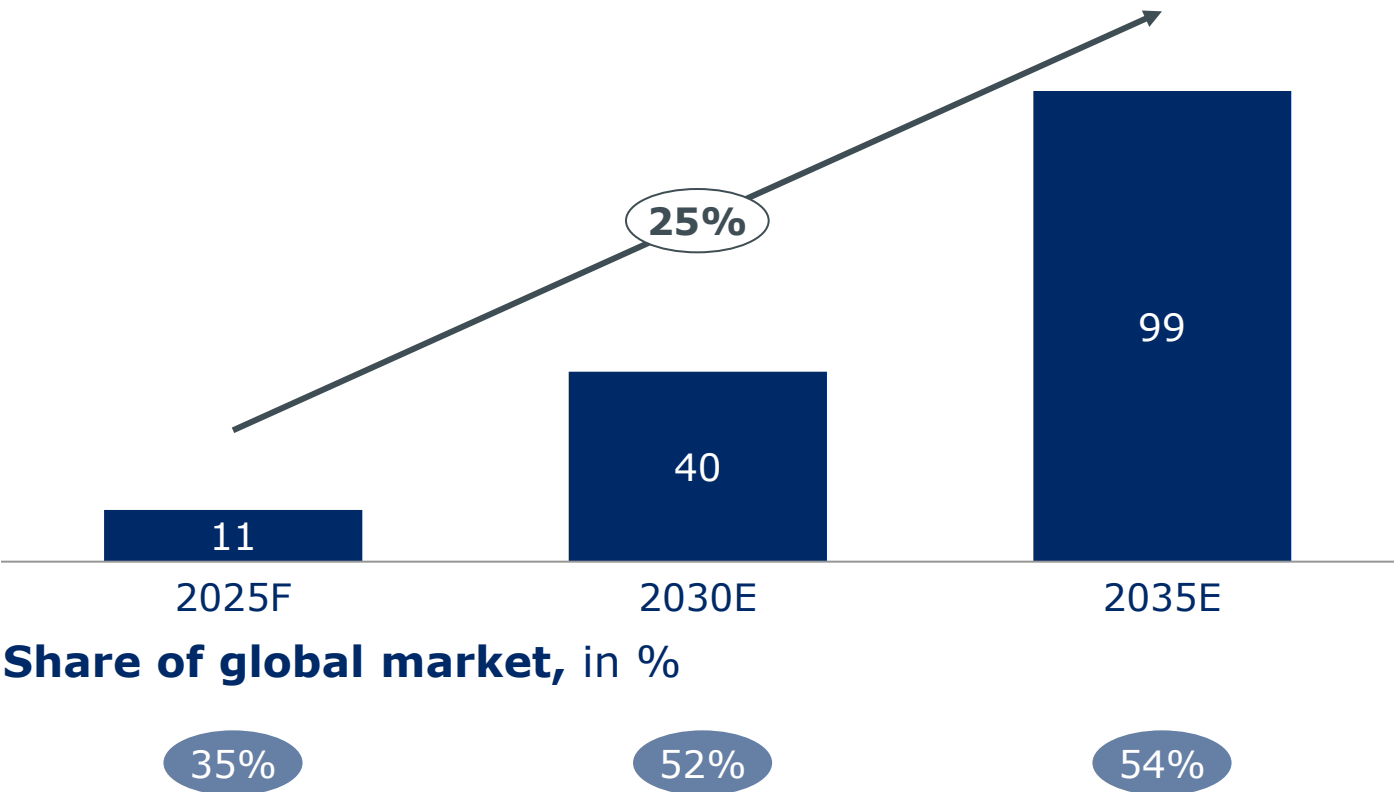
- ✓ **Incubator market** for piloting ahead of global launch (e.g., pembrolizumab biosimilar)
- ✓ **Significant biopharma market** in LATAM
- ✓ **Strong local market position** of our products
- ✓ **Dual national-provincial tender structure** informed our robust tender capabilities that are relevant for other tender-driven markets





# Spotlight US: Attractive, high-growth, and evolving market

## US biosimilar market<sup>1</sup>, in €b



## Market evolutions

- > **IRA<sup>2</sup> legislation opens** early-entry windows for authorized biosimilars
- > **Independent and employer health plans** shift toward transparent pricing outside traditional PBMs<sup>3</sup>
- > **Increasing interchangeability designations** accelerate biosimilar uptake

**>60%** Revenue growth 24-25E

<sup>1</sup> Source: IQVIA. Excluding GLP-1 molecules. H2 2035E not available in IQVIA and forecasted based on CAGR 2030E - H1 2035E | <sup>2</sup> Inflation Reduction Act. Introduces drug pricing reforms that enable earlier competition with originator products | <sup>3</sup> Pharmacy Benefit Manager





# Tyenne is the first and leading tocilizumab biosimilar in the US



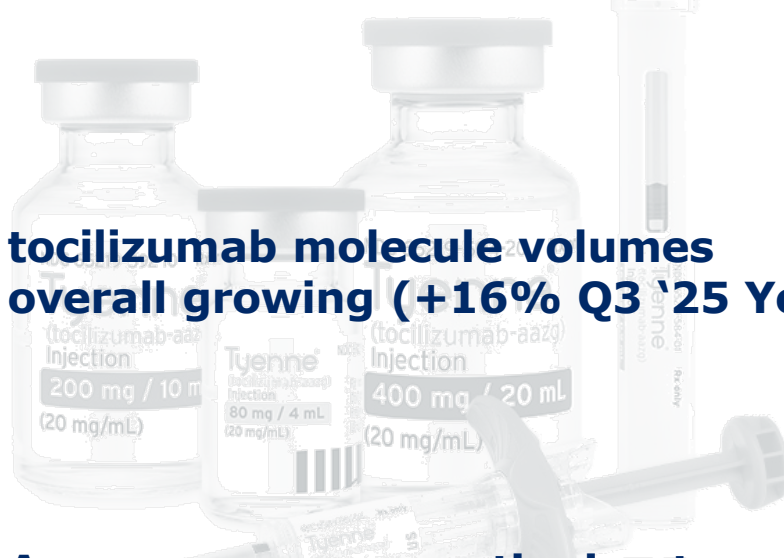
**Fastest growing US-launch for pharmacy benefit biosimilar**



