



MSCA Postdoctoral Fellowships

HORIZON MSCA PF 2023

EXPRESSION OF INTEREST



Deadline for submission of documents
15th of July 2023



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EXPRESSION OF INTEREST



EXCELENCIA
MARÍA
DE MAEZTU



HR EXCELLENCE IN RESEARCH



Contact Person/ Scientist in charge

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Brief description of the Research Group

The Biotechnological Processes Unit (BTPU) focusses its research on two of the biochemical technologies selected by the European Industrial Initiative as the most promising to be developed at commercial scale: (i) ethanol and higher alcohols from lignocellulosic feedstock through chemical and biological processes and (ii) bioenergy carriers produced by micro-organisms (algae, bacteria) from CO₂ and sunlight. Since it is the only C-rich material source available on the Earth, biomass is very likely to be the only viable alternative to fossil resources for the production of transportation fuels and chemicals. As a consequence, keeping in mind that BTPU is working at IMDEA Energy, our research activity considers not only the production of biofuels but also bioproducts.

Project description

Renewable oil-based chemistry arises as a promising alternative to petroleum for the production of fuels and chemicals. It is of utmost importance to obtain low-cost microbial oils to reach an economically viable process. Within this context, microbial oils derived from lipids synthesized in microorganisms and produced from wastes are a feasible alternative for a progressive fossil fuels reduction. Conventionally, sugar-based feedstocks are used for yeast oleaginous production however this limits the process to carbohydrate rich substrates. Nevertheless, the sugar platform can be substituted by a SCFAs (carboxylate)-based technology which enables bioprocess flexibility upon different substrates while opening the range of utilized molecules. In this context, the fellow will be involved in the development of efficient yeast strains for producing microbial oils production through biochemical routes from SCFAs generated out of different feedstocks.

The postdoctoral fellow is expected to work on the study of fundamental aspects of yeasts metabolism in order to increase the knowledge of this innovative approach and the long-term exploitability of bioprocesses combination. The fellow will also study different fermentation routes for producing microbial oils with non-conventional yeasts.

Yeast molecular biology will be valued since different molecular tools will be use for the development and generation of new yeast strains

Research Area

Chemistry (CHE)
Environmental Sciences and Geology (ENV)
Life Sciences (LIF)

Applications



Deadline for submission of documents **15th of July 2023.**
Documents to be submitted:

- ✓ Complete curriculum vitae stating background and skills
- ✓ Letter of motivation including research interests
- ✓ Two reference letters