Welcome to Sartorius

February 2024
Our ambition: Better health for more people

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.

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.
# Sartorius in 2023 numbers

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue</td>
<td>~€3.4bn</td>
</tr>
<tr>
<td>Profit margin(^1)</td>
<td>28.3%</td>
</tr>
<tr>
<td>Employees</td>
<td>14,500+</td>
</tr>
<tr>
<td>Locations worldwide</td>
<td>60+</td>
</tr>
<tr>
<td>Years of experience</td>
<td>150+</td>
</tr>
<tr>
<td>Investments in capacities</td>
<td>~€560mn</td>
</tr>
<tr>
<td>Target for climate neutrality</td>
<td>2045</td>
</tr>
</tbody>
</table>

\(^1\) Underlying EBITDA margin
14,500 employees united by strong values

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

113 Nationalities
54% Younger than 40 years
39% Women
55% Joined since 2019
Two divisions with a clear focus on the life science industry

- **Bioprocess Solutions Division**: Offers a wide array of innovative technologies for the manufacture of biopharmaceuticals and vaccines as well as cell and gene therapeutics.

- **Lab Products & Services Division**: Specializes in equipment and technologies for life science research and pharmaceutical laboratories.

Sales 2023:
- **79%** Bioprocess Solutions Division (~€3.4bn)
- **21%** Lab Products & Services Division

~85% with life science customers
Enabling the discovery and production of biopharmaceuticals

Bioprocess Solutions Division

Molecule development

Cell line and process development

Upstream & downstream production

Quality | Testing | Validation

Lab Products & Services Division
The promises of biologics: From established to new concepts

What are biopharmaceuticals?

- Consist of complex molecules
- Obtained from living cells in cell culture processes
- Administered mainly intravenously

Advantages

- Target only diseased cells
- Have fewer side effects
- Allow first-time or improved treatment of illnesses, e.g. cancer, multiple sclerosis, rheumatism

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>1796</td>
<td>Smallpox Vaccine</td>
</tr>
<tr>
<td>1818</td>
<td>Blood Transfusion</td>
</tr>
<tr>
<td>1982</td>
<td>Human Insulin</td>
</tr>
<tr>
<td>1986</td>
<td>Monoclonal Antibodies</td>
</tr>
<tr>
<td>2012 / 2017</td>
<td>Cell &amp; Gene Therapy</td>
</tr>
<tr>
<td>2020</td>
<td>mRNA Vaccine</td>
</tr>
</tbody>
</table>

Established biopharmaceuticals

Next generation
Many biotech medications are highly effective, but very expensive

<table>
<thead>
<tr>
<th>Disease</th>
<th>Treatment</th>
<th>Cost in Germany</th>
<th>Cost in Europe</th>
<th>Cost in USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatism</td>
<td>Monoclonal antibodies</td>
<td>~€12,000</td>
<td>~€280,000</td>
<td>~$3.5mn</td>
</tr>
<tr>
<td>Blood cancer</td>
<td>CAR-T cell therapy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemophilia</td>
<td>Gene therapy</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Only one out of 10,000 new drug candidates reaches the market

Drug discovery ➔ Process development ➔ Market approval ➔ Commercial production

>€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
Helping researchers in the labs to accelerate drug discovery

Our ambition
Reduce costly trial & error

Our solutions
Powerful bioanalytical tools and lab essentials

- Understand diseases
- Conduct experiments
- Make better use of data
- Identify molecules
- Develop new drugs

- Live cell analysis
- Cell characterization
- Protein analysis
- Cell selection
- Pipetting
- Weighing
- Filtration
- Water purification
Once discovered also the manufacture of biologics remains complex
Providing technologies to increase productivity in bioprocessing

Our ambition
More efficient bioprocessing

- Set up safe and flexible processes
- Increase resource and material efficiency
- Reduce investments
- Enhance product yield

Our solutions
Technologies for all phases of drug manufacturing

- Media & reagents
- Bioreactors & fermenters
- Chromatography
- Filtration
- Fluid management
- Data analysis
Offering integrated end-to-end manufacturing solutions

