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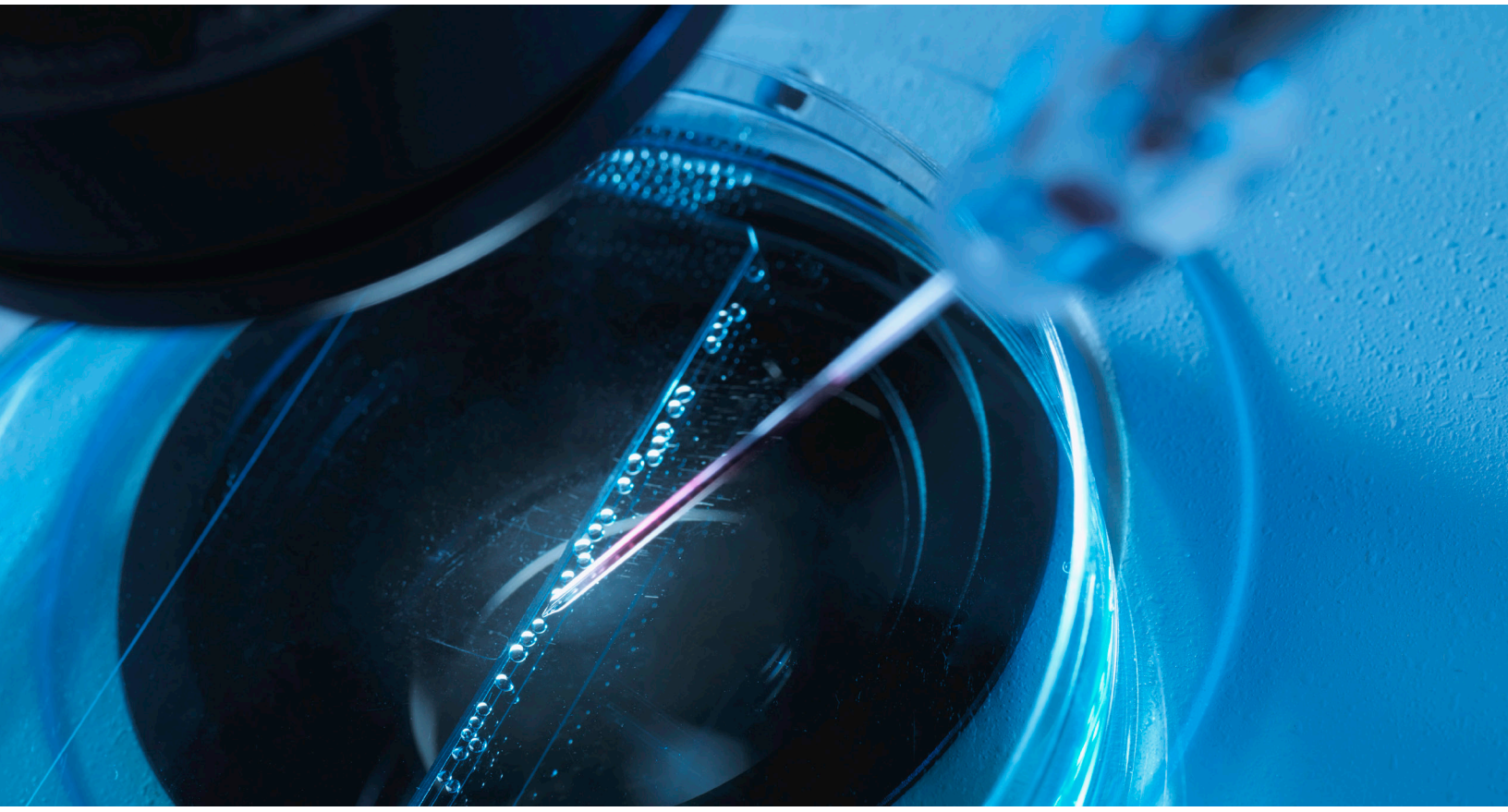
Pharmaceuticals & Medical Products Practice

Can European biotechs achieve greater scale in a fragmented landscape?

World-class science and innovation need to be matched with stronger scale-up capabilities and a broader funding base if Europe is to emerge as a leader in biotech.

