

Press release
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Solar Foods and partners to develop a net-zero carbon dairy production platform

The European Innovation Council (EIC) has selected a research proposal by a Consortium led by Solar Foods (FI), together with the University of Groningen (NL), RWTH Aachen University (DE) and FGen AG (a subsidiary of Ginkgo Bioworks, Inc.; CH) for funding. The four-year project, titled HYDROCOW, will have a total budget of 5.5 M€. The proposal was selected from more than 440 contesting teams to the European Innovation Council's 2022 Pathfinder Challenge call for proposals.

The HYDROCOW project will develop a novel biotechnology platform that opens new ways for sustainable food, materials, medicines, and chemicals production. As the first application of the platform, the Consortium has chosen to genetically engineer a hydrogen oxidizing bacteria (HOB) to naturally excrete beta-lactoglobulin, the major whey protein in e.g. cow's milk.

The Consortium will work with a Design-Build-Test-Learn cycle, consisting of designing a comprehensive metabolic model for the HOB at the RWTH Aachen University. The model-informed designs will be implemented at the University of Groningen by modern genetic modification techniques, aimed at incorporating the intra-cellular protein secretion mechanism to the HOB.

The test phase will then utilize the ultra-high speed screening platform of FGen AG, a subsidiary of Ginkgo Bioworks, Inc., to rapidly select best performing strains for protein secretion. The selected strains will be validated by Solar Foods in autotrophic growth conditions for protein secretion, followed by downstream processing.

"HYDROCOW could lead to the creation of truly ground-breaking technology for the food industry", rejoices **Dr Arttu Luukanen**, SVP at Solar Foods and the Coordinator of the project. "We are grateful for the EIC funding and the fact they share our vision on this project. We have a highly skilled Consortium and cannot wait to get started", he continues.

The European Commission selected [44 new projects](#) from the submissions to the 2022 EIC Pathfinder call. The Pathfinder programme seeks cutting edge research projects to achieve breakthroughs in six strategic areas. The successful projects were chosen from 436 submitted eligible proposals and will receive up to €167 million of EU funding (on average €3.8 million per project).

[Click here to read more about project HYDROCOW on the Solar Foods website](#)

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Solar Foods Ltd.

Solar Foods produces protein using carbon dioxide and electricity. Solein® production, independent of weather and climate conditions, liberates global protein production from the constraints of traditional agriculture. Solar Foods was founded in Finland in 2017. solarfoods.com



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