



AgroParisTech



INRAE



Call for a Post-Doctoral Fellowship of 18 months starting from April/May 1st 2021

in lignin bioconversion and structural analysis

- **ORGANISATION:** Institut Jean-Pierre Bourgin, UMR1318 – INRAE-AgroParisTech (Versailles, FRANCE)
- **DISCIPLINARY FIELDS:** Biotechnology; Analytical chemistry
- **APPLICATION DEADLINE:** 4/03/2021 24:00 – CET
- **EU RESEARCH FRAMEWORK PROGRAMME:** H2020-ERANET CoBioTech
- **PROJECT:** Milimo (“Microbial conversion of lignin to monomers for bio-based plastics using synthetic biology”) <https://www.cobiotech.eu/funded-projects/2nd-call/milmo>
- **CONTEXT OF THE POST-DOCTORAL POSITION:** A research Post-Doctoral Fellowship is open for a Doctor in the Joint research unit UMR 1318 Institut Jean-Pierre Bourgin, AgroParisTech-INRA, under the European Project ERA-IB LIGBIO "A Synthetic Biology approach for bacterial bioconversion of lignin into renewable chemicals" funded by the Horizon 2020 Programme. The Institut Jean-Pierre Bourgin is a multidisciplinary research unit of 300 persons dedicated to plant science and is member of the Excellence Network “Saclay Plant Science”. One of its research areas is the understanding of plant cell-wall formation and properties and their impact on lignocellulose biorefinery processes. Within the “Biomass-Environment-Adaptation-Metabolism” division, the Apsynth team develops chemical and analytical strategies to investigate the reactivity of plant cell-wall phenolic compounds upon biosynthesis or technical processes. The objective of the MILIMO project is to use lignin as low-value substrate for the production of bio-based phenolic monomers of interest for the synthesis of biomaterials. The role of the team is to investigate the structural modifications generated by enzymes and bacterial process in order to help understand the metabolism pathways of the engineered microorganisms.
- **ACTIVITIES OF THE POST-DOCTORAL RESEARCHER:**
 - Interaction with the MILIMO partners to identify the analytical needs and set-up experimental plans;
 - Management of samples and data exchanges involving IJPB;
 - In collaboration with IJPB staff, implementation of enzymatic treatments and analytical technics to investigate the structural modifications of lignins (LC-MS; GC-MS; HPSEC; NMR, IRFT);
 - Development of analytical strategies to elucidate the action mechanisms of new biocatalysts of interest;
 - Contribution to the preparation of scientific reports and publications.
- **CONDITIONS FOR THE APPLICATION:**
 1. **Admission requirements:** PhD in the field of Biotechnology or Analytical chemistry;
 2. **Preferential Experience:** experience in the structural investigation of phenolic compounds; experience in microbial or enzymatic bioconversions;
 3. **Expected skills:** capacity to work in an interdisciplinary and intercultural environment; good oral and written communication in English; sense of organization and planning;
 4. **Fellowship Duration:** 18 months starting from April or May 1st 2021;
 5. **Required Documents:** motivation and presentation letter with indication of the call requirements; copies of PhD and degree certificates; curriculum Vitae;
 6. **Application period:** from February 4th to March 4th 2021.

The application should be sent by e-mail to: stephanie.baumberger@inrae.fr