

Healthcare industry BW

Amedrix GmbH - Successful cell-free products

The cell biologist Dr. Thomas Graeve has founded Amedrix GmbH in Esslingen. In future, the company will develop and produce innovative, cell-free medical products based on animal collagen for the purpose of wound regeneration and the reconstruction of degenerated soft tissue, for example.

Collagen is one of the most important elements in the human body. As the main component in connective tissue, this protein is found in bones, cartilage, teeth, ligaments, tendons and the skin. Depending on the characteristics of the tissue in question, it can have either a protective, connective or supportive function. As a result, collagen plays a key role in the regeneration of defective connective tissue structures. The cell biologist Dr. Thomas Graeve recognised this potential and has been working for several years on the development of collagen-based medical products and drugs – most recently as Head of Research and Development at Arthro Kinetics AG in Esslingen, where he was also the sole member of the executive board. Dr. Graeve founded his own company – Amedrix GmbH – in January 2009, saying: "The field of cell-free medical products offers a great deal of potential, and the site in Esslingen provides the ideal conditions for harnessing it."



Dr. Thomas Graeve
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Dr. Graeve intends to focus initially on skin regeneration: "For the treatment of deep wounds, we at Amedrix have the expertise and technology required to produce membranes, fleeces and sponges or sponges made of collagen as substitutes for damaged tissue as well as carrier materials for cells in the top layer of skin." In the very near future, Dr. Graeve hopes to provide solutions for the tooth and jaw area, focusing primarily on a gel made of compressed collagen that can be used to treat degenerated jaw structures following tooth loss. However, Dr. Graeve can also envisage developing medical products for reconstructive surgery, "particularly solutions for the treatment of skin damage, as caused by tumours, for example."

Dr. Graeve will be able to put his ideas into practice in a familiar environment because he has taken over the premises - including the equipment in the laboratories and offices - of his former employer in the Life Science Center Esslingen. His new procedure of isolating nucleic acid-free, ultrapure and native collagen from rat tails will play a key role, but the skin, tendons and ligaments of pigs and calves will continue to be used as a source of protein. "The new isolation procedure improves the product characteristics of the collagen considerably," explains Dr. Graeve. As the newly developed collagen transplants are completely cell-free, they can be implanted directly into the patients whose own cells populate the transplant immediately. "Tests on animals have proven that our acellular products perform just as well as the cell-populated products already on the market today." However, acellular products are much easier to handle in everyday clinical use.

Amedrix benefits enormously from the fact that its products are classified as medical products which can be approved comparatively quickly and cost-effectively in line with the German law on medical products (MPG). Cell-populated products on the other hand are classified as drugs, which means they are subject to stricter approval criteria. Patients and sponsors also benefit from simplified processes, as cell-sampling operations are no longer required for articular cartilage regeneration.

Dr. Thomas Graeve is confident that - with support from cooperation partners - the company will be able to launch its first products on the market as early as next year. He is also relaxed about what the future holds for the other areas of operation: "The product range, schedule and budget are in place for the next three years. We'll see what will happen after that."

Dr. Klaus Eichenberg, Managing Director of BioRegio STERN Management GmbH, is delighted that this innovative company has chosen to concentrate on tissue regeneration at its site in Esslingen. "The new business model of Amedrix GmbH fits perfectly into our 'regenerative biology' competence network and provides a further promising link between biotechnology and medical technology."

Amedrix GmbH
Life Science Center Esslingen
Schelztorstraße 54-56
73728 Esslingen
Tel. +49(0)711-30511072
Fax +49(0)711-30511080
E-Mail: [info\[at\]amedrix.de](mailto:info[at]amedrix.de)