**tocilizumab molecule volumes overall growing (+16% Q3 '25 YoY<sup>1</sup>)**



**Access coverage continuing to expand from parity to exclusive in 2026**



## Market share<sup>1</sup>, in volume %



<sup>1</sup> Source: IQVIA Monthly data





# We have a targeted go-to-market-strategy molecule by molecule

## Individualized Contracting

**Launch learnings and adapting** to customer market needs

**Customized provider and payer contracting** initiatives

**Developing partnerships** with unique access alternative models

### Example: adalimumab-aacf

Grew 74% YoY mostly due to alternative agreements

## Access Execution

**Market access and contracting strategies** built per molecule

**Optimizing a brand vs unbranded strategy** for lifecycle management

**Growing access coverage** to bring cost savings to the market

### Example: Tyenne

Secured formulary placement with payers, now covering >70% of US market and growing

## Capability Evolution

**Building a hybrid approach** in the market for account management

**Aligning field and marketing resources** to specific initiatives

**Flexible capabilities** based on molecule, market, and life cycle

### Example: Molecule specific

Activate internal teams and resources to support payers/providers to optimize pull through

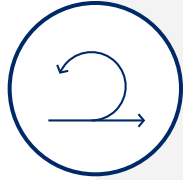




# Track record of agreements to bring volume to market quickly



**Proven access agreements**  
across U.S. regional payers  
and provider networks,  
distributors



**Flexible contracting model**  
enabling rapid biosimilar  
adoption and direct  
distribution at scale



**Demonstrated ability to  
capture volume early** post-  
launch through high-trust,  
cost-efficient supply model

## Successful innovative agreements

### Partner

### Scope & impact



Agreement expanding biosimilar coverage  
to ~20m members across multiple  
regional payers



Our products added to Cost Plus  
formularies, supporting rapid market share  
growth



Exclusive distribution agreement for  
pharmacy dispensed drugs with access to  
~100m lives



# Commercial excellence: balanced footprint across geographies

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**We execute successfully across key regions: deep payer access in EU, gaining traction in US, leader in LATAM, scaling access in other regions**

---



**We have a targeted go-to-market strategy molecule by molecule and have shown first-to-market ability with Tyenne, the leading tocilizumab biosimilar**

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**We will continue to de-risk our revenue streams through our commercial network and selected partners with milestone payments**



# VI

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## Q&A



# VII

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**Wrap-up**



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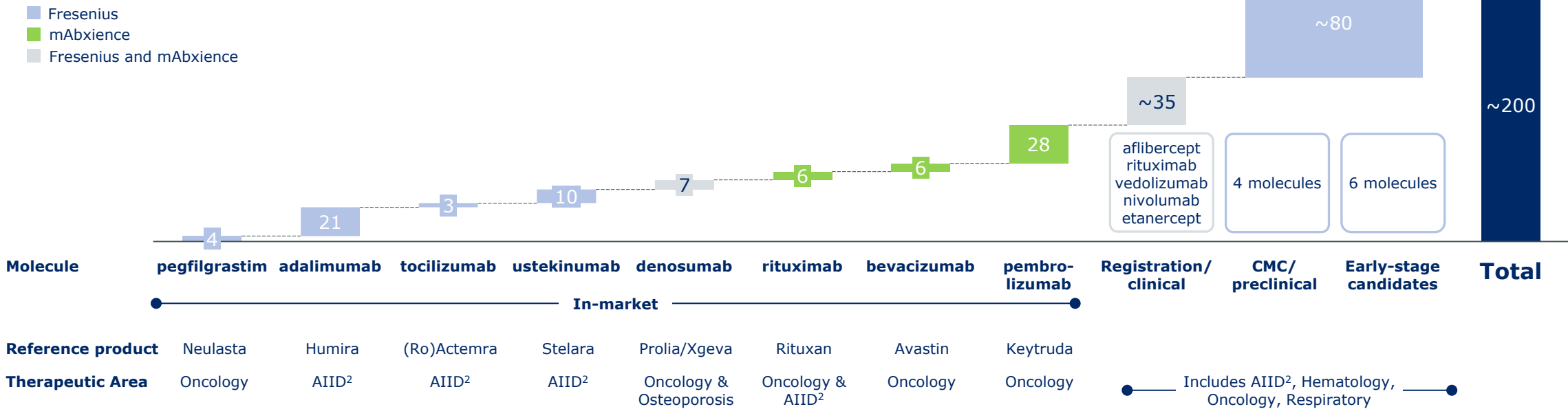
## **BACKUP Pipeline & Molecule Onepagers**



# Our biosimilar portfolio & pipeline

## Current biosimilar portfolio & pipeline

Global peak branded sales of originators<sup>1</sup>, in €b



> **Attractive and growing biosimilar market** with upcoming near- and mid-term launches

> **Strong position with broad and attractive pipeline**, leveraging end-to-end value chain capabilities

> **Recurring revenues** from milestone payments and CDMO business

<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Autoimmune & Inflammatory Diseases | <sup>3</sup> Source: IQVIA



# Our biosimilar portfolio (in-market)

Limited ●●● Moderate ●●● High ●●●

	Molecule (brand)	Therapeutic Area	Originator peak sales <sup>1</sup> , €b	Launch			Revenue contribution
				EU	US	RoW	
Fresenius	pegfilgrastim 	Oncology	4	2022	2023		●●●
	adalimumab 	Immunology	21	2019	2023	2021	●●●
	tocilizumab 	Immunology	3	2023	2024	2024	●●●
	ustekinumab 	Immunology	10	2025	2025	2025	●●●
	denosumab 	Osteoporosis, Oncology	7	2025	2025	2025	●●●
	rituximab <sup>2</sup>	Oncology	6			2014	●●●
	bevacizumab <sup>3</sup>	Oncology	6	2021	2022	2016	●●●
	pembrolizumab	Oncology	28	LoE in 2028	LoE in 2029	2024	●●●
	denosumab <sup>4</sup>	Osteoporosis, Oncology	7	2025	2025	2025	●●●

<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Referenced as Novex® in LATAM | <sup>3</sup> Referenced as Alymsys®, among other names, in Europe, US and RoW | <sup>4</sup> Indicated for osteoporosis and referenced as Izamby® in Europe, Indicated for oncology and referenced as Denbrayce® in Europe



