PhD candidate in plant breeding and phytopathology (100%)

Lifecycle and control of *Colletotrichum lupini*, the causal agent of anthracnose, in white lupin breeding

The overall goal of the PhD project is to identify cultivars of white lupin (*Lupinus albus* L.) with resistance against the seed-borne pathogen *Colletotrichum lupini*, the causal agent of anthracnose. White lupin is a valuable leguminous crop grown worldwide and suitable for Swiss growing conditions. However, the anthracnose disease poses a major challenge in lupin cultivation causing substantial or near-total yield loss. Currently, there are no resistant varieties available and effective seed treatments are limited (especially for organic production systems). Thus, the main objectives of the PhD project are:

1. To investigate the **virulence and spatio-temporal dynamics** of *C. lupini*
2. To develop and apply **screening systems** to generate pre-breeding material with enhanced resistance against anthracnose
3. To improve **seed health** by (a) identifying effective seed treatments and (b) investigating modes of action of potential microbial antagonists

The PhD candidate will be part of the FiBL programme „Breeding research on anthracnose tolerance and intercropping of lupin". S/he will be located at the Plant Breeding group of the Research Institute of Organic Agriculture in Frick (www.fibl.org) and enrolled in the doctoral programme of the Institute of Phytomedicine (Prof. Ralf Vögele) at Hohenheim University.

The project will begin on **April 1, 2018** (or upon agreement).

A successful applicant will have a Master's degree (or equivalent) in Agricultural Sciences or related fields. Experiences with design and statistical analysis of pot or field experiments are mandatory. Strongly advantageous are competencies in phytopathology, molecular biology and seed treatment methodologies. Further competencies include excellent organisation and communication skills, proficiency in written and oral English, high self-motivation and the ability to work both independently and as a team player in a multi-disciplinary, international research environment.

Contact person	Dr. Pierre Hohmann, pierre.hohmann@fibl.org, +41 (0)62 865 0476
Application	Applications with a letter describing your background and motivation, the CV (incl. publication list), two reference letters and copies of certificates should be submitted electronically until **February 28, 2018** to stefan.williner@fibl.org.

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