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| | **20 months Postdoc position at INRA Nancy, France** | |

**Title — MICROBIAL DIVERSITY IN FOREST SOILS**

**Key words:** Bacterial and fungal communities, Forest soil, minerals, wood, Pyrosequencing, DNA, 16S rRNA, ITS, bioinformatics

**Position available —** from September 2014, starting no later than October 1, 2014.

**Project:** We are currently recruiting a motivated young post-doc scientist in the context of a French Labex ARBRE project untitled « **I**mpact of **N**utrient **A**vailability on the diversity, function and functioning of the forest soil **BACT**erial communities: insights from the soil succession of the forest experimental site of Montiers-sur-Saulx». The aim is to monitor by cultivation-independent approaches the structure and taxonomic diversity of the bacterial and fungal communities colonizing different soil microbial habitats such as minerals, rhizosphere, wood and the surrounding bulk soil.

**Candidate —** Should have a PhD (no more than 2 years experience after PhD thesis) in a related field, having experience both with techniques for studying taxonomic bacterial diversity in the environment, especially soil one, and with researches focused on ecological questions. An experience in pyrosequencing and/or Illumina technique and metagenomic/bioinformatic analyses will be suitable. A previous experience with 16S rRNA amplicon based pyrosequencing and bioinformatics analyses will be greatly appreciated. Strong academic background in molecular ecology and soil science is required. Because the project will be conducted at the interface between different microbial habitats (minerals, soil, rhizosphere, wood), the candidate will have to adapt/optimize the analytical methods. He/she should have demonstrated skills in verbal and written communication (writing reports and publications), ability to establish and maintain good interpersonal relationships.

**Location —** INRA Research Center of Nancy, UMR INRA-Lorraine University "Tree-Microbe interactions", CHAMPENOUX, FRANCE. (http://mycor.nancy.inra.fr/IAM/). The Tree-Microbe Interaction Department is an interdisciplinary research lab with excellent facilities in bacteriology/microbial ecology/molecular biology and bioinformatics (GS Junior pyrosequencer; ultracentrifuge; epifluoresence, confocal and laser dissection microcospes).

**Living in Nancy —** The INRA Center is located 15km (Champenoux; accessible by bus or car) far from Nancy: middle size city in North-eastern France, attractive in terms of cultural activities, peaceful country side with a lot of forests, close proximity to the Vosges mountains, to Belgium, Luxembourg and Germany, 01h30 far from Paris using the high speed TGV train.

**Salary —** Annual gross salary of 28 782 EUR. Expected net salary around 1 940.47 EUR/month including health and unemployment benefits.

**Application —** Interested candidates are encouraged to send as soon as possible by e-mail to Stéphane UROZ (uroz@nancy.inra.fr, tel +33383394081), a cover letter outlining previous experience, a *curriculum vitae* and the name of up to three colleagues with first-hand knowledge of their academic

accomplishments/post graduate work experience. Informal enquiries can be addressed to the same e-mail address. The application must be submitted by the **closing date of 1 july, 2014**.

**Selected publications of the team**


- Buée, M., Reich, M., Murat, C., Morin, E., Nilsson, R.H., Uroz, S. and Martin, F. (**2009**) 454-pyrosequencing analyses of forest soil reveal an unexpectedly high fungal diversity. ***New Phytologist***. 184:449-456.
- Calvaruso C., Turpault M-P., Leclerc E., Ranger J., Garbaye J., Uroz S., and Frey-Klett P. (**2010**) Forest trees influence distribution of the mineral weathering bacterial communities from the Scleroderma citrinum mycorrhizosphere. ***Appl. Environ Microbiol***. 76:4780-4787.
- Uroz S., Buée M., Murat C., Frey-Klett P., Martin F. **(2010**) Pyrosequencing highlight of the contrasted bacterial diversity occurring in forest soil: comparison of the oak rhizosphere and the surrounding soil. ***Environmental Microbiology Reports***. 2: 281-288.
- Uroz, S., Turpault, M.P., Delaruelle, C., Mareschal, L., Pierrat, J-C. and Frey-Klett, P. (**2011**) Minerals affect the specific diversity of forest soil bacterial communities. ***Geomicrobiology Journal***. 29:88-98.
- Uroz, S., Oger, P., Lepleux, C., Collignon, C., Frey-Klett, P. and Turpault, M-P. (**2011**b)Bacterial weathering and its contribution to nutrient cycling in temperate forest ecosystems. **Research in Microbiology** . In press
- Uroz, S., Oger, P.M., Morin, E.. and Frey-Klett, P. (2012) Distinct ectomycorrhizospheres share similar bacterial communities composition as revealed by pyrosequencing-based analysis of 16S rRNA genes. **Applied Environmental Microbiology**. 78:3020-3024
- Uroz, S., Ioannidis, P., Lengelle, J., Cébron, A., Morin, E., Buée, M., Martin, F. Functional assays and metagenomic analyses reveals differences between the microbial communities inhabiting the soil horizons of a Norway spruce plantation. **Plos ONE.** 8:e55929.
- Uroz, S., Tech, J.J., Sawaya, N.A., Frey-Klett, P., and J.H.J. Leveau. Structure and function of bacterial communities in ageing soils: Insights from the Mendocino ecological staircase. **Soil Biology and Biochemistry**. In press.