THE UNIVERSITY OF WESTERN AUSTRALIA

POSITION DESCRIPTION

Position Title	Research Fellow (Ocean Omics Centre, Ocean Genomes Laboratory)
Classification	Level B
School/Division	Ocean Institute
Centre/Section	OceanOmics Centre
Supervisor Title	Principal Research Fellow, Ocean Genomes Laboratory, OceanOmics Centre
Supervisor Position Number	FSR
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Your work area

The Minderoo OceanOmics Centre at UWA combines a joint Ocean Genomes Laboratory, an OceanOmics Laboratory, and Computational Biology Services,

Equipped with the latest high-throughput sequencing technology and in collaboration with global partners, the Ocean Genomes Laboratory will generate a comprehensive library of high quality marine vertebrate reference genome assemblies. All reference genome data will be subject to rigorous QC/QA and all assemblies will be released publically through open access.

The OceanOmics Centre will be located in the Bayliss Building on the UWA Crawley Campus, OceanOmics staff sharing the building with research and teaching staff primarily from the UWA School of Molecular Sciences and interacting with staff in the UWA Oceans Institute in the nearby IOMRC building.

The UWA staffing of the OceanOmics Centre is anticipated to initially comprise a Lead Academic, a Laboratory Manager, a Research Fellow (this post), a junior postdoctoral researcher, and 6 laboratory technicians. The OceanOmics Centre will be supported in its operations by the UWA Oceans Institute and liaise closely with the Head of Research of the OceanOmics program, a senior Minderoo employee with oversight of all sub-components of the Centre. Minderoo Foundation employees will also operate within the OceanOmics Centre as UWA Adjuncts and Visitors.

Reporting structure

Reports to: Principal Research Fellow, Ocean Genomes Laboratory, OceanOmics Centre

Dotted line reports to: Head of Research, OceanOmics Program

Your role

As the appointee you will, under broad direction, work closely with the Principal Research Fellow, and liaise with the Laboratory Manager, OceanOmics Centre, to undertake research on the genomics of marine vertebrates, focussed on the production of high-quality reference genomes and associated bioinformatics pipelines and quality control.

You will participate in and coordinate research relevant to the genomic sequencing of marine vertebrates, particularly using high throughput DNA sequencers, established and novel bioinformatics approaches.

You will use your familiarity with the whole workflow from sample preparation from tissues, DNA extraction and sample preparation for genome sequencing, sequence assembly, sequence quality control and assurance, bioinformatic analyses, and communication of results.

Core duties of the position will be elements of the workflow downstream of sequence generation, particularly data QA/QC, genome assembly and application of bioinformatic pipelines and analyses, reporting/publication of data sets and scientific writing.

You will work closely with all other members of the OceanOmics Centre staff, providing leadership particularly in genome assembly and publication.

You will liaise closely with the Centre's Laboratory Manager to ensure the correct, safe, efficient, and effective use of equipment, including the oversight of the work of laboratory research technicians and PhD students.

With the Principal Research Fellow, other postdoctoral staff, and Minderoo employees in the OceanOmics Centre, you will be expected to contribute to decision making to prioritise target species and genomic pipelines and workflows.

Your key responsibilities

Conduct independent laboratory work to gather new molecular genetic data, including genomic sequencing and informatics relating to marine vertebrates

Undertake post-sequencing processing of genome sequence data, including data QA/QC and preparation of data for archiving and bioinformatic analyses, and interpretation and presentation of results

Collaborate with internal and external stakeholders, making an independent contribution to maximise the productivity of the laboratory and the impact of its work

Coordinate milestones to ensure the successful and timely completion of field collections, laboratory work, and analysis of genomic data as agreed with line managers

Undertake activities that support safe field and laboratory work practices in line with UWA guidelines including:

- Comply with workplace safety policies and procedures to ensure a safe workplace
- Comply with intellectual property (IP) policies and procedures to ensure IP is correctly managed and protected
- Comply with Codes of Conduct ensuring the standards of conduct required are upheld

Lead reporting and publishing of high-quality research focussed on marine vertebrate genomics, including both papers in academic journals and, where relevant, policy documents, reports etc., and articles for non-academic audiences

Undertake field work to collect samples for laboratory processing, including involvement in logistics and mobilisation/demobilisation for field work

Present results to national and international audiences at scientific conferences and, where appropriate, to non-academic audiences

Other duties as directed

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Your specific work capabilities (selection criteria)

A PhD in bioinformatics, molecular genetics or genomics, computational biology (or demonstrated equivalent competency)

Relevant postdoctoral experience in whole genome assembly and high throughput DNA sequencing (preferably with vertebrates)

Strong research interest and demonstrated expertise in the analysis of genomic data and establishing bioinformatic pipelines for analysis

Strong computational skills with the ability to organise and process large genomic data sets

Demonstrated originality, creativity, and innovation in the application of expert scientific knowledge

Strong track record of research publication relative to opportunity

Ability to supervise higher degree by research students

Ability to undertake field and laboratory work, with quality controls for reliability of data and with safe working practices

Ability to work independently, show initiative and work productively as part of a team

Highly developed organisational skills and demonstrated ability to set priorities, meet deadlines and conduct research

Marine biological knowledge and familiarity with marine vertebrates, including their diversity and phylogeny (Desirable)

Experience with marine field work and sample collection, and laboratory sample preparation and analyses (Desirable)

Familiarity with international data sharing and consortia efforts focused on the open publication of large reference data sets e.g., Earth Biogenome Project, G10K, VGP etc (Desirable)

Special requirements (selection criteria)

Occasional travel for fieldwork, conferences etc. will be required, possibly including interstate and overseas

Current "C" class driver's licence

Compliance

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

The University's Code of Conduct hr.uwa.edu.au/policies/policies/conduct/code/conduct

Inclusion and Diversity web.uwa.edu.au/inclusion-diversity

Safety, health and wellbeing safety.uwa.edu.au/