# Our biosimilar pipeline

Limited ●●● Moderate ●●●● High ●●●●●

**Fresenius**

Molecule	Therapeutic Area	Pre-clinical		Clinical		Originator peak sales <sup>1</sup> , €b	LoE		Revenue contribution
							EU	US	
aflibercept	Ophthalmology	Early stage	CMC	Ph 1	Ph 3	10	2027	2023	●●●●
rituximab	Oncology	Early stage	CMC	Ph 1		6	2018	2019	●●●●
vedolizumab	Gastroenterology	Early stage	CMC	Ph 1		7	2032	2027	●●●●
Molecule 6	TA's include: Immunology, Hematology, Oncology, Respiratory	Early stage	CMC			~80			
Molecule 7		Early stage	CMC						
Molecule 8		Early stage	CMC						
Molecule 9		Early stage	CMC						
Molecule 10		Early stage							
Molecule 11		Early stage							
Molecule 12		Early stage							
Molecule 13		Early stage							
Molecule 14		Early stage							
Molecule 15		Early stage							
nivolumab	Oncology	Early stage	CMC	Ph 1		10	2028	2028	●●●●
etanercept	Immunology	Early stage	CMC	Ph 1		7	2016	2029	●●●●

**mAbxience**  
From lab to life

<sup>1</sup> Source: Evaluate Pharma

**Fresenius**

Biopharma 'Meet the Management' © Fresenius SE & Co. KGaA Investor Relations



# Molecule Overview | adalimumab

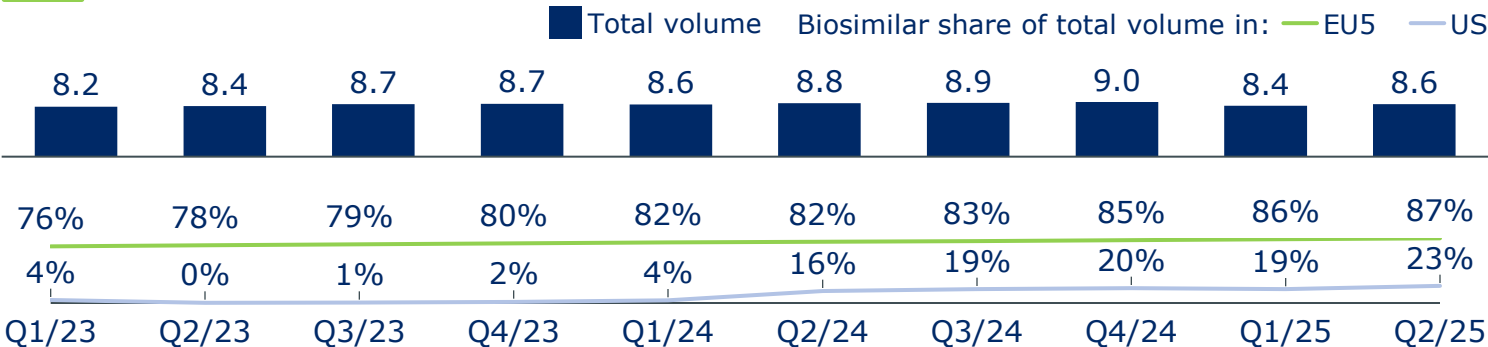


## Key information

**Originator:** Humira **abbvie**  
**TA:** Immunology  
**Disease:** Rheumatoid arthritis, Crohn's disease  
**Sales contrib.:** ●●● Moderate

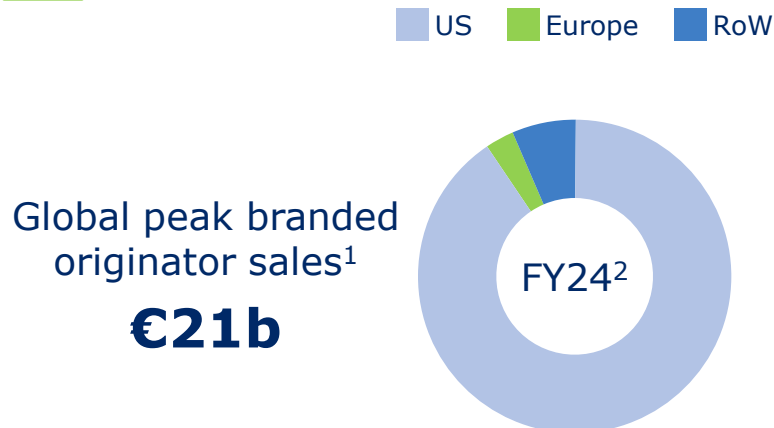
		# biosimilar products	
LoE <sup>1</sup>	Launch	Launched	Pre-Launch
	2018 2019	8	1
	2023 2023	10	

## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split





- ✓ **Global footprint** in EU, US, LATAM, MENA
- ✓ **Launch of improved TPP ongoing** incl. citrate-free version
- ✓ **In the US, all PBMs kept originator in formulary** in addition to 1-2 biosimilars, resulting in slow initial uptake; acceleration in 2024 after PBM's exclusivity contracting
- ✓ **In the US, primarily reimbursed through Pharmacy Benefit**
- ✓ **Globally, 67% distributed through retail, 33% through hospitals<sup>2</sup>**



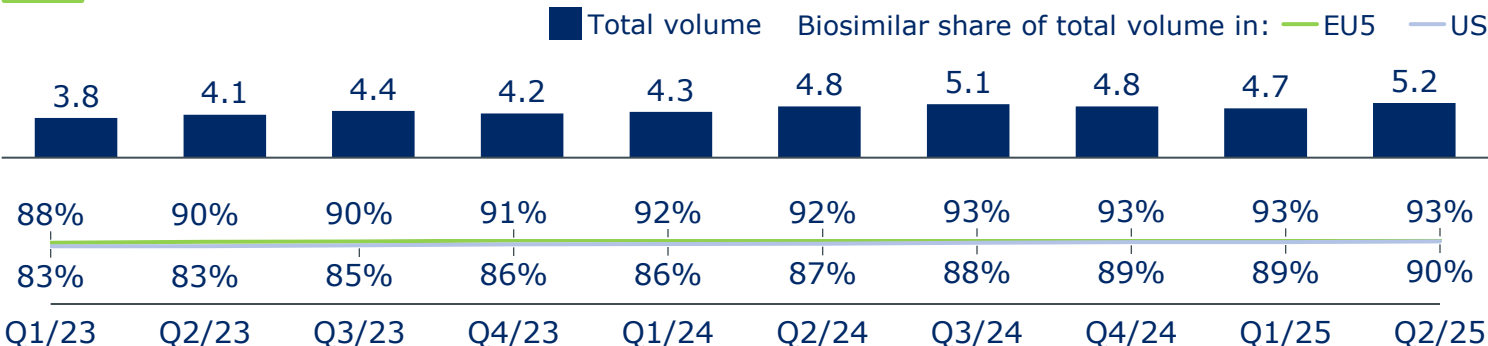
# Molecule Overview | bevacizumab

## Key information

**Originator:** Avastin    
**TA:** Oncology  
**Disease:** Metastatic colorectal cancer  
**Sales contrib.:**    Moderate

