



## MICRObes for BIOEnergy Production Post-Doctoral position at CNRS (France)

A **24-month post-doctoral position** is available at **CNRS Marseille (France)**.

A 24 months position is available for a highly motivated and skilled postdoctoral fellow in a project involving the discovery of key factors determining the unique reactivity of microbial metalloenzymes for applications in the field of bioinspired chemistry and biofuels.

**Context:** In search for biofuel production and biomass valorization processes, the CO<sub>2</sub> reduction as starting point for hydrocarbon generation appears as an attractive way. Activation of this molecule is known to be a crucial problem but some microorganisms can naturally reduce CO<sub>2</sub> with a high efficiency and in mild conditions via the activity of a specific group of molybdenum and iron-containing enzymes. The post-doctoral fellow will take part to an interdisciplinary project aiming at understanding the mechanism of these enzymes involved in carbon metabolism and energy conversion in microorganisms. The central goal of the project is to identify the molecular factors responsible for the unique reactivity of these molybdenum (or tungsten) containing metalloenzymes in order to develop new class of biocatalysts able to perform reaction of interest in mild conditions. The project will involve high-throughput protein expression, site-directed mutagenesis, enzyme kinetic analysis, advanced magnetic spectroscopies (especially multifrequency EPR and related techniques), electrochemistry, fast kinetic experiments, and modelisation.

This position forms part of a dynamic and successful research collaboration between two labs, Laboratoire de Chimie Bactérienne (LCB CNRS) and Bioénergétique et Ingénierie des Protéines (BIP, CNRS). The two labs located on a large CNRS campus belong to the Mediterranean Institute for Microbiology which offers state-of-the-art core facilities (Mass, NMR, EPR, CD, Proteomics,..) in a highly dynamic and international environment. (<http://www.imm.cnrs.fr>). The position is funded by the Aix-Marseille University Foundation A\*MIDEX (<http://amidex.univ-amu.fr/en>) supporting innovative and interdisciplinary top international level research. The Aix-Marseille University is a world-class research and teaching located in Marseille, a multi-cultural, dynamic city on the Mediterranean coast.

**Requirements:** Candidates must have a recent Ph.D. in biochemistry, biology, biophysics, chemical-physics or similar. Previous experience in biochemistry and biophysics (EPR) of metalloenzymes will be a strong asset. Enthusiasm, the ability for good team work, and a good command of the English language are essential. The applicant will be expected to liaise with microbiologists, physicists, electrochemists and structural biologists since this project forms part of a collaborative network of 4 different labs.

Annual gross salary: 29-34 k€ (depending on professional experience).

**Application:** will include: (i) a cover letter outlining the applicant's relevant research experience and motivation for applying for the position, (ii) a detailed CV including the applicant's degrees, post-doctoral experience if any, and other relevant research qualifications, and (iii) the names and full contact information for three professional references. French people can apply only if they have a sufficient research experience out of France (PhD Thesis or Postdoc).

**The position is available immediately with preferred start dates before July 2015.**

Applications should be sent to: Dr Axel Magalon [magalon@imm.cnrs.fr](mailto:magalon@imm.cnrs.fr) & Prof Bruno Guigliarelli [guigliar@imm.cnrs.fr](mailto:guigliar@imm.cnrs.fr). The closing date for applications is June 1<sup>st</sup> 2015.