

**PhD scholarship:** in Development of enzyme based assays of functional diversity in soil and methods for monitoring expression of genes codifying enzymes.

Department of Plant, Soil and Environmental Sciences, University of Firenze

**ESR 9, 3 years starting 01 June 2012 to 31 May 2015**

Deadline for applications 15 May 2012

Soil is characterised by many microbial habitats with hundreds of thousands of different microbial species in a few grams and it is a vital component contributing to Ecosystem services. Microbial functions are at the base of soil functioning and are often determined by enzyme activities. In this project some nucleic acid sequences codifying urease, alkaline and acid phosphomonoesterase, protease and  $\beta$ -glucosidase will be monitored and related to the enzyme activities of soil. The project aims to better understand the origin of enzymes in soil and it will involve the use of both molecular and classical techniques.

The selected candidate will use a combination of high throughput technologies to detect genes encoding enzymes based on DNA and RNA. The work involves nucleic acids extraction from soil, their purification and amplification with degenerated primers and sequencing of the target sequences.

The position is funded for 3 years through the project approved by the European Commission "Support for training and career development of researchers" TRAINBIODIVERSE - FP7 Marie Curie Initial Training Network. The project will be carried out at Section of Soil Biochemistry, Department of Plant, Soil and Environmental Sciences, University of Florence. For more information please visit: [www.unifi.it/dipsa](http://www.unifi.it/dipsa).

We are looking for one expert biochemist or microbiologist with documented experience in molecular and biochemical techniques applied to soil.

M.Sc. in, microbiology, biochemistry, molecular biology or similar relevant discipline.

Experience of standardised sampling methods and nucleic acid and protein isolation.

Documented experience with molecular tools including Q-PCR

Fluency in English.

You will be able to engage in teamwork within the group and our collaborators

Recruiting is in accordance with the European rules for Marie Curie Initial Training Networks. Early-stage researchers can be of any nationality. They must be, at the time of recruitment by the host organisation, in the first four years (full-time equivalent) of their research careers and have not yet been awarded a doctoral degree. This is measured from the date when they obtained the degree which would formally entitle them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate is envisaged.

Furthermore, at the time of recruitment by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organisation for more than 12 months in the 3 years immediately prior to the reference date. Short stays such as holidays and/or compulsory national service are not taken into account.

An assessment committee will be appointed to evaluate the applications. Applicants will be notified of the composition of the committee and will receive the part of the evaluation that concerns her/him. The final selection of one successful candidate will be made by Professor Paolo Nannipieri, based on the recommendations of the assessment committee. The selected candidate will then be requested to formally apply for enrolment as a PhD student at the PhD School Environmental and Agricultural Sciences of the University of Florence.

Terms of appointment and payment are in accordance with the European regulations and with the Grant Agreement Number 289949 "Support for training and career development of researchers" TRAINBIODIVERSE.

Salary for the ESR is expected to be about Euro 158.733,12 for three years including Monthly Living allowance and Mobility Allowance. The salary will be specified in the employment contract taking into account the personal status of the selected candidate with reference to his/her family charges and family mobility allowance. Researcher will be appointed under an employment contract with full social security coverage under national applicable legislation.

The University of Florence wishes to reflect the diversity of society and welcomes applications from all qualified candidates regardless of personal background.

**The application must contain:**

Motivated letter of application

Curriculum vitae

List of publications

Transcript of university examinations (in English)

Contact details of 2 persons for references.

The form, together with appendices requested in that form and above should be e-mailed as a single PDF-file to [paolo.nannipieri@unifi.it](mailto:paolo.nannipieri@unifi.it) Please include in the subject field "your name - PhD scholarship in "Development of enzyme based assays of functional diversity in soil and methods for monitoring expression of genes codifying enzymes ". In addition, a signed hardcopy of the application must be posted to Prof. Paolo Nannipieri, DiPSA, P.le delle Cascine 28, 50144 Firenze, Italy. The deadline for applications is May 15, 2012 at 12:00 noon Italian local time.

Eligibility criteria of Marie Curie Initial Training Networks apply. Only applicants who comply with these conditions will be considered. Details can be found on <http://www.trainbiodiverse.com/eligibility-criteria>

Applications received after the deadline, or with insufficient documentation or otherwise not complying with the above requirements, may not be considered. It is expected that the selected candidate will be enrolled at the PhD School of Environmental and Agricultural Sciences as soon as possible and no later than the 1<sup>st</sup> June 2012.

For further information please contact Professor Paolo Nannipieri [paolo.nannipieri@unifi.it](mailto:paolo.nannipieri@unifi.it)