Postdoctoral Position on the Plant Microbiota

Job offer from September 6th, 2017

The Max Planck Institute for Plant Breeding Research (MPIPZ) in Cologne, Germany invites applications for an ERC-funded postdoctoral position in the field of microbial ecology, plant-microbe interactions and functional genomics. The position is available in the Multitrophic Plant-Microbe Interactions group headed by Dr. Stéphane Hacquard for an initial period of two years, with the possibility of extension.

Background / Objectives

In the Multitrophic Plant-Microbe Interactions group, we aim at understanding the fundamental mechanisms that underlie the structure and the functions of multi-kingdom microbial consortia colonizing plant roots. By combining microbial community profiling data from natural A. thaliana populations, with the use of reference microbial culture collections and gnotobiotic plant systems, we dissect how both host-microbe and microbe-microbe interactions impact microbial community structure and plant health. We are also generating extensive microbial genome resources that will serve as key resources to identify the genetic determinants of microbial adaptation to plant roots and to interpret metatranscriptomic profiles of artificial microbial consortia.

The initial project of the selected candidate will include the reconstitution of the microbiota of Arabidopsis roots in gnotobiotic plant systems using genome-sequenced microbial isolates (bacteria, fungi, oomycetes), the development of a protocol for metatranscriptome profiling of synthetic microbial consortia, and the analysis of the corresponding metatranscriptomic signatures during root colonization or upon perturbation. The project aims at providing novel insights into the molecular mechanisms and the functions that drive the establishment of multi-kingdom microbial consortia on plant roots.

Our requirements

In addition to a PhD in microbial ecology or molecular plant-microbe interactions, the applicant should have solid knowledge in the use of Linux/Unix and R. The position requires a combination of wet lab expertise (microbiology, molecular biology) and bioinformatics/computational biology (microbial genomics and meta-transcriptomics). A previous experience on host-associated metatranscriptomics is highly appreciated, but not compulsory. The candidate must be able to design her/his own experiments and analyse complex biological datasets. The proven ability to work in a team at the interface between biology and bioinformatics is essential. Very good organizational and communication skills are desired. Good command of English language, the working language of our group, is required.

Payment / Position

The position is available immediately. Selected candidates will be invited for interview. Working hours are fulltime; Payment and benefits are according to German TVöD-Bund. The Max-Planck society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

Your application

For questions concerning the postdoctoral project please contact Dr. Stéphane Hacquard. Please email an application letter clearly stating why you are applying for the position, including curriculum vitae, list of publications or similar achievements, and at least two academic letters of recommendation until October 30, 2017:

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