

Israeli startup unveils 3D-printed, plant-based salmon fillet

Six-month-old food tech company, Plantish, says it made a fully structured, boneless cut with the same nutritional value as the fish, minus the mercury and toxins

By [RICKY BEN-DAVID](#) 17 January 2022



Israeli startup Plantish, based in Rehovot, says it made the first 3D-printed, whole-cut, plant-based salmon fillet in January 2022 with plans for a commercial launch in 2024. (Plantish)

A new Israeli startup says it has produced a plant-based whole-cut salmon fillet that is the first to mimic the appearance, taste, and texture of the actual fish.

The six-month-old company, Plantish, unveiled the prototype on Thursday, announcing that it was developing a patent-pending additive manufacturing technology — the industrial name for 3D printing — to make plant-based fish alternatives at a low cost and at scale.

Plantish, based in Rehovot, says it made a fully vegan, structured, boneless salmon fillet with the same nutritional value as the actual fish, which is high in protein, omega 3 and omega 6 fatty acids, and B vitamins — but without the mercury, antibiotics, hormones, microplastics, and toxins often found in ocean or aquaculture species.

The company said it opted for the complexities of whole-cut production rather than minced, because of customer demand. “Approximately 80% of fish is consumed whole-cut, in the form of whole fish or fillets,” Plantish said.

“Using the right plant proteins to achieve the fibrous strands meant to replicate the complex texture of animal muscle is the key to succeeding in capturing the experience of eating salmon, and doing so at scale will make it a suitable substitute for food service, restaurants, and retail,” it said.

The Plantish product can be cooked in the same ways that conventional salmon is prepared, the company said in its announcement Thursday.

Previously in stealth mode, Plantish was founded in mid-2021 by Ofek Ron, the former general manager of the Israeli organization Vegan Friendly, who serves as CEO; Dr. Hila Elimelech, a chemistry PhD and expert in additive manufacturing technology who serves as head of R&D; Dr. Ron Sicsic, chief scientific officer; Dr. Ariel Szklanny, a bioengineering PhD who serves as chief technology officer; and

Eyal Briller, a former director of product at US plant-based meat company Impossible Foods.

Ron said in a company statement that the Plantish mission was deeply meaningful to the founding team. “We exist to save the oceans and eliminate

the need to consume marine animals by providing more sustainable, more nutritious, and more delicious fish options,” he said.



Israeli startup Plantish unveiled a 3D-printed, whole-cut, plant-based salmon fillet in January 2022. (Plantish)

“Our vision is to be the world’s leading seafood brand all without hurting a single fish,” he added.

Plantish raised a pre-seed round of \$2 million from TechAviv Founder Partners, a fund focused on Israeli founders that has backed companies such as drone logistics firm Flytrex and creator firm Nas Academy.

The startup said its plant-based salmon product will be launching in select pop-up locations by the end of 2022 with an official launch expected in 2024.

Plantish is one of some 90 companies across the world operating in the plant-based seafood industry, with another dozen or so developing cultivated seafood or fish made from animal cells, according to a Good Food Institute [report](#) in June 2021.

Market research firm IMARC Group reported that companies developing alternative fish and seafood products [grew](#) by 30 percent between 2017 and 2020, with further growth expected in the coming years as concerns over [depleted supplies and overfishing](#) increase, and more firms move from development to commercial launch.

Some are well on their way. Spain's Mimic Seafood rolled out a [tomato-based tuna product](#) last year, while US startup Ocean Hugger Foods launched a plant-based alternative to raw tuna and raw eel (for sushi) in 2019 with plans to focus on the US and Europe this year in partnership with Bangkok-based Nove Foods.

A number of companies are making plant-based crab cakes, shrimp, fish sticks, smoked salmon, and cod fillets.



Swiss food giant Nestlé launched a plant-based tuna product, Vuna, in 2021. (Nestlé)

Large food companies are also fishing for success in the field. US meat company Tyson Foods bought a minority stake in New York-based plant-based shrimp developer New Wave Food [in 2019](#). Thai Union Group, a Thailand-based producer of seafood products that owns the Chicken of the

Sea brand, launched a plant-based meat line, OMG Meat, last year that includes crab cakes and fish burgers sold to retailers and restaurants. Food giant Nestle launched a fish-free tuna product, Vuna, made with pea protein [in 2020](#). And American global food corporation Cargill unveiled a new line of plant-based products including vegan scallops with Japan-based convenience store chain Lawson, also [in 2020](#).

The plant-based seafood market is still small compared to the plant-based meat industry, noted the Good Food Institute report, but sales in the coming years “could grow by \$221 million if the category was able to capture the same share of the seafood market that plant-based meat has of the meat market.”