This article is a collaborative effort by Sarah Brinckmann, Martin Dewhurst, Willemijn Kremer, Jorge Santos da Silva, and Alexandra Zemp, representing views from McKinsey's Pharmaceuticals & Medical Products Practice.



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Europe's biotech industry continues on a trajectory of growth fueled by innovations from cell and gene therapies to antisense, messenger RNA (mRNA), and chimeric antigen receptor T-cell therapy (CAR-T), with more emerging technologies and techniques on the horizon. The industry has made considerable progress in improving access to capital and talent gaps in the past few years. However, its future growth will depend on whether it can continue to scale up innovation and keep up with the pace of change in other regions. Biotechs, investors, and other stakeholders will need to play their part in the industry's next act if the promise of a golden age of biotech is to become a reality.

This article shares highlights from our industry report, Biotech in Europe: Driving the next act in Europe, in which we focus on four key questions: how has the COVID-19 pandemic affected biotechs globally, what makes European biotech uniquely attractive, how is the industry progressing, and how can biotech leaders and investors succeed in the future?

How has the COVID-19 pandemic affected biotechs globally?

The biotech sector has remained resilient through one of the worst economic crises in decades. Despite a brief downturn in 2020, share-price evolution has been positive overall since the beginning of the pandemic.

Biotechs have played a leading role during the pandemic. Many biotechs, along with pharmaceutical companies, have risen to the challenge of COVID-19. They have developed vaccines and secured regulatory approval at unprecedented speed, and their pipelines contain more than 250 vaccine candidates.

Capital availability is growing. Biotech funding continues to grow at a record rate from both public and private sources. Global venture-capital funding and deals reached their highest ever level of $36.6 billion in 2020, and the amount of capital raised during IPOs in 2020 ($28.7 billion) was more than twice the amount raised in 2019 ($11.8 billion) (Exhibit 1). Some biotechs are also exploring a nascent form of funding: special-purpose acquisition companies (SPACs).

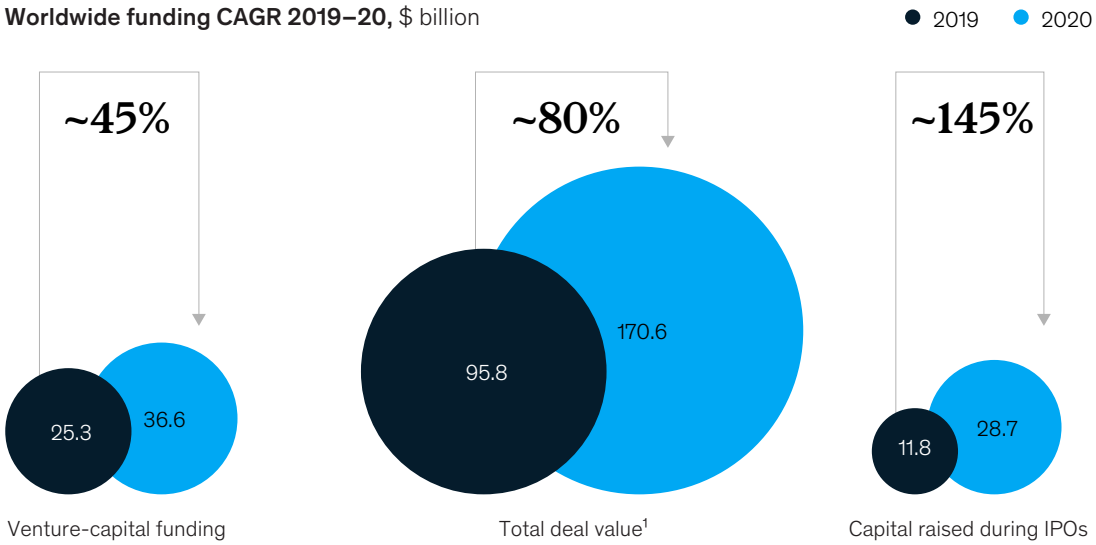
Industry recognition is increasing. The world has lived through a time of mass education in science research and development because of the COVID-19 pandemic. Public perceptions of the pharma industry have improved, with more than half (54 percent) of respondents to a recent US survey rating it positively, for instance, compared with less than a third (32 percent) before the pandemic.[1] Similarly, McKinsey's industry interviews and analysis of online search data reveal that awareness of the biotech industry has improved since the pandemic, as has pharma brand recognition.

