



THE BELGIAN LIFE SCIENCES ECOSYSTEM

BIOWIN
THE HEALTH CLUSTER OF WALLONIA

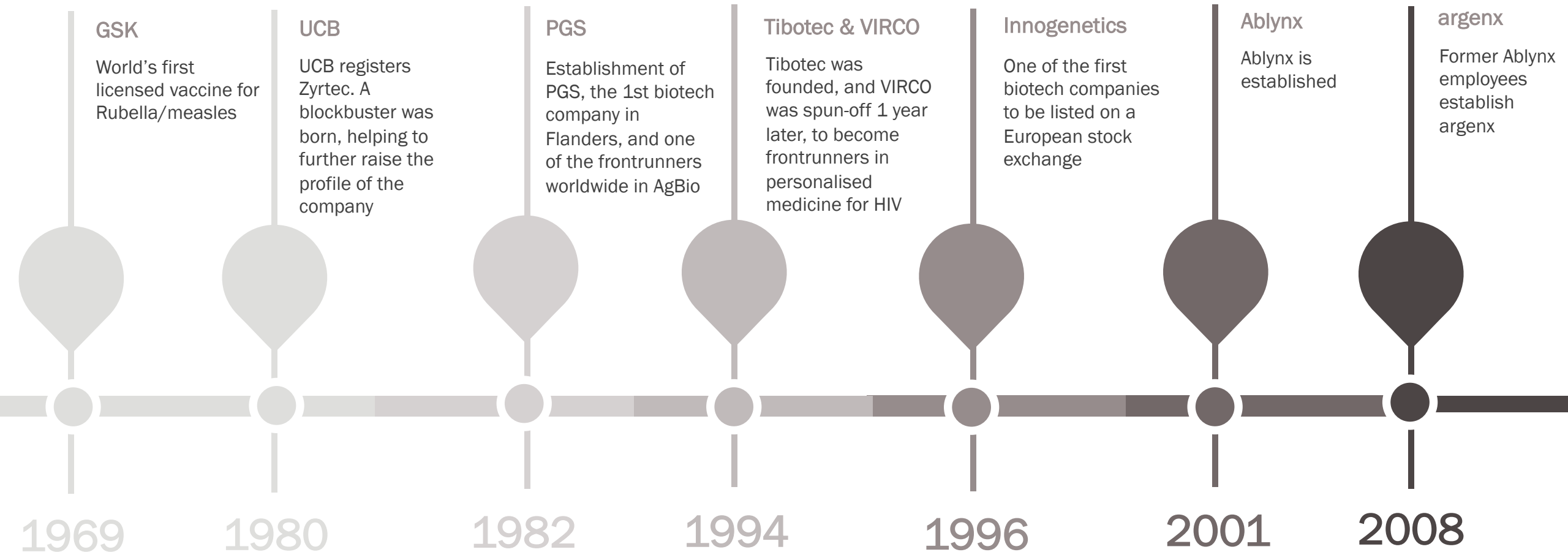
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AGENDA

- **BELGIUM**
STRONG HISTORY AND TRACK RECORD IN BIOTECH EXCELLENCE
 - **INGREDIENTS OF A**
BOOMING BIOPHARMA HUB
 - **2ND EUROPEAN LEADER**
IN CLINICAL TRIALS FOR NEW THERAPIES
 - **ONGOING INVESTMENTS**
IN RESEARCH & DEVELOPMENT
 - **ACCESS TO TALENTS**
AND EXCELLENCE IN EDUCATION
 - **PROXIMITY**
BETWEEN UNIVERSITIES, RESEARCH ORGANIZATIONS & COMPANIES
- **SUCCESSIONS**
MADE IN BELGIUM
- **KEY**
TAKE AWAYS

