

# BIOLAMER NEWSLETTER

European  
Innovation  
Council



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## Exordium

**BioLaMer** is an EIC Pathfinder Open Project addressing the Food Waste and Petrochemical Plastics Challenges by Introducing a New Food Waste Value Chain

## An Overview

The **BioLaMer** project will

- Demonstrate the potential of a black soldier fly larvae (*Hermetia illucens*) route – that is grown consuming low-grade food waste – for the production of two biopolymers, polyhydroxyalkanoates (PHA) and chitosan, which are promising candidates in bioplastics production.
- Apply Life Cycle Assessment and Life Cycle Costing throughout its feedstock preparation, processing and production steps to demonstrate the environmental and economic sustainability of its developed processes and products.
- Assess, optimize and validate the biorefinery processes by applying machine learning-based hybrid models.



## Kick-off Meeting

The project was officially launched on the 4<sup>th</sup> of April, 2023, at the AMBER / CRANN Centre, Trinity College Dublin, Ireland, in the presence of our consortium members and the EIC project officer, Mr. Olivier Dahon (virtual)



## Project Dissemination

**BioLaMer** participated in the “XVII Conference of the Italian LCA Association”, which was held from the 28<sup>th</sup> to 30<sup>th</sup> of June 2023, in Milan through our partner University of Bologna (UNIBO).

Prof. Serena Righi and Dr. Martina Pelliconi represented the BioLaMer project at the conference and talked about the state-of-the-art sustainability of the polyhydroxyalkanoates production with a work titled “LIFE CYCLE ASSESSMENT APPLIED TO POLYHYDROXYALKANOATES PRODUCTION PHASES A MINI REVIEW”

## The Issues Addressed

- Food waste refers to food that is discarded at the level of retailers, food service providers and consumers. When deposited in landfills, food waste tends to release methane, the second most important greenhouse gas contributor to climate change. Food waste also has numerous environmental, health, social, economic and ethical implications, contributing to food insecurity, loss of biodiversity and public health problems.
- Petrochemical plastic’s non-degradability has serious repercussions, such as linear materials ending up in lands, soil and water bodies, creating environmental issues and affecting human health. When incorrectly discarded and treated, petrochemical plastics can take hundreds of years to degrade, breaking into microplastics which are tiny particles less than 5 millimetres in size that endanger the whole ecosystem and threaten the human food chain.

## Team Gatherings



Apart from the day-to-day running of the project and management, we are holding regular monthly project meetings to maintain effective communication among our team and discuss the monthly outcomes, followed by knowledge sharing, progress tracking, mitigating potential risks and decision-making

Tech Demo Day: Food chain technologies, novel and sustainable food

22 September 2023



Albert Schnieders  
CNM Technologies GmbH



Basanti Ekka  
Riga Technical University



Basia J. Vinocur  
Euogene Ltd



Débora Monteiro Moretti  
Technical University of Munich



Lorenzo Sbizzera  
Day One srl



Saurabh Joshi  
University of Bremen



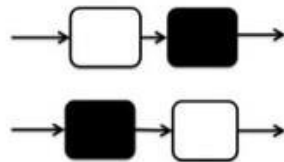
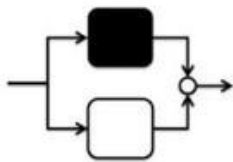
Sibu Padmanabhan  
Trinity College Dublin

# New Breakthrough

We are delighted to announce that **BioLaMer**, amongst all current EIC projects, is one project that has **been selected** to pitch the innovations in the **EIC Tech to Market Venture Building Programme**.

**BioLaMer** coordinator Dr. Sibu Padmanabhan pitched a new all bio-based super-absorbent material/technology in the programme on the 7<sup>th</sup> of September and further showcased it in the Tech Demo Day on Food chain technologies, novel & sustainable food, that took place on the 22<sup>nd</sup> of September 2023.

## Skill Enhancement



Hybrid modeling  
Summer school

Hybrid modeling for process development,  
process characterization and optimization

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## Thank You

See you in the next edition of our newsletter

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The first skill development activity of the **BioLaMer** Project was organized by our consortium partner **Nova School of Science and Technology**, from the 2<sup>nd</sup> to 4<sup>th</sup> of October 2023 in Lisbon (Summer School for Hybrid Modeling). The purpose of this summer program was to **empower** relevant stakeholders (researchers and industry participants) via lectures and practicals **on the principles and applications of hybrid modelling for process development, process characterization and optimization**.

# BioLaMer Partners



**Dr. Sibu Padmanabhan – Project Coordinator**  
**Prof. Michael Morris – Co-Investigator**  
Advanced Materials and BioEngineering Research (AMBER)  
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Ireland



**Prof. Serena Righi – Associate Professor**  
ALMA MATER STUDIORUM– UNIVERSITA DI BOLOGNA– UNIBO, Italy



**Dr. Jorge Santos - CEO**  
AquaInSilico LDA, Lisbon, Portugal



**Dr. Ana Rita Farias**  
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**Prof. Rui Oliveira - Associate Professor**  
**Prof. Maria Reis - Full Professor**  
NOVAID FCT, Lisbon, Portugal



**Ms. Neda Tozija – Co founder**  
TransfoLAB BCN (centre for trash investigation), Barcelona, Spain



**Ms. Nisha Thomas - Director**  
Soclinetech Solutions & Services, Cork, Ireland



Trinity College Dublin  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin



**TransfoLAB BCN**  
center for trash investigation



**HEI-Lab**  
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