Europe and China: Building the Next Generation of Biotech Together

Richard van Ewijk
QULLA Partners
JULY 2026

Europe continues to produce world-class biotechnology innovation. China has spent the last decade building biological scale. Increasingly, competitive advantage is determined not by either capability alone, but by the ability to combine innovation, scale, and governance into a globally integrated development model. The organizations that master this combination may define the next generation of biotechnology success.

For many years, the biotechnology value chain followed a relatively predictable model. Scientific innovation was driven primarily by Europe and the United States, while development and manufacturing activities were distributed globally to support clinical and commercial supply. Today, however, that model is evolving.

China is no longer simply viewed as a manufacturing destination. It is increasingly becoming a biotechnology innovation and industrialization ecosystem, contributing not only manufacturing capacity but also development expertise, scientific talent, integrated platform capabilities, and growing innovation output.

According to IMF January 2026 World Economic Outlook projections, China is projected to contribute approximately 26.6% of global GDP growth in 2026, making it the single largest contributor to global economic expansion. While economists may debate the precise figures, the broader trend is difficult to ignore. China is becoming an increasingly influential force across multiple industries, including biotechnology and biopharmaceutical development.

This transformation is particularly visible in the CDMO sector, where many Chinese organizations have evolved from providers of manufacturing services into integrated development and manufacturing partners supporting global biotechnology programs.

> ***China is no longer simply a manufacturing destination.***

The CDMO Shift

Only ten to fifteen years ago, many Western biotechnology companies viewed China primarily through the lens of cost reduction. Today, that perception is becoming outdated. During my interactions with Chinese CDMOs, what stands out is not cost, but the combination of speed, flexibility, technical capability, and a strong operational commitment to meeting challenging timelines.

Perhaps the most significant development is the scale of the biological ecosystem that China has created. Over the past decade, enormous investments have been made in biologics development and manufacturing infrastructure. Modern facilities have been built at a pace rarely seen elsewhere. More importantly, these facilities are staffed by a rapidly growing pool of highly educated scientists, engineers, manufacturing specialists, and quality professionals who have accumulated practical experience across monoclonal antibodies, bispecifics, ADCs, recombinant proteins, cell therapies, and other advanced modalities.

The result is not simply manufacturing capacity. It is biological scale.

Biological Scale Is Becoming as Important as Scientific Innovation

For decades, competitive advantage in biotechnology was primarily driven by scientific innovation. The ability to discover new targets, develop novel therapeutic concepts, and generate breakthrough science determined which organizations would lead the industry. While scientific innovation remains the foundation of biotechnology, the industry is increasingly recognizing that innovation alone is no longer sufficient.

The ability to rapidly transform scientific discoveries into robust development programs, clinical trial materials, and ultimately commercial products has become a critical differentiator. In this environment, biological scale is emerging as a strategic asset in its own right.

Biological scale extends beyond manufacturing capacity alone. It encompasses the availability of experienced scientific and technical talent, integrated development platforms, analytical capabilities, process development expertise, digital infrastructure, supply chain networks, and the organizational experience gained from executing large numbers of biologics programs. These capabilities allow organizations to move efficiently from concept to clinic and from clinic to commercial supply.

The European Commission itself acknowledges that Europe possesses world-class science but faces challenges in scaling biotechnology innovation, attracting late-stage investment, accelerating clinical development, and expanding manufacturing capacity at a pace that allows it to compete globally. At the same time, significant investments in other regions, particularly China, have resulted in the creation of extensive biotechnology ecosystems capable of supporting development and manufacturing activities at scale.

As a result, competitive advantage is increasingly determined not only by who generates the best ideas, but also by who can most effectively connect innovation with execution. Scientific innovation creates opportunity; biological scale enables its realization. Organizations that successfully combine both will be best positioned to accelerate development timelines, deploy capital efficiently, and deliver new therapies to patients in an increasingly competitive global environment.

> ***Scientific innovation creates opportunity; biological scale enables its realization.***

Europe's Enduring Strength

Throughout this paper, the term Europe refers to the broader European biotechnology ecosystem rather than the European Union alone. This includes innovation hubs such as Switzerland and the United Kingdom, which continue to play a critical role in global biotechnology research, development, and commercialization.

Europe continues to be one of the world's leading sources of scientific innovation. Groundbreaking research, novel therapeutic concepts, and entrepreneurial biotech companies continue to emerge from universities, research institutes, and innovation clusters across Switzerland, the United Kingdom, Germany, France, the Netherlands, Denmark, Belgium, and other leading biotechnology regions.

Switzerland in particular has established itself as one of the world's most productive biotechnology ecosystems. According to the Swiss Biotech Report, Switzerland consistently ranks among the highest globally for biotech company density and R&D spending relative to GDP, supported by institutions such as ETH Zürich, EPFL, and a highly concentrated life sciences sector spanning biotech, pharmaceutical, engineering, and investment communities. Switzerland continues to generate scientific innovation and company creation at a scale disproportionate to its size.

