



## Call for applications for M2 internship FARE

### Study of the electrogenic potential of several microbial communities during the degradation of lignocellulosic biomass.

The UMR FARE laboratory (University of Reims-Champagne Adrennes/Institut national de la recherche agronomique et Environnement) is offering an internship to determine the electrogenic potential of several microbial communities during the degradation of lignocellulose biomass.

**Context:** The Fractionation of Agro-Resources and Environment (FARE) laboratory based in Reims and under the dual supervision of INRAE and the University of Reims Champagne Ardenne is developing its research activity in the field of the biological and/or chemical and/or physical deconstruction of plant biomass. The targeted application concerns the bioelectrochemical fractionation of lignocellulosic biomass.

**Objective of the M2 internship:** The internship will be carried out within the framework of the PEPR (priority research programs and equipment) project ElectroMIC (Electrochemically-assisted MICrobial community metabolic network optimization for biorefinery of organic waste) in partnership with six laboratories. This project aims to develop systems using electromicrobial technologies for the degradation and valorisation of organic waste and agricultural co-products. The person will be in charge of studying the electrogenic potential of different communities and  $\mu$ organisms during the degradation of the above-mentioned waste and co-products. Several approaches will be used: molecular approaches (NGS, ...) to study the microbial diversity from samples at various stages, characterization of initial and in-process co-products (FTIR, ...), lignocellulolytic enzymatic activities, determination of the electrogenic potential.

**Keywords:** Microbiology, electrochemistry, co-products, microbial diversity

**Profile required:** A student with a background in Biology with a solid foundation in Microbiology and a good command of omics tools and/or analysis. A highly motivated student with good interpersonal skills, able to work in a team, with a proven scientific curiosity and a sense of initiative. The candidate must be able to write and synthesize and be comfortable communicating scientific results orally. A good level of oral and written English will be a plus.

**Laboratory address:** UMR FARE INRAE/URCA, 2 esplanade Roland Garros, 51100 Reims, <https://www6.nancy.inra.fr/fare/>

**Contract duration:** Beginning of March 2023 for 6 months

**Compensation:** According to the legislation = 600 euros/month

**To apply:** Send a CV with a letter of motivation, the contact details of 2 referees, and transcripts of Master's degrees (M1 & M2), to [ludovic.besaury@univ-reims.fr](mailto:ludovic.besaury@univ-reims.fr) and [sofiene.abdellaoui@univ-reims.fr](mailto:sofiene.abdellaoui@univ-reims.fr) before 15 January 2023