

...Biotechnology companies, more commonly known as biotechs, play a vital role in improving the treatment and survival of patients suffering from rare, difficult-to-treat diseases, as well as in safeguarding their well-being. Despite the importance of the sector in Europe, the continent is losing ground to the United-States and China.

The biotech world is buoyant

Thanks to their agility and links with the academic world, biotechs play a **crucial role in the discovery of new therapies and the development of biological drugs**, whose share of drug sales has risen by 13 percentage points between 2014 and 2022, a sign of their activity.

In terms of research and development (R&D), biotechs have established themselves as major players, accounting for almost **two-thirds of Phase I¹ clinical trials** in 2023, compared with one-third in 2014.

At the same time, they are very active and have **substantial capital requirements**. They need to access to finance for many years before they can generate sales, which are conditional on obtaining market approval (MA) from health regulators.

A Europe losing momentum

BioNTech, a German biotech allied with the American pharmaceutical company Pfizer, was the first company to offer an authorized vaccine to fight the COVID-19 epidemic, enabling it to occupy a prime position in vaccine orders. This example, far from being unique, illustrates the importance of Europe's contribution to the global biopharmaceutical concert. Behind the United States, the UK, France and Spain respectively occupy second, third and fifth place worldwide in terms of number of active medical biotech companies².

However, Europe is struggling to turn its advances into industrial projects.

European biotechs have initiated **17% of clinical trials by 2022**, but have been overtaken by China, which has gone from **9% in 2017 to 20% in 2022**.

Innovation lies in emerging biotech companies, generally small, which in Europe have **difficult access to financing from venture capital funds**³, less inclined to invest early, preferring less risky phases. As a result, many European biotechs are seeking foreign, mainly American, financing (as was the case with BioNTech and its financial ally Pfizer).

The American leader now in competition with China, a heavyweight in the making

For several years now, China has been asserting itself as a **major competitor**, striving to develop a biotechnology industry capable of rivalling that of the United States, thanks to a strategy focused for the moment on improving existing drugs before aiming for more radical innovations.

The United States, thanks to the establishment of an integrated ecosystem and symbiosis between universities, research centers, public funding agencies, private partners (VCs), CRO (Contract Research Organisations) and CDMO (Contract Development Manufacturing Organisations), remains the world leader. These partnerships between the many players in the biotech value chain help to ensure the survival of companies that must overcome numerous regulatory hurdles before they can generate sales.

Sino-American trade tensions, which affect many areas of activity, do not spare the biotech segment, and threaten to **complicate the relationships and collaborations** currently at work between biotechs in both countries.

Against this backdrop, Europe needs to **improve the conversion of its basic research into clinical applications and attract more European funding**. This would facilitate the development of appropriate production capacities, including in collaboration with major pharmaceutical companies. The latter, with their recognized expertise in drug development and substantial financial

resources, would be in a position to support European biotechs as they grow.

1 Before being dispensed to patients, a drug must undergo three phases (I, II and III) to determine its efficacy and toxicity on groups of volunteers. At the end of phase III, the competent medical authority issues a marketing authorization (MA). A fourth phase is planned to measure any side effects over the long term and under real-life conditions.

2 <https://www.labiotech.eu/best-biotech/top-biotech-countries/>

3 A venture capital fund is an investment product that enables investors to participate in the capital of a company with high growth potential. In return for this capital investment, the company transfers shares to the investors.