Partner of Life Science Research and the Biopharmaceutical Industry

Our mission
We empower scientists and engineers to simplify and accelerate progress in life science and bioprocessing, enabling the development of new and better therapies and more affordable medicine.

Our vision
We are a magnet and dynamic platform for pioneers and leading experts in our field. We bring creative minds together for a common goal: technological breakthroughs that lead to better health for more people.
Pacesetter for More Than 150 Years

1870  Florenz Sartorius, a 24-year-old, continues to develop a weighing technology that reduces the time for balance beam stabilization, substantially accelerating lab experiments as a result.

1927  A joint venture with Nobel Prize laureate Richard Zsigmondy expands the Sartorius product portfolio to include membrane filters.

Back then as today, our innovative product solutions are helping to accelerate research work, simplify manufacturing processes and improve quality of results.
Sartorius in Brief

- 60+ Locations worldwide, headquartered in Göttingen, Germany
- ~16,000 Employees¹
- ~€4.175bn Sales revenue²
- 33.8% EBITDA margin²,³
- ~€24.1bn Sartorius AG market capitalization¹; listed on the DAX and TecDAX

~37% Sales revenue Americas
~37% Sales revenue EMEA
~26% Sales revenue Asia | Pacific

¹ As of December 31, 2022, 2 FY 2022, 3 Underlying EBITDA
Strong Company Values Are the Basis of All Our Activities

**Sustainability**
Growing profitably and acting responsibly towards all stakeholders

**Openness**
Driving change and progress internally and externally

**Enjoyment**
Working in an energetic and rewarding environment
Strategic Focus on the Biopharma Market

Bioprocess Solutions Division

Molecule development

Cell line and process development

Upstream & downstream production

Quality | Testing | Validation

Lab Products & Services Division
Megatrends in Our Target Markets Offer Strong Growth Opportunities

Growing and aging population

9 billion people by 2050

World population over age 60 in 2050

>2bn

World population over 60 in 2022

~1bn

Biologics are gaining importance

Sales share of biologics in 2028

~41%

Sales share of biologics in 2022

~37%

~10% CAGR for the biopharma market in 2022–2026

1 United Nations: World Population Prospects, 2019   2 Evaluate Pharma: World Preview 2022, Outlook to 2028, August 2022
What Are Biopharmaceuticals?

Active agent

- Small molecules
- Large molecules > 20,000 atoms

Manufacturing

- Chemical synthesis
- Cell culture processes with living cells

Administration

- Mainly oral
- Mainly intravenous

Advantages

- First-time or improved treatment of serious illnesses, such as cancer, multiple sclerosis, rheumatism
- Targets only diseased cells; fewer side effects
- New vaccines
The Development and Manufacture of Biopharmaceuticals Are Complex
Only One Out of 10,000 New Drug Candidates Reaches the Market

Drug discovery: 4-5 years
Preclinical testing and further development: 1 year
Clinical trials: 4-7 years
Drug approval: 1-2 years

>€2bn
Average costs of developing a successful drug

~10%
Probability of clinical success (Phase I to approval)

>10 years
From drug discovery to approval

Schematic example of biologic drug discovery with data from the Association of the British Pharmaceutical Industry
As a Consequence, Biotech Medications Are Very Expensive

**HUMIRA® | Abbvie**
- Monoclonal Antibodies
- ~€12,000 Annual cost of treatment in GER
- against inflammatory immune diseases such as rheumatism, Crohn’s disease, or psoriasis
- Approval 2003, first biosimilars available

**YESCARTA® | Gilead**
- CAR-T Cell Therapy
- ~€280,000 Cost per treatment in Europe
- combating certain types of blood cancer, for example Non-Hodgkin lymphoma
- EMA-Approval 2018

**HEMGENIX® | CSL**
- Gene Therapy
- ~$3.5mn Cost per treatment in the USA
- against hemophilia, a disorder of blood coagulation
- FDA-Approval 2022
Our Ambition: Reduce Costly Trial & Error in Drug Discovery

Our laboratory tools support researchers ...

