

## Candidate Information

<b>Position:</b>	Research Fellows
<b>School/Department:</b>	School of Biological Sciences
<b>Reference:</b>	19/108056
<b>Closing Date:</b>	Wednesday 12 February 2020
<b>Salary:</b>	£33,797 to £36,914 per annum
<b>Anticipated Interview Date:</b>	Thursday 5 March 2020
<b>Duration:</b>	Post 1 available until 31.10.21, Post 2 available for 20 months or until 31.12.22

### JOB PURPOSE:

To conduct research in the areas of metabarcoding, metagenomics and population genomics. To be highly productive, ambitious and collaborative members of the Fish Genetics Research Group led by Prof. Paulo Prodohl in the Institute for Global Food Security at the School of Biological Sciences. The positions are linked to the BEYOND 2020 (Burrishoole Ecosystem Observatory Network 2020) and the FishKOSM (Fisheries Knowledge for Optimal Sustainable Management) multi-institute projects. Capitalising on the existence of "in-house" modern genomics infrastructures and bioinformatics capacity, the successful candidates will develop and implement protocols for examining food web structures for several key fish species in the freshwater and/or the marine environment. The successful candidates will have responsibilities in independent research, supervision, planning, day-to-day lab management, collaborations and outreach.

### MAJOR DUTIES:

1. Develop and plan an area of personal research and expertise, and undertake research under supervision within the specific research project aiming at understanding food web structures for a number of key fish species in the freshwater and/or the marine environment.
2. Design, develop and implement methodologies and analytical capabilities to obtain reliable genomics data species ID.
3. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
4. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
5. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
6. Assist grant holder in the preparation of funding proposals and applications to external bodies.
7. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project/group meetings and documentation, financial control, stock management/procurement, risk assessment of research activities and development of SOPs.
8. Carry out routine administrative tasks associated with the day-to-day running of the research group in a communal lab setting.
9. Carry out, as appropriate, school/undergraduate/post-graduate student and visiting researcher training and supervision, demonstrating, tutoring or lecturing duties within the post holder's area of expertise and under the guidance of a member of academic staff.
10. Participate in local research-related activities such as journal clubs, training sessions, seminar series etc.
11. Assist in assessment of research communications and data, particularly within the group.
12. Additional research and/or laboratory related duties including outreach activities, within the general range of the post and competence of post holder.

### Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.

2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to-day activity within framework of the agreed research programme as well as communal activities (e.g. meetings) where appropriate.
4. Plan up to a year in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group and collaborative research groups regarding work progress and stock management.
6. Assist in training other group members on effective planning and organisation.

**Resource Management Responsibilities:**

1. Ensure research resources are used in an effective and efficient manner including liaising with vendors and collaborators.
2. Provide guidance as required to support staff and any post-graduate/under-graduate students and visiting researchers who may be assisting with work of the group.

**Internal and External Relationships:**

1. Liaise on a regular basis with supervisor, colleagues, students and collaborators.
2. Communicate appropriately and effectively with lab colleagues on topics such as latest research findings/results within the group and field.
3. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
4. Travel to, and present at scientific meetings and work in collaborative laboratories when necessary.
5. Join external networks to share information and ideas and help develop and maintain external collaborations, as appropriate.
6. Contribute to the School/Centre outreach programme.

**ESSENTIAL CRITERIA:**

1. Have or about to obtain a PhD in a relevant area to include Population Genomics, Evolutionary Biology or other related area of Biological Sciences.
2. At least 3 years recent relevant research experience.
3. Practical laboratory experience in molecular genetics including DNA extraction, PCR, DNA sequencing, phylogenetic analysis, population genetics, environmental DNA, bioinformatics.
4. Methodical approach to project management and meticulous in regard to experimental procedures and record keeping.
5. Contribute to general culture of the laboratory, particularly passing on skills to new members.
6. Highly ambitious, motivated, efficient, organised and show a commitment to, and interest in, research topic.
7. Experience in the use of statistical methods for data analysis.
8. General familiarity with common bioinformatics tools, utilities, programming languages and operating systems.
9. Ability to communicate complex information clearly.
10. Ability to build contacts and participate in internal and external networks.
11. Strong ability to work from own initiative.
12. Excellent team working skills in multiple internal and external team settings.
13. Leadership qualities.
14. Excellent problem-solving skills.
15. Irregular hours including evening, weekend and other out-of-hours working will be a component of the research at times.
16. Must be willing to travel to national and international meetings and collaborative laboratories.

**DESIRABLE CRITERIA:**

1. Practical experience with library construction for metagenomics and/or metabarcoding construction.
2. Scientific and/or professional experience in the area of Bioinformatics or Comparative Genomics.
3. Experience in the development and/or use of computational pipelines for metagenomics and metabarcoding data.
4. Experience in the analysis of next-generation sequencing data (genomics).
5. Experience in bash, R, Python or other relevant programming language.
6. Experience with teaching and/or supervision.
7. Research project management.
8. Experience of high-throughput pipeline design for biological analysis.
9. Up-to-date knowledge in the field of genomics and bioinformatics.