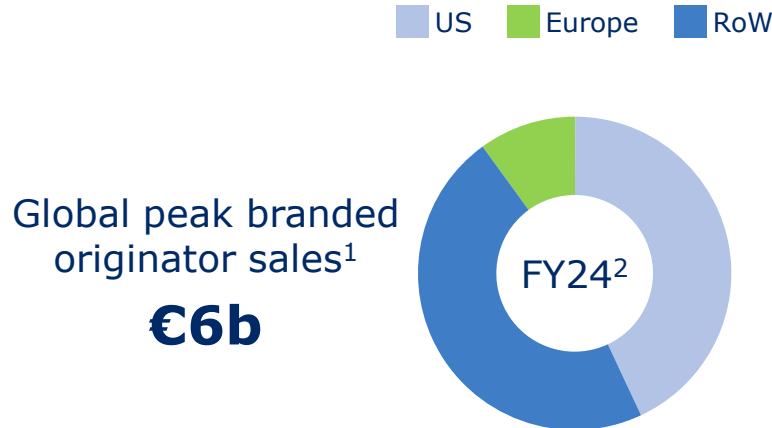
		# biosimilar products		
LoE <sup>1</sup>		Launch	Launched	Pre-Launch
	2021	2021	9	1
	2019	2022	4	1

## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split




- ✓ **Developed by mAbxience** and marketed globally by several partners
- ✓ **In the US, primarily reimbursed through Medical Benefit**
- ✓ **Globally, 5% distributed through retail, 95% through hospitals<sup>2</sup>**





# Molecule Overview | pegfilgrastim



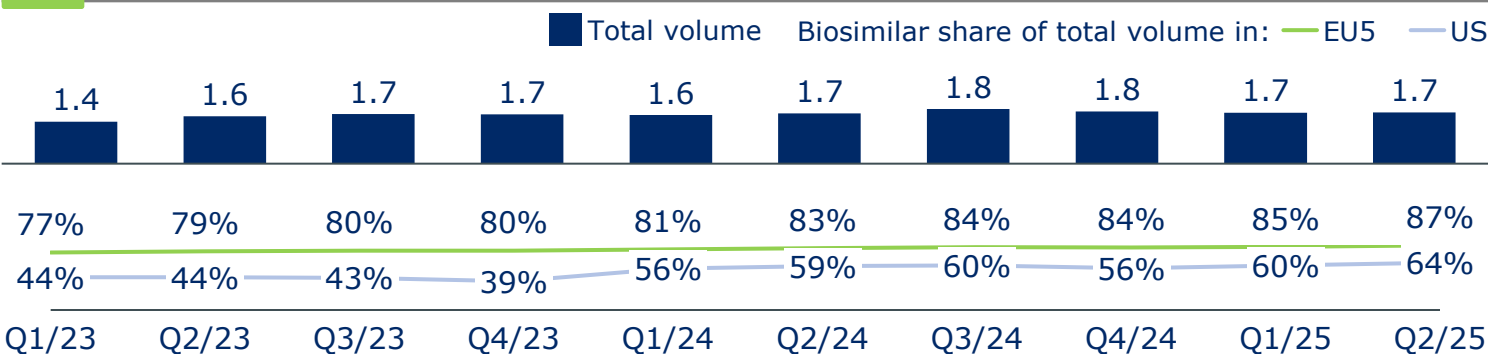
## Key information

**Originator:** Neulasta   
**TA:** Oncology  
**Disease:** Neutropenia

**Sales contrib.:**  Limited

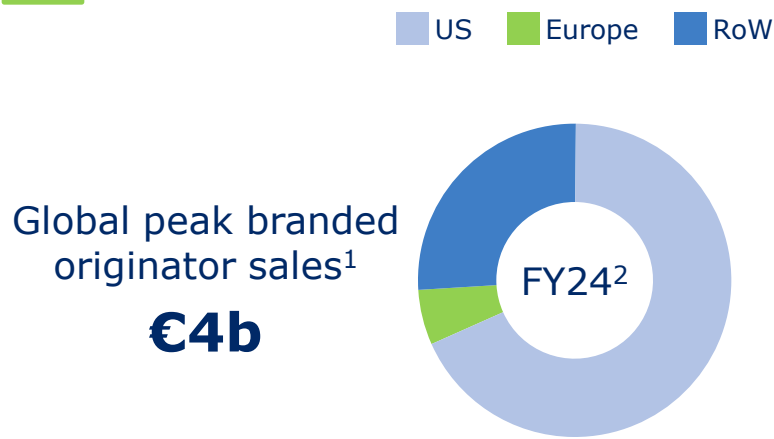
	# biosimilar products			
	LoE <sup>1</sup>	Launch	Launched	Pre-Launch
	2015	2022	8	1
	2017	2023	6	1

## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split



✓ In the US, primarily reimbursed through Medical Benefit

✓ Globally, 80% distributed through hospital, 20% through retail<sup>2</sup>



# Molecule Overview | tocilizumab



## Key information

**Originator:** Actemra **Genentech**

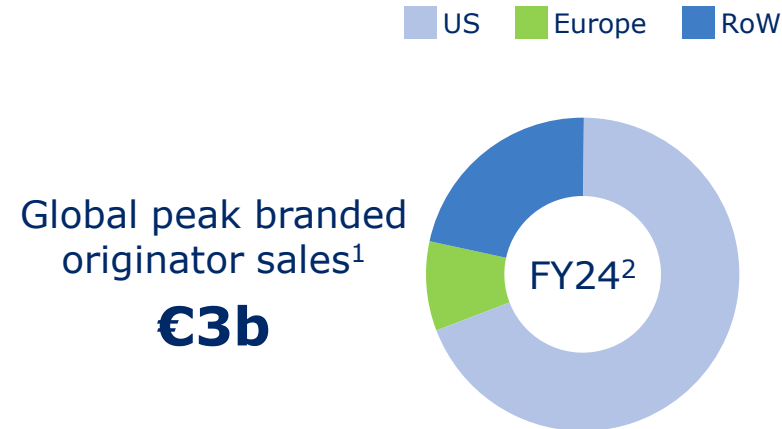
**TA:** Immunology

**Disease:** Rheumatoid arthritis

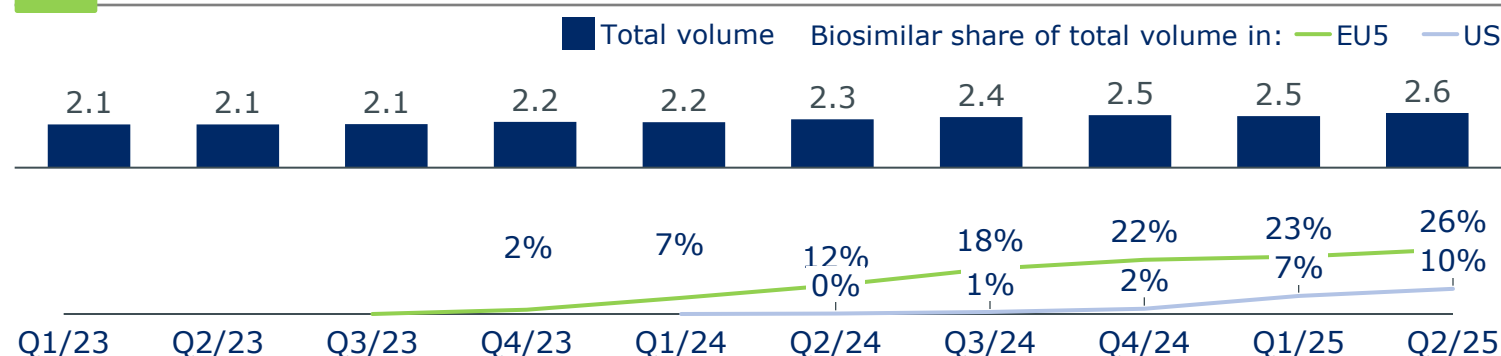
**Sales contrib.:** ●●● High

		# biosimilar products	
LoE <sup>1</sup>	Launch	Launched	Pre-Launch
	2023 2023	2	2
	2023 2024	3	

## Market size and regional split



## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

- ✓ **22 markets launched** – leveraging Autoimmune commercial infrastructure
- ✓ **First-to-market launch**
- ✓ First and only **subcutaneous and intravenous** formulation in the market so far
- ✓ **Advancing with tech transfer** to mAbxience; Garín site received EMA approval
- ✓ **In the US, distribution mixed between pharmacy and medical benefit**
- ✓ **Globally, 51% distributed through hospital, 49% through retail<sup>2</sup>**



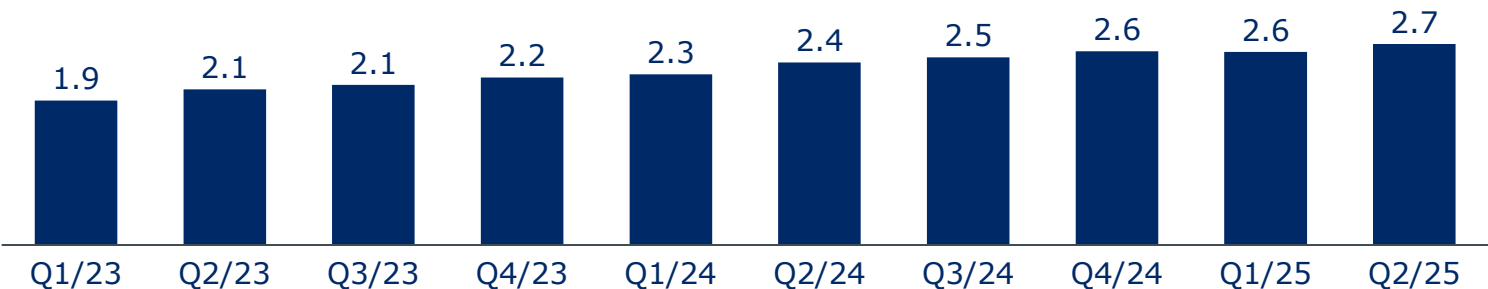
# Molecule Overview | pembrolizumab

## Key information

**Originator:** Keytruda   
**TA:** Oncology  
**Disease:** Unresectable or metastatic melanoma  
**Sales contrib.:**    Moderate

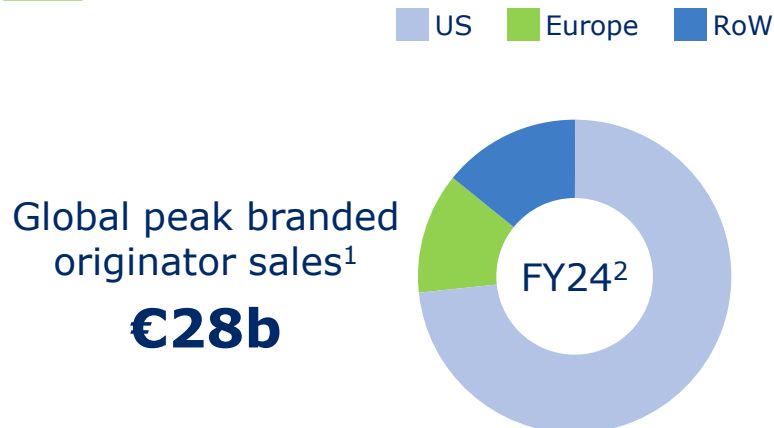
		# biosimilar products
LoE <sup>1</sup>	Launch	Launched Pre-Launch
	2028	7
	2029	7

## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split







- ✓ **First-to-market** launch in Argentina and Paraguay in 2025
- ✓ **Developed by mAbxience** and commercialized by Elea ARG and Bioéticos PY
- ✓ **In the US, primarily reimbursed through Medical Benefit**
- ✓ **Globally, 7% distributed through retail, 93% through hospital<sup>2</sup>**