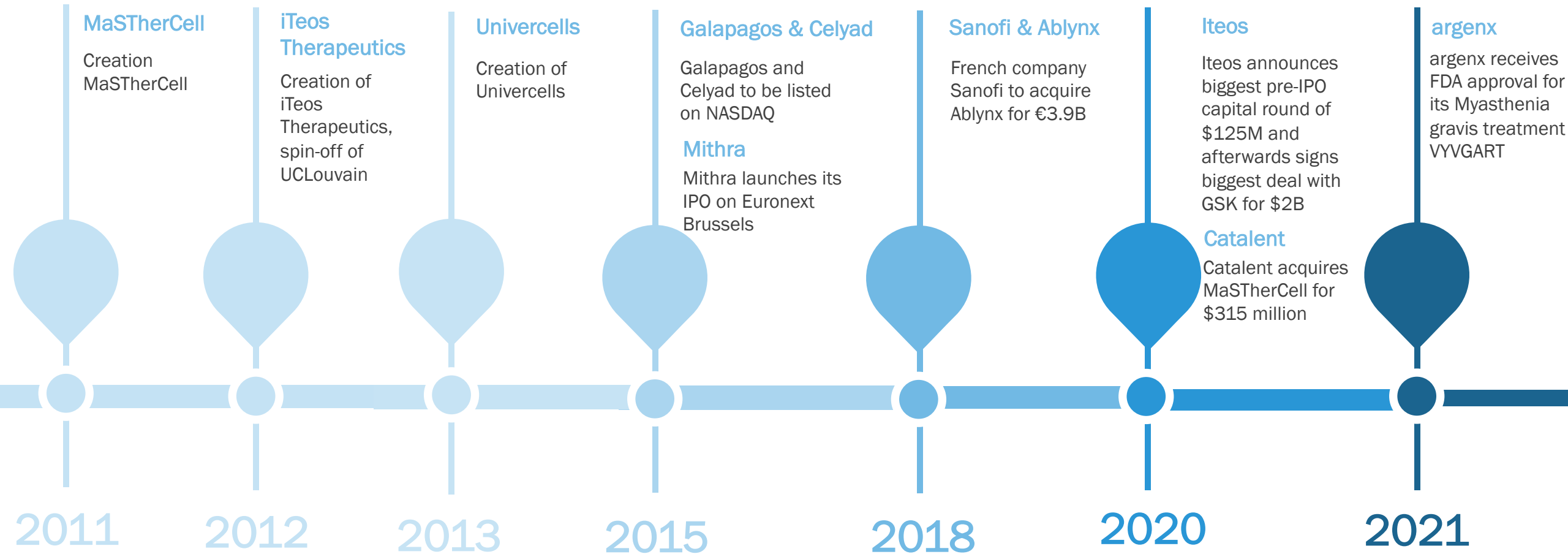
BELGIUM

STRONG HISTORY IN BIOTECH EXCELLENCE



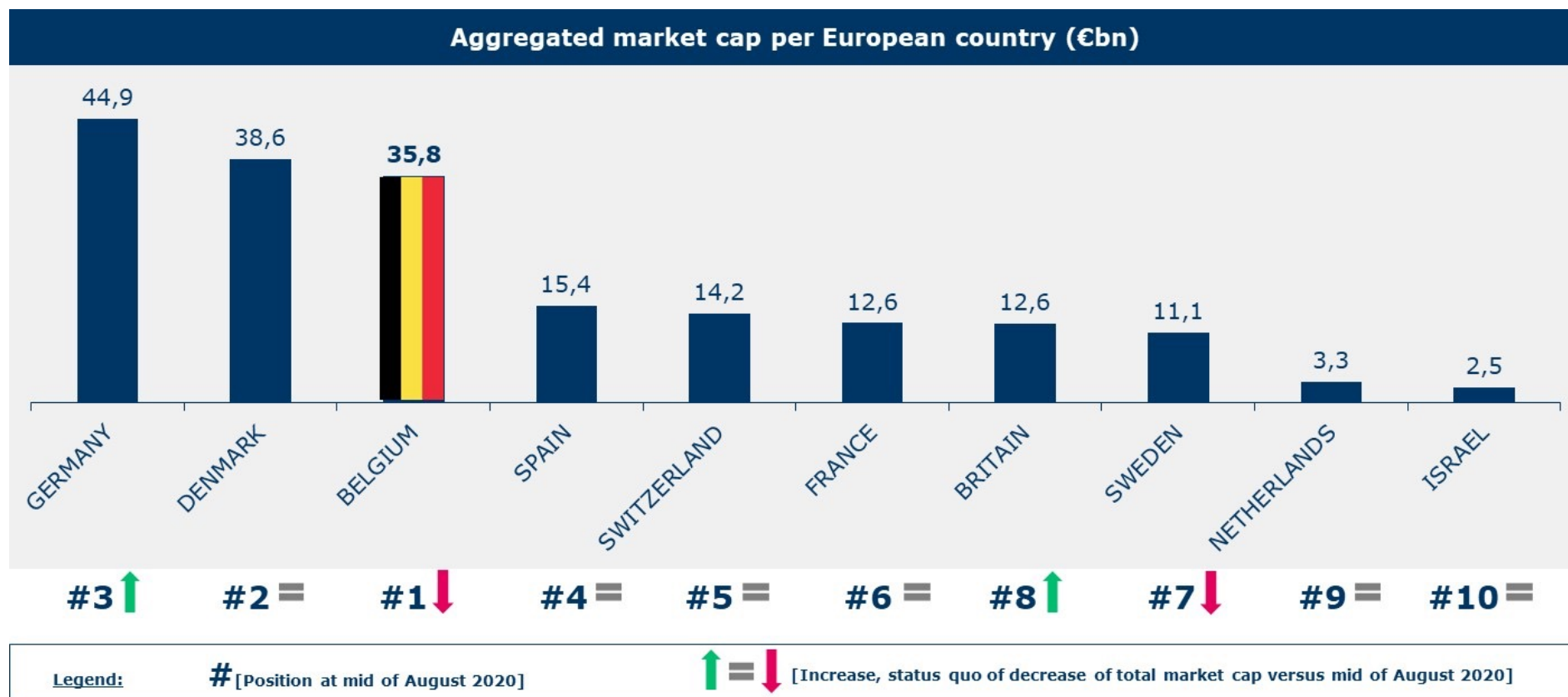
BELGIUM

STRONG HISTORY IN BIOTECH EXCELLENCE



BELGIUM

FORMER N°1, CONSTANTLY TOP 3 IN EUROPE



Note: 1. Numbers are based on the market cap of companies that are classified by Bloomberg either as "biotech" or "Medical Biomed/Gene", with further analysis by KBC Securities

Source: Bloomberg (numbers are at year-end for 2019 and at mid of August 2020, and as of 31 March for the current year)

