



## Job Advertisement | Postdoctoral Research Associate

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### Overview

**Rhizocore Technologies** is an applied mycology startup (based at the **Roslin Innovation Centre** in Edinburgh) building the world's largest commercial fungal strain library for the discovery, protection and utilisation of fungal biodiversity for environmental and social benefit. Rhizocore has a forestry product on the market using fungi to grow healthier, more resilient forests that are less susceptible to drought and that sequester more carbon. We are now researching the potential application of fungi to tackle environmental pollution (mycoremediation).

We are starting an Innovate UK-funded **2 year project** in partnership with **The James Hutton Institute**, **Harper Adams University** and **The Cheshire Wildlife Trust**, which aims to develop novel and effective fungal-filter technology that can be deployed in agricultural settings to remediate watercourses affected by agricultural pollution (e.g. Nitrates and Phosphates). In order to achieve this, we are hiring two postdoctoral researchers to support the development of this novel mycoremediation technology; one based at The James Hutton Institute, one based at Harper Adams University.

**This post will be based at The James Hutton Institute (JHI), Aberdeen**, an internationally recognised research centre based in Scotland tackling challenging problems including the environmental quality of soils and freshwaters under challenges of land use and climate, although with a requirement to undertake field work supported by the wider team in East Scotland, and to visit and meet with partners in Scotland and England.

Our ideal applicant will have a PhD in environmental, soil or water sciences with experience of field monitoring, experimentation, laboratory analysis and data evaluation. The postholder will be involved in carrying out on-farm field evaluations (in E. Scotland) and experiments (in Aberdeen) involving fungal filter pre-trials in artificial channels, then pot experiments linking nutrient recovery (to plants) with runoff water quality, both as team member and leader of some activities. Knowledge of water and soil chemical and hydrological processes in a catchment context is essential, as is the ability to manage data quality from field monitoring and experiments. This post-doc opportunity will suit someone eager to understand interdisciplinary catchment pollution, develop nutrient capture and reuse working between academia and industry to answer global environmental quality challenges. A full job description is provided in **Section A**.

The post holder must have the Right to Work in the UK, and be able to accommodate flexible working arrangements. A full candidate specification is provided in **Section B**.

Equality of opportunity is factored into all our recruitment decisions, and we welcome applicants from a diversity of backgrounds and will guarantee to interview all disabled applicants who meet the essential criteria for this post.

If you are interested in this position, please follow the guidelines in **Section C**, ensure the checklist is completed, and send all necessary documents to the provided email address. We look forward to hearing from you!

No agencies please.

## Section A: Job Description

We require an experienced soil and water biogeochemist or catchment scientist with field and laboratory knowledge of catchment processes to support this Innovate UK funded research project. The candidate will set up and run several experiments sequentially at the James Hutton Institutes (JHI) main site in Aberdeen and undertake field trials on a farm in East Scotland. Field monitoring is also being undertaken in England, led by Harper Adams University and Cheshire Wildlife Trust and the candidate will occasionally travel with the team to see other trials and share knowledge across project activity centres.

There will be an expected element of problem solving, designing and adapting some equipment when developing experiments and real on-farm field trials. Samples will need to be prepared for analysis and involvement in the analysis side of the role is encouraged, but the person will be part of a wider support team. In the immediate workplace this includes a field work and lab team, supervisors and fellow academics who you will work with directly. In the wider project the team extends to Rhizocore Technologies researchers and other partners, with whom you will get experience.

Having two post docs on this project (one at JHI [**this post**], another at Harper Adams) will allow peer support in sharing ideas and progress. Experience and training will be gained in wider catchment measures for landscape mitigation on farms. We need a self-reliant person capable of organising and undertaking year-round fieldwork and experiments out of doors, maintaining high standards of data quality from field and lab investigations, working up data including statistical analyses, communicating findings across wider disciplines of catchment sciences, industry partners and stakeholders.

