This is Sartorius
Company Presentation | 2020
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.
Innovations since 150 years

1870 24 year old Florenz Sartorius develops a weighing technology that reduces balance beam stabilization time and substantially accelerates lab experiments.

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

10,000+
Employees\(^3\)

\(~\€1.83bn\)
Sales revenue\(^1\)

27.1%
EBITDA margin\(^{1,2}\)

\(~\€19bn\)^3
Sartorius AG market capitalization; included in relevant indices in Germany

\(~35\%\)
Sales revenue Americas

\(~40\%\)
Sales revenue EMEA

\(~25\%\)
Sales revenue Asia | Pacific

1 As of December 31, 2019; 2 Underlying EBITDA; 3 As of September 30, 2020
Strong company values as 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 control & testing

Lab Products & Services Division
### Attractive market environment with strong growth opportunities

<table>
<thead>
<tr>
<th>Favorable demographics</th>
<th>~9bn people by 2050; &gt;2bn 60 years or older</th>
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<tbody>
<tr>
<td>Rise of biosimilars</td>
<td>~30% CAGR for biosimilar sales 2019–2022</td>
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<td>Strong R&amp;D pipeline;</td>
<td>&gt;40% share of biologics in the pharma R&amp;D pipeline</td>
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<td>advances in gene and</td>
<td></td>
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<td>cell therapy</td>
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<td>~8% CAGR for biopharma market 2019–2025</td>
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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
Our products are widely used in the development and production of biologics against COVID-19

Pandemic crisis with significantly different effects

- High demand related to the development and production of vaccines and therapeutics against COVID-19; consequences from delays in clinical trials not clear yet
- Affect by softer macroeconomic environment; positive effects on products that are used for testing

180+ companies developing corona vaccines

The majority work with Sartorius products
The development and manufacture of biopharmaceuticals are complex
Only one out of 10,000 new drug candidates reaches the market

Schematic example of biologic drug discovery with data from the Association of the British Pharmaceutical Industry

1 in 10,000
Chance for a candidate to make it to the market

Drug discovery
4 ½ years
€500m

Testing & improving
1 year
€110m

Clinical trials
5 ½ years
€640m

Drug approval
1 ½ years
€60m

>10 years
From drug discovery to approval
The consequence: Biotech medications are extremely expensive

**HUMIRA®**
Annual revenue of $18 billion; is used to treat rheumatism and other inflammatory autoimmune diseases, such as Crohn’s disease and psoriasis
Manufacturer: Abbvie

Cost per annual treatment
€21,300 in Germany
Source: Abbvie

**ZOLGENSMA®**
Currently the world’s most expensive medical drug; gene therapy used to treat spinal muscular atrophy
Manufacturer: Novartis

Cost per treatment
$2,100,000 in the U.S.
Source: Novartis

First biosimilars out on the market:
- Imraldi® from Biogen up to 40% less expensive
- Hyrimoz® from Sandoz around 21% less expensive
- Amgevita® from Amgen about 18% less expensive
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 medicine
Our solution: Technologies to accelerate drug discovery and development

**Molecule development**
- Identification / validation
- Library screening
- Lead optimization
- Candidate characterization

**Cell line development**
- Gene cloning
- Cell line selection
- Cell line characterization
- Cell banking

**Key products**
- IncuCyte
- iQue
- Octet
- Sartoclear Dynamics
- MyCap

**Supporting products**
- Picus NxT
- Cubis
- Microsart
- Centrisart

This is Sartorius
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 set-up costs

... enhance the product yield
Our solution: Innovative technologies for all phases of drug production

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

**Application areas**
- Biopharmaceutical manufacturing
- Quality control and testing
The widest offering of solutions in the industry

**Upstream**
Production of the desired drug

- Culture media preparation
- Seed cultivation
- Scale-up
- Production

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

- Final filling
- Cryo-preservation
- Sterile filtration
- Concentration
- Virus removal filtration
- Polishing
- Viral clearance
- Chromatography
- Clarification and centrifugation
Single-use production systems are becoming increasingly prevalent

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

**Single-Use**
+ 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

- TAP Biosystems
- AllPure Technologies
- Bio Outsource
- Cellca
- kSep
- Umetrics
- Biological Industries
- BIA Separations

Divestment Intec Division

Intellicyt
ViroCyt
Essen BioScience

Life science businesses from Danaher

Acquisitions to remain part of strategy

Sales revenue has more than doubled over the last five years

Sales CAGR: ~+14.5%
EBITDA-margin\(^1\): +8.8pp

Sales growth and CAGR 2011-20 for continued operations, in constant currencies; 2020 based on guidance midpoint

1 Excluding extraordinary items
Sartorius 2025 ambition and initiatives

2025 targets

- ~ €4bn
  - Sales revenue
- ~ 2/3
  - Organic
- ~ 1/3
  - Acquisitions
- ~28%
  - EBITDA margin

Strategic initiatives

Regional
- Participate in strong Chinese 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 are based on 2017 currency exchange rates; non-organic revenue growth is accounted for companies acquired from 2018 and onwards; EBITDA excluding extraordinary items;
Recent investments: Infrastructure prepared for further growth

- **Aubagne, France**
  - Capacity extension for single-use bag production

- **Göttingen, Germany**
  - Expansion of lab instrument manufacture and extension of capacities for filter production; new Application Center

- **Boston, USA**
  - New bioanalytical and biosafety testing facility

- **Yauco, Puerto Rico**
  - Capacities for bag and filter production doubled

- **Peking & Shanghai, China**
  - Production of aseptic bags and new center for validation services
Thank you.