



About Fera

Fera Science Ltd (Fera) is a leading UK centre for sustainable agriculture and plant protection research, providing truly interdisciplinary applied research for commercial and government customers. Our overarching purpose is to support and develop a sustainable food chain, a healthy natural environment, and to protect the global community from biological and chemical risks. Fera and the NaToxAq Marie-Curie Initial Training Network offers:

2 x Early Stage Researcher (ESR) positions

Background

NaToxAq is a multidisciplinary European Training Network (ETN) funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 722493 and comprises 21 leading universities, research institutions/agencies, and water enterprises in 7 European countries, which aim to expand insight on natural toxin identity, analysis, fate, dissipation, removal during water treatment, health effects, and risk assessment under the impact of climate change, to ensure safe and healthy waters for European consumers. Further information on the NaToxAq project and consortium partners can be found at: www.natoxaq.eu.

1. Land cover mapping – plant toxin production and impact of policy (ESR 15)

This research position will seek to establish the spatial coverage of land cover relevant to natural toxin production, and in relation to water bodies. The ESR will conduct a high-level review of GIS risk-assessment tools to gain a broad understanding of the different approaches and to identify the approach that will be most suitable for the current project given the availability of data. The ESR will seek to include measurements of the biomass of the vegetation. ESR15 will identify likely land cover changes of vegetation as influenced by policy and/or other drivers. This information will be used to develop contrasting scenarios of land use which will then be used to predict the impact of these drivers on potential toxin contamination of drinking water sources in close collaboration with ESR16 using the information from their database. ESR 15 will actively collaborate with all the other ESRs to integrate the findings of the project overall.

Main duties

The post is a full-time research position (approx. 18 months) and duties will include:

- Searching existing literature, datasets and models to extract relevant information on natural toxins
- Creating maps of land cover related to toxin production/fate
- Estimating land use scenarios in response to policy change/other drivers
- Collaborating with other NaToxAq ESRs to align research
- Presentation of findings at seminars/conferences and writing scientific and/or commentary articles for e.g. journals, webpage

Experience

Applicants must hold a degree (typically a 2:1 or 1st equivalent) in environmental sciences or a related field. Preference may be given to applicants with a Masters qualification, or equivalent workplace experience. Experience in GIS and/or remote sensing would be advantageous. Fluency in English (working language) is required.



2. Natural toxin database and risk assessment (ESR 16)

This research position will expand an existing natural toxin database (<https://pubs.acs.org/doi/10.1021/acs.jafc.8b01639>) to include plant toxins from across Europe and reported medicinal properties by datamining a wide range of data sources, including citizen science. Information in the database will be designed to align with the land cover mapping work of ESR15 to apply a simple model to predict relative toxin transfer to water and hence concentrations. ESR16 will assess the impact of land use changes on predicted concentrations of toxins in water, in conjunction with ESR15, and propose mitigation measures.. ESR16 will actively collaborate with all the other ESRs to integrate the findings of the project overall.

Main duties

The post is a full-time research position (approx. 18 months) and duties will include:

- Searching existing literature, datasets and models to extract data on natural toxins
- Further development of an existing natural toxin database
- Adapting a simple toxin export model in collaboration with ESR15
- Collaborating with other NaToxAq ESRs to align research
- Presentation of findings at seminars/conferences and writing scientific and/or commentary articles for e.g. journals, webpage

Experience

Applicants must hold a degree (typically a 2:1 or 1st equivalent) in environmental sciences or a related field. Preference may be given to applicants with a Masters qualification, or equivalent workplace experience. Experience in environmental risk assessments and/or an understanding of the fate of chemicals in soil/water would be advantageous. Fluency in English (working language) is required.

Mobility conditions

To be eligible, applicants for Early-Stage Researcher fellowships must have **no PhD** and **less than 4 years** full-time equivalent research experience from the award of the degree which entitles them to undertake a doctorate. Applicants can be any nationality, but they must comply with the eligibility requirements for Marie Skłodowska Curie Fellowships. Further information on eligibility can be found at: http://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl-msca-itn_en.pdf (Pg 6)

Duration and place of employment

Each ESR will be employed by Fera for approximately 18 months with an anticipated start date of 01 December 2018. The ESR will be based at Fera, Sand Hutton, York. Secondments to other NaToxAq institutions for 1 – 2 weeks are anticipated, and the ESRs will work closely with Yorkshire Water. Attendance of annual training course(s) over a 1-2 week period at host organisations within the NaToxAq network is also expected.

Benefits

Situated just outside of the beautiful city of York, Fera staff enjoy a purpose-built facility with state-of-the-art facilities, a nursery, onsite gym, staff restaurant and parking. The site is just 7 miles from the historic city centre with its excellent transport links and varied attractions, and within easy commuting distance of the many thriving Yorkshire towns and villages that are situated around the city.



Fellows will receive a contract of employment as a full-time researcher at Fera for the relevant period of their appointment, which will include applicable benefits in the host country. All fellows will complete a comprehensive personalised career development programme, with targeted training measures, and participate in a range of network events. Fellows will benefit from interdisciplinary cooperation and interaction within the network, providing them with the best preparation for a successful career in either academia or industry. Marie Curie Fellowships for Early-Stage Researchers provide competitive salaries in line with H2020-MSCA-ITN-2015. Additional allowances for mobility, travel and career development are also provided.

Application process

Applications must be completed in English. Please send a copy of your CV specifying: the post for which you are applying, details of modules taken with associated grades (Transcript), an abstract of the BSc and MSc thesis (if applicable) or any previous research project, evidence of English language competence, and a covering letter explaining why you are applying for the position, to carmel.ramwell@fera.co.uk.

The closing date for applications is 21 October 2018. The anticipated start date is 01 January 2019.

For further information about the position please contact the principal supervisor, Dr Carmel Ramwell: carmel.ramwell@fera.co.uk