

Israel startup gets EU backing to help bring lab-grown meat cuts to table

Profuse says the €2.4m grant will be used to get regulatory approval for its small molecule-based cocktail that catalyzes muscle tissue growth for cultivated meat production

By **SHARON WROBEL**  [FOLLOW](#)

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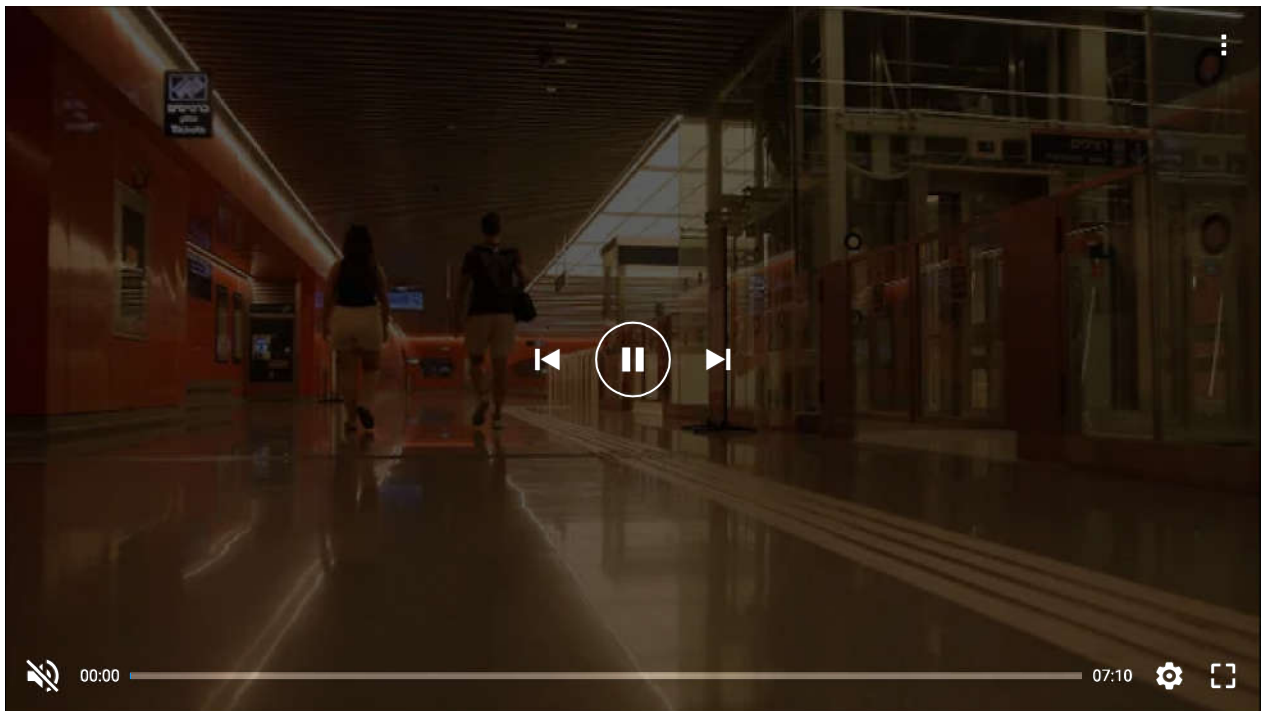


Scientists at Israeli biotech Profuse Technology develop a cocktail of small molecules that acts as a catalyst for muscle tissue growth for the production of lab-grown meat. (Courtesy)

There was much buzz around the world's first regulatory approval for the sale of cultivated beef, which was granted in Israel early last year. Cultivated meat, which is made from animal cells grown in a lab, has been gaining traction, but the high costs and lengthy production process remain key obstacles to bringing a whole cut of meat to diners.

An Israeli foodtech startup recently received funding from the European Union to seek regulatory approval for technology that it says can help cultivated meat startups produce more meat in a shorter time period, thereby cutting the cost of production by some 50 percent.

Profuse Technology was awarded a 2.4 million euro grant from the EU's competitive Horizon EIC Transition program to refine its technology, which it says speeds up the time it takes to grow muscle tissue for cultivated meat by 80% while simultaneously improving its nutritional quality, texture, and taste.



“Producing cultivated meat is a big challenge and the industry is in its early days,” Profuse CEO Guy Nevo Michrowski told The Times of Israel. “We don’t solve all the problems, but we provide a piece of the solution needed to eventually be able to grow and produce chunks of steak on a large scale.”

The technology behind Profuse’s supplements is based on six years of research led by co-founder and US immigrant Dr. Tamar Eigler-Hirsh conducted at the Weizmann Institute of Science, which resulted in an understanding of how the body regenerates or repairs muscle. Building on the research, the Kiryat Shmona-based startup founded in 2021 developed technology not to repair muscle, but to help grow cultivated meat in the lab in a faster and more competitive way.

