RESPONSE – Open PhD Position

Open PhD Position in

RESPONSE (GA No. 847585)
«RESPONSE - to society and policy needs through plant, food and energy sciences»
H2020-MSCA-COFUND-2018

ESR 12

Exploitation of genomic resources to spike forage breeding programs.

Within the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 847585, ETH Zurich is offering a 36-month PhD position for an early-stage researchers (ESR) in in the area of sustainable food systems.

Job Description

We are looking for a doctoral student working on forage grass genomics and bioinformatics. The project will develop state-of-the-art genomic resources in forage grasses and specifically aims at: i) converting a raw NRGene F. pratensis (meadow fescue) diploid genome assembly into a phased chromosome-scale pseudogenome; ii) annotating the genome to high-quality standards using transcriptome data, ab initio prediction, and protein homology-based approaches; and iii) conducting full-genome comparative analysis with related grass species to identify core, dispensable and unique genome elements in the Festuca and Lolium species complex; iv) analysing segregant populations from crosses between the sequenced meadow fescue and several other fescue genotypes.

A planned secondment of 12 months at DLF Seeds A/S (Denmark) in 2021-2022 is part of this project. During this secondment, the ESR will produce new data (optical map, transcriptomes, genotyping populations) and deploy available and develop novel protocols and software. To achieve this, the ESR will be working closely with Dr Dario Copetti (Molecular Plant Breeding, ETH Zurich), Ingo Lenk (Head of Genomics Research Division at DLF) and their teams.

The anticipated results/outcomes of this project are a high quality assembly and annotation of meadow fescue. The will be communicated in /shared with the scientific community in peer-reviewed publications, international meetings, and to farmers during outreach events.

Interested / Your profile

To perform successfully, potential candidates should have a strong interest in bioinformatics, genomics, and plant breeding. Good knowledge of genome biology and at least a basic knowledge of plant breeding methods are required. Familiarity with command line and basic
bioinformatics skills are expected. Experience in coding (Perl, Python, R, ...) will be a plus. Good writing and communication skills are also essential.

**Eligibility:** Early stage researcher in the first 4 years (full-time equivalent) of their research careers, including the period of research training, starting at the date of obtaining the degree which would formally entitle them to embark on a doctorate either in the country in which the degree was obtained or in the country in which the initial training activities are provided.

At the time of recruitment (for call 2 = July 1, 2020) by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc.) in Switzerland for more than 12 months in the 3 years immediately before the reference date. Compulsory national service and/or short stays such as holidays are not taken into account.

**Language requirement:** English / Proficient oral and written English skills are expected. German and/or Danish are desirable but optional.

**Main Research Field:** Plant genomics

**Sub Research Field:** Forage grass genomics, bioinformatics

RESPONSE is open to applicants of any nationality.

**For submitting your online application:** [https://join.lszgs.uzh.ch/](https://join.lszgs.uzh.ch/) (select PhD Program Science and Policy). The online application should contain all information as indicated by the application portal. Moreover, the following documents have to be uploaded under “further documents”: 1) a letter of motivation to join a) the RESPONSE doctoral programme and b) to apply for this specific positon (ESR xx), 2) a comprehensive tabular CV, and 3) transcripts of records. If you apply for more than one RESPONSE position, please refer to them in your letter of motivation. Please note that we exclusively accept applications submitted through our online application portal. Applications via email or postal services will not be considered.

**Benefit**

We are offering an interesting position at the interface of science and policy. While working in an international, interdisciplinary and innovative research environment at ETH Zurich, the ESR will be jointly co-supervised by the Molecular Plant Breeding group at ETH Zurich and the DLF Seeds A/S (Denmark).

The complete 36 months will be under 100% working contracts.

The PhD salary follows the regulations of ETH Zurich and will be according to EU regulations for Marie Skłodowska-Curie Early Stage Researchers. The monthly gross salary will not be lower than CHF 3920.

The successful candidate will be matriculated and will have a working contract at ETH Zurich. He/she will work in Switzerland. The secondment will take place in Store Heddinge, Denmark.

Expected starting date of the working contract: **01.09.2020**
For questions and further information on the position, please contact (Dario Copetti at dario.copetti@usys.ethz.ch), no applications.

Further information

RESPONSE Doctoral Programme (DP): «RESPONSE - to society and policy needs through plant, food and energy sciences» is funded by the European Union’s Horizon 2020 research and innovation program under the Marie Skłodowska-Curie Grant Agreement No 847585. RESPONSE DP builds on the academic expertise of three world-leading institutions - ETH Zurich, University of Zurich and University of Basel. The successful candidate will be integrated in the research network and infrastructure of the internationally renowned competence center Zurich-Basel Plant Science Center.

All RESPONSE ESRs will follow the PSC PhD Program Science and Policy that is unique in its kind. Through the curriculum of this program, ESR will be trained in the communication of scientific evidence to policy-makers and the public; the involvement of different stakeholder groups as well as in policy development and endorsement in Europe and at global scale.

For project, programme and application details:

Working location: ETH Zurich, Switzerland and Strore Heddinge, Denmark
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