

Newsletter No. 1

Insights from the PROTEIN4IMPACT project on sustainable and alternative protein sources



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EDITORIAL

Welcome to the first edition of the PROTEIN4IMPACT Newsletter!

We are proud to introduce *PROTEIN4IMPACT* – a European research initiative aiming to harness the full potential of alternative protein sources. As the global population continues to grow, the demand for food — particularly protein — is projected to rise substantially.

At the same time, food systems contribute significantly to global greenhouse gas emissions, with animal agriculture being one of the major contributors ([FAO, 2023](#)). Meeting future protein needs while protecting human health, ecosystems, and climate stability is one of the greatest challenges of our time.

In this first edition, we are pleased to present an overview of our project and introduce the diverse consortium behind it. You will also find a selection of key events on the horizon that are particularly relevant for those interested in sustainable and innovative protein solutions.

On behalf of the PROTEIN4IMPACT project team, we wish you pleasant reading.

Protein4impact Team

PROTEIN4IMPACT IN NUTSHELL

[Project description](#)

[Project website](#)

- **Research & Innovation** project
- **Funded by:** European Union – Horizon Europe programme
- **Duration of project:** 2025–2027 (36 months)
- **Coordinator:** Pedro E. D. Augusto, CentraleSupélec (Université Paris-Saclay, France)

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About PROTEIN4IMPACT

PROTEIN4IMPACT is a European project funded by the Horizon Europe programme, exploring sustainable protein sources such as algae, fungi, bacteria, insects, and food system by-products. The project aims to develop products that are nutritious, safe, industrially viable, widely accepted by consumers, and produced with minimal environmental impact.

The project takes an integrated approach, assessing nutritional value, food safety, sensory qualities, and environmental and socio-economic impacts. It also focuses on valorising by-products from the agri-food, fisheries, and aquaculture sectors.

Key objectives include:

- Developing a data platform to analyse dietary habits and create a protein scoring database.
- Assessing the market potential of alternative proteins.
- Improving formulation, stability, and sensory properties of novel foods.
- Evaluating social impacts, including health and consumer acceptance.
- Supporting sustainability goals aligned with the European Green Deal and the Farm to Fork Strategy.

Project Consortium

PROTEIN4IMPACT unites **18 expert partners from 13 European countries**, each bringing unique strengths to develop new, protein-rich foods from unconventional sources. Together, we combine scientific excellence, technological innovation, and social insight to tackle food system challenges head-on. The coordinator of the consortium is CentraleSupélec (CS), from France.

Together, we are working to transform the future of food — ensuring nutrition, sustainability, and resilience in the face of global challenges.



PROTEIN4IMPACT Kick-off meeting

The consortium involved a diverse range of partners to cover all aspects of our ambitious mission:

Leading Research Organisations, which are developing cutting-edge technologies and solutions for the food industry.

- CS
- ENEA
- CNR
- UMINHO
- UOH
- NTUA
- CARTIF
- DTU

High-Tech SMEs, which provide expertise in areas like aquaculture and food technology.

- AQB
- VRLS

Consulting Agencies, which focus on sustainable development and ensuring that the solutions created are practical and impactful.

- AgC
- IDE

Social Impact Groups and Consumer Associations, which ensure that new food products meet the needs of consumers and society.

- UNIWA
- NDF
- CCA

Market-oriented Partners, which help bring new products to the market.

- GG
- In.Bio

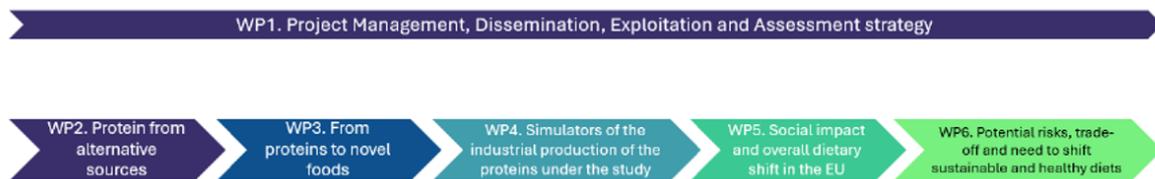
Finally, Technology Transfer Companies, who specialize in sharing PROTEIN4IMPACT's findings and building industry partnerships.