Biotechs, investors, and other stakeholders will need to play their part in the industry's next act if the promise of a golden age of biotech is to become a reality.

[1] Harris Poll, September 2020.

Exhibit 1

Global venture-capital funding, deals, and IPOs reached their highest levels in 2020.



Note: Intended to provide insight based on currently available information for consideration and not specific advice.
[1]Includes acquisitions, partnerships, co-developments, JVs with disclosed deal values (20–30% of deals).
Source: BCIQ (February 2021); Pharmadeals (January 2021)

What makes European biotech uniquely attractive?

European biotechs have established a position of strength from which to enter the industry's next act.

Innovation is strong but varies by country. In our analysis of Europe's complex biotech landscape (see sidebar, "Mapping a complex landscape" for details), France, Germany, and the United Kingdom (home to the largest biotech hub) stand out as the top three biotech centers in Europe, and together account for half of all European biotechs. France, Switzerland, and the United Kindgom have seen the fastest growth, accounting for 63 percent of the biotechs founded between 2018 and 2020. Other European countries are innovating at a steady pace, such as Germany, or in some cases, losing momentum.

The science is world-class. Europe continues to maintain a clear lead over China, the United States, and the rest of the world in terms of the quality and quantity of its science. The region is home to 43 of the global top 100 life-science universities, while the United States has 34. Europe is also a powerhouse in scientific publishing, with roughly twice the output of the United States and three times that of China. Europe also leads in terms of quality, as measured by the number of citations for its publications. More than 40,000 biotech patents have been granted in Europe since 2015, although the region's 3 percent CAGR in patent approvals between 2015 and 2019 lagged that of the United States (4 percent) and was a fraction of China's (14 percent) (Exhibit 2).

The capital landscape is maturing. European biotech has been increasingly successful at

Mapping a complex landscape

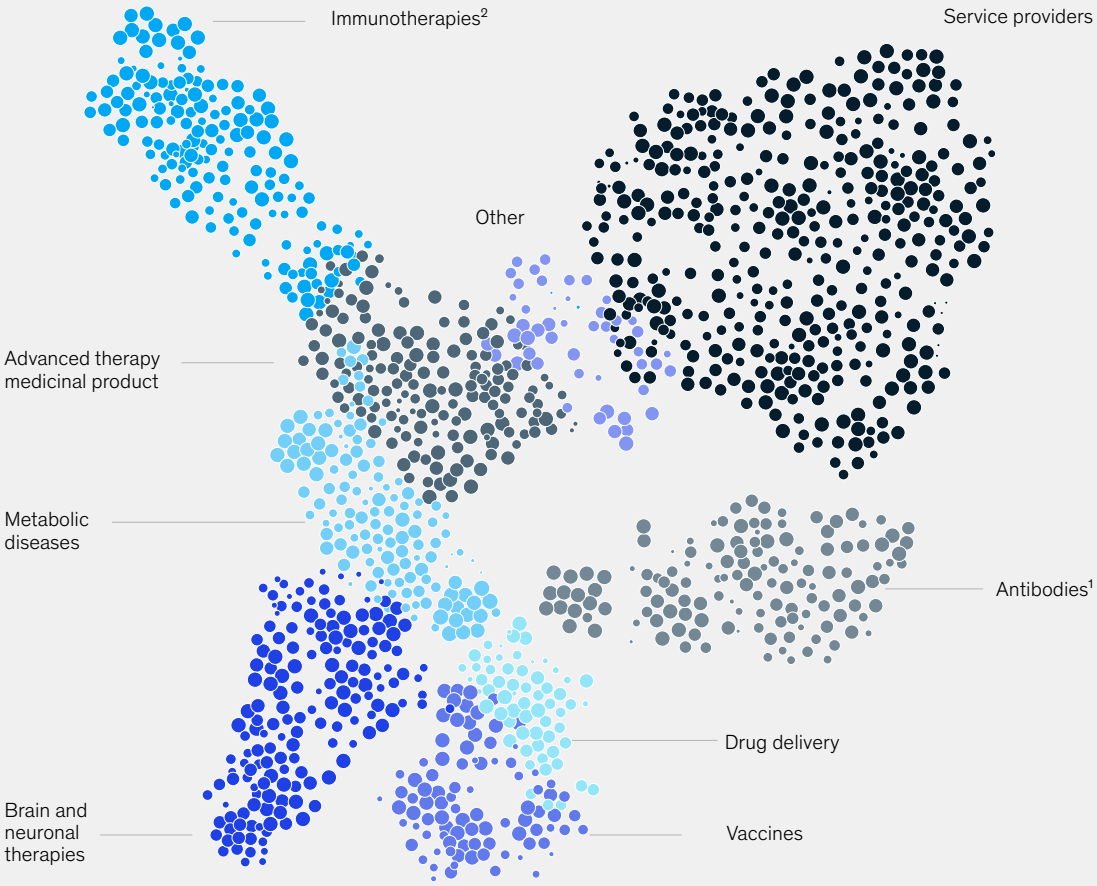
Europe's complex biotech landscape comprises hundreds of companies, dozens of countries, and multiple paths to innovation and financing. To cut through this complexity, McKinsey grouped 1,382 European biotech companies into natural clusters using a purpose-built methodology. This enabled us to identify biotech hotspots by country, modality, and therapeutic area (exhibit).

