



Materials of
tomorrow made
available today

Presskit

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- Gelatex's mission and vision
- Founding story and founders
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Gelatex in a sentence

“Gelatex Technologies is a Techstars-backed materials technology company from Estonia and inventor of the fastest and most cost-effective technology for nanofiber production. “

Gelatex in a paragraph

“Gelatex Technologies is a Techstars-backed materials company from Estonia that is revolutionizing nanofiber production. Gelatex has patented a novel high-capacity solution-spinning method and device for nanofiber manufacturing to innovate cultured meat, tissue engineering, and many other industries. The material comes in rolls, is easily scalable, and is up to 90% cheaper than current nanofibrous materials.”

Boilerplate

Gelatex Technologies is a materials technology company from Estonia specialized in developing and manufacturing nanofibrous materials. The company has patented a high-throughput method and device to produce nanofibers. Their scalable cost-effective technology has opened the possibility for the commercial use of nanofibers in the fields of cell-cultured meat, tissue engineering, wound care, filtration, energy storage, and more. Gelatex was founded in 2016 and makes the materials of tomorrow available today.

We are the catalyst for many sustainability and health related industries.

Food

Cultured meat
Plant-based meat

Medical

Tissue engineering
Wound care
Regenerative
medicine
Drug delivery

Filtration

Face masks
Air filtration
Water filtration
Compostable
filtration media

Energy

Ultracapacitors
Batteries
Electrode materials
Fuel cells

Other

Cosmetics
Textile
Oil-spill removal
Liquid absorption

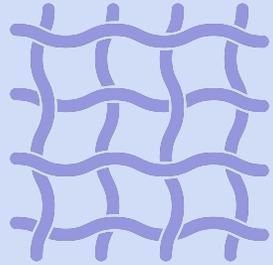
- By [2040](#), cultured meat is estimated to make up 35% of global meat production. For this prediction to come true, we need scalable scaffolds to give texture to the meat. Without a scaffold, the meat is just mush. Nanofibers are proven to provide high performance, however, production technologies are slow and expensive.
- Gelatex has invented scalable scaffolding technology: the biggest available electrospinning (currently used technology) units in the market can produce 360 g/h, our semi-industrial unit can already produce up to 5 kg/h.
- Gelatex's technology has a small footprint. A machine that takes only a couple of square meters of floor space can produce 5 kg of nanofibers per hour. That is enough nanofibers for the production of 1300 kg of meat in only a single 8 hr workday.

Key facts and figures

- Gelatex's 3D scaffold for cultured meat is produced with our proprietary nanofiber production technology from high-quality edible plant-based raw materials.
- Due to much higher production throughput and 28% smaller electricity consumption, Gelatex can reduce the cost of nanofibers by up to 90%.
- The properties of Gelatex's nanofibrous materials are customizable. Gelatex can adjust the fiber diameter, porosity, density, thickness, etc.
- Gelatex Technologies develops its own products (currently scaffolds for cultured meat and tissue engineering) and provides the development of nanofibrous materials as a service.
- Gelatex has set up its production in Tallinn, Estonia, where both the founders and patented technology are from.

Key facts and figures

Benefits of our nanofiber production technology



Unique 3D structure

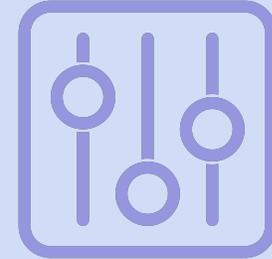
Less dense than other alternatives.

Mimics the natural ECM promoting cell-to-cell interactions and inwards cell migration



Compatible with many polymers and solvents

No use of high voltage enables bigger variety of polymers and solvents, including bio-based ones.



Optimizable

Upon request, it can be optimized by varying:

1. •Fibre diameter
2. •Fibre porosity
3. •Fibre density
4. •Fibre thickness
5. •Etc.

Benefits of our nanofiber production technology



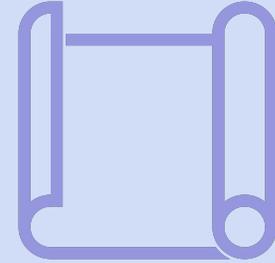
Scalable high-speed production

The biggest available electrospinning unit can produce 360 g/h vs our semi-industrial unit can produce already up to 5 kg/h.



Cost-effective

Due to much higher production throughput and 28% smaller electricity consumption we can reduce the costs of nanofibers in large scale **up to 90%**.



Material comes in rolls

Material is produced in continuous line on rolls and material width is customizable.

Material can be cut to required sizes.

Mission

Gelatex is on a mission to be a growth catalyst of sustainability and health-related industries by developing and producing nanofibrous materials.

Values

Our values are responsibility, collaboration, curiosity and starting today.

- We believe that small things can have a big impact.
- Each and everyone of us has an impact on the environment and people around us.
- Every member of our team has an impact on the success of the company and our customers.
- And even something as tiny as a nanofiber can impact billions of people.

Founding story

Our founders met at the University of Tartu, where Mari-Ann was doing her MBA and Märt-Erik was pursuing an MSc in Materials Science, specializing in gelatin nanofibers. Together they came up with the idea of using gelatin nanofibers for the production of leather-like textile. Thus, Gelatex started developing its high-throughput nanofiber technology back in 2017 because of the company's own needs.