- GOLEM



Work Plan and Packages

PROTEIN4IMPACT starts with the careful selection of feedstocks to maximize positive outcomes and close resource loops, addressing impact assessment from the very first step. The initial focus of **WP2** is on recovering protein fractions from food by-products, macroalgae, microalgae, microbial cultures, and insect rearing. The data collected here will support parallel research in **WP3** on novel food production, while **WP4**, **WP5**, and **WP6** will assess economic, environmental, and social impacts, as well as associated risks, ensuring a holistic evaluation of the project's contributions.



PROTEIN4IMPACT Work Plan

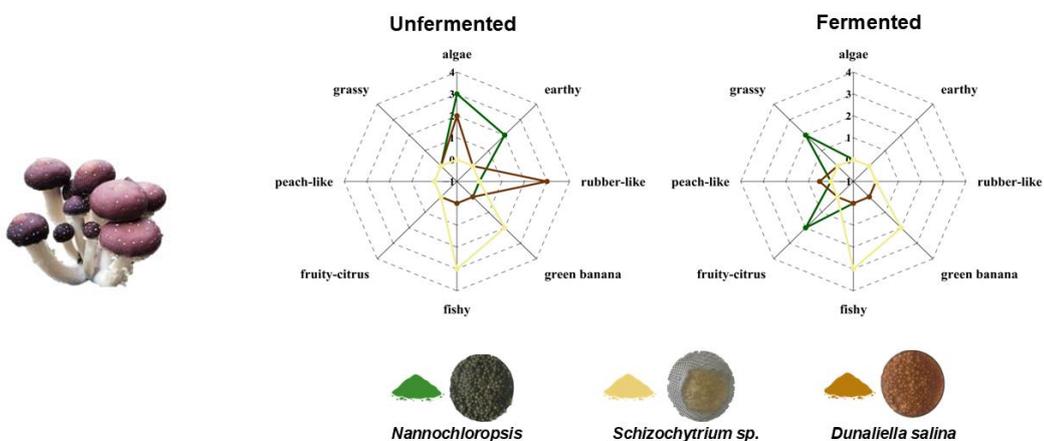
WP2 is making steady progress in the development of sustainable protein sources from a variety of biological materials. Research efforts are focused on producing mycoproteins from selected fungal strains and brewing by-products; optimizing processes that combine anaerobic digestion and hydrogen-oxidizing bacteria to valorize fishery residues; refining extrusion technologies for the recovery of proteins from agro-industrial side streams; the use of insect larvae based systems fed with agricultural by-products; the extraction of proteins from aquaculture waste through innovative techniques like microwave assisted extraction; the characterization of micro- and macroalgae as promising sources of alternative proteins. Through close collaboration with WP3, the activities are ensuring that all processes align with project objectives and quality standards, supporting the broader goal of building a circular and sustainable bioeconomy.



Rotor for microwave extraction

Building on the results of WP2, **WP3** focus to enhance the sensory, functional and nutritional properties of alternative proteins for use in novel food products. Building on the alternative proteins identified in WP 2 which uses proteins from fungi, insects, algae, and by-product-derived proteins, WP3's activities include enzymatic functionalization and fungal fermentation in combination with new separation processes for alternative proteins. These processes will be used to test the nutritional and sensory properties of the alternative proteins and evaluate their scalability. The aim is to incorporate these ingredients into consumer-ready foods and dietary supplements while maintaining high nutritional standards and ensuring sustainability.

Further updates on the remaining work packages and project progress will be provided next time.



