



## **BellaSeno Initiates Scaffold Development Program for Tendon and Ligament Regeneration**

- *Collaboration with Fraunhofer IZI further expanded*
- *Funding provided by Sächsische Aufbaubank*

**Leipzig, Germany, July 1, 2021** – BellaSeno GmbH, an ISO 13485-certified medtech company developing absorbable scaffolds using additive manufacturing technologies, today announced that the Company has initiated a program on tendon and ligament reconstruction funded by the State of Saxony’s Sächsische Aufbaubank (SAB). The program will be run in close collaboration with Fraunhofer Institute for Cell Therapy and Immunology (Fraunhofer IZI), which will be responsible for the development of an animal model for subsequent in vivo performance testing of the scaffolds.

The goal of the program is to design and evaluate next-generation scaffolds for tendon and ligament reconstruction, incl. assessment of their biomechanical properties and manufacturing processes. The novel scaffolds will be based on BellaSeno’s proprietary Senella® platform, which has already generated promising results in first-in-human trials in breast reconstruction. Senella® scaffolds are made of a biocompatible and absorbable polymer that is FDA-approved and CE-marked for a variety of clinical applications. The scaffolds are designed to slowly get absorbed by the body while the patient's own tissue forms synchronously, resulting in natural tissue with no foreign body remnants.

Human tendons and ligaments are made of complex structures that include blood vessels, nerves and lymphatic vessels. They link bones and muscles and need to have robust biomechanical properties as they are the key connective links of body movements. At present, torn tendons and ligaments are treated with conservative management, surgical intervention, or replacement with autografts.

The global orthopedic soft tissue implant market is projected to reach US \$9.4 billion by 2024.<sup>1</sup>

"We believe that our Senella technology is very well suited to address the growing need of tendon and ligament reconstruction," said Dr. Navid Khani, Head of R&D at BellaSeno. "Due to its porous and flexible structures, Senella scaffolds are ideal for seamlessly fitting into the bone and muscle environment. As a first step, we will develop novel porous architectures which can bear the mechanical forces typical for tendon and ligaments."

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<sup>1</sup> [Source: Grandview Research: https://www.grandviewresearch.com/press-release/global-orthopedic-soft-tissue-repair-market](https://www.grandviewresearch.com/press-release/global-orthopedic-soft-tissue-repair-market)



"We are delighted about the SAB funding and the further expansion of our good collaboration with Fraunhofer IZI. Most importantly, this program allows us to enter new high growth markets with our Senella resorbable implant technology," said Mohit Chhaya, PhD, CEO of BellaSeno. "Our vision is to step-by-step create a family of scaffolds which can target tendons/ligaments in different regions of the body, e.g., shoulder, hands, or Achilles tendon. As our Senella scaffolds gradually get absorbed by the body, we hope that we can transform the quality of life of patients and athletes in need for tendon or ligament replacements, especially at a young age."

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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.



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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.

**Contact BellaSeno**

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