Cultivated meat producers leverage the ability of animals to grow tissue muscle constantly and isolate the stem cells responsible for the process. They then reproduce the optimal conditions for these cells to grow into tissue in bioreactors that act as fermenters, similar to those in a brewery. The tissue is nurtured and shaped into 3-D structures such as a steak or a chicken nugget to replicate meat products that taste and look like the real thing but are grown outside the animal.



Profuse Technology CEO Guy Nevo Michrowski. (Courtesy)

As cultivated meat startups work on bringing their lab-grown offerings to the market, they have been focusing on growing cell biomass with limited proportion of muscle tissue, Michrowski said.

“We are providing cultivated meat producers with a small molecule-based cocktail mix, a powder material, that is added at the right point biologically to accelerate the formation of muscle from stem cells,” said Michrowski. “In the

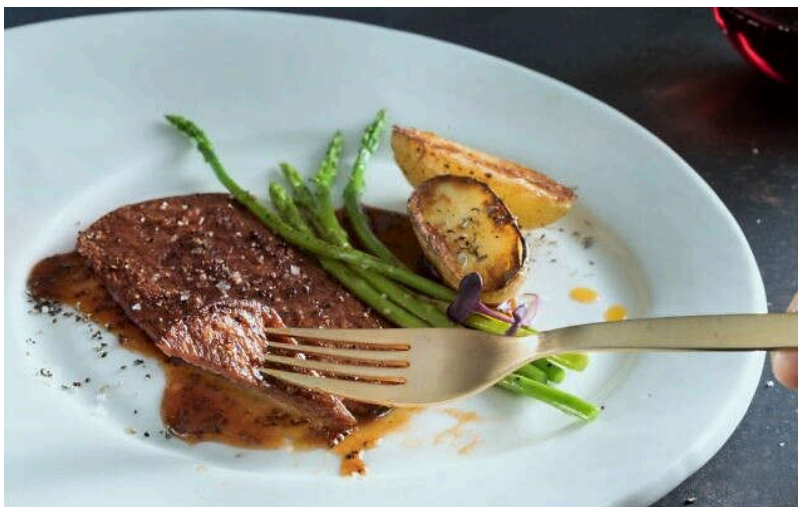
production process, where stem cells become muscle, that's the last 10 days of the process. We help reduce that to 48 hours only."

Michrowski said that the supplement mixtures also enhance the nutritional value of cultivated meat, resulting in a more protein-rich alternative.

"If you compare the amount of protein that you have in the muscle produced with our supplements, versus without our supplements, you get five times more protein content," he said.

Michrowski noted that the startup has been collaborating with most of the leading cultivated meat startups for beef, chicken, or fish, and the EU grant will be instrumental in the final push to gain regulatory approval for the use of its supplements in high-volume production of cultivated meat, as the market matures in the coming years.

To date, Profuse has raised about \$7 million in funds, which includes about \$4 million from equity and \$3 million from grants. The EU grant adds to the government-backed funding the startup received through the Fresh Start Foodtech incubator backed by the Israel Innovation Authority. In 2022, Profuse secured \$3 million in seed funding led by New York-based foodtech fund Green Circle. Other investors include Israeli venture firm OurCrowd, Israeli food manufacturer Tnuva, and beverage maker Tempo.



Aleph Farms' cultivated thin-cut steak. (Courtesy)

Profuse is seeking to tap into the global cultivated meat market that is estimated to reach \$25 billion by 2030, [according](#) to international consulting firm McKinsey & Company.

Israel has, in recent years, grown into an important tech hub for cultured meat, a key subsector in the alternative protein market that comprises plant-based substitutes for meat, dairy, and egg; cultured dairy, meat and seafood; insect proteins; and fermentation products and processes. It is ranked second after the US in attracting alternative protein investments in recent years, according to the Good Food Institute (GFI) Israel, a nonprofit organization that seeks to promote research and innovation in food tech. In the Israeli ecosystem, there are more than 80 alternative protein startups, of which 15 were founded in 2023.

Israel ranks second to the US in terms of number of food tech companies in the cultured meat sector with 19 startups, according to GFI data. Most notable are Future Meat, a biotechnology firm that creates chicken, lamb, and beef products from animal cells, and Aleph Farms, the food tech startup that was granted the world's first regulatory approval by Israeli authorities for the sale of cultured meat based on beef.

"Alternative proteins are still in their early days, and reaching full potential requires significant investments in R&D and scaling – much as it did in the earliest days of electric vehicles and renewable energy innovation," said Aviv Oren, business engagement and innovation director at GFI Israel. "As the sector grows and matures, we expect to see continued government support for mass commercialization of alternative proteins products and B2B inputs, like those developed by Profuse."