The challenge has rarely been the quality of underlying innovation. The more persistent challenge has been how quickly that innovation can be translated into clinical programs and ultimately into medicines for patients.

The Scale-Up Challenge

Europe's challenge is not scientific capability.

Across the broader European biotechnology ecosystem, world-class research institutions, entrepreneurial talent, established pharmaceutical companies, and innovative biotechnology start-ups continue to generate groundbreaking science and novel therapeutic concepts. The region consistently produces scientific discoveries capable of transforming patient care.

The challenge begins when innovation must be converted into industrial-scale development and manufacturing.

Recent European policy initiatives have openly acknowledged these challenges. The European Commission has highlighted limitations in access to late-stage financing, manufacturing scale, and clinical development competitiveness, noting that Europe continues to produce world-class science while often struggling to translate that science into industrial and commercial success.

Many emerging biotechnology companies face a combination of fragmented capital markets, limited access to late-stage financing, regulatory complexity, lengthy multinational clinical trial processes, and restricted access to integrated development infrastructure. While each of these challenges may be manageable individually, together they can slow the transition from scientific discovery to clinical and commercial execution.

As a result, promising biotechnology companies are often required to operate with greater capital discipline while simultaneously navigating increasingly complex development pathways. In a market where investors expect efficient use of capital and accelerated value creation, speed of execution becomes a strategic advantage rather than simply an operational objective.

This challenge is increasingly recognized within Europe itself. Recent European policy initiatives aimed at strengthening biotechnology competitiveness acknowledge the need for greater scale, improved access to capital, faster development pathways, and stronger manufacturing capabilities. The objective is not to improve scientific innovation, which remains a European strength, but to improve the ability to transform innovation into industrial and commercial success.

It is within this context that collaboration with global development and manufacturing partners becomes strategically relevant.

Speed, Flexibility and Capital Efficiency

Many Chinese organizations have developed an operating culture that places enormous emphasis on execution. Decisions are often made quickly. Resources can be mobilized rapidly. Project teams demonstrate a strong commitment to meeting ambitious timelines. For early-stage biotechnology companies operating under constant funding pressure, every month saved in development can have a meaningful impact on value creation and financing requirements.

Equally important is flexibility. Biotech development is rarely linear. Programs evolve, strategies change, and unexpected challenges emerge. Successful Chinese CDMOs often demonstrate a willingness to adapt alongside their clients, creating solutions rather than obstacles. This mindset can be particularly valuable for emerging biotechnology companies operating with lean internal organizations.

Cost remains part of the equation, but increasingly it is not the primary driver. The real advantage is capital efficiency. The ability to achieve more development progress with the same investment is often far more valuable than simply reducing manufacturing costs. In today’s market, where funding remains selective and investors expect disciplined execution, capital efficiency has become a competitive advantage in its own right. Technical capability is becoming increasingly global. Governance is becoming the differentiator.

The growing importance of execution speed is reflected in global clinical development trends. According to the IQVIA report commissioned by EFPIA (2024), the European Economic Area's share of commercially sponsored clinical trials fell from 22% in 2013 to 12% in 2023, while China's share increased from 8% to approximately 18–29% over the same period depending on methodology. These trends highlight the increasingly competitive nature of the global development environment.

The Leadership Decision

For biotechnology leadership teams, the decision is rarely about choosing a geography.

For many emerging biotechnology companies, resources are finite and development timelines are directly linked to funding requirements and investor confidence. Every month gained in development may accelerate value creation, while every delay can increase financial pressure and strategic uncertainty.

In this environment, development and manufacturing decisions increasingly become business decisions as much as technical decisions. The ability to access the right expertise, infrastructure, and execution capability at the right stage of development can significantly influence a program's probability of success.

The decision therefore involves a broader set of considerations than is often acknowledged. Alongside quality, speed, capital efficiency, regulatory expectations, and risk, leadership teams must increasingly evaluate how development and manufacturing choices align with investor expectations, board priorities, long-term supply chain strategy, and the organisation's overall risk appetite. Recent geopolitical developments and evolving legislative frameworks have further elevated the strategic importance of supply chain geography and operational resilience.

Technology transfer complexity, scalability from early clinical development through commercial supply, and the organisation's own capacity to govern a globally distributed programme are equally important considerations. Regulatory strategy adds another layer, requiring sponsors to consider how development activities, manufacturing locations, inspection readiness, and product release models align with the expectations of multiple health authorities across different markets.

Ultimately, the decision is no longer simply about selecting a service provider. It is about selecting a development model. The question is not whether a partner possesses the necessary technical capabilities, but whether the combined sponsor-partner ecosystem can consistently deliver quality, speed, resilience, regulatory credibility, and risk appetite throughout the product lifecycle.