... in understanding diseases

... in conducting experiments and evaluating their data

... in identifying the right molecules and developing new medicines
Our Solution: Technologies to Accelerate Drug Discovery and Development

<table>
<thead>
<tr>
<th>Molecule development</th>
<th>Cell line development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification/valida</td>
<td>Gene cloning</td>
</tr>
<tr>
<td>Library screening</td>
<td>Cell line selection</td>
</tr>
<tr>
<td>Lead optimization</td>
<td>Cell line characterization</td>
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<tr>
<td>Candidate characterization</td>
<td>Cell line characterizatio</td>
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<tr>
<td></td>
<td>Cell banking</td>
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</tbody>
</table>

Key products:
- IncuCyte
- iQue
- Octet
- Sartoclear Dynamics Lab
- MyCap

Supporting products:
- Picus NxT
- Cubis
- Microsart
- Centrisart
Our Goal: Simplify Manufacturing of Biopharmaceuticals

Our technologies empower engineers in the biopharma industry to ...

... set up robust, flexible and safe processes for industrial production

... reduce setup costs

... enhance product yield
Our Solution: Innovative Technologies for All Phases of Drug Production

Products
Scalable easy-to-use technologies for the production of biopharmaceuticals and digital tools for biopharma data analytics

Application areas
- Biopharmaceutical manufacturing
- Quality control and testing

- Filtration
- Cell culture technology & media
- Fluid management
- Purification
The Widest Offering of Solutions in the Industry

**Upstream**
Production of the desired drug

- Culture media preparation
- Seed cultivation
- Scale-up
- Production
- Clarification & centrifugation

**Downstream**
Isolation and filling of the desired drug

- Final filling
- Cryo-preservation
- Sterile filtration
- Concentration
- Virus removal filtration
- Polishing
- Chromatography
- Viral clearance

This is Sartorius
Flexible Production Systems Are Becoming More and More Prevalent

Classic stainless steel plants

- High initial investment outlay
- High cleaning effort and expense
- Risk of contamination

Flexible systems with sterile bags

+ Faster setup and lower investment throughout the entire life cycle
+ Lower consumption of water and energy
+ Reduced risk of cross-contamination
Data Analytics Has Huge Potential for the Biopharmaceutical Industry

Sartorius supports its customers in the digitalization and automation of their processes with its leading software for analysis of bioprocess data.

- Enhanced process control and robustness
- Improved product quality
- Predictive process control

- Powerful solutions for modeling and optimizing development and manufacturing
- Helps provide insights derived from complex data sets
Leading Market Positions Worldwide in Both Segments
Acquisitions Strengthen and Differentiate the Sartorius Portfolio

Acquired technologies include:

- Cell line and process development services
- Automated single-use centrifugation
- Bioprocessing software
- Cell culture media
- Chromatography and tangential flow filtration systems; microcarriers
- Multiple systems for cell and protein analysis
- Multiple solutions for production of cell and gene therapies and vaccines

Acquired from:

- Danaher Life Science assets
- Novasep Chromatography assets
- Albumedix
Sales Revenue Has More Than Doubled Over the Last Five Years

Ø Sales CAGR ~18%
EBITDA Margin\(^1\) +13.3 Pp

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Sales growth and CAGR for continued operations, in constant currencies; 1 Excluding extraordinary items
Sartorius 2025 Ambition and Initiatives

Strategic initiatives

Regional
- Participate in strong Asian market growth
- Continue to outperform the important U.S. market

Portfolio
- Add high-impact innovations, e.g., digital tools
- Enhance process development capabilities
- Expand into adjacent applications

Operations
- Accelerate workflows across the organization through digitalization
- Extend manufacturing base in Asia

2025 targets

- ~€5.5bn Sales revenue
- ~34% EBITDA margin

2025 targets are based on current currency exchange rates; EBITDA excluding extraordinary items
Substantial Investments in the Expansion of Global Capacities

Significant CAPEX ratios
CAPEX in millions of €; ratio in %

<table>
<thead>
<tr>
<th>Year</th>
<th>CAPEX</th>
<th>Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>226</td>
<td>12.3</td>
</tr>
<tr>
<td>2020</td>
<td>240</td>
<td>10.3</td>
</tr>
<tr>
<td>2021</td>
<td>407</td>
<td>11.8</td>
</tr>
<tr>
<td>2022</td>
<td>523</td>
<td>12.5</td>
</tr>
</tbody>
</table>

- **USA**
  - Marlborough
  - Ann Arbor

- **Puerto Rico**
  - Yauco

- **France**
  - Aubagne
  - Lourdes

- **Germany**
  - Göttingen
  - Guxhagen
  - Freiburg
  - Bielefeld

- **China**
  - Beijing

- **South Korea**
  - Songdo

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**Lab Products**

**Bioanalytics**

**Separation**

**Fluid Management**

**Instruments & Systems**

**Cell Culture Media**

**Customer Interaction**

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This is Sartorius
Thank you.