



## **BellaSeno and Fraunhofer Institute for Production Technology IPT Receive EUR 1.4 Million BMBF Grant**

- *Funding dedicated to the development of commercial-scale, fully automated additive manufacturing of resorbable medical implants*
- *First-ever industrial-scale, additive manufacturing platform of medical implants*

**Leipzig and Aachen, Germany, March 10, 2021** – BellaSeno GmbH, an ISO 13485-certified medtech company developing absorbable scaffolds using additive manufacturing technologies, and the Fraunhofer Institute for Production Technology IPT today announced that both parties have received a grant totaling EUR 1.4 million from Germany’s Federal Ministry of Education and Research (BMBF) under the funding program KMU-innovativ.

BellaSeno and Fraunhofer IPT aim to develop a high-performance industrial scale-up process for its GMP-compliant manufacturing facilities, which include leading-edge features such as high-throughput additive manufacturing based on the so-called no-touch approach to significantly improve the safety and sterility of medical implants.

Specifically, the collaboration partners plan to establish a fully automated, commercial-scale manufacturing platform supported by robotic systems and intelligent software which control the polymer-feeding, the implant handling, QC steps, labelling and recording traceability data. This will enable a constant 24-hour manufacturing flow covering all necessary process steps, while minimizing mistakes and optimizing the outcome of the production. With this approach, BellaSeno intends to significantly shorten development and manufacturing times and at the same time enhance the quality of its medical implants.

“So far, the key steps in the additive manufacturing process had to be performed manually,” said Dr. Navid Khani, Head of R&D at BellaSeno. “The BMBF grant and the collaboration with Fraunhofer IPT will allow us to pursue a 3- to 4-fold increase of productivity for commercial-scale manufacturing driven by robotics and automation. As soon as we have fully established the new infrastructure, we will be able to create a cloud-based factory which can enable manufacturing at different locations and adapting the design by the push of the button. Such a fully scalable, automated, cloud-based additive manufacturing infrastructure for medical implants has never been established before.”

“The joint project combines BellaSeno’s extensive knowledge in 3D-printing high quality absorbable scaffolds and their ingenious Senella implant with Fraunhofer IPT’s vast



experience in the development of fully automated cleanroom production facilities,” said Ferdinand Biermann, Head of the business unit “Life sciences engineering” at the Fraunhofer IPT. “A freely moving, autonomous robot, fully networked processing units and an adaptive, service-oriented software structure allow repeatable and high quality manufacturing by maintaining full flexibility in the production process. Not only will the production site make it possible to bring products to market that immensely increase the patient’s quality of care, but it will also set a new benchmark for the automated production of medical implants.”

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## About BellaSeno

BellaSeno GmbH was founded in 2015 and is located on the BioCity campus in Leipzig, Germany. The Company is developing novel absorbable soft tissue reconstruction implants made by additive manufacturing (3D-printing) under ISO 13485 certification. The Company has received substantial financial support from private investors as well as from the Saxony Development Bank (SAB), the European Fund for Regional Development (EFRE) and Germany’s Federal Ministry of Education and Research (BMBF). The Company is thereby co-funded from tax resources based on the budget adopted by the members of Saxon State Parliament.



Europäische Union

Europa fördert Sachsen.



Europäischer Sozialfonds



Diese Maßnahme wird mitfinanziert durch Steuermittel auf Grundlage des von den Abgeordneten des Sächsischen Landtags beschlossenen Haushaltes.

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## About Senella®

Senella® is a patented porous scaffold made of absorbable Polycaprolactone (PCL) containing highly-specialized topological and design features, which act as recipients for injected fat tissue isolated with a standard liposuction procedure. The implant is designed to get absorbed over a span of two years and to provide a stable platform for the injected fat tissue to mature, adapt to its environment and stabilize. The clinical end result is a natural soft tissue – without remnants of foreign material. Senella® therefore has the



potential to alleviate the complications found in current breast reconstruction and augmentation approaches.

### **About the Fraunhofer Institute for Production Technology IPT**

The Fraunhofer IPT develops systems solutions for production. The institute focuses on process technology, production machines, production quality and metrology as well as technology management. Fraunhofer IPT's clients and cooperation partners represent all fields of industry: from aerospace technology to the automotive industry and its suppliers as well as tool and die making companies and the precision mechanics, optics and machine tool industries in particular. Fraunhofer IPT combines knowledge and experience in all fields of production technology, e.g. process technology, production machinery, production quality and metrology as well as technology management, and offers project partners and clients individual special solutions and immediately realizable results for the manufacture of sophisticated components and high-tech products.

### **Contact BellaSeno**

BellaSeno GmbH  
Dr. Mohit Chhaya  
mohit.chhaya@bellaseno.com  
Tel.: +49 176 2283 9583

### **Media Inquiries**

akampion  
Dr. Ludger Wess / Ines-Regina Buth  
Managing Partners  
info@akampion.com  
Tel. +49 40 88 16 59 64  
Tel. +49 30 23 63 27 68

### **Contact Fraunhofer IPT**

Fraunhofer Institute for Production Technology IPT  
Steinbachstrasse 17  
52074 Aachen, Germany  
[www.ipt.fraunhofer.de](http://www.ipt.fraunhofer.de)

Ferdinand Biermann M.Sc.  
Head of the business unit "Life sciences engineering"  
[Ferdinand.biermann@ipt.fraunhofer.de](mailto:Ferdinand.biermann@ipt.fraunhofer.de)  
Tel +49 241 8904-303