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Aquafeeds

Aqua-Spark invests in Finnish biotech startup to scale up fungal protein production

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By Responsible Seafood Advocate

eniferBio to seek Novel Food approval for fungal protein from EU and other markets

Finnish biotech startup eniferBio has raised €11 million (USD \$12 million) in series A funding, which was led by the Netherlands-based global aquaculture investment fund Aqua-Spark along with Tesi (Finnish Industry Investment) and Valio, Voima Ventures and Nordic Foodtech VC. With this new funding, the company will begin to scale up the production of its PEKILO® mycoprotein powder and seek Novel Food approval from the European Union and other markets.

PEKILO® is a fungus that, through a special fermentation process, can produce a dried powder rich in protein and has a vast variety of usage cases, such as pet food and aquafeed. It contains very high levels of protein, healthy carbs, fats and minerals.

The process was originally developed by forestry industry scientists in the 1960s in Finland to produce cost-efficient animal feed protein from side streams of the pulp and paper industry. Its carbon footprint is over 50 times smaller than beef's and doesn't require large land masses or water usage like growing soybeans, the company stated.



Funding enables eniferBio to scale up production of PEKILLO® fungal protein powder and seek approval from the EU and other markets. Photo courtesy of eniferBio.

“New, plant-based sources of protein are gaining interest amongst consumers and demand is growing worldwide,” said Tuomas Salusjärvi, executive VP at Valio. “In addition to traditional food production, we also need new ways of producing food that promote the circular economy. eniferBio is a cutting-edge research company that has developed new ways of utilizing the food industry’s side streams in the production of protein.”

A promotional banner for the Responsible Seafood Summit. On the left is the Responsible Seafood Summit logo, which includes a stylized fish icon. To the right of the logo, the text reads "Responsible Seafood SUMMIT". Further right, it says "SAINT JOHN NEW BRUNSWICK CANADA OCTOBER 2-5 2023". A prominent red button with the word "REGISTER" in white capital letters is positioned in the center-right. On the far right is the Global Seafood Alliance logo, which features a globe icon and the text "Global Seafood ALLIANCE". The background of the banner is dark blue with faint white lines and several red airplane icons.

(<https://events.globalseafood.org/responsible-seafood-summit>).

Using the same, yet enhanced, proprietary technology and fermentation process, eniferBio can upcycle byproducts from diverse agri, food and forest industry processes into its PEKILLO® mycoprotein, which consists of up to 70 percent protein, 20 to 30 percent of high-quality fiber, about 10 percent of fats and minerals and has a high concentration of vitamin B. The production process is efficient, uses very little water, doesn't require large land areas and does not cause eutrophication, like traditional agriculture.

“We are very excited to work with eniferBio to scale PEKILLO® as a positive ingredient in the sustainable aquaculture feed of the future,” said Lissy Smit, CEO of Aqua-Spark. “Greening aquaculture feed by eliminating our reliance on wild ingredients and reducing our footprint is one of our biggest priorities in getting to a more sustainable aquaculture industry.”

According to Statista (<https://www.statista.com/statistics/1025784/human-consumption-of-protein-by-type-worldwide/>), humans consumed 160 million metric tons (MT) of farmed and wild fish in 2021. Aquaculture production has overtaken the wild fish catch and is the most rapidly expanding food production sector, requiring huge amounts of new high-quality protein feeds. Soy has become a common feed ingredient, with Brazilian soybean **production increasing and estimated to reach 152 million tons in 2021/2022.** (<https://www.statista.com/statistics/1006415/soybean-oilseed-consumption-brazil/>). By comparison, PEKILLO® mycoprotein has a lower carbon footprint than soybean, offering a sustainable alternative for the European market that is currently heavily reliant on imported soybeans.

“eniferBio’s alternative feed ingredient serves as a replacement for soy in aquafeed. It significantly reduces land and water usage,” said Smit. “Furthermore, early trials suggest that it has the potential to improve growth performance and immune response in fish.”

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