Services remain the largest area of focus, accounting for 36 percent of biotechs. Immunotherapies, antibodies, and cell and gene therapy collectively account for an additional 41 percent. Among therapeutic areas (TAs), the main hotspots continue to be oncology (27 percent of biotechs) and central nervous system (CNS) (12 percent). Oncology is becoming even more of a focus in Germany, Ireland, Switzerland, and the United Kingdom, while CNS is seeing strong growth in Switzerland and the United Kingdom. Among new biotechs, the share focusing on gastrointestinal and metabolic disorders has increased. Overall, biotechs are tending to focus on one TA rather than several.

Exhibit

Services are the largest category in European biotech.

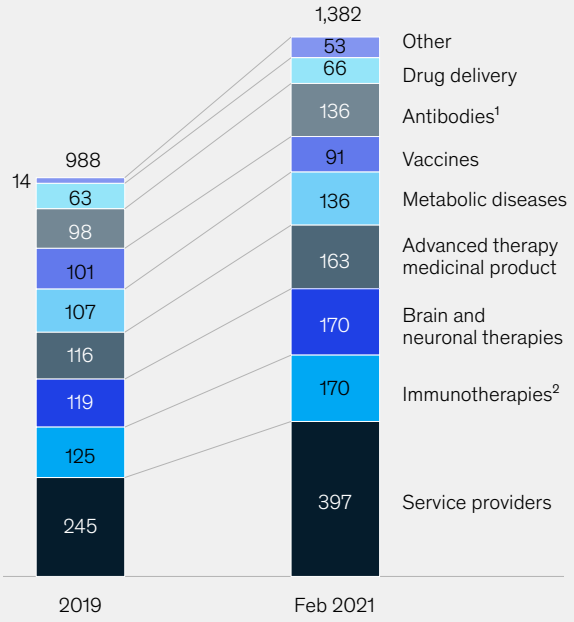
European biotech natural clusters in 2021 (1,382 companies)



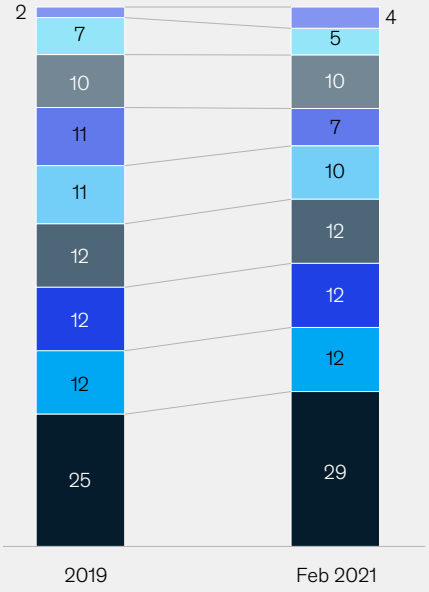
Mapping a complex landscape (continued)

Exhibit (continued)

