

Temporary Postdoctoral position in Blue Biotechnology

IPREM - E2S UPPA

Du 4 février 2021 au 28 février 2021



↓ Temporary Postdoctoral position in Blue Biotechnology

To candidate Send the required documents to: [✉ susana.fernandes@univ-pau.fr](mailto:susana.fernandes@univ-pau.fr) **by 28th February 2021**

Research Group:



Recently, UPPA was granted the label Initiatives Science Innovation, Territoires, Economie (I-SITE) in the frame of the second Programme d'Investissements d'Avenir (PIA 2) with its project Energy Environment Solutions (E2S). To become an attractive international reference in research in these two areas, E2S UPPA has implemented different research tools, including scientific research chairs: 'Chaires d'Excellence Partenariales'. The proposed position is in the framework of one of these partner-based chairs: MANTA - MAriNe MaTeriAls.

In the MANTA research chair, led by Dr. Susana Fernandes, we use marine organisms and the marine environment as a source of inspiration for the development of novel functional (bio)materials and processes combining chemistry, biology, materials science and biotechnology. Our research is funded by large grants from Campus France (Make Our Planet Great Again: MOPGA), FORMAS and public institutions and private partners namely E2S UPPA, Communauté d'Agglomération du Pays Basque (CAPB), Région Nouvelle Aquitaine (NA), Comité Interdépartemental de Pêche Maritimes et des Elevages Marins (CIDPMEM 64 40) through a DLAL project, Laboratoires de Biarritz, Scale and

Lees.

Project description/Duties:

MANTA chair aims to mimic remarkable phenomena and hierarchical structures observed in the aquatic environment to design functional and environmentally sustainable (bio)materials based on marine molecules and assess their impact on human health and marine ecosystems. To do so, the project involves 4 key areas: (1) marine by-product and bioresources valorization; (2) marine bioinspiration for ecofriendly chemistry and development of materials and processes for marine environment; (3) impact of the materials on the marine environment and on marine organisms; and (4) impact of biomaterials on the human health. Currently, we are a multidisciplinary research group of about 14 people, with diverse technical backgrounds: postdocs, PhD candidates, research engineers and master students. To strengthen the team, we are now looking to recruit a postdoc with a strong background in Blue Biotechnology or Green Chemistry to develop alternative greener and efficient extraction approaches for obtaining red seaweed compounds (bioactive molecules and biomacromolecules). The postdoc will be in collaboration with the Comité Interdépartemental de Pêche Maritimes et des Elevages Marins (CIDPMEM 64 40) and SIAME (Laboratoire des sciences pour l'ingénieur appliquées à la mécanique et au génie électrique).

Polysaccharides are the major fraction extracted from red seaweeds. Nevertheless, this type of macroalgae also contains a variety of components with functional and biological properties. In this context, the main goal of this project is to develop alternative greener and efficient extraction approaches (sequential separation) for obtaining the integral red seaweed compounds (bioactive molecules and biomacromolecules). Also, the integral utilization/valorization of these raw materials with biological properties of interest for food, cosmetic, medical and pharmaceutical applications is incentivized. From a scientific perspective, this position involves different methods to address the problematic of biomolecules extraction from red algae, purification and characterization. In particular,

chemical, enzymatic and electric treatments will be used to improve efficiency and selectivity of the extraction of structurally complex marine molecules. We will characterize the ensuing products using different analytical methods, optical and magnetic spectroscopies, mass spectrometry, diffraction methods, imaging and biochemical characterization.

The position includes research, teaching duties (64h/year), supervision of undergraduate students and

travel to conferences and meetings with partners/collaborators.

More details : [↓ Temporary Postdoctoral position in Blue Biotechnology](#)

MANTA is hosted by **IPREM** that is a joint Research Unit CNRS/UPPA (UMR 5254) in **Pau** and **Anglet**, France.

Starting date: **April 2021** or as otherwise agreed.

Type of position: Full-time temporary position for 1 year.

For further information about the position, please contact

 Susana Fernandes ([personal page](#))

Please submit your application by 28th February 2021