



## News Release

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### **MilliporeSigma Gains Leading Perfusion Micro-Bioreactor with Erbi Biosystems Acquisition**

- **Erbi's differentiated 2 ml micro-bioreactor platform technology, Breez™, enables rapid lab testing for bioprocessing scale up**
- **Allows MilliporeSigma to offer full range of bioreactors, from 2ml to 2000L**
- **Adds to company's expertise in monoclonal antibody (mAb) process development**

Burlington, Massachusetts, December 6, 2022 – MilliporeSigma, the U.S. and Canada Life Science business of Merck KGaA, Darmstadt, Germany, a leading science and technology company, has acquired Massachusetts-based Erbi Biosystems, a developer of the 2 ml micro-bioreactor platform technology, known as the "Breez™". The deal strengthens MilliporeSigma's upstream portfolio in therapeutic proteins by enabling scalable cell-based perfusion bioreactor processes from 2ml to 2000L with rapid lab-scale process development. It also offers future development opportunities in novel modality applications, including cell therapies. Financial terms were not disclosed.

"Erbi's Breez™ is one of the few micro-scale, fully automated, functionally closed and continuous perfusion cell culture platform technologies on the market. Its footprint is also much smaller than that of other bioreactor platform technologies," said Darren Verlenden, Head of Process Solutions, Life Science business sector of Merck KGaA, Darmstadt, Germany. "By integrating the Breez™ in our extensive Mobius® portfolio, we can now offer a full range of bioreactors, cell retention systems and devices, and cell culture media. This increases the productivity of our upstream

processes and will further accelerate the adoption of perfusion cell culture operations as our customers move towards more connected and continuous processing.”

“We look forward to joining the Life Science business sector of Merck KGaA, Darmstadt, Germany and are confident that our expertise in bioprocessing process development will complement the Mobius® portfolio and help advance life-enhancing therapeutics,” said Michael Chiu, President and CEO at Erbi Biosystems.

The Breez™ micro-bioreactor platform technology expands the upstream portfolio of MilliporeSigma’s BioContinuum™ Platform, which includes cell culture, cell retention, and bioreactor solutions for continuous bioprocessing. As part of MilliporeSigma’s intensified upstream ecosystem, the Breez™ will transform continuous process development through automation. It increases operator throughput by up to four times compared to other benchtop-scale systems to yield high-performing continuous processes that lower the cost of manufacturing and increase speed to market. Compared to competitive bioreactor platform technologies, it requires less bench space and no biosafety hood.

The acquisition of Erbi Biosystems, which closed on December 1, 2022, is another milestone to accelerate innovation in the company’s Process Solutions business unit through targeted smaller to medium-sized acquisitions with high impact. Process Solutions business, together with the Life Science Services business unit, is one of Merck KGaA, Darmstadt, Germany's “Big 3” growth drivers. The company aims to increase its Group sales to approximately € 25 billion by 2025.

#### **About the Life Science business of Merck KGaA, Darmstadt, Germany**

The Life Science business of Merck KGaA, Darmstadt, Germany, which operates as MilliporeSigma in the U.S. and Canada, has more than 26,000 employees and more than 55 manufacturing and testing sites worldwide, with a portfolio of more than 300,000 products focused on scientific discovery, biomanufacturing and testing services. Merck KGaA, Darmstadt, Germany, a leading science and technology company, operates across healthcare, life science and electronics.

Around 60,000 employees work to make a positive difference to millions of people’s lives every day by creating more joyful and sustainable ways to live. From advancing gene-editing technologies and discovering unique ways to treat the most challenging diseases to enabling the intelligence of devices – the company is everywhere. In 2021, Merck KGaA, Darmstadt, Germany generated sales of € 19.7 billion in 66 countries.

The company holds the global rights to the name and trademark "Merck" internationally. The only exceptions are the United States and Canada, where the business sectors of Merck KGaA, Darmstadt, Germany operate as EMD Serono in healthcare, MilliporeSigma in life science, and EMD Electronics. Since its founding in 1668, scientific exploration and responsible entrepreneurship have been key to the company's technological and scientific advances. To this day, the founding family remains the majority owner of the publicly listed company. For more information about Merck KGaA, Darmstadt, Germany, visit [www.emdgroup.com](http://www.emdgroup.com).

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#### **About Erbi Biosystems**

Erb Biosystems is revolutionizing cell therapy and bioprocessing process development with the Breez™, a fully automated 2 mL TruePerfusion™ bioreactor that reduces by at least 1/3 the skilled labor required. The platform offers a 90% footprint reduction using disposable, functionally closed single-use cassettes with proprietary microfluidic technology processes capable of performing activation, transduction, intensified growth, and diafiltration steps. It offers closed-loop control of pH, total cell density (OD), dissolved oxygen, and CO<sub>2</sub> measurements. The integrated online sensors and intuitive software deliver sophisticated feeding strategies, increased cell concentration, low shear, bubble-free mixing with high kLa resulting in performance far exceeding the static and benchtop reactors typically used today. A single 2mL volume cassette can deliver up to 400M (CHO and T-cells), sufficient for most development needs and a number of CAR-T clinical dose regimes.

Erb Biosystems has expanded into a 10,000 sq. ft. R&D and manufacturing facility north of Cambridge, Massachusetts. The company has systems installed across the US, Europe, and China. After doubling its employee headcount in 2021, the company is expected to maintain this growth in 2022 as it develops GMP compliant systems to address the clinical manufacturing needs.