European biotech natural clusters in 2021, number



European biotech natural clusters in 2021,[3] %



Note: Intended to provide insight based on currently available information for consideration and not specific advice.
[1]Companies with focus on antibodies or antibody engineering, including monoclonal antibodies.
[2]Companies with focus on immuno-oncology, immunotherapies and/or inflammation.
[3]May not sum to 100%, due to rounding.
Source: BCIQ (February 2021); McKinsey BIHOMA (2021); McKinsey Growth Analytics (2019)

attracting financing capital from public and private resources. Late-stage funds have seen tremendous growth since 2010, with an 8.5 percent CAGR in the median fund size. Venture funding has increased at a similar rate to that in the United States, though from a smaller base. Moreover, the returns on late-stage investments are higher in Europe, with a net internal rate of return of 15 percent, compared with 13 percent in the United States. Total deal value increased by 54 percent in 2015–17 and 2018–20, but the US increase was higher, at 74 percent. Average deal values remain lower in Europe than in the United States, but the share of large deals exceeding $500 million in value is roughly 10 percent in both Europe and the United States.

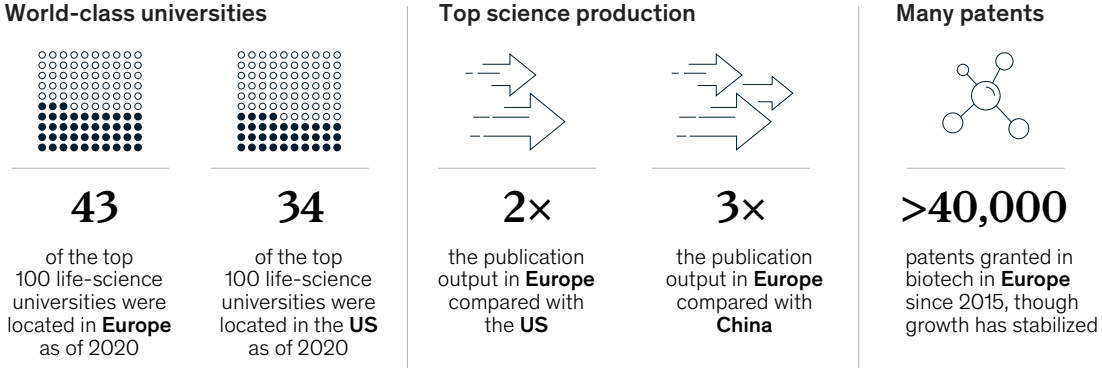
How is Europe progressing?

Since McKinsey's earlier analysis of European biotech in 2019,[2] the industry has seen a number of improvements, although challenges persist.

[2]See Franck Le Deu and Jorge Santos da Silva, "Biotech in Europe: A strong foundation for growth and innovation," August 23, 2019, McKinsey.com.

Exhibit 2

Europe continues to produce world-class science.



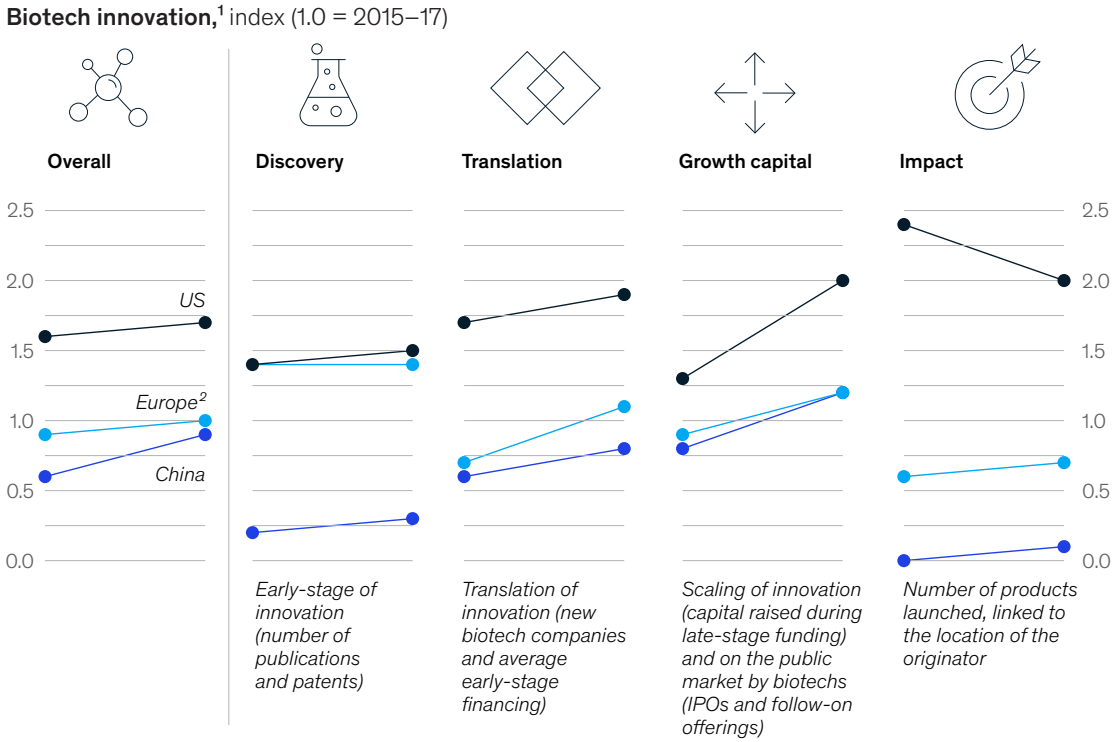
Innovation and discovery have improved. McKinsey's Biotech Innovation Index assesses innovation and funding in terms of four indicators: discovery (measured in numbers of patents and publications); translation (measured in numbers of new biotech companies and average amounts raised in early-stage financing); growth capital (measured in average amounts raised during late-stage funding and by IPOs and follow-on offerings on public markets); and impact (measured in numbers of products launched). Europe's overall score on the index improved by 20 percent in 2015–17 and 2018–20, compared with an improvement of 5 percent in the United States, although the US score of 1.7 is considerably higher than Europe's score of 1.0. China has almost caught up with Europe with a score of 0.9, an improvement of 55 percent above its previous score (Exhibit 3).