Radar chart of sensory characteristics and intensity of aroma improvement in three microalgae by basidiomycota fermentation

Partners' News

PROTEIN4IMPACT partner **DTU** has joined the Synfeed project, aiming at redefining proteins for revolutionising the feeding industry. The long-term vision of Synfeed is to revolutionise animal feed production by developing, for the first time, new microbial-origin proteins fully fitted to animals' requirements and completely digestible, by employing novel protein biosynthesis through fermentation processes. This approach will enable a more competitive and environmentally-friendly animal feeding system. The project is led by Universitat Politècnica de València, with a consortium including Barcelona Supercomputing Center, Wageningen University and INRAE. Synfeed is a Pathfinder project funded by the European Union.



You can find more information at Synfeed's website: <https://synfeed.eu/>.



Synfeed consortium

Upcoming Events

Which exciting events are coming up soon? Here are some key events we've chosen for you.

FOOD2030 Networks Conference 2025

Date: 2-4 December 2025

Place: Copenhagen, Denmark

Organised by the CLEVERFOOD project, this conference brings together leading researchers, innovators, and policymakers from across Europe. The 2025 edition will focus on accelerating collaboration and strengthening impact within the FOOD2030 community, providing a platform for knowledge exchange, networking, and the presentation of innovative solutions for sustainable food systems.

Evridiki Kaba from consortium partner **UNIWA** will present their work *titled Empowering Dietary Transitions Towards Alternative Proteins: A Behavioural Nutritional Intervention Based on the Transtheoretical Model*.

More information about the event [HERE](#).

Microbiotec'25 – Congress of Microbiology & Biotechnology

Date: 4-6 December 2025

Place: University of the Azores, Ponta Delgada, Azores

Organised by the Portuguese Societies of Microbiology and Biotechnology, this congress brings together national and international researchers and stakeholders. The 2025 edition will focus on innovations and challenges in

microbiology and biotechnology, offering a platform for collaboration, networking, and knowledge exchange.

Luís Abrunhosa from consortium partner **UMINHO** will introduce *Valorization of Food By-Products Via Solid Submerged Fermentation for Sustainable Mycoprotein Production*.

More information about the event [HERE](#).

MedLIFE-25 – Mediterranean Life Sciences Union Annual Meeting

Date: 9-11 December 2025

Place: Naples, Italy

Organised by the Mediterranean Life Sciences Union (MedLIFE), the 2nd edition of this conference will be hosted at the University of Naples Federico II (Centro Congressi Federico II) in Naples. The hybrid-format event (in-person & virtual) invites researchers from all fields of the life sciences, both within the Mediterranean region and globally, to engage in high-quality scientific exchange. The 2025 edition will focus on transdisciplinary research addressing environmental and social challenges, promoting sustainable societies, and strengthening the impact of life sciences on policy and practice, offering a platform for knowledge exchange, networking, and collaborative innovation.

Tiziana Marino from consortium partner **CNR** will share insights on *Sustainable Recovery of Proteins from Fishery By-Products via Microwave-Assisted Extraction within the PROTEIN4IMPACT Project*.

More information about the event [HERE](#).

ISEKIFOOD26 – 8th International ISEKI-Food Conference

Date: 1-3 June 2026

Place: University of Algarve, Faro, Portugal

Organised by the ISEKI-Food Association, this conference brings together national and international researchers, educators, and industry stakeholders. The 2026 edition, held in Faro, Portugal, will focus on innovation in research and education for the transition to sustainable food systems, providing a platform for collaboration, networking, and knowledge exchange across food science and technology.

More information about the event [HERE](#).

IDS 2026 – 2026 International Drying Symposium

Date: 25-28 August 2026

Place: Paris-Saclay, France

This event is co-organised by our project coordinator, **CentraleSupélec**, and AgroParisTech, two prestigious French engineering schools of Université Paris-Saclay. The symposium will focus on strategies to reduce the carbon footprint of drying processes in a resource-constrained world, addressing current and emerging challenges in drying and dewatering technologies.

It will provide a platform for researchers, industry professionals, and educators to share knowledge, exchange ideas, and foster collaboration. Participants will also have opportunities to present their work, discuss recent developments, and connect with international experts in the field.

More information about the event [HERE](#).



Thank you for joining us on this journey. Stay connected as we share key insights, progress, and perspectives from across the consortium and beyond.

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