

## PhD STUDENT FOR A *MARIE CURIE* FELLOWSHIP (ref. 19-022-03694)

CREAF is seeking for a PhD student - Early Stage Researcher (ESR8), to be beneficiary of a *Marie Skłodowska-Curie* ITN fellowship. This predoctoral researcher will be part of the *FutureArctic* project (“A glimpse into the Arctic future: equipping a unique natural experiment for next-generation ecosystem research”), funded from the European Union’s Horizon 2020 research and innovation programme, under the *Marie Skłodowska-Curie* grant agreement No 813114.

The labour contract linked to the fellowship is expected to start in September 2019, with a total duration of 36 months.

### TASKS

Your PhD project: “Plant and soil metabolome in a warming subarctic”

Soil microbiota and “soil metabolome” is expected to change with warming. Stress protection in plants changes their metabolic activity. Studying the metabolome profile will allow assessing changes in C and nutrient use and the effects on element stoichiometry, as well as plasticity and adaptation capacity of different species. The PhD student will use HPLC-MS/MS, GC-MS/MS and P31-NMR metabolome profile analysis to determine the most active metabolic pathways. She/he will examine whether short-term and long-term warming allow assessing the role of evolutionary processes in the metabolome and also the elementome. She/he will conduct a multidimensional analysis of metabolic pathways triggered in different species and soil under different temperatures, explaining shifts in plant community functioning, soil functioning and carbon and nutrient metabolism, and distinguishing short-term plasticity and long-term adaptation.

### Secondments

She/he will be seconded by other *FutureArctic* partners 1, 3 and 4 (UCPH, UIBK and IMEC), to link metabolomics and carbon balances and figure it out the source of that carbon. She/he will also use machine-based learning and developing algorithms for complex metabolomics analysis (with ESR 8 and 13).

### REQUIREMENTS

- Applicants must hold an MSc or equivalent in the field of environmental sciences, biology, chemistry or a related discipline.
- Applicants must have an ability to understand and express themselves in both written and spoken English, to a level that is sufficiently high for them to derive the full benefit from the network training.
- Applicants must be eligible to enrol on a PhD programme at the host institution (CREAF - *Universitat Autònoma de Barcelona*).
- H2020 MSCA Mobility Rule: researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organisation (Spain) for more than 12 months in the 3 years immediately before the recruitment date. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status are not taken into account.
- H2020 MSCA eligibility criteria: Early Stage Researchers (ESRs) must, at the date of recruitment by the host organisation, be in the first four years (full-time equivalent research

experience) of their research careers and have not been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when the researcher obtained the degree entitling him/her to embark on a doctorate (either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started or envisaged).

## SELECTION PROCESS

The selection process is led by the project research team, and will be overseen by the Management Office and the Human Resources Area of CREAF. This process consists of:

1. Admission of candidates: **applicants must submit a résumé and a cover letter (maximum 500 words), by e-mail to [Josep.Penuelas@uab.cat](mailto:Josep.Penuelas@uab.cat) and [rosa.casanovas@creaf.uab.cat](mailto:rosa.casanovas@creaf.uab.cat) until 26 July, 2 PM, indicating the reference code of the offer.**
2. Pre-selection: determination of compliance with the minimum requirements of the offer.
3. Selection: assessment of the preselected candidates by scoring based on objective criteria.
4. Final decision: in case of finding the suitable person, the election will be formally communicated to him/her, and the identification of the chosen person will be published on CREAF job openings section.

## ADDITIONAL INFORMATION

For additional information about the research project and this individual position, please contact: Prof. Dr. Josep Peñuelas, e-mail [Josep.Penuelas@uab.cat](mailto:Josep.Penuelas@uab.cat)