Translation remains a challenge. When it comes to transforming research into a pipeline of new medicines, growth has been stagnant over the past six years. Europe scored 0.8 on the translation index—lower than both the United States, with 2.0, and China, with 1.1—and its share of newly funded biotechs represented only a quarter of the total number. Early-stage funding for European

Since McKinsey's earlier analysis of European biotech in 2019, the industry has seen a number of improvements, although challenges persist.

Exhibit 3

Europe's main challenge remains translating science.



Note: Intended to provide insight based on currently available information for consideration and not specific advice.
[1] 1.0 corresponds to the average of all 3 geographies in the 2015–17 time range; growth between periods shown; Discovery and Impact index normalized to population per country to allow comparisons across geographies, as well as number of new biotechs (Translation index).
[2] Includes EU-27 countries, countries belonging to the European Economic Area and/or Schengen Area, and UK.
Source: BCIQ (February 2021); Evaluate Pharma (March 2021); GBI (February 2021); PubMed (March 2021); WIPO (March 2021)

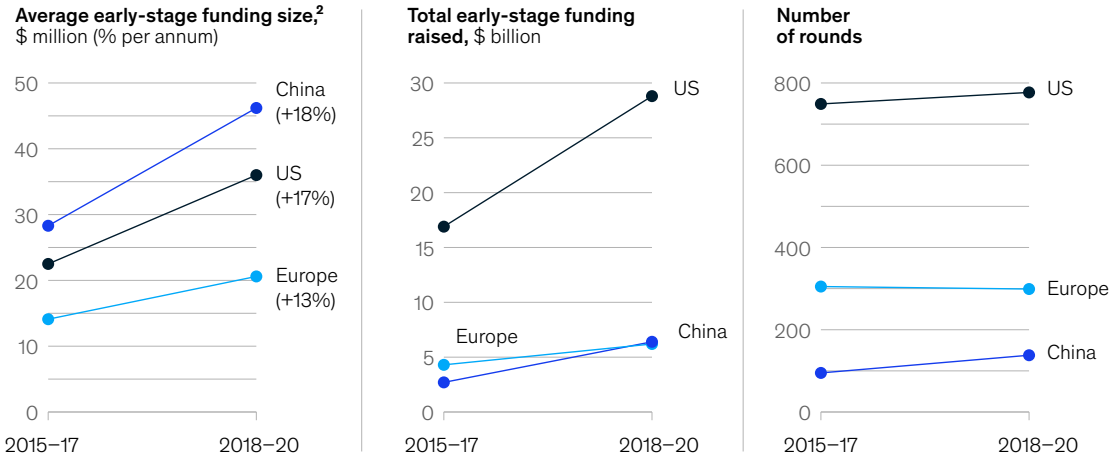
biotechs has grown by 13 percent CAGR, but are well below the United States, at 17 percent, and China, at 18 percent—an indication that the gap in early funding is widening (Exhibit 4). With European biotechs, founders, and investors continuing to focus on their home markets, biotechs seeking access to large early rounds of funding may need to involve more investors from outside the region.

