



## **M2ex – Exploiting metal-microbe applications to expand the circular economy**

Marie Skłodowska-Curie Action H2020-MSCA-ITN-EJD-2019

### **ESR3-NUIG: Single-cell and microfluidic trace element microbiology in anaerobic digestion communities**

#### **Job description**

We are looking for a motivated Early Stage Researcher (ESR) in the field of microbial ecology, single-cell microbiology and microfluidics to study trace element microbiology in anaerobic digestion communities. The research fellow will be hosted at the National University of Ireland Galway (NUIG). This group has long expertise in environmental microbiology and microbial ecology, leading several projects in this area. He/she will be recruited by NUIG for a period of 36 months with the aim of obtaining a joint PhD degree between NUIG and Universidade do Porto (UP).

The M2ex European Joint Doctorate offers to the ESR3 an innovative series of Network-wide training events to ensure a high-quality, engaging and inspirational training environment including secondments in UP/CIIMAR (Portugal), Tratamento de resíduos sólidos E.I.M. (Portugal) and Institut de Recerca en Tecnologies Agroalimentaries (Spain).

#### **Objectives**

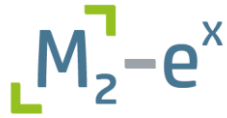
Virtually nothing is known about the impact TE on the interactions between cells in the AD microbial community. In this project, the objective is to use metagenomics, metabolic reconstructions of genomes, and microfluidics, under different TE conditions, to investigate the impact on cell associations at the level of single cells.

#### **Expected Results**

1) obtain a deep characterisation of AD microbial communities, including with metagenomics, followed by targeted isolation of important organisms using metabolic reconstruction and microfluidics; 2) generate information on the impact of TE concentrations and availability on cell associations in AD biofilms.

#### **Candidate's profile**

We are looking for a candidate with a Biology, Microbiology, Biochemistry or equivalent degree and a master's degree in a similar area. Candidates with primary/master's degrees from another discipline but with a strong knowledge of microbial ecology may also be considered. Additionally, some knowledge of bioprocess engineering would be advantageous.



### **Our Offer**

You will receive an employment contract for 3 years according to the EU contribution for ITN recruitments and general conditions at the host institution. It includes full social security coverage and will start in September 2020.

**Enrolment in Doctoral degree(s):** NUIG / UP