



## LABORATORY OF MOLECULAR AND ENVIRONMENTAL MICROBIOLOGY



Are you interested in performing research in the field environmental microbiology?

We offer the opportunity to participate in projects carried out in Laboratory of Molecular and Environmental Microbiology (LMEM) focused on soil microbial functional and genetic diversity after organic waste amendments and other factors.

Responsibilities/Requirements:

We are looking for experienced researchers interested in a 2 year post-doc position funded by a Marie Curie fellowship (IEF or IIF). The candidate is asked to write a Marie Curie proposal in collaboration with us to undertake research on one of the following topics:

**A) Microbial functional and genetic diversity in soil after organic waste amendments**

The aim of the study is to assess the response of microbial functional and genetic diversity to organic amendment and the relationship between the microbial functional diversity and soil carbon availability.

**B) Diversity, biochemical potential and systematic of bacteria and fungi isolated from soils**

The study will include the molecular identification of dominant microorganisms (bacteria and fungi) isolated from soil and evaluation the biochemical potential of selected bacterial and fungal strains.

**C) Application of Nod factors and flavonoids for improvement of nitrogen fixation by legumes**

Knowledge of primary microbial culture including DNA isolation from microorganisms and environmental samples (soil, waste) is required. Moreover, basic knowledge of molecular techniques like PCR, DGGE, sequencing analyses and also Biolog Ecoplate method is required.

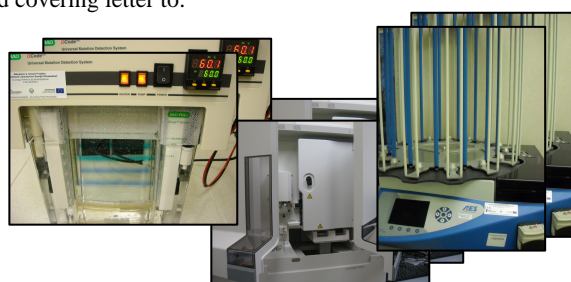
The candidate will have a PhD or at least four years of full-time equivalent experience in the aforementioned research areas. He/she is interested in interacting with an international team and in communicating with our scientific collaborators. To complete a successful application, the candidate has proven his/her scientific excellence by multiple peer-reviewed publications in leading professional journals.

The deadline for applications to LMEM is May 31<sup>st</sup>, 2012. Further information on EU-funded Marie Curie actions is available at: <http://cordis.europa.eu/fp7/mariecurieactions/>

Interested?

If this opportunity appeals to you, please send your full CV and covering letter to:

Dr. Magdalena Frac  
Institute of Agrophysics Polish Academy of Sciences  
Department of Plant and Soil System  
Laboratory of Molecular and Environmental Microbiology  
Ul. Doświadczalna 4, 20-290 Lublin, Poland  
Phone: +48 81 744 50 61 ext. 156  
E-Mail: [m.frac@ipan.lublin.pl](mailto:m.frac@ipan.lublin.pl)  
Keyword: Marie Curie Fellowship



**Laboratory of Molecular and Environmental Microbiology (LMEM)** is research lab, equipped with new and modern instrumentation including among others equipment for microbial diversity analysis (genetic analyzer, real time PCR and denaturing gradient gel electrophoresis system DGGE) (<http://www.ipan.lublin.pl/en/laboratory/index.html>) that could be useful for possible proposal and research.

**Research profile:**

- The study of soil microbial and enzymatic activity
- Evaluation of microbiological state of soil and microbial diversity of soil, organic waste and sewage sludge
- Microbial diagnostics – microorganisms characterization using BIOLOG system (metabolic activity of microorganisms) and microorganisms identification using modern techniques of molecular biology (MicroSEQ) in environmental samples
- Micological research and expertises

**Analyses:**

- Quantitative and qualitative investigation of microbial pollution
- Evaluation of bacterial total number
- Evaluation of total number of fungi and yeast
- Bacteria, yeast and fungi identification using DNA analysis
- Micological analyses of soil and waste

