

Temporary Postdoctoral Researcher in Enzymatic Synthesis of Marine-based Bioconjugates, Biopolymers and Biomaterials

Institute of Analytical Sciences and Physico-Chemistry for Environment and Materials (IPREM)

<https://iprem.univ-pau.fr/fr/index.html>

Université de Pau et des Pays de l'Adour (UPPA), Anglet, France

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Position Responsibilities & Duties:

Our research team is seeking a postdoctoral researcher with a strong background in enzymology and biomaterial. The qualified candidate will explore the enzymatic synthesis to fabricate innovative bioconjugates. Marine biopolymer such as chitin, chitosan, alginate, collagen and gelatin will be used as matrix for bioconjugation. Site-specific ligation of bioactive compounds to marine biopolymer for bioconjugation will be catalyzed by specific enzymes. The candidate will investigate the effect of the biocatalytic modifications on the multiscale hierarchical organization of the bioconjugates. The newly created bioconjugates can be further prepared into nanomaterials with improved bioactivity, biocompatibility and intelligence with potential applications in pharmaceuticals, functional foods, cosmetics, drugs, and biomedicines, etc.

The candidate will be joining a dynamic research group with expertise in biochemistry, enzymology and material sciences. He/she will design innovative and effective investigation strategies to emerge unique findings and answer novel research questions. The candidate will conduct both basic and applied research using state-of-the-art techniques provided in our institute.

This position also offers exciting opportunities for collaboration with academic and industrial partners, teaching (64h/year), supervision of junior students, publication in high impact peer-reviewed journals and participation in national and international conferences.

Host Institute:

The project is hosted by IPREM (Institute of Analytical Sciences and Physico-Chemistry for Environment and Materials) that is a joint Research Unit CNRS (The French National Center for Scientific Research) & UPPA (University of Pau and Pays de l'Adour) in Pau and Anglet, France. IPREM has an extensive and highly competitive research program that encompasses fundamental research in physical chemistry, analytical chemistry and microbiology, as related to the molecular structure of the living world, environmental management and the functional properties of different classes of materials.

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The proposed position will work with research team MANTA in IPREM. In MANTA, we are led by Senior Research Chair Dr. Susana Fernandes, and with a Junior Research Chair Dr. Yi Zhang as well as several research scientists, engineers, technicians, postdoc fellows, PhD and MSc students. In general, we use marine organisms and the marine environment as a source of inspiration for the development of novel functional (bio)molecules and (bio)materials via green processes combining biochemistry,

enzymology and other biotechnology. Our research is funded by large grants from Campus France (Make Our Planet Great Again: MOPGA), ANRT–CIFRE, 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, Lees, Scale and Ceebios.

Qualifications:

- A PhD in Enzymology, Biosynthesis, Biochemistry, Polymer Science, Food Science or similar disciplines.
- Proven academic track record.
- Expertise with enzymology skills, analytical tools (e.g., HPLC, LC-MS, NMR, HPAEC-PAD, HPSEC), bioinformatics used for enzyme characterization and macromolecules structural analyses using solid-state characterization techniques like microscopy, spectroscopy and scattering, as well as the characterization of the macroscopic properties (e.g., rheological and mechanical) of the ensuing materials.
- Excellent communication skills (both written and oral) with the ability to deliver research findings.
- Ability to interact effectively in a multi-disciplinary research environment.
- Proficiency in spoken and written English.

How to apply:

The application dossier must be written in English and should include:

- Detailed CV
- Copy of PhD degree diploma
- A motivation letter describing the applicant's previous research experience and how it is related to the advertised position (maximum 2 pages)
- Contact information of 3 references

Send the required documents to: yi.zhang@univ-pau.fr

Selection process:

- Review of applications will begin on **September 1, 2021** and continue until the position is filled
- The selected candidates will be contacted for a 15 min presentation followed by a 10-20 min interaction

Salary:

Salary before taxes: 2 960 € gross salary per month (according to E2S UPPA index)

Full-time temporary position for 1 year with possibility to extend 1 year more.

Starting date: October/November 2021

For further information about the position, please contact Dr. Yi Zhang, yi.zhang@univ-pau.fr