



life conquer



Project & Consortium presentation

Demonstration of industrial scale production of hydrolysed peptides for human consumption from side streams of salmon processing industries.

Funded by the European Commission as part of its LIFE Programme, the LIFE CONQUER Project officially kicked off on September 1st, 2022, with the aim of sustainably exploiting the side stream of the fish processing industry (i.e., salmon offcuts), also defined in the text as unused rest raw material (RRM), for producing salmon peptides and oil, to be used as ingredients for human nutrition at a larger scale.

LIFE CONQUER wishes to demonstrate to the fishery and aquaculture sectors that a significant reduction of natural resources consumption is possible, while at the same time, producing ingredients for human nutrition, by implementing an industrial biorefinery able to upcycle side stream of the salmon processing industry. biomega® has already conducted R&D activities in its facilities in which all the necessary technologies for production have been tested for a few years, verifying the quality of the final products. The promising results led to design of an innovative biorefinery in Europe to sustainably exploit the human grade fresh offcuts from the salmon industry for producing salmon peptides. These peptides are to be used as ingredients for human nutrition at a larger scale. The residual product obtained from the enzymatic hydrolysis process will be valorized as ingredients for the premium pet food market, as already done in the Norwegian plant (branded as Salmigo® Active), contributing to the economic viability of the value chain and featuring a 'zero waste' production

A sustainable first of-its-kind biorefinery is developed in Hirtshals (Denmark) based on the know-how developed by biomega® Denmark, the Coordinator, in its DEMO plant, bringing the process from TRL 6 to TRL 8. The building of such a business is huge in term of effort and investments. The beneficiary coordinator already started the work in autumn 2021, by using their own resources, to set-up all the external infrastructure and some of the equipment needed for producing salmon peptides and oil as ingredients for human nutrition. At the beginning of the LIFE CONQUER project, the biorefinery will be ready to host and to demonstrate the innovative i) solutions for extracting proteins from bones ii) the in-situ spray drying iii) an innovative inbound logistics for raw material, the three main objectives of LIFE CONQUER project.

Once the three objectives are set-up, tested and optimized the whole biorefinery will be ready to demonstrate at industrial scale the following environmental goals in line with the priority of LIFE programme:



Bio-waste reduction

Of app. 18.300 tonnes/year
of salmon offcuts saved



GHG reduction

Of app. 1,600 tonnes
of CO₂eq/year



Water efficiency

Of app. 30,000
tonnes/year



Thermal energy saving

Of app. 23.7 Gwh/year



The project will have benefits of the creation of new jobs, as 17 FTE will be employed in the biorefinery starting from 2023.

LIFE CONQUER KICKOFF MEETING & WORKPLAN

The LIFE CONQUER partners met on September 29th, 2022, to present the work plan for the next 3 years, and to discuss the actions to be carried out in each Work Package. In particular, the project plan is organized in 8 WP: a range of technical activities is divided into 4 Work-Packages, namely WP 2, 3, 4, 5. Monitoring of project KPIs and environmental impact assessment will be continuously performed within the project, in WP5. Dissemination, communication and networking activities have also been foreseen in WP7. To successfully exploit and replicate the project's results after the project end a WP8 has been included. In the frame of the kickoff meeting, the main activities to be carried out towards the project aims and goals were also discussed.

LIFE CONQUER CONSORTIUM

The LIFE CONQUER Consortium is composed by:



biomega® Denmark was founded in 2000 on the premise of advancing innovative biotechnology to release the full nutritional and functional value of rest raw materials from the salmon industry. Today, biomega® has a rich patent family of various technologies, with the continuous enzymatic hydrolysis process at its core. biomega® invests continuously in innovation through R&D to ensure best-in-class technology and respond to customers' needs, including product development, traceability, and sustainability. In our modern biorefineries we turn food-grade fresh raw materials into premium ingredients. Sophisticated biorefining processes ensure careful separation of nutritional components. Local and fresh raw materials guarantee stable supply to our customers around the world. The acquisition of biomega® by AMERRA Capital in 2017 has allowed the company to release its full growth potential. biomega® is now increasing its number of production facilities by building a new biorefinery in Hirtshals / Denmark entering strategic partnerships with further raw material providers. Our technology is not only limited to salmon, but also includes other marine species such as cod, pelagic and mesopelagic, as well as chicken and other types of poultry and is part of the circular economy strategy. biomega® aspires to become the leading partner for innovative high-quality ingredients to the health and nutrition industry.

ROLE IN THE PROJECT

biomega® is the beneficiary coordinator of the LIFE CONQUER project. biomega® will develop the technology for efficient extraction of proteins from bones and facilitate spray-drying of the salmon peptides produced at the biorefinery in Hirtshals. Together with Vega Salmon, biomega® will develop a new solution for logistics of salmon raw material.



Vega Salmon was established in 2010 as a merger between Vega Salmon and Seamore. The company's main activities are processing and refinement of fresh and smoked salmon. The company has grown from small Danish producer to an international player with an annual turnover of 180€ million from sales to more than 30 different countries in Europe, Americas, Oceania, and Asia. Vega Salmon's 12,900 m² factory are based in Handewitt, Germany which opened in September 2012 and has the annual capacity to produce 37,500 metric tons per year, on highly automated and state of the art facilities. The customers are major international retailers, wholesalers, brand owners and food service providing companies. Vega Salmon sells their premium products through both own Vega brands and through private label manufacturing. Vega Salmon has just recently been acquired by the Norwegian Coast Seafood group from the private Danish equity fond Maj Invest Equity A/S in mid-January 2023. Vega Salmon invest in their innovative solutions, both in product development and within their technology of being more efficient and leaner. Latest product developed is a new convenient product for a healthier choice on the retail shelf, within their own brand The Salmon Chef, a infused portion, ready to be cocked and served. A tasty portion spiced and ready to be heated either in the oven or microwave. Vega Salmons vision is to deliver world class salmon every day, and by this they steer their business as a principal. Their values found deep in their business on people first, craftsmanship, quality, and flexibility.


ROLE IN THE PROJECT


Vega Salmon contributes to the LIFE CONQUER Project by supplying the needed rest raw materials from its production of salmon products for human consumption for testing and development of their end-product. Vega Salmon are also contributing to establish an innovative logistics setup for inbounding and handling of the rest raw materials from its production facility, by aiming for a bulk transportation at hygienic conditions and securing the rest raw materials quality, and at the same time reducing the carbon footprint by lowering the CO₂ emissions. Vega Salmon are also contributing to the LIFE CONQUER Project by monitoring and evaluate the impact through the value chain together with Biomega Group, as well as participating in networking and sharing of knowledge with other LIFE projects.

CONSORTIUM


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