Strictly private and confidential • 13

BELGIUM

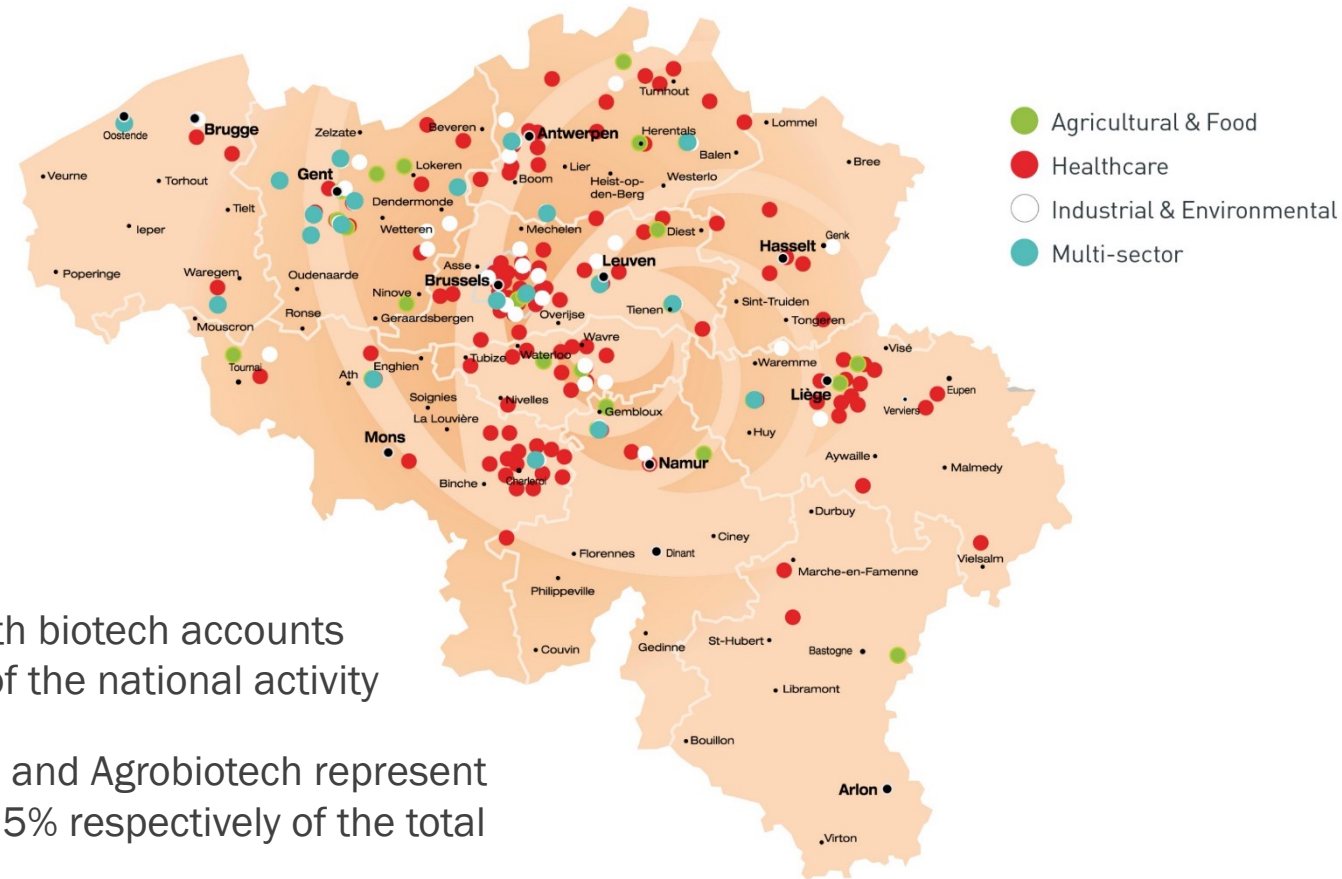
HAS ITS PLACE AS AN INTERNATIONAL BIOPHARMA VALLEY



- **Engagement & long-term vision of the federal Government***, academic world, and health industry to strengthen the Belgian position.
- **Integrated value chain approach**: from idea to market: managing R&D, clinical trials, production, market launch & distribution.

* <https://www.premier.be/en/belgium-health-biotech-valley-tomorrow>

BELGIUM BIG IN BIOTECH



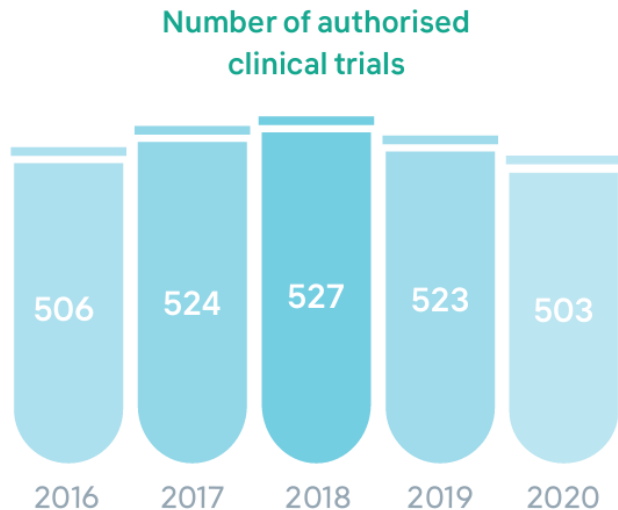
- The Health biotech accounts for 80% of the national activity
- Industrial and Agrobiotech represent 15% and 5% respectively of the total

INGREDIENTS OF A BOOMING BIOPHARMA HUB



- **Science serving Life**: a diverse dynamic and mature ecosystem
- **Connecting** industry leaders, SMEs, academia & research centers and the public authorities
- **biopharmaceutical companies** continue **investing in Belgium** to find new solutions for a wide range of therapeutic areas

