



Department of Plant-Microbe  
Interactions

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## **PhD position: Structure-guided analysis of a plant immune regulatory protein complex**

Applications are invited to join a project studying molecular interactions and conformational transitions underpinning the function of a central *Arabidopsis* immune regulatory protein, EDS1. In collaboration with Karsten Niefind's protein structural chemistry group (Institute of Biochemistry, University of Cologne) we recently solved the crystal structure of EDS1 as a soluble heterodimer with one of its signalling partners, SAG101. The student will join Jane Parker's lab at MPIPZ to undertake a structure-guided analysis of EDS1-SAG101 complexes. This will involve measuring physico-chemical properties and molecular dynamics of mutated forms and examining protein interactions, localisations and defence signalling functions of protein variants in plant cells. The student will also have the opportunity to work with protein docking modellers to explore protein-ligand binding which we hypothesize is a key step in EDS1 signal relay. The project is funded within SFB 635 (Posttranslational control of protein function: <http://www.sfb635.uni-koeln.de/>), providing an excellent framework to interact with other groups studying various aspects of protein molecular structure and function in different systems. MPIPZ is a world premier site for research on fundamental processes in plant biology. It offers an international environment with excellent laboratory and bioinformatics infrastructures and a new genome centre. The working language is English. The student will join the International Max Planck Research School (IMPRS). Applicants must have a strong academic record in the areas of protein biochemistry, plant biology and/or plant-microbe interactions and ideally will have completed a Masters (or Diplom) project in protein biochemistry/molecular function. Apply by email to our departmental office (Frau Ute von Ciriacy; [ciriacy@mpmpz.mpg.de](mailto:ciriacy@mpmpz.mpg.de)) with a short letter describing your research interests and CV with names and contacts of at least two academic referees. Informal inquires can also be made to Jane Parker by telephone, email or a visit. The planned start date is Jan/Feb/March, 2012.

