CARE 4 BIO

Horizon Europe Brokerage Event
Cluster 6 Calls 2025
Warsaw, 27 May 2025

Accelerating Sustainable Proteins from Microbial, Plant, and Cell-Based Systems through Biotechnology and Collaboration

Yvonne McMeel

Head of Impact, Growth & Development

This project has received funding from the European Union's Horizon Europe research and innovation programme, under Grant Agreement No 101059839

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the granting authority can be held responsible for them.

Topics:

- HORIZON-CL6-2025-02-FARM2FORK-13: **Raising citizen awareness on alternative proteins derived from biotechnology**
- HORIZON-CL6-2025-02-FARM2FORK-14: **Nutrients produced by microbes utilizing CO2 from the air, with the support of biotechnology**
- HORIZON-CL6-2025-01-CIRCBIO-09: **Unleashing the potential and advancing the impact of the digitalization/Artificial Intelligence of the climate-neutral bio-based value chains**
- HORIZON-CL6-2025-01-CIRCBIO-10: **Support to the EU Biotechnology and Biomanufacturing Initiative: scoping action**
- HORIZON-CL6-2025-02-COMMUNITIES-04: **Creating urban co-creation spaces for driving sustainable food system transformation**

Project(s) Idea

Our approach combines microbial biotechnology, AI-driven optimisation, and urban co-creation spaces to support the development, awareness, and scale-up of alternative protein and products that addresses several Horizon Europe call topics.

- Develop safe and nutritious alternative proteins using engineered microbes and sustainable feedstocks.
- Map and align existing EU-funded biotechnologies, identifying best practices and gaps for future R&I.
- Build a strategic vision and research agenda for EU biomanufacturing with input from industry, SMEs, academia, and civil society.
- Address societal trust, ethical concerns, and transparency in digital biotechnology through social science and co-creation.
- Develop and demonstrate AI tools and digital twins for optimising microbial bioproduction and bio-based value chains.
- Foster co-creation and trust-building measures between stakeholders, including researchers, industry, policymakers, and the public.
- Establish multidisciplinary consortia comprising academic institutions, industry partners, NGOs, and public bodies to ensure comprehensive coverage of expertise and perspectives.

CARE 4BIO

Cluster 6 Brokerage Event

Warsaw, 27 May 2025

UKRI | MICROBIAL FOOD HUB

BEZOS CENTRE FOR SUSTAINABLE PROTEIN

IMPERIAL | BEZOS EARTH FUND

Main expertise offered

- Engineering biology, plant mammalian and microbial
- Understanding nutritional value of new foods
- Alternative protein production from a wide range of sources
- Expertise in feedstock development and valorisation of agro-industrial side streams
- Understanding metabolic pathways integral for guiding strain engineering for new food ingredients
- Utilising AI across the value chain of alt. protein production to optimise process and improve yield and quality output
- Experts in bioprocessing

Previous/ongoing projects:

- Involvement in many UKRI and EU-funded projects

Role in the project:

- Scientific and technical partner, with potential to act as coordinator
- Experience in building interdisciplinary consortia across academia, industry, and policy

Main expertise sought

- **Industrial scale-up**: Partners with expertise in fermentation, scale-up, process engineering and GMP production/ ISO22000.
- **Regulatory and novel food approval**: Partners with expertise in EU regulatory pathways, EFSA submissions, food safety, and labelling compliance.
- **AI and digital twins for biomanufacturing**: Developers of AI-driven platforms for process optimisation and supply chain modelling.
- **Public engagement and citizen science**: Experts in behavioural science, co-creation, and building trust in biotechnology-enabled foods.
- **Urban food system testbeds:** City-based partners or municipalities offering living labs for piloting sustainable food innovations.

Contact details:

Yvonne McMeel
y.mcmeel@imperial.ac.uk

Bezos Centre for Sustainable Protein &
UKRI Microbial Food Hub
Imperial College London

Academic Institution
UK with local, European and Global partners