



(<https://www.globalseafood.org>).



 Aquafeeds

NovoNutrients secures funding to scale up microbial meal production

5 August 2021

By Responsible Seafood Advocate

California-based alternative ingredient manufacturer teams up with Happiness Capital of Hong Kong



The NovoNutrients Protein is a microbial meal using industrial waste streams as an energy source. Courtesy photo.

NovoNutrients, a U.S.-based producer of microbial meals for aquafeeds using industrial waste streams, has recently secured a total of (U.S.) \$9 million in equity to scale production.

Last week, the company announced a \$4.7 million raise from Happiness Capital of Hong Kong, a global venture capital firm committed to “make the world a happier place.” Happiness Capital CEO Eric Ng said he was impressed with NovoNutrients’ growth and its future potential.

“NovoNutrients’ uniqueness is the combination of its current focus on alternative protein, its use of carbon capture and inexpensive hydrogen, and its creation of a robust platform for making both natural and synthetic biology products,” he said. “Beyond nutrition, we expect its platform to make other biobased chemicals and materials. Its tech is exceedingly cost-effective and promising for addressing increasing global demand and greenhouse gas emissions.”

A new nutrient for aquaculture, from microbes that consume carbon waste

Biotechnology firm NovoNutrients aims to produce a line of nutraceutical aquafeed additives as well as a bulk feed ingredient that can supplement fishmeal. Its process includes feeding carbon dioxide from industrial gas to a "microbial consortium" starring hydrogen-oxidizing bacteria.



Happiness Capital's portfolio includes several food/agtech companies like the cellular protein maker Beyond Meat as well as the France-based insect producer **Ynsect** (https://www.aquaculturealliance.org/advocate/france-has-become-innovation-nation-for-insect-production/?_hstc=236403678.e2cc605d8569fe9003a9551065831f93.1631826627530.1631826627530.1631826627530.1&_hssc=236403678.1.1631826627530&_hsf)

NovoNutrients had previously raised \$4.3 million in venture backing and corporate funding commitments. The funds will be used to complete its industrial pilot program, which captures carbon dioxide emissions at an oil and gas or cement plant. It will then seek series A financing later this year.

Last fall, NovoNutrients announced **partnerships** (<https://www.aquaculturealliance.org/advocate/novonutrients-partners-up-on-its-pathway-to-commercialization/?>)



An artists' rendering of the NovoNutrients pilot system. Courtesy image.

[_hstc=236403678.e2cc605d8569fe9003a9551065831f93.1631826627530.1631826627530.1631826627530.1&_hssc=236403678.1.1631826627530&_hsf](https://www.aquaculturealliance.org/advocate/novonutrients-secures-funding-to-scale-up-microbial-meal-production/?_hstc=236403678.e2cc605d8569fe9003a9551065831f93.1631826627530.1631826627530.1631826627530.1&_hssc=236403678.1.1631826627530&_hsf) with multinational energy corporation Chevron and with Skretting, one of the world's largest animal feed producers.

The manufacturing process for NovoNutrients' microbial meal – called NovoMeal – is similar to what is used to make tofu, beer, cheese and yogurt. Using a natural fermentation process to capture and convert carbon dioxide and other forms of waste carbon, the microbes, which get energy from a hydrogen source, rapidly consume the carbon-hydrogen mixture in a bioreactor to generate specific products: bioplastics, chemicals or a biomass that serves as a nutritious animal feed ingredient.

NovoNutrients' CEO David Tze said the company's technology, which builds on the work of fermentation pioneers in the biofuels sector, is making considerable progress: "We are rapidly accelerating to industrial scale. Our current pilot project is centered on a 1,000-liter bioreactor. Shortly thereafter, we will stand-up a 20,000-liter industrial demo."

Follow the *Advocate* on Twitter [@GAA_Advocate](https://twitter.com/GAA_Advocate) (https://twitter.com/GAA_Advocate)

Author



RESPONSIBLE SEAFOOD ADVOCATE

editor@aquaculturealliance.org (mailto:editor@aquaculturealliance.org).

Copyright © 2021 Global Seafood Alliance

All rights reserved.