

Research Associate/Fellow - Fungal and Plant Genome Bioinformatics

Job Reference: 431856

Contract to June 2022 Full time

\$71,230 - 96,105 (ALA) plus 9.5% superannuation

\$101,079-\$119,738 (ALB) plus 9.5% superannuation

Centre for Crop and Disease Management (CCDM)

The Centre for Crop and Disease Management (CCDM) at Curtin University launched in April 2014 as a co-investment between the Grains Research and Development Corporation (GRDC) and Curtin University. The CCDM is a major investment in research training, crop disease-focused research activity and infrastructure. The Centre includes a new high quality research facility at Curtin, used for research and development to sustainably reduce the impact of important grain pathogens and ultimately, to provide solutions to reduce the impact of diseases on farm business resilience. The Centre's activities integrate molecular sciences with field-based agronomy to generate new avenues to breed disease resistant germplasm and to assist farmers to sustainably utilise a full range of disease control options. The CCDM has three themes of activity with several projects in each theme. There is strong interdisciplinary collaboration within the Centre and active collaboration with leading national and international scientists.

Research Theme B – Cereal Diseases

This position is embedded in Theme B of the CCDM which focusses on cereal disease research and targets a range of costly and complex diseases of wheat and barley. Yield and economic losses of both of these crops remain a significant issue for the Australian grains industry. CCDM conducts pre-breeding research using a biochemical, genetic and 'omic' approaches to help breeders develop disease-resistant varieties as an effective, long-term solution to crop disease control. Our researchers also explore the interaction of pathogens during co-infection and the resulting host responses.

This role is a unique opportunity for the successful candidate to be part of the dynamic team in Theme B to substantially improve yield stability for Australian grain growers.

Responsibilities of the role include

- Carry out fungal and wheat genome assemblies, gene annotation, RNAseq and pan-genomics analysis.
- Adopt/modify/develop computational pipelines for various bioinformatics tasks.
- Identify potential effector and plant receptor candidates.
- Participate in group activities.
- Supervise staff and students.

You will bring to the role

- A Ph.D. in a relevant subject area (e.g. life science or bioinformatics). Candidates with theses under examination may also be considered.
- Experience in programming languages (e.g. Perl, Python, R, Bash, etc.) and their scientific application.

- Experience of using methodologies associated with bioinformatics and scientific computing.
- Ability to write scripts or programs to support common bioinformatics/analysis tasks.
- Prior experience with genome assembly, gene annotation, transcriptome analysis and comparative genomics.
- Demonstrated commitment to publish the results of research in scientific journals.
- Sound interpersonal skills, with the ability to work independently and as a team.
- Strong oral and written communication skills.
- Demonstrated experience in statistics and experimental design as applied to molecular biology.
- Prior experience using high-performance supercomputing (desirable).
- Experience with life sciences, molecular biology and/or host-microbe interactions (desirable).

Why choose Curtin?

- Easily accessible location with great parking, bus station and end of trip facilities!
- Vibrant campus with gym, childcare and medical services, and an array of food trucks, coffee shops and restaurants!
- We are ranked in the top 1% of universities worldwide (ARWU 2018 and QS World University Rankings 2019)
- A major global player, with well-integrated campuses in Singapore, Malaysia, Mauritius and Dubai.
- The University has recently been named as one of Australia's Inclusive Employers for 2019-2020 by the Diversity Council of Australia (DCA).

For further information on Curtin and all of our employee benefits visit

<https://about.curtin.edu.au/jobs/>

Next steps

Please apply on-line with a cover letter, resume and documentation addressing the selection criteria to enable us to assess your suitability for the role. If you require reasonable accommodation to participate in the recruitment process please advise in your cover letter.

To view a copy of the role's Position Description, please copy and paste the following link into your browser

<https://cloudstor.aarnet.edu.au/sender/?s=download&token=7b6c0840-7eae-4150-a0c6-293689327e1d>

Applications close: Friday 7 August, 10:00 PM AWST

Contact details

If you have a query in relation to the application process please contact our careers team on curtincareers@curtin.edu.au or call Natalie Munro on 08 9266 2280.

If you wish to speak to a technical specialist please contact Huyen Phan (Project lead) on 08 9266 2099 or huyenphan.phan@curtin.edu.au.

Disclaimer

Curtin reserves the right at its sole discretion to withdraw from the recruitment process, not to make an appointment, or to appoint by invitation, at any time. We reserve the right to remove the advert earlier than the date on the advert.