An SME compounder is sought for a Eurostars consortium focused on the development and scale-up of PHB-based sustainable polymer compounds

Summary

Profile type	Company's country	POD reference
Research & Development Request	**Türkiye**	**RDRTR20260216005**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Research and development cooperation agreement**	**• World**
Contact Person	**Term of validity**	**Last update**
Enrico FRANZIN	**16 Feb 2026** **16 Feb 2027**	**16 Feb 2026**

General Information

Short summary

An SME compounder is sought for a Eurostars consortium focused on the development and scale-up of PHB-based sustainable polymer compounds. The compounder will collaborate with Sabancı University IMC and an industrial end user to industrialize bio-based formulations meeting defined application-specific plastic requirements.

Full description

The proposed Eurostars project targets the development, optimization, and industrial validation of polyhydroxybutyrate (PHB)-based polymer compounds for high-value industrial applications. The consortium is structured around a strong value-chain approach, integrating academic formulation development, SME-level compounding expertise, and end-user-driven application validation.

The industrial end user will define the target product(s), including detailed mechanical, thermal, rheological, and regulatory plastic specifications required for the intended application. Based on these requirements, Sabancı University Integrated Manufacturing and Composites (IMC) Research Center will lead the formulation design and laboratory-scale development of PHB-based compounds, including additive selection, compatibilization strategies, and performance optimization.

The SME compounder will work in close technical collaboration with Sabancı University IMC throughout the formulation development phase, contributing practical compounding know-how, processability feedback, and scale-up considerations. Once formulations are validated at laboratory scale, the SME compounder will be responsible for producing compound batches under industrially relevant processing conditions, ensuring reproducibility, quality consistency, and readiness for downstream processing.

The developed compounds will be supplied to the end user for application-level testing, prototyping, and functional validation. Iterative feedback loops between the end user, Sabancı University IMC, and the SME compounder will enable continuous refinement of formulations and processing parameters.

Advantages and innovations

The project offers a strong innovation advantage by integrating the complete industrial value chain, combining SME-originated biopolymer production (PHB and PHBHV), academic formulation development, SME-level scalable compounding, industrial injection moulding and tooling capabilities, end-user-driven product specifications, and dedicated life cycle assessment (LCA) and end-of-life (EoL) evaluation.

Key innovative aspects include:

Full value-chain integration from bio-based polymer synthesis (PHB and PHBHV) to validated injection-moulded end products
Co-development of formulations by academia and SMEs, ensuring direct transfer from laboratory-scale material design to scalable compounding
Early and continuous involvement of the SME compounder to bridge formulation performance with industrial processability and scalability

Direct alignment of material and compound development with end-user-defined product specifications and processing requirements. Substitution of fossil-based plastics with bio-based, biodegradable, and circular PHB-based solutions. The SME compounder gains early access to novel PHB formulations and new market opportunities, while contributing directly to shaping materials that are commercially relevant.

Technical specification or expertise sought

The consortium is seeking an SME compounder with the following expertise and capabilities:

- Industrial polymer compounding
- Experience with biopolymers and/or biodegradable plastics (PHB, PLA, PBS, PHA-based systems preferred)
- Capability to process formulations developed jointly with academic partners
- Knowledge of additives, fillers, plasticizers, stabilizers, and compatibilizers
- Ability to support scale-up from laboratory and pilot formulations to industrial batches

Stage of development

Under development

Sustainable Development goals

• Goal 7: Affordable and Clean Energy

IPR Status

No IPR applied

IPR Notes

Partner Sought

Expected role of the partner

The SME compounder will play a core industrial role in the Eurostars consortium.

Main responsibilities include:

- Active participation in formulation development together with Sabancı University IMC
- Providing process-oriented feedback during formulation optimization
- Scalable compounding of PHB-based formulations developed within the project
- Optimization of processing parameters to ensure consistent and efficient compound quality
- Production of compound samples and batches for end-user validation and testing
- The SME compounder is expected to act not only as a contract manufacturer, but as a technical development partner, contributing know-how and innovation input throughout the project lifecycle.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **SME <=10**
- **SME 50 - 249**
- **SME 11-49**

Call Details

Framework program

Eureka

Call title and identifier

Eurostars 10 call

Submission and evaluation scheme

Anticipated project budget

Coordinator required

No

Deadline for EoI

19 Mar 2026

Deadline of the call

19 Mar 2026

Project duration in weeks

Web link to the call

Project title and acronym

Dissemination

Technology keywords

- **02007014 - Plastics, Polymers**

Market keywords

- **08001018 - Polymer (plastics) materials**

Targeted countries

- **World**

Sector groups involved