**Upstream**
Production of the desired drug

- Cell culture media & preparation
- Seed cultivation
- Scale-up
- Production

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

- Final filling
- Cryo-preservation
- Sterile filtration
- Concentration
- Virus clearance & filtration
- Chromatography
- Clarification & centrifugation

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Helping customers to reduce their environmental footprint

- Single-use technologies
- Process intensification
- Data analytics

- No water-/energy-intensive cleaning
- Less cleanroom space, less energy usage
- Higher yields

Biostat® STR Bioreactors
Linkit® AX
Resolute® BioSMB
Ambr® 250HT Perfusion
Umetrics Suite
Cell and gene therapies: New modalities, new challenges

Next generation biopharmaceuticals
- Viral Vectors
- mRNA
- Stem Cells
- Exosomes
- DNA
- New Vaccines

Innovative treatments for patients
- 6,000+ candidates in development
- ~60 approved therapies worldwide

Enabling CGT: High need for innovation
- Robustness of production process
- Yields, productivity, cost-per-dose
- Time-to-market
- Regulation under development
- Manufacturing close to patients

1 GlobalData, October 2023, CGT = Cell & Gene Therapies
Creating a technology platform for cell and gene therapy applications

<table>
<thead>
<tr>
<th>Biological Industries</th>
<th>CellGenix</th>
<th>Xell</th>
<th>Albumedix</th>
<th>Polyplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture media</td>
<td>Growth factors and cytokines</td>
<td>Media and supplements</td>
<td>Recombinant Albumin</td>
<td>Transfection reagents and plasmid DNA</td>
</tr>
</tbody>
</table>

Welcome to Sartorius

Up & downstream solutions

Cell line development, plasmid design & manufacturing and testing services
How we innovate

**Own Product Development**
in areas of core competencies

- Separation
- Lab analysis
- Cell cultivation technologies
- Automation

**Acquisitions**
of complementary technologies

- Media & reagents
- Chromatography
- Bioanalytical instruments

**Cooperations**
with partners leading in their fields

- Nanoparticles
- Artificial intelligence
- Cell models
- Bioprinting

Recent focus; selected projects

Welcome to Sartorius
Resilient global setup, well prepared for further growth

Customer proximity

Redundant capacity

Operational excellence

Global resilience

Ann Arbor, Michigan, USA
Bioanalytical products & services

Songdo, South Korea
Media, bags, filtration, labs, training

Freiburg, Germany
Cell culture components

Göttingen, Germany
Filter production, product development

Aubagne, France
Clean rooms, product development, labs

~€500 mn
Planned investment 2024

Expansion of production & R&D capacities; selected current projects
Strong financial track record; profitable growth expected for 2024

Sales revenue and EBITDA margin in %

~15% Ø Annual growth 2014-2023

High volatility during and post pandemic

~€3.4bn

Mid to high single-digit sales growth

Margin slightly >30%

Welcome to Sartorius

Sales CAGR for continued operations, in constant currencies; EBITDA margin excluding extraordinary items
Ambitious midterm targets backed by strong market fundamentals

- Growing and aging world population
- Expanding market for biopharmaceuticals incl. biosimilars
- Dynamic market segment of novel therapies
- High need for innovation

Ambition to 2028

- Clear strategy
- Competitive, integrated product portfolio
- Strong, customer-focused team
- Powerful and resilient production and R&D infrastructure

Low double-digit avg. annual sales growth\(^1\)

\(~34\%\)

Underlying EBITDA margin

\(^1\) Thereof around a fifth through acquisitions
Broad and ambitious sustainability agenda in implementation

2030 mid-term targets

~10% av. reduction of CO₂eq emission intensity p.a. (Scopes 1-3)

Zero avoidable emissions in Scopes 1 and 2

100% electricity from renewable sources

>75% revenue with products designed according to circularity principles²

Zero operational waste to landfill

2045 long-term target

Net-zero emissions

Decarbonization of the entire supply chain in collaboration with suppliers and customers

1 Process emissions from membrane manufacturing are currently considered unavoidable based on available technology, 2 including product and transport packaging
Simplifying Progress