2ND EUROPEAN LEADER IN CLINICAL TRIALS FOR NEW THERAPIES



Source: FAMHP data

80%

sponsored by pharmaceutical
companies

- **Phase I** trials in Belgium remain exceeding the European average
- In 2020, **phase III** clinical trials also outgrew the European average
- **Commercial** trials have a higher footprint in Belgium compared to the European cohort
- A wide **variety of therapeutic areas** is covered with a growing share of **cancer** research in the past five years.
- Compared to the proportion of the Belgian population in Europe (2.6%) a proportional higher share of clinical trials in Europe is conducted in Belgium (**16%**)

BELGIUM HAS AN IMPACT ON GLOBAL PUBLIC HEALTH

- Belgium is a **top export country of biopharmaceuticals** which makes Belgium one of the top contributors in Europe: 56 billion euro in 2020, medicines developed and produced in Belgium help patients all over the world.
- In 2020, biopharmaceuticals accounted for **more than 15% of Belgium's total exports**
- Within Europe, **14%** of the EU biopharmaceutical export was shipped from Belgium.
- With a share of **24%**, the USA is the most important trading partner,

Belgium was a key player in the development of large-scale production of vaccines during the COVID-19 pandemic.

ONGOING INVESTMENTS IN RESEARCH & DEVELOPMENT



In 2020, the sector invested
€13M in R&D every day,
amounting to a **total of €4.96B**



Over the past 5 years: investments
have **grown by 71%**



In 2020, on average **one patent application was filed per day** in the field of biotechnology and pharmaceuticals



Over the past 5 years, the number of **patent applications** from the biopharma industry **has increased by 34%**. The percentage increase in pharmaceutical and biotechnology patent applications is four times greater than the total number of patent applications



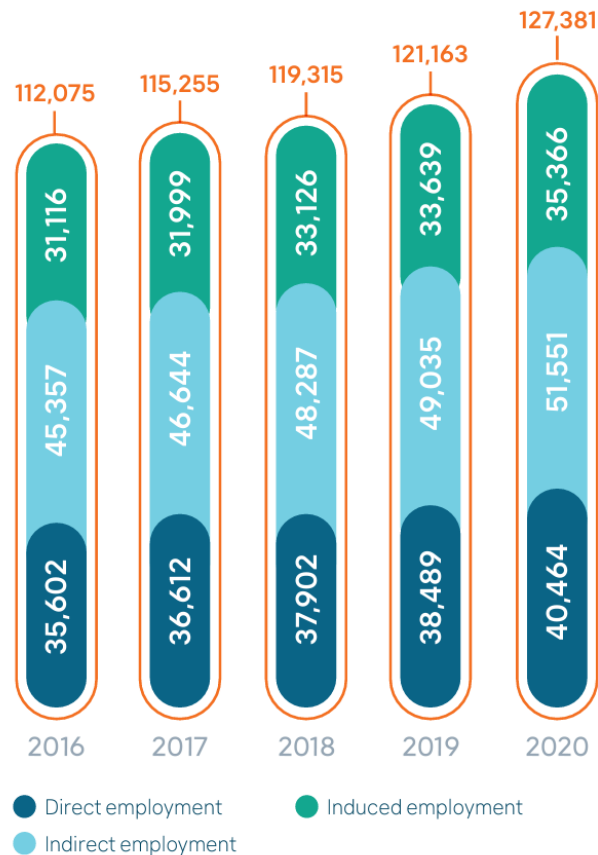
Highest density of researchers in Europe (30% more than US)

A POSITIVE IMPACT ON THE ECONOMY

- Belgium's unique biopharmaceutical hub is world-class, and a leader in the development of revolutionary medicines and vaccines:
 - Added value for the **patient**
 - Direct **economic return**
 - Positive impact on **public finances**
 - Direct, indirect, and induced **jobs**



ECONOMIC VALUE: EMPLOYMENT GROWTH



Source: pharma.be & PWC, Economic and societal footprint of the pharmaceutical industry in Europe, June 2019

Source: Pharma.be report

- **Top 3** of important employers in Europe: 130.000 direct & indirect jobs in the pharmaceutical industry
- Over the past 5 years the number of employees **increased by close to 20%**
- **Direct jobs:** 40,464 FTEs
- **8.5%** of the direct jobs accounts in the biomanufacturing industry in Belgium
- **... and employment in the industry is growing!**

