JOB ROLE: Postdoctoral Research Assistant/Scientist

JOB PURPOSE: This is an exciting opportunity for two highly motivated Postdoctoral Research Assistant/Scientists (PDRAs) to join the new *Microplastics and Marine Pollution* group at the Marine Biological Association in Plymouth. These posts will draw on a range of complementary skills and experience, including experimental ecotoxicology, sample processing and spectroscopic analysis, microbial and molecular ecology, and ecotoxicology/risk modelling. PDRAs will be encouraged and supported to apply their own expertise to the existing research plan, and to develop their own lines of enquiry where appropriate.

ACCOUNTABILITY Reporting to: Dr Alice Horton, Senior Research Fellow

Candidates must hold a PhD in ecotoxicology, invertebrate biology, microbiology, environmental science, chemistry or related field.

Further, each candidate must be able to demonstrate proficiency across **at least two** of the following specific areas:

- Working with live macroinvertebrate/zooplankton organisms, including handling, maintenance and culturing
- Experimental ecotoxicology testing (for example with microplastics, organic chemicals and/or metals)
- Spectroscopy and analysis of spectroscopic data (e.g. µFTIR, Raman)
- Molecular analysis (PCR extraction, DNA/RNA sequencing, metabarcoding, data analysis and interpretation)
- Modelling approaches specific to risk assessment, ecology and/or ecotoxicology, for example environmental risk assessment (ERA), ecotoxicological modelling (SSD, DEBtox), or trait-based modelling.
- Intermediate to advanced statistics using R (or equivalent)

Additional essential criteria:

- Experience working in a laboratory environment
- Experience and enthusiasm for writing research publications (including as lead author)
- Highly motivated to do scientific research to a high standard
- Demonstrated ability to work independently and as part of a team
- Strong communication skills and ability to work effectively in a highly collaborative research environment
- Excellent English language skills (both oral and written)

Desirable (although not essential) experience also includes:

- Working with microplastics (experimentally/analytically)
- Experience with lab method development and/or adaptation
- Experience with application or development of novel microscopy/spectroscopy/analytical chemistry techniques for analysis of materials

- First author publication(s)
- Presenting at national or international conferences
- Public engagement and outreach

Key responsibilities and skills

1. To undertake research, as follows:

    - Designing and conducting laboratory experiments to test defined research questions
    - Laboratory processing and analysis of samples for various parameters, for example microplastic composition, stress biomarkers, microbial composition etc
    - Analysing and interpreting the results of own research and generating original ideas based on outcomes
    - Using new research techniques and methods
    - Using initiative and creativity to identify areas for research, developing new research methods and extending the research portfolio
    - Using creativity to analyse and interpret research data and draw conclusions on the outcomes
    - Dealing with problems which may affect the achievement of research objectives and deadlines
    - Writing up research work for publication
    - Developing research objectives and proposals for own or joint research
    - Giving presentations at national and international conferences
    - To represent the research group and MBA at relevant meetings and workshops, where appropriate
    - To ensure health and safety measures are in place and documented for all research activities, and adherence to these
    - Effective data management, storage and accessibility in line with MBA guidelines

2. To collaborate with and assist other members of the team:

    - Working closely with other team members on practical or experimental tasks
    - Attending regular group meetings, and engaging in constructive discussions, regarding planning and implementation of work
    - Providing support and feedback to colleagues. Sharing knowledge and expertise with students and other postdocs in the group

3. To contribute to research-focussed teaching:

    - Assisting in the supervision of student projects and in the development of student research skills
    - Where relevant, contributing to MRes practicals as part of the wider research group

- Undertake any other tasks identified as being within the job holders' capabilities