In 2020, after having participated in Techstars accelerator and while helping to reduce filtration material scarcity during the COVID-19 pandemic, we realized that our proprietary nanofiber technology could be used in various fields. We decided to pivot. Now we focus on developing and producing nanofibrous materials for various industries such as cultured meat, tissue engineering, wound care, filtration, or energy storage. Our main focus goes to enabling the cost reduction and scalability of cultured meat with our high-performance plant-based 3D scaffolds.

Our materials are produced with a patented solution-spinning technology, which is the fastest, safest and cheapest technology for nanofiber production.



Märt-Erik Martens

Märt-Erik Martens is the co-founder and CEO of Gelatex Technologies. Märt-Erik has MSc in materials science and has devoted his whole scientific career to nanofibers and bio-based materials. Besides that, he has ample experience in mechanical engineering and product development having engineered robots, satellites, and automotive accessories. Märt-Erik is the main inventor of Gelatex's proprietary nanofiber production technology.

His passion in life is finding new and innovative ways to make the materials and technology around us work for the greater good, to be one step closer to achieving sustainability and advancing people's health.

Mari-Ann Meigo Fonseca

Mari-Ann Meigo Fonseca is the co-founder and COO of Gelatex. She has a BAsC degree in Technical Design and Technology of Apparel and an MBA degree in Entrepreneurship and Technology Management. Mari-Ann has experience in textile industry product development, manufacturing management, and optimization and has also worked as a business consultant and a project manager of various international projects.

Mari-Ann is passionate about supporting practices that could make life on Earth more sustainable and healthy. She believes that everything we do should have a purpose, and thus, constantly asks why do we do what we do and tries to improve the efficiency in processes and communication as much as possible.



Company history

From gelatin-based leather-like textile to novel nanofiber production method.

- 2016** - Gelatex won Climate Launchpad with the idea of producing leather-like textile from the nanofibers of gelatin. **Gelatex Technologies OÜ was registered.**
- 2017** - **Novel production method was developed** by Gelatex co-founder Märt-Erik Martens to increase the production capacity.
- 2018** - Founders developed the business, production technology, and leather-like material part-time with support of non-equity grants
- 2019** - Started **Techstars accelerator** in Indianapolis, USA + pre-seed investment
- 2019** - Our nanofibrous material was successfully tested as a growth substrate for liver cells cultivation
- 2020** - Using our nanofiber production machinery with other polymers to make filtration material for masks to help with the COVID-19 pandemic
- 2020** - **Pivot** to focus on developing and producing nanofibrous materials for sustainability and health-related industries, **filing the patent** for the method and device for producing polymer fibers, first version of the scaffold for **cell-cultured meat** was developed
- 2021** - **€1.2M seed round closed** from investors in Estonia, Sweden, Finland, Germany, Brazil, and the US
- 2022** - Moved to **new bigger facilities** in Tallinn, Estonia, team enlargement with members also from Greece and Mexico, further developing of our scaffold

FAQ

What is a nanofiber and why are they so special?

Nanofiber is a fiber with a diameter of only a few nanometers - that is over 100 times smaller than a human hair. Nanofibers have unique properties such as high porosity or high surface area to mass ratio, which enables special performance in various applications such as cell culture, filtration, absorption, energy storage, etc.

How is it possible that Gelatex brings the cost of nanofibers down by 90%?

The biggest available electrospinning units can produce 360 g/h, while Gelatex can produce 5 kg/h. Due to much higher production throughput, smaller initial investments, and 28% smaller electricity consumption, Gelatex can reduce the costs of nanofibers by up to 90%, which is a huge breakthrough in the industry.

Who has invented the patented technology?

Our patented technology was invented by our founder Märt-Erik Martens in collaboration with our team of engineers and materials scientists in 2017.

How is cultured meat made? What role do Gelatex's nanofibrous scaffolds play in the process?

Cultured meat is meat that is made from animal cells without harming any animals. The first step is always cell multiplication. The next step is structuring the cells with the help of a scaffold to turn the mass of cells into structured muscle tissue. Without the scaffold, we would have an unstructured mass of cells resembling more of a paté. Gelatex's scaffolds help the cells to form a tissue and make it feel and taste like real meat.

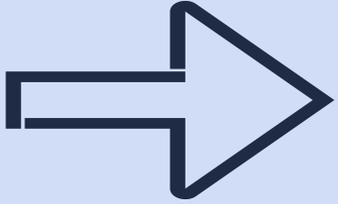
Media coverage

Links from top stories:

- <https://www.eu-startups.com/2021/11/estonian-gelatex-picks-up-e1-2-million-to-make-cell-cultured-meat-cheaper-than-ever/>
- <https://sifted.eu/articles/cheap-cultured-meat-gelatex/>
- <https://www.foodingredientsfirst.com/news/gelatexs-ceo-prospects-industrys-cell-based-gold-rush-closing-%E2%82%AC12-million-funding-to-scales-scaffolding-tech.html>
- https://www.foodnavigator.com/Article/2021/12/01/Gelatex-Cost-efficient-scaffolding-tech-developed-for-cultivated-meat-at-scale?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright

- Climate Launchpad, winner 2016
- Prototron, winner 2016
- European Business Awards for the Environment, representing Estonia 2018
- Green Alley Award, winner 2019
- Global Hack, winners of Health & Wellness track 2020
- Techchill Fifty Founders Battle, winners for Httpool and BaltBan award 2021
- Women Building the Future, honoree for the 2021
- Masschallenge Switzerland, Silver Winner 2021

Awards



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Want to know more?
Let's talk.

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