ACCESS TO TALENTS AND EXCELLENCE IN EDUCATION



- **12 universities** providing strong education and a stable inflow of highly qualified workers. A strong position in the international rankings*
- Most of them are **researchers**: 6.234 in 2020 compared to 4.472 in 2016: **+39,4%**
- **More Life Sciences graduated per capita**: 1.727 per 1M inhabitants in 2018
- **Short-cycle higher education, Bachelor's Master's and Doctoral degrees**

*a total of 9 are featured in the QS World University Rankings 2022 (<https://www.topuniversities.com/where-to-study/europe/belgium/guide>)

A PRO-ACTIVE TALENT DEVELOPMENT POLICY

- Various education programs to train talents continuously



- Competence Center
- 4.500 people trained annually
- Job integration rate: > 85%
- Ongoing extension project
- Tailor-made programs
- Including GMP

New education program by VDAB and ViTalent (Feb 2022)

- Train jobseekers for a job in pharma and biotech
- 5-day professional training
- First training in Antwerp, the province with the highest concentration of pharma- and biotech companies
- Partnership between VDAB and ViTalent (the 1st specialized education centre for pharma and biotech)

A PRO-ACTIVE TALENT DEVELOPMENT POLICY

- New promising education programs recently launched or announced

Solvay Advanced Master program (September 2022)

- Advanced Master in Biotech & MedTech Ventures
- Generating Future Biotech & MedTech entrepreneurial industry leaders

Incubator program biotope launched by VIB (March 2022)

- Incubator program to support biotech startup teams looking to impact people's lives through innovation.
- Biotope will help early entrepreneurs to transform their ideas into viable businesses, with an initial focus on agrifood innovation.

'Talent Now' project (May 2022)

- Unique initiative to tackle recruitment acute shortages and challenges in the healthtech industry
- Public-Private consortium
- Industry leaders: GSK, Univercells, Takeda, UCB, Janssen Pharmaceutica & ThermoFischer
- Support of the Walloon Government

European Biotech Campus (2025)

- State of the art biotech campus
- One-stop shop
- Active watch: evaluate needs and centralize job/training offers
- Focus on innovative teaching methods (VR/AR) & digital twins
- Supported by the regional & federal governments and Europe

PROXIMITY

BETWEEN UNIVERSITIES, RESEARCH ORGANIZATIONS & COMPANIES

- **Positive climate** for start-ups & scale-ups: tech transfer from universities
- **Collaborations** between academia, regions and industry
- 57 new **spin-offs** in the last 10 years (2011 – 2021)
- Belgian startup companies are accelerating and grow to **biotech superstars**



BRIDGING ACADEMIC AND INDUSTRIAL COMMUNITIES

- Strong and diverse ecosystem of industries and research centers active in cell & gene therapy fields

From **PRECLINICAL** to **CLINICAL** to **MARKET**

Bridging academic and industrial communities to create innovation and develop solutions



SUCCESSIONS MADE IN BELGIUM

- From emerging technology to acquisition to established international player in biotech and manufacturing

EMERGING TECHNOLOGIES



ESTABLISHED INTERNATIONAL PLAYERS



KEY TAKE AWAYS

Belgium, a (bio)pharmaceutical innovation hub in the heart of Europe

- The ingredients of the success lies in the unique Belgian biopharmaceutical ecosystem of
 - World-renowned academia
 - Local SMEs and start-ups
 - Large multinational companies with strong local anchorage
 - Innovative suppliers and service providers
 - Access to talent
 - Supportive governments: Interesting combination of regulatory & tax measures & incentives for biopharma R&D

BELGIUM

HEALTH & BIOTECH VALLEY OF TOMORROW

Representatives of the Belgian government, academia and the health and biotech industry signed at the initiative of Prime Minister Alexander De Croo a joint charter pledging to (further) strengthen Belgium's position in biopharma R&D and production. The President of the European Commission, Ursula von der Leyen, was also present.



[Watch the video](#)

THANK YOU FOR YOUR ATTENTION!

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