Swedish University of Agricultural Sciences announces the appointment of a

1 PhD student in Biology

Department of Plant Protection Biology, Faculty of Landscape Planning, Horticulture and Plant Production Science

**Phytophthora and Alternaria interactions with potato**

Today, many of the fungicides in Swedish agriculture are used for potato crops, even though potatoes comprise just over one percent of cultivated land. This is largely due to the diseases late blight, caused by *Phytophthora infestans* and early blight, caused by *Alternaria* species. Consequently, there is a need for new sources of resistance in order to counteract the continued evolution of these pathogenic microbes and to develop sustainable agricultural practices. Pivotal in this work is to better understand the plant-pathogen interaction and the defence response mechanisms in potato.

To identify candidate key players in plant-pathogen interactions for further functional assessments, we have generated RNA, quantitative proteomics and phospho-proteomics data from different life stages of the pathogens as well as from potato genotypes with varying resistance. The mechanisms at play will be further elucidated and validated by several multispecies molecular and biological assays. Experiments are carried in controlled green-house environments and in field trials, and both genetically modified (GM) and non-GM plants will be used.

We seek a student who wants to explore a career in plant science. The successful applicant will partly be funded by the foundation for environmental strategic research and The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning. The research group forms a part of Plant Link, a Centre between the Swedish University of Agricultural Sciences and Lund University. The project will be supervised by a team including Prof Erik Andreasson and Dr. Laura Grenville Briggs.

**Qualifications**

A master degree, or similar university higher
degree, in molecular biology, plant science, plant pathology or bioinformatics, preferably including functional genomics. Knowledge of bioinformatic tools and computational methods to handle, explore and visualize large datasets are highly valued. Experiences working as part of a laboratory research project and/or of plant handling are preferable. Good knowledge of spoken and written English is required.