The organisations that navigate this complexity successfully do not do so by chance. They do so through deliberate partner selection, early governance design, and a realistic assessment of where internal capabilities end and where partner capabilities must begin.

The question therefore is not where development happens.

The question is how to build a development model capable of delivering quality, speed, and value simultaneously.

> ***Technical capability is becoming increasingly global. Governance is becoming the differentiator.***

Quality and Governance

At the same time, the quality landscape has evolved significantly. Since joining the International Council for Harmonisation (ICH) in June 2017, China has been progressively aligning its regulatory framework with international standards. ICH membership marks a formal commitment to harmonisation, not a guarantee of uniform implementation across all organisations. In practice, the leading CDMOs have made significant advances, operating within mature quality systems, supporting global regulatory submissions, and routinely interacting with international regulatory authorities. The gap that existed a decade ago has narrowed considerably at the frontier, though variation across organisations and programmes remains.

Of course, successful outsourcing is never solely about technical capability. Governance remains essential. Sponsors retain responsibility for quality oversight, supplier management, data integrity, change control, and regulatory compliance regardless of where manufacturing activities take place. The strongest partnerships are built not only on technical excellence but also on transparency, communication, and robust governance structures.

Challenges Cannot Be Ignored

Successful collaboration between European biotechnology companies and global development and manufacturing partners is not without challenges. While technical capabilities have advanced significantly and regulatory expectations have become increasingly harmonized, cross-border development models inevitably introduce additional complexity that must be actively managed.

Intellectual property protection, technology transfer, data integrity, data governance and cross-border data flows, supply-chain resilience, evolving export control regulations, and broader geopolitical considerations all require careful assessment. In addition, differences in language, culture, business practices, and decision-making processes can create misunderstandings or inefficiencies if expectations are not clearly aligned from the outset.

Recent global events have also highlighted the importance of supply-chain visibility and resilience. Organizations increasingly need to understand not only the capabilities of their direct partners, but also the broader supplier networks, critical materials, logistics pathways, and potential geopolitical factors that may influence program continuity.

These challenges should not be viewed as reasons to avoid collaboration. Rather, they reinforce the importance of selecting the right partners and establishing robust governance frameworks. Clear quality agreements, effective communication channels, risk-based oversight, regular performance monitoring, and well-defined escalation processes remain essential regardless of where development and manufacturing activities take place.

Organizations that underestimate these challenges may encounter delays, operational inefficiencies, or regulatory friction. Organizations that proactively manage them can leverage the benefits of global collaboration while maintaining quality, compliance, supply continuity, and strategic control.

The opportunity is real. The responsibility to govern it effectively remains with the sponsor.

Complementary Strengths

Neither region needs to replicate the strengths of the other.

The greater opportunity may lie in combining complementary capabilities within a globally governed development model.

Too often, discussions are framed as Europe versus China.

The more relevant question is how Europe and China can complement each other.

Europe continues to provide world-class science, innovation, clinical expertise, and regulatory experience. China increasingly offers biological scale, development speed, manufacturing capacity, and operational execution. Together, these strengths create a powerful combination capable of accelerating the development of new therapies while maintaining the quality and compliance standards expected by regulators and patients worldwide.

At QULLA, we increasingly see this model emerging. European biotechnology companies are looking for ways to move faster without compromising quality. Chinese CDMOs are looking to build long-term partnerships and demonstrate their ability to support global programs. When supported by strong governance and clear expectations, these collaborations can create substantial value for all parties involved.

> ***The more relevant question is how Europe and China can complement each other.***

Governed Interdependence

Much of the current discussion around biotechnology is framed as a choice between regional self-sufficiency and global collaboration. In reality, the future is likely to be neither.

Europe and China have developed different but highly complementary strengths within the biotechnology ecosystem.

Europe continues to excel in the areas that create innovation. Its world-class universities, research institutes, biotechnology clusters, and healthcare systems remain among the strongest globally. Scientific discovery, translational medicine, novel biological concepts, regulatory science, quality systems, and clinical expertise continue to emerge from leading innovation hubs across Switzerland, the United Kingdom, Germany, France, the Netherlands, Denmark, and Belgium.

China, meanwhile, has built capabilities that increasingly determine how rapidly innovation can be transformed into clinical reality. Over the past decade, substantial investments have created large-scale biologics infrastructure, integrated development platforms, extensive technical talent pools, and highly efficient execution models. Regulatory maturity has advanced significantly through alignment with ICH standards, while leading organizations have accumulated practical experience across monoclonal antibodies, bispecifics, ADCs, recombinant proteins, cell therapies, and other advanced modalities.

