THE UNIVERSITY OF WESTERN AUSTRALIA

POSITION DESCRIPTION

Position Title	Research Associate
Classification	Level A
School/Division	UWA School of Agriculture & Environment
Centre/Section	DNA Zoo Australia
Supervisor Title	Associate Professor and Director, DNA Zoo Australia
Supervisor Position Number	318416
Position Number	FSR

Your work area

The UWA School of Agriculture and Environment is located in one of the world's biodiversity hotspots. Surrounded by a wealth of agricultural, natural and mining resources, our location allows us to produce innovative research with worldwide application

Our teaching and research benefit from a network of national and international collaborators, and our strong industry and government links are producing change in agricultural and environmental management, regional development, and urban policy and planning

DNA Zoo Australia (DZA, dnazoo.org), research initiative with the University of Western Australia dedicated to generating high-quality genomic resources for Western Australia species and a member of a global comparative genomics consortium, is looking for an experienced computational biologist to advance DNA Zoo's mission to leverage comparative genomic data to improve ecosystem stability and human health. DZA provides computational and analytic resources to advance scientific discovery through its multi-disciplinary team of wet-lab and computational scientists who work on collaborative projects both within Australia and with the global members of the DNA Zoo community.

Reporting structure

Reports to: Associate Professor and Director, DNA Zoo Australia

Your role

As the successful appointee, you will contribute to and lead processing, analysing, and integrating public and newly generated genomic and epigenomic datasets. This will include developing sustainable integrated data science products, scaling up existing open-source software packages and developing new tools that empower DNA Zoo Australia to explore, analyse and interpret their comparative genomic data. The scale of the data to be analysed will require methodological work, algorithm development and technical development.

Your key responsibilities

The ideal candidate will be proficient in bash, awk, Java, C++ and/or Python, have comparative genomic experience, have strong quantitative, analytical, and communication skills, and will be able to work independently and collaboratively on scientific problems and deliver solutions. There will be opportunities for working in teams and independent decision making at all levels of bioinformatic processing and analysis of the data, as well as examining, evaluating, and recommending analytical approaches to collaborating labs. In addition, methodological developments for novel and challenging data analysis and integration tasks arise frequently

requiring originality and creativity, including designing and analysing follow-up experiments and analyses.

Plan and implement the preparation of scientific manuscripts for publication in peer reviewed journals

Assist in supporting the ongoing activities of the DNA Zoo program, including development of chromosome-length genomes, and maintenance of databases, websites, and stakeholder engagement

Other duties as directed

Your specific work capabilities (selection criteria)

PhD in bioinformatics or computational biology, Biostatistics, Computer Science or related fields or a combination of relevant experience and/or education/training

Proficient in bash, awk, Java, C++ and/or Python

Substantial experience analysing genetic and genomic data

Familiar with open-source tools for annotation of repeats and protein-coding genes, genome alignment, orthologue identification, selection analysis

Working knowledge of git or similar tools for scientific software development

Ability to program at a high level and ability to work independently, show initiative, problem solve and work productively as part of a team

Strong quantitative, analytical, and communication skills, and ability to work independently and collaboratively on scientific problems and deliver solutions

Experience in next generation sequencing and chromosome-length genome analysis

Proficiency in genome assembly workflows using a range of sequencing data including HiC

Substantial relevant experience in writing scientific manuscripts and reports

Highly developed written and verbal communication skills

Highly developed organisational skills with the demonstrated ability to set priorities and to meet deadlines

Special requirements (selection criteria)

There are no special requirements

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/