



Polymer Factory's Dendritic Polymers Demonstrate Strong Antimicrobial Performance in Advanced Fiber Membranes

Polymer Factory today announces new research results demonstrating that fiber membranes incorporating the Company's proprietary dendritic polymers exhibit strong antimicrobial performance against both bacterial and viral strains.

In the study, researchers successfully fabricated electrospun fiber membranes based on biodegradable and biocompatible poly(L-lactide-co-caprolactone) (PLCL), functionalized with positively and negatively charged dendritic polymers supplied by Polymer Factory. Morphological and physicochemical analyses confirmed the successful formation of multifunctional fibers using a scalable electrospinning process.

The functionalized fibers demonstrated strong antibacterial performance, achieving greater than **99.9% efficacy** against both gram-negative *Escherichia coli* and gram-positive *Staphylococcus aureus*. In addition, the membranes showed a significant antiviral effect, with more than **97% efficacy** against an enveloped coronavirus strain (OC43). The effectiveness against other types of viruses requires further study.

The results highlight the antimicrobial functionality of Polymer Factory's charged dendritic polymers and their compatibility with scalable fiber manufacturing techniques. The developed fiber membranes show potential to supplement existing filtration technologies and support the development of advanced filtration membranes and next-generation personal protective equipment (PPE), particularly for addressing environmental and biological pollutants in indoor environments.

Strategic research collaboration

Polymer Factory is a participant in the **Nano-SHIELD** consortium, a collaborative European research initiative financed by the **European Defence Fund (EDF)**. Within the consortium, Polymer Factory contributes its expertise in charged dendritic polymers to the development of advanced multifunctional membrane materials together with academic and industrial partners across Europe. The research results announced today are well aligned with this broader strategic focus on advanced protective and filtration technologies.

CEO comment

"These results clearly demonstrate the versatility and applicability of our dendritic polymer technology," says **Mats Wallnér**, CEO of Polymer Factory. "The combination of strong antimicrobial performance, biocompatibility, and compatibility with scalable fabrication methods represents an important step toward new application areas. We see promising opportunities for continued development and collaboration within filtration, protective materials, and indoor environmental solutions."

Scientific publication

The full peer-reviewed article is available online for investors and partners interested in the underlying technology:

For more information, please contact:

Mats Wallner, CEO

Phone: +46 (0) 70 951 95 06

E-mail: mats.wallner@polymerfactory.com

Polymer Factory (publ) is a leading global provider and producer of dendritic materials, with customers ranging from BigPharma, MedTech and BioTech companies, to research-intensive institutes and academic research groups. The Company's dendritic materials act as smart delivery systems that enhance the effects of the substances they carry, e.g. a vaccine or an anticancer drug. They have also shown great promise in diagnostics, tissue engineering and in the development of vaccines. In addition, Polymer Factory has used the Company's vast knowledge and expertise to develop a patented calibration technology, named SpheriCal®, designed for Mass Spectrometry instruments. The Company's dendritic nanotechnologies have the potential to accelerate innovation in technologically demanding sectors, such as MedTech and BioTech. Learn more at www.polymerfactory.com.