<b>Hours of work:</b>	Full time
<b>Contract type:</b>	Temporary - 24 months
<b>Contracted hours:</b>	34 per week
<b>Salary:</b>	£40,000 per annum
<b>Location:</b>	The James Hutton Institute, Aberdeen
<b>Reports to (position):</b>	Marc Stutter (JHI) and Philip Schuler (Rhizocore)

**Closing date:** 30NOV2024  
**Interview dates:** 12DEC2024, 17DEC2024  
**Start date:** January 2025

## Accountabilities

1. Leading the setting up of an experimental system of artificial mini stream channels within which different combinations of fungi with substrate media (developed in a parallel project work package) will be installed and multi-week experiments performed using polluted water.
2. Collection of the samples from the artificial channel experiments, troubleshooting any issues, sample preparation for analysis and working with the wider staff at JHI to get samples analysed.
3. Leading the setting up of a soil pot trial experiment running over one year where additions of fungal filters, having previously been used for nutrient retention, will be explored for nutrient recovery and reuse in crop growth.
4. Collection of the samples from the nutrient recovery pot experiment, troubleshooting any issues, sample preparation for analysis and working with the wider staff at JHI to get samples analysed.
5. Working within a field team to establish a trial in watercourses on a farm in Fife, including a pre-deployment characterisation period (storm monitoring), then deployment of the fungal filter materials and paired up/down -stream sampling.
6. Collation of experimental and monitoring data and data exploration.
7. Interacting with the project team, the other post-doc undertaking field deployment trials in England and wider partners to present results and develop concepts.
8. Leading or contributing to writing scientific papers for publication in leading international journals and conferences.

This post will be line managed by Marc Stutter (JHI) and Philip Schuler (Rhizocore)

## Section B: Candidate Specification

### Education and experience

#### Essential

- PhD in Environmental sciences, or Environmental chemistry/biogeochemistry/analytical chemistry.
- Attitude and willingness for environmental fieldwork during all seasons involving soil and water monitoring, sampling and data collection.
- Proven field, experimental and laboratory skills in water chemical analyses and/or microbiological analyses leading to data of sufficient quality for journal publication.

- Experience of working with environmental datasets across multiple physico-chemical and/or microbiological parameters and ability to query these data using empirical statistical methods.
- Full driving licence appropriate to the UK.
- Track record of technical and integrative publications across environmental and water science disciplines.
- An interest and ability to communicate technical topics to non-specialist peers and, for example, land managers.
- A proven ability to work within a team to effectively organise field and laboratory research tasks and collaborate on science outputs.
- Experience in managing resources of time and consumables/travel money for discrete work areas under your control.
- A proven ability to deliver data and written work to a high quality and to deadlines.

## Desirable

- A previous postdoc, or similar experience, in applying soil and water technical skills in the lab and/or field towards understanding catchment processes.
- Direct experience working with investigations on catchment nutrient, sediment pollution and mitigation for diffuse pollution in rural environments.
- Experience of quality control on larger datasets, for example such as environmental sensor parameters.
- Knowledge of UK and EU water policy and regulation.
- Experience in wider science communication and ability to speak to farmers about the work taking place.
- Experience of active engagement and ideas sharing amongst research teams representing field, laboratory experimentation and modelling involving scientists across multiple institutions and/or countries.
- Experience of problem-solving issues of delivery due to project circumstances e.g. weather disruption, experimental delays.
- Experience working with microorganisms, particularly fungi
- Experience working in an innovative laboratory or startup environment
- Knowledge of the environmental sector, UK and EU water policy and regulation.

## Section C: Application Procedure

To be considered for the position, applicants must provide the documents listed below. A checklist has been provided as further guidance for what to include:

### Document 1: Cover Letter

- Please provide examples of your relevant skills, abilities, knowledge and experience to support your application for this role. Please refer to the essential criteria in Section B of the Job Advertisement (~1,000 words).

### Document 2: CV

- Education and employment history
- Contact details for two referees

Once completed, please email your documents to:

Rhizocore Technologies Ltd.

[recruitment@rhizocore.com](mailto:recruitment@rhizocore.com)

Kind regards,

Philip Schuler, Head of R&D, Rhizocore Technologies