Postdoctoral or engineer position starting from January 2023

Financed by Horizon 2020 - Research and Innovation Framework Programme

For a sustainable and european value chain of PHA-based materials for high-volume consumer products

Context:

Plastic is one of the preferred materials for manufacturing high volume consumer products and more particularly packaging thanks to its physical, mechanical, thermal or barrier properties. However, existing global plastic industry is mainly a petrochemical-based industry, bringing bad environmental footprint.

Polyhydroxyalkanoates (PHA) are a group of biopolymers that are now widely recognized as attractive substitutes to fossil fuel derived plastics in a wide range of applications. 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.

The NENU2PHAR project aims at bridging this crucial gap in the EU industry, within an inclusive approach that will address the whole PHA-based plastic value chain, targeting high volume consumer products. The NENU2PHAR project gathers 17 european partners leaders in the different fields of research, from biomass development to formulation of biopolymer up to plastic processes.

More information: https://nenu2phar.eu/ https://cordis.europa.eu/project/id/887474/fr

Moreover, the candidate will have to manage a second project whose the content is confidential (information may be orally communicated).

Candidate profile:

The candidate will be working on the design of a process for the production of PHA from substrates provided by partners of the consortium. Selection of the right bacterial strain and optimization of the culture parameters will be done at IRDL. This process will then have to be transferred to another partner for the scale-up. Regular exchanges will have to occur to ensure the process can be used at industrial scale. Chemical and physico-chemical characterizations of the PHA produced will be made by the candidates. Chemical modification will also be studied to help later formulation of the PHA for a wide range of applications.

We are looking for a candidate having a strong team working ability, with expertise in chemistry and biotechnology. Knowledge of at least one of the following topics will be highly appreciated: bacterial fermentation, biopolymers and/or physico-chemistry of biopolymers. Candidate must be proficient in English as the consortium is international.

Duration:

12 or 18 months, starting from January 2023

Location:

The academic work will be carried out at the Dupuy de Lôme Research Institute (UMR CNRS 6027) at the Lorient and Pontivy sites. The candidate must be able to move between several sites within the IRDL. Driving license and car mandatory. More information: http://irdl.fr

Contact:

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Please send a detailed CV, a cover letter and at least one recommendation letter.