CARE 4BIO

Horizon Europe Brokerage Event
Cluster 6 Calls 2025

Warsaw, 27 May 2025

“Use of in silico bioprospecting tools to identify specific lipase genes.”

Alberto Barranca Jiménez

AIMPLAS (Plastic Technology Centre)

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.

Topic(s) addressed (lead by AIM):

CIRC-BIO topics

CL6-2025-01-CIRCBIO-09: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors (AIMPLAS, coordinated).

Project idea: Use of in silico bioprospecting tools to identify specific lipase genes with the aim of enhancing them and obtaining enzymes with improved properties for applications in the cosmetics, pharmaceutical, and home-care sectors.

Topic: **CL6-2025-01-CIRCBIO-09: Bioprospecting and optimized production of the terrestrial natural products: new opportunities for bio-based sectors (coordinated by AIMPLAS).**

- Current consortium: three partners confirmed
- What we need?: i) companies for validation in pharma /food/nutraceutical sectors and ii) company for scaling up enzymes' production.

Other Topic(s) addressed (not lead by AIM):

FARM2FORK topics

- CL6-2025-02-FARM2FORK-03: Overcoming the barriers for scaling up circular water management in agriculture
- **HORIZON-CL6-2025-02-FARM2FORK-04-two-stage: Research and innovation for food waste prevention and reduction at household level through measurement, monitoring and new technologies. (looking for a coordinator): two possible partners have confirmed.**
- CL6-2025-02-FARM2FORK-05: Emerging and future risks to plant health
- CL6-2025-02-FARM2FORK-06: Developing innovative phytosanitary measures for plant health - focus on systems approach for pest risk management
- HORIZON-CL6-2025-02-FARM2FORK-10: Diversifying aquaculture production with emphasis on low-trophic species.
- HORIZON-CL6-2025-02-FARM2FORK-21: Nutrition in emergency situations - Ready-to-use Supplementary Food (RUSF) and Ready-to-use Theapeutic Food (RUTF)

Topic(s) addressed (not lead by AIM):

Zero pollution topics

- CL6-2025-01-ZEROPOLLUTION-03: Substances of concern and emerging pollutants from bio-based industries and products: mapping and replacement (IA, 2 projects, 5 M€/project)

Main expertise offered / sought

- ISO 7 certified cleanroom for evaluating formulations using alternative technologies.
- Identification of critical substances of concern related to the plastic industry. Inventory of SoC (substances of concern) and emerging pollutants.
- REACH and CLP assessment
- Alternatives proposal for replacement of substances of concern
- Technological solutions by membranes and fotochemistry for SoC and emerging pollutants removal and degradation into non hazardous substances
- Risk assessment
- interaction and cooperation with related ongoing projects based on SSbD
- Detection methods
- Identification and quantification of micro and nanoplastics
- Bioassays

Main expertise offered / sought

- Development of sustainable materials from agricultural by-products (starches algae) for biodegradable films, foams and soil additives.
- Design of biodegradable biopolymer carriers for active ingredients to improve input efficiency and reduce environmental impact
- Production and scale-up controlled-release systems (tablets, beads, coatings thermoplastics) for smart delivery of agrochemicals.
- Contribution to circular economy, reduction of synthetic inputs and improvement of soil health.

Contact details

- AIMPLAS (Instituto tecnológico del plástio, research center, Spain);
- Alberto Barranca Jiménez (albarranca@aimplas.es);

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