# Molecule Overview | ustekinumab

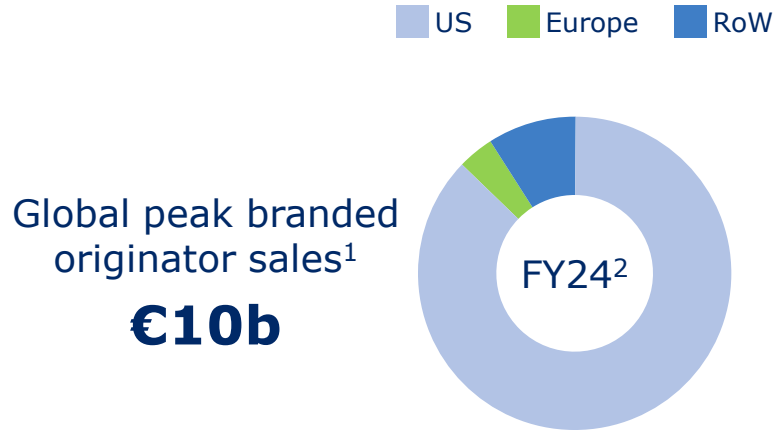


## Key information

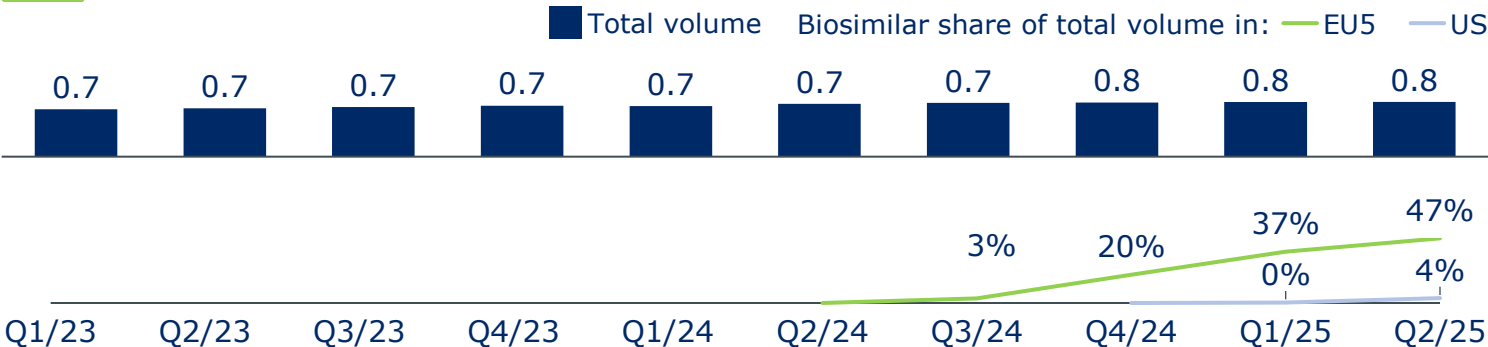
**Originator:** Stelara   
**TA:** Immunology  
**Disease:** Plaque psoriasis, Crohn's disease  
**Sales contrib.:**    Limited

	# biosimilar products			
	LoE <sup>1</sup>	Launch	Launched	Pre-Launch
	2024	2025	8	1
	2025	2025	8	

## Market size and regional split



## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

- ✓ **13 markets launched** – leveraging existing commercial infrastructure
- ✓ **Subcutaneous and intravenous** formulation
- ✓ **U.S. interchangeability** designation
- ✓ **In the US, primarily reimbursed through pharmacy benefit**
- ✓ **Globally, 56% distributed through hospital, 44% through retail<sup>2</sup>**



# Molecule Overview | denosumab





## Key information

**Originator:** Prolia / Xgeva

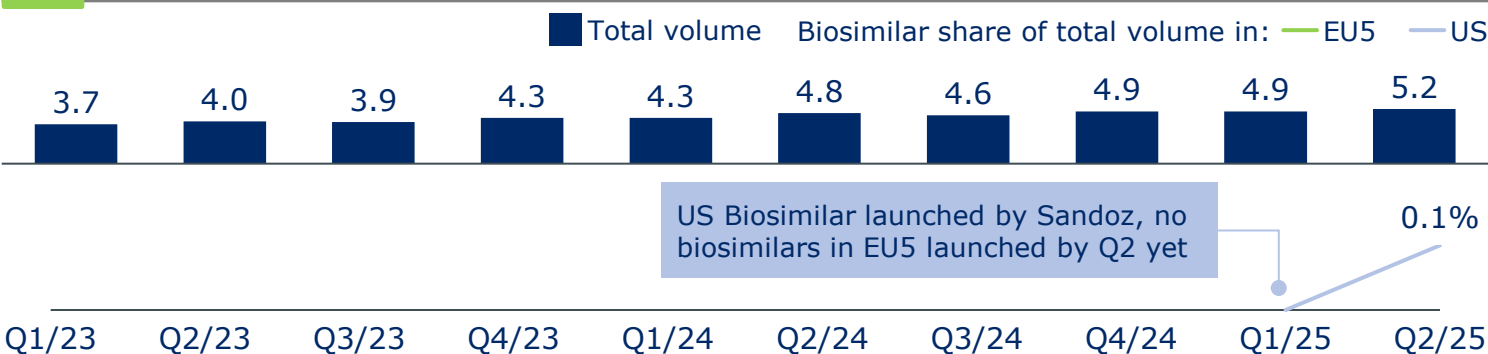
**TA:** Osteoporosis, Oncology

**Disease:** Osteoporosis, cancer-related bone loss

**Sales contrib.:** Moderate

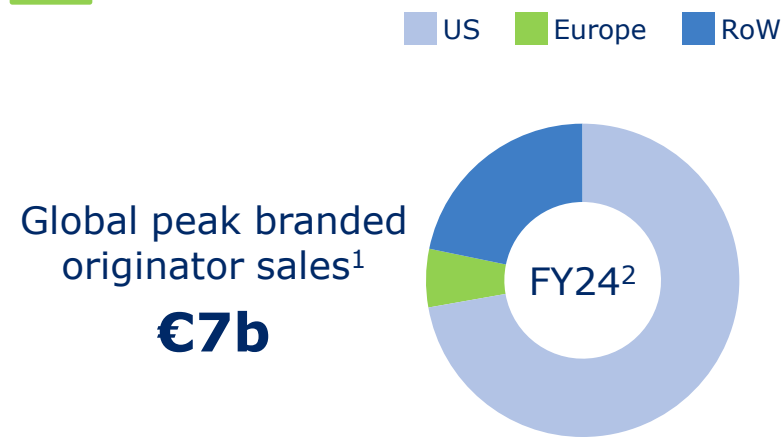
			# biosimilar products	
	LoE <sup>1</sup>	Launch	Launched	Pre-Launch
	2025	2025	5	8
	2025	2025	3	8

## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split



- ✓ **First wave to market** with large TPP offering
- ✓ **Differentiated vs competitors** through Oncology PFS
- ✓ **For US launch**, CMS<sup>3</sup> issued a permanent, product-specific billing code
- ✓ **In the US, reimbursement balanced** between retail and hospital
- ✓ **Globally, 59% distributed through retail**, 41% through hospital<sup>2</sup>



# Molecule Overview | aflibercept

## Key information

**Originator:** Eylea **REGENERON** 

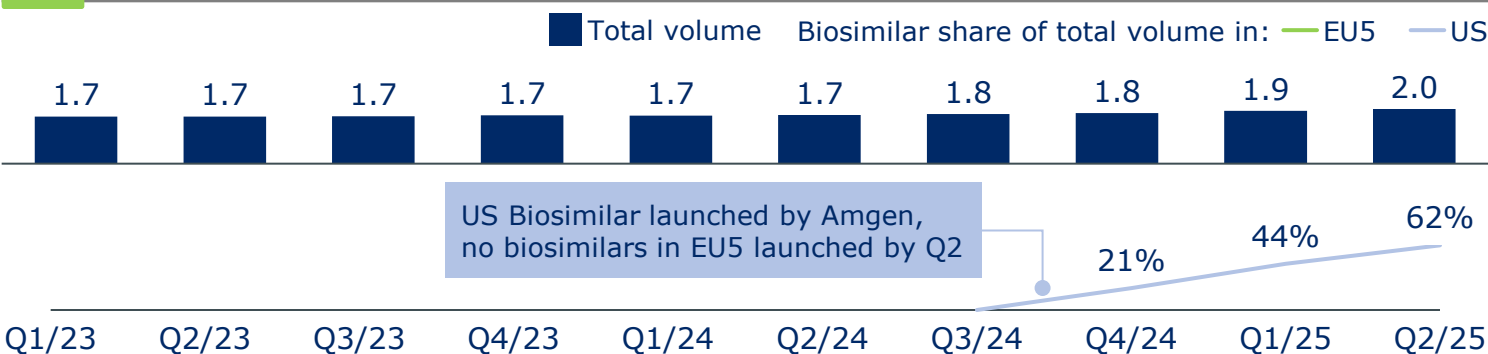
**TA:** Ophthalmology

**Disease:** Neovascular age-related macular degeneration

**Sales contrib.:**  Moderate

		# biosimilar products	
LoE <sup>1</sup>		Launch	Pre-Launch
	2027		8
	2023	1	7

## Volume, in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split

Global peak branded originator sales<sup>1</sup>  
**€10b**

Aflibercept not well covered in IQVIA, e.g., underestimation of US market size

- ✓ **In-licensed from SamChunDang Pharm** with exclusive commercialization for US and several LATAM countries
- ✓ **In the US, primarily reimbursed through Medical Benefit**
- ✓ **Globally, 44% distributed through retail, 56% through hospitals<sup>2</sup>**



# Molecule Overview | vedolizumab


## Key information

**Originator:** Entyvio 

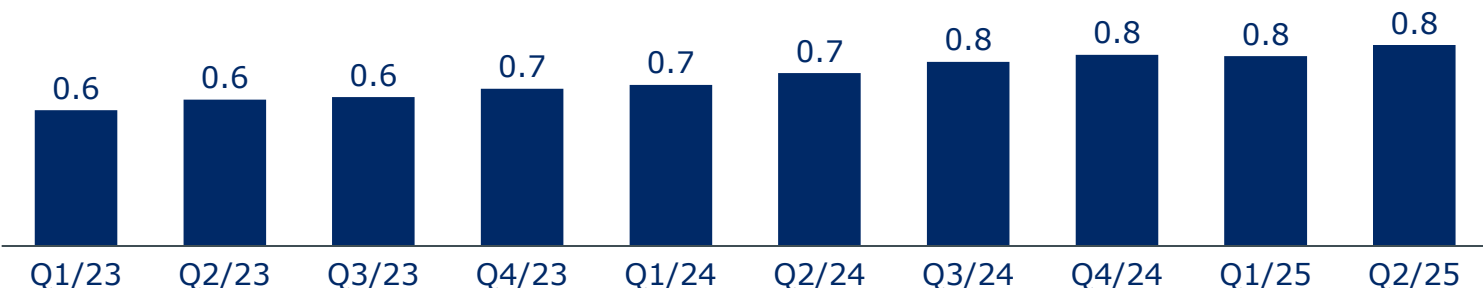
**TA:** Gastroenterology

**Disease:** Ulcerative colitis,  
Crohn's disease

**Sales contrib.:** ●●● High

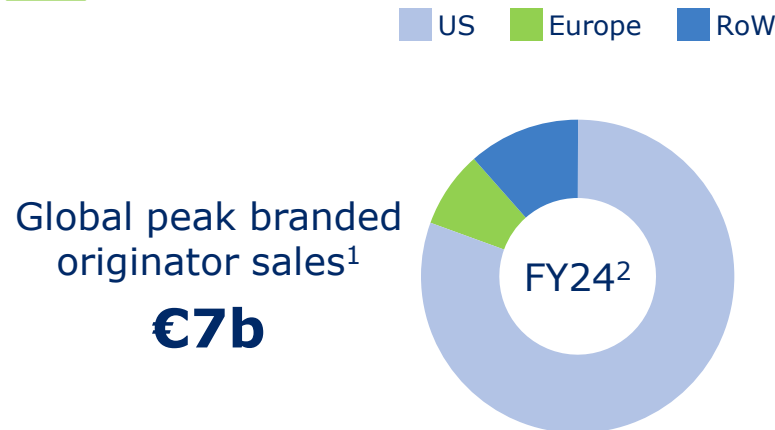
		# biosimilar products
LoE <sup>1</sup>		
Launch	Launched	Pre-Launch
 2032		3
 2027		4

