

Vacancy: PhD position “Ecology and Molecular biology of bacterial adaptation to pesticides” at the Division of Soil and Water Management, KU Leuven, Leuven, Belgium

A PhD position is open at the Division of Soil and Water Management on the molecular biology and ecology of bacterial adaptation towards pesticide biodegradation in pesticide contaminated environments. The PhD is held within a research project supported by the Fonds voor Wetenschappelijk Onderzoek (FWO) of Flanders and performed within a collaboration between the Division of Soil and Water Management KU Leuven (Prof. Dirk Springael), the Centre of Microbial and Plant Genetics KU Leuven (Prof. René De Mot) and the research group Data integration and Biological Networks UGent (Prof. Kathleen Marchal). The project aims at a better understanding of the bacterial adaptation to pesticide metabolism by examining to what extent preconditioning with a first pesticide compound affects the evolutionary pathways for the acquisition of biodegradation of a novel structurally related pesticide. The study includes a profound analysis of the genetic mechanisms involved in the acquisition of the catabolic capacities in microbial communities in pesticide treated agricultural soils and biofilters used for on farm treatment of pesticide contaminated wastewater, using amongst others, an innovative metagenomic approach involving nucleic acid based Stable Isotope Probing and Next Generation Sequencing. Candidates must have a Master degree in bio-engineering (with relevant specialization) or in molecular biology. Experience with molecular biology, microbial community analysis and/or environmental microbiology during for instance the Master thesis is an advantage. The position is for 4 years starting from around half September 2015 - beginning of October 2015.

Interested candidates should send their application to Prof. Dirk Springael (Tel: ++ 32 16 32 16 04; e-mail: dirk.springael@ees.kuleuven.be) preferentially by e-mail before August 31, 2015. The application must contain (1) a curriculum vitae, (2) publications record, (3) a motivation letter, and (4) contact details of 2 persons for references.