This evolution is visible in the growing participation of Chinese organizations in global development programs. Companies such as WuXi Biologics, GenScript, Canton Biologics, and ADC specialists such as MabPlex, among others, have become established partners supporting biotechnology companies across multiple regions and regulatory frameworks.

The question therefore is no longer whether Europe or China will dominate biotechnology. The more relevant question is how both regions can leverage their respective strengths to accelerate the development of innovative therapies for patients worldwide.

In practice, this model already exists. Increasingly, biotechnology programs operate across multiple regions and organizations throughout their lifecycle, reflecting the global nature of modern drug development and manufacturing.

A biotechnology company may discover a novel therapeutic concept in Switzerland, develop the cell line in China, manufacture clinical trial material within an integrated development platform, conduct clinical trials across Australia, Europe and North America, certify product through a European Qualified Person framework, and ultimately commercialize globally.

This is not outsourcing.

It is the creation of a globally integrated development ecosystem.

The challenge is no longer primarily technical capability. For many leading organizations operating at the frontier, technical standards have advanced substantially and the gap with Western peers has narrowed significantly. Across the broader market, variation still exists. Increasingly, however, the differentiator for sponsors selecting global partners is governance.

As development models become increasingly global, success depends on the ability to maintain effective oversight across organizational, cultural, and geographical boundaries. Data integrity, supply-chain resilience, technology transfer, intellectual property protection, regulatory alignment, and geopolitical risk management become strategic capabilities rather than operational considerations.

The future therefore lies neither in decoupling nor dependency.

It lies in governed interdependence.

Organizations that can combine European innovation with global development and manufacturing excellence while maintaining robust governance structures will be best positioned to accelerate development timelines, optimize capital efficiency, and maintain regulatory credibility.

In the next decade, competitive advantage may not be defined by where innovation occurs or where manufacturing takes place.

It may be defined by who can govern the ecosystem most effectively.

> ***The future lies neither in decoupling nor dependency. It lies in governed interdependence.***

A New Competitive Model

The biotechnology industry is entering an era in which innovation, scale, and governance are becoming equally important drivers of success.

Europe continues to generate world-class science, entrepreneurial talent, and therapeutic innovation. China has built significant biological scale, integrated development capabilities, and execution capacity. Increasingly, the organizations that succeed will not be those that possess only one of these strengths, but those capable of combining them effectively within a globally integrated development model.

Technical capability is becoming increasingly global. Governance is becoming the differentiator.

The future of biotechnology is unlikely to be defined by geography alone. It will be shaped by the ability to connect innovation with execution, while maintaining the quality, oversight, and regulatory credibility required to bring new therapies to patients.

That is not a model of competition.

It is a model of governed collaboration.

The organizations that master this model may define the next generation of biotechnology success.

At QULLA, we increasingly observe this model emerging as biotechnology companies seek to balance speed, quality, capital efficiency, and governance within globally distributed development networks.

About the Author

Richard van Ewijk

Founder and Managing Director, QULLA Partners

Former Vice President Global Quality, IMP QP and HSE, Ichnos Sciences

Richard van Ewijk is a biotechnology quality executive and advisor with more than 25 years of experience across biologics development, GMP manufacturing, quality leadership, CDMO oversight, and regulatory compliance.
Throughout his career, he has supported the development, manufacture, and commercialization of complex biological products, working with biotechnology companies, pharmaceutical organizations, and global development and manufacturing partners across Europe, North America, and Asia. His experience spans quality strategy, supplier governance, regulatory inspections, technology transfer, clinical development support, and the design of phase-appropriate operating models for emerging biotechnology companies.
Through QULLA Partners, Richard advises leadership teams on quality, governance, and development strategies that enable efficient clinical execution while maintaining compliance, oversight, and business agility.

For more information about QULLA Partners and our advisory services, please contact us directly through www.qulla.bio.

References

1. International Monetary Fund. *World Economic Outlook Update: January 2026*. Washington, D.C.: International Monetary Fund, 2026.

2. European Commission. *Proposal for a Regulation of the European Parliament and of the Council on establishing a framework of measures for strengthening Union's biotechnology and biomanufacturing sectors*. COM(2025) 1022 final. Brussels: European Commission, 2025.

3. International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH). *ICH Guidelines and Standards*.

4. European Federation of Pharmaceutical Industries and Associations (EFPIA). *The Pharmaceutical Industry in Figures*. Brussels: EFPIA, 2026.

5. McKinsey & Company. *The Future of Biopharma Operations and Global Supply Chains*. 2022.

6. IQVIA. *Assessing the Clinical Trial Ecosystem in Europe*. October 2024. Commissioned by EFPIA and Vaccines Europe and Citeline, *Pharma Intelligence Clinical Trials Database*.

7. Swiss Biotech Association. *Swiss Biotech Report 2026*. Basel: Swiss Biotech Association, 2026.