

News Release



LenioBio reaches industrial-scale with its high-yield eukaryotic platform for cell-free protein synthesis

Dusseldorf, June 8th 2022 – LenioBio GmbH today announced it had achieved a key milestone for the company with the successful linear scaling of its cell-free protein synthesis (CFPS) platform, ALiCE®, to an industrial scale.

Through a series of breakthrough developments, ALiCE® can now be used to produce up to 3g/litre of complex, functional proteins in reaction volumes of up to 10 litres, without requiring extensive process development and optimization, and without compromising on protein yield. This offers a significant step forward in eukaryotic protein expression.

The key differentiator of ALiCE® at scale, compared to other cell-free expression systems, is its unique achievement in keeping the protein production machinery of the living cell intact: active energy supply and everything needed for protein folding, disulfide bonding, and glycosylation.

CFPS systems offer a number of benefits over cell-based protein alternatives, including shorter protein production time (hours vs. months), and the ability to produce proteins at levels usually toxic to living cells. However, the widespread adoption of CFPS in industrial protein manufacture has been hindered by a lack of systems that can reliably operate at scale.

CEO Remberto Martis said: “We are extremely excited about the response received from the industry and collaboration partners in reaching this important milestone. The scaling of LenioBio’s CFPS system, combined with its ability to produce complex proteins with eukaryotic

post-translational modifications, opens the door to many applications beyond research and development.”

To accommodate future demands for larger volumes of their cell-free lysate, the company is scaling the technology further to 100L production capacity.

Scaling of the technology is one outcome of the two-year PEPPER project (881025), funded by the EU Horizon 2020 program, which was successfully completed in February 2022. LenioBio will be exhibiting within the European Innovation Council Pavilion (Hall C, booth #1911) at the 2022 BIO International Convention, June 13-16. The team will be happy to discuss this and other recent developments at the company.

About LenioBio

LenioBio is a protein expression platform company committed to advancing transformative technology for the discovery, development, and large-scale production of proteins, unconstrained by the limitations of the cell.

LenioBio was established as a legal entity in Germany in September 2016, with offices in Dusseldorf and R&D and production labs in Aachen. For more information, visit [Leniobio.com](https://leniobio.com) and follow LenioBio on [LinkedIn](#).