**Volume,** in m standard units<sup>2</sup>



<sup>1</sup> Source: Evaluate Pharma | <sup>2</sup> Source: IQVIA

## Market size and regional split



✓ **Global in-licensing agreement announced with Polpharma Biologics**

✓ **In the US, reimbursement mixed between pharmacy and medical Benefit**

✓ **Globally, 44% distributed through retail, 56% through hospital<sup>2</sup>**



# Glossary



# Glossary (1/4)

Term	Explanation
Aseptic FP capabilities	Ability to manufacture finished pharmaceutical products in sterile environments to prevent microbial contamination.
ASP	Average Selling Price; the average price at which a drug is sold to purchasers, often used in reimbursement calculations
ASP+ / ASP+ reimbursement model	A U.S. Medicare payment model that reimburses providers at the Average Selling Price plus an additional percentage to cover handling costs.
Auto-injector	A prefilled, self-administered device designed to deliver a fixed dose of medication via subcutaneous or intramuscular injection.
Bioreactor	A vessel or system that provides a controlled environment for growing cells or microorganisms to produce biologic substances.
Cell line	A population of cells derived from a single cell with uniform genetic makeup used for consistent biologic production.
cGMP / GMP	Current Good Manufacturing Practice; regulatory standards ensuring products are consistently produced and controlled for quality and safety.
Citrate-free formulation	A drug formulation that removes citrate buffer to reduce injection-site pain and improve patient comfort.
Clone	A cell or group of cells derived from a single parent cell with identical genetic material used in biologic production.
CMC	Chemistry, Manufacturing, and Controls; the technical section of drug development describing product composition and quality assurance processes.
CMS	Centers for Medicare & Medicaid Services, a U.S. federal agency that administers the major healthcare programs and regulates, among others, healthcare reimbursement, pricing, and data reporting.
Cost of Production (COP)	The total expense incurred in manufacturing a drug, including raw materials, labor, utilities, equipment, and overhead, often used to benchmark competitiveness and profitability in biomanufacturing
Digital Twins	Virtual digital replicas of physical processes or systems used to simulate, monitor, and optimize biomanufacturing performance.
Drug Product (DP)	The finished dosage form of a pharmaceutical containing the active ingredient(s) and excipients, ready for patient use.



# Glossary (2/4)

Term	Explanation
Drug Substance (DS)	The active pharmaceutical ingredient that provides the intended therapeutic effect in a medicine.
ELN	Electronic Laboratory Notebook; a digital system for recording, storing, and sharing laboratory data and experiments.
EMA	European Medicines Agency; the regulatory authority responsible for the scientific evaluation and supervision of medicines in the EU.
FDA	U.S. Food and Drug Administration; the regulatory agency overseeing safety, efficacy, and quality of drugs, biologics, and medical devices.
Finished Product (FP)	The final packaged pharmaceutical product released for commercial distribution.
Formulary	A list of medications approved for use and reimbursement by a particular health plan, hospital, or payer.
IDN (Integrated Delivery Network)	A network of healthcare providers and facilities under shared management aiming to coordinate patient care and reduce costs.
In-licensing	Acquiring the rights to develop or commercialize a product or technology originally developed by another organization.
Interchangeability	A regulatory designation allowing a biosimilar to be substituted for its reference product without prescriber intervention.
Intravenous (IV)	Administration of a drug directly into a vein for rapid systemic delivery.
Latex-free	Indicates materials and packaging are free of natural rubber latex to prevent allergic reactions.
Lead clone	The selected cell line or genetic variant demonstrating optimal yield and product quality for scale-up manufacturing.
LIMS	Laboratory Information Management System; software for managing laboratory samples, workflows, and analytical data.
LoE (Loss of Exclusivity)	The point when a branded drug's patent protection expires, allowing generic or biosimilar competition. LoE-1 refers to the year before.



# Glossary (3/4)

Term	Explanation
Medical benefit	Insurance coverage for drugs administered by healthcare professionals, typically billed under the medical plan.
Medicare Advantage	U.S. Medicare Part C plans offered by private insurers providing combined hospital and medical coverage, sometimes including drugs.
Out-licensing	Granting rights to another company to market a product owned by the licensor.
Parallelization of clinical trials	Conducting multiple clinical activities concurrently to shorten overall development timelines.
Payer	An organization, such as an insurance company or government agency, that finances or reimburses healthcare costs.
PBM	Pharmacy Benefit Manager; intermediaries that negotiate drug prices and manage prescription benefits on behalf of payers.
Pharmacy benefit	Coverage for outpatient prescription drugs dispensed through retail or specialty pharmacies.
Phase 1	The first stage of clinical trials assessing safety, tolerability, and pharmacokinetics in healthy volunteers or patients.
Phase 3 waiver	Regulatory allowance to approve a biosimilar without a traditional Phase 3 trial based on robust analytical and PK/PD similarity data.
PK / PD	Pharmacokinetics and Pharmacodynamics; the study of how the body affects a drug and how the drug affects the body.
PMDA	Pharmaceuticals and Medical Devices Agency; Japan's authority for evaluating and approving drugs and medical devices.
Pre-Filled-Syringe (PFS)	A single-use syringe preloaded with a sterile drug product, ready for administration.
Process validation	Documented proof that a manufacturing process consistently produces product meeting predetermined quality standards.
Q-Code	A billing code used in the U.S. Medicare system for drugs administered under the medical benefit, often for biologics.



# Glossary (4/4)

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Term	Explanation
Regulatory track record	A company's historical performance and reliability in obtaining and maintaining regulatory approvals.
Scale-up	Increasing production from laboratory or pilot to commercial manufacturing while maintaining product quality.
Single-use technology	Disposable bioprocessing equipment designed to prevent cross-contamination and reduce cleaning needs.
Small-scale similarity	Early comparative testing of biosimilar and reference product on limited scale to confirm analytical equivalence.
Subcutaneous (SC)	Administration of a drug into the fatty tissue beneath the skin for slower absorption.
Target Product Profile (TPP)	A strategic summary outlining desired characteristics of a drug product to guide development and regulatory alignment.
Tech transfer	The process of transferring manufacturing or analytical knowledge and processes between development and production sites.
Tender	A formal procurement process where suppliers submit bids to provide medicines at negotiated prices to public buyers.
Therapeutic Area (TA)	A specific category of diseases or medical conditions targeted by related treatments, such as oncology or immunology.
Titer	The concentration of product (e.g., antibody) produced by cells in a bioreactor, typically measured in grams per liter.
Transfection	Introduction of foreign genetic material into cells to enable production of a desired protein or biologic.
Vial	A small glass or plastic container used to store and administer injectable drug products.
Yield	The amount of product obtained from a bioprocess relative to input materials, reflecting production efficiency.



