# Position Details

## CSIRO Early Research Career (CERC) Postdoctoral Fellowship– CSOF4

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| The following information is for applicants | |
| Advertised Job Title | CERC Postdoctoral Fellowship in genetic disease resistance in oat |
| Job Reference | 84261 |
| Tenure | Specified Term of 32 months  Full-