Growth capital shows signs of maturing. European biotechs are catching up with their counterparts in the United States and China in average late-stage venture funding. They have closed the gap with the United States for Series E funding rounds, and match the United States and China in the average value of large (greater than $100 million) late-stage funding. European biotechs floated on the US stock market are close behind their US peers in mean IPO size ($153 million compared with $159 million). When it comes to raising follow-on rounds in the United States, European biotechs perform better than US biotechs on average but have a lower total funding amount. Raising large capital sums in IPOs on European stock markets has continued to be difficult; the mean size of European biotech IPOs was four to five times larger on US exchanges than on European exchanges.

Exhibit 4

Sufficient early-stage capital may increase translation; Europe currently shows the slowest growth in this area.

Early-stage biotech funding[1] by region, 2015–17 compared with 2018–20



Note: Intended to provide insight based on currently available information for consideration and not specific advice.
[1]Early-stage funding defined as Venture seeds, Series A and Series B.
[2]3-year CAGRs shown between periods 2015–17 and 2018–20.
Source: BCIQ (February 2021)

The investment market is still fragmented. European biotechs are listed on 15 different European stock exchanges, with 90 percent listed in their home countries. Institutional investors hold a smaller share of the top ten regional biotechs in Europe (60 percent) than they do in the United States (85 percent). Although mutual funds are maturing, Europe still lags the United States: the three largest US biotech funds are twice of the size of their European counterparts, with a collective value of around $12 billion.

Talent gaps are closing. Though the United States continues to lead the global race for talent, Europe is poised to catch up, with rising numbers of STEM graduates, more biotechs training the next generation of talent, and a growing pool of experienced biotech executives. Around half of the executives at the most successful biotechs[3] in 2020, for instance, had previous experience on other biotech executive teams. According to our research, European R&D talent is perceived as almost on a par with that in the United States, and commercial talent is regarded as having caught up significantly in both quality and availability. However, interviews with biotech executives and investors suggest that Europe still lacks biotech talent with an entrepreneurial mindset.

How can biotechs and investors succeed in the future?

To scale up innovation, industry stakeholders need to focus on several key areas.

[3]Defined for this purpose as companies among the top five in 2020 for funding raised from IPOs, the top 10 for funding raised from venture capital, or the top 10 for deals.

Biotechs and investors seeking to build companies that achieve scale and success at bringing innovative assets to market should take the following steps:

— *Go global.* Be open to following talent, money, and opportunities beyond your home country and region. Go East or West, particularly to the United States and China, to build a global organization, global networks, and global credibility.

— *Think unicorn.* Focus on securing cornerstone investors, and don't shy away from large investment rounds.

— *Stand out.* Differentiate the company to attract, grow, and retain the talent needed to support successful clinical development and launch; embed digital and analytics capabilities in day-to-day operations.

— *Focus on execution.* Define areas of uniqueness, and design your development programs, go-to-market models, and commercial operations in line with your assets, not today's budget.

The broader biotech ecosystem could provide more support for biotechs in securing funding and developing capabilities by taking the following actions:

— *Power early-stage translation.* Increase the speed and effectiveness of technology transfer in turning academic innovations into patents, companies, and pipeline products.

— *Incubate innovation.* Nurture a risk-taking culture to facilitate early growth and rapid successes.

— *Invigorate public markets.* Extend regional collaboration to combat market fragmentation, and maximize knowledge sharing to make private- and public-funding systems globally competitive.

Decisive action on these seven fronts could help to strengthen both the biotechs and the ecosystem that supports them with the resources needed to take innovative discoveries to market.

Europe continues to be a powerhouse of science. Over the past three years, Europe's biotech industry has made meaningful progress on attracting capital and bringing products to market. However, translation remains the biggest challenge. Future success will depend on improving the translation of research into new companies, raising more capital, and building entrepreneurial talent.

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