

## **NENU2PHAR PROJECT KICK-OFF**

**September 15, 2020**

Online

### **BIOECONOMY | RESEARCH & INNOVATION | NENU2PHAR PROJECT**

#### **HIGHLIGHTS**

**Launch of a new Bio Based Industry Joint Undertaking (BBI-JU) project, NENU2PHAR aiming at setting-up an innovative European value chain of PHA-based bio-plastic products from a sustainable resource with an acceptable end of life.**

- NENU2PHAR - For a sustainable and European value chain of PHA-based materials for high-volume consumer products
- €5 million European grant of private-public partnership “Bio-Based Industry Joint Undertaking”– 6,4€ million of total budget.

**NENU2PHAR brings together 16 European partners and was successfully launched online, on September the 15<sup>th</sup>, 2020.**

#### **CONTEXT AND OBJECTIVES**

Plastics represent an important part of the global economy: its production has surged over the 50 years, from 15 million tonnes in 1964 to 359 million tonnes in 2018, and it is expected to grow. The plastics industry is a key contributor to European society. The plastics industry gives over 1.5million of direct employment in Europe, with close to 60,000 companies that generated a turnover close to 350 billion euros in 2016 and a trade balance close to 15 billion euros (PlasticsEurope).

The plastic industry is currently facing two major challenges. Currently, still, 90% of global plastic produced is derived from virgin fossil feedstock giving the plastic industry a poor environmental footprint. Moreover, the plastic industry suffers from a rather negative image linked the unsustainable end of life management practices, such as incineration and persistent and increasingly visible environmental impacts.

Polyhydroxyalkanoates (PHAs) are a group of biopolymers that are now widely recognised as attractive substitutes to fossil fuel-derived plastics in a wide range of applications. They are renewable, biodegradable and bio-based polymers, in the form of polyesters. They are considered as one of the **green polymers groups of the future**. Unfortunately, no sustainable value chain exists in Europe, and production schemes developed elsewhere in the world appear highly questionable from an environmental and ethical standpoint.

In this context, over the next 3 years, the NENU2PHAR project will develop an original route of production PHA (Polyhydroxyalkanoate) from sustainable and renewable resources: micro-algae biomass and selection of bacteria strains. 8 PHA-based products with their respective end-of-life scenarios will be developed and benchmarked to their fossil-based counterparts. To overarching this ambitious goal, NENU2PHAR has six specific objectives :

- Develop competitive PHAs polymers bio-sourced, sustainable both from an environmental and economic perspective
- Formulate and functionalise polymer for masterbatch and compounding development
- Identify processes of PHA-material to reach defined functional properties of bioplastic better than fossil-fuel counterparts
- Develop eco-designed PHA-biobased products
- Demonstrate the circular economy and sustainability of the NENU2PHAR value chain
- Increase stakeholders and consumer awareness of new bio-plastic product for better acceptance and compliance to market



## A MULTI-STAKEHOLDER PROJECT

**NENU2PHAR brings together 16 European partners, coordinated by CEA (France):**

- **4 large industrials:** DANONE (France), KAJ PLASTICS (Poland), SOFRADIM PRODUCTION (France), IFG EXELTO (Belgium)
- **6 SMEs:** ELIXANCE (France), CELABOR (Belgium), BIO-MI Ltd (Croatia), BIOTREND (Portugal), LOMARTOV S.L. Applied Innovation Engineering (Spain), ZERO EMISSIONS ENGINEERING B.V. (The Netherlands)
- **4 RTOs:** CEA (France's Alternative Energies and Atomic Energy Commission), Innovation Plasturgie Composites (France), ITENE (Spain), CENTEXBEL (Belgium)
- **1 academic:** Université de Bretagne Sud – Institut de recherche Dupuy de Lôme (France)
- **1 innovative cluster:** IAR, the French Bioeconomy Cluster (France)





**Duration: 42 months (September 2020 - Mars 2024) | Total budget: € 6 395 081.2**

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**For more information, please refer to the European Commission website:**

<https://cordis.europa.eu/project/id/887474/fr>

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