

Letter to European Political Decision Makers

Dear Ministers and Representatives of Member States, the European Commission, and the European Investment Bank,

It was a privilege to meet you at the Biosolutions Gala Dinner this July, during the Informal Meeting of Ministers for Competitiveness. I am grateful for the opportunity to present 21st.BIO's work, and to highlight why Europe must act decisively now to safeguard and expand its leadership in precision fermentation.

Precision Fermentation: a Strategic Opportunity for Europe

Precision Fermentation is a proven biotechnology that uses microorganisms in fermentation tanks to produce specific proteins and peptides. It is a core strategic technology for future production of a long range of products from food and nutrition, sustainable materials, to replacements for conventional chemicals.

Precision fermentation technology was invented and developed in Europe, and has been used for decades to produce insulin, enzymes, and food ingredients. Europe has the knowledge base and innovation not only to build the resilience and sustainability of its own supply chains, but to continue to lead and scale this technology globally.

Precision fermentation can help meet the rising demand for protein in an efficient and sustainable way. By 2035, the world will need up to 60% more protein than what is currently produced.

Producing milk protein via precision fermentation is sustainable. It uses 90% less land and water than cows and has a sharply reduced environmental footprint. The production process can run on local raw materials grown by local farmers and processed by local industry. It can secure the supply needed while building on Europe's strong tradition in food production.

Producing food and nutrition like this will therefore strengthen Europe's self-sufficiency, secure supply chains, and help stabilize nutrition prices. And with the right policy framework, it can help Europe meet rising protein demand, reduce environmental impacts, secure long-term food resilience and drive global technology leadership.

A Critical Strategic Technology for Europe

Precision fermentation has the potential to:

- Close the global protein gap – Europe is unfortunately a net importer of protein,
- Strengthen Europe's food security and self-sufficiency,
- Secure supply chain predictability and price stability,
- Deliver sustainable nutrition to our citizens,
- Secure Europe's role as a global leader in biotechnology.

The United States and China have already prioritized precision fermentation as a strategic technology, backed by fast-track approvals and predictable supportive investment frameworks. Europe risks losing ground: our technologies are invented here, but they are being scaled outside Europe. The result is that we risk to see factories, jobs, technology development, and supply chains moving abroad.

21st.BIO is a Clear Example

At 21st.BIO, we produce technology for production of high-value milk proteins through precision fermentation. In the United States, approval for our protein was granted within one year. In Europe, the same clean, animal-identical protein faces a regulatory process expected to take more than five years. This mismatch drives investments, industrial facilities, and innovation out of Europe.

Europe Must Lead, Not Follow

We cannot allow a strategic field of biotechnology to slip away. Biotechnology is a core battlefield for both US and China. Europe has the foundation to lead – not only in innovation, but in industrial scale-up. No European country alone has the resources to build the industrial capacity to lead this globally. What is needed now is the European ambition and policy framework to turn potential into competitive advantage.

Recommendations

1. Adopt an EU-wide ambition, vision, and strategy for leadership in industrial biotechnology.
2. Introduce fast-track approvals for well-characterized, animal-identical proteins.
3. Modernize EFSA's procedures to ensure global competitiveness, focusing on:
 - Speed: approvals in 1-2 years, not 5+ years,
 - Predictability: alignment and pre-application support, • Focus: assessment of the product, not the process.
4. Launch competitive funding schemes for European protein 'mega-factories', to encourage private and public investments – similar to AI mega-factories.
5. Establish EU and national strategies for protein self-sufficiency and bio-based value chains, from raw materials (e.g., sugar) to industrial production and market adoption.

Conclusion

Europe invented precision fermentation. It is a critical strategic technology. With decisive action, we can also own its future. By accelerating regulation, aligning strategy, and backing industrial scale-up, Europe can retain global leadership in biotechnology, build resilient supply chains, and create sustainable growth for decades to come.

We hope the forthcoming EU Biotech Act will seize this opportunity and become a broad and bold Biotech Act.

The choice is between hesitation and leadership. Europe has the talent, the science, and the industrial base. What is needed now is the leadership and the confidence to act. Let us set the ambition and turn ambition into action.

With respect,

Thomas Schmidt,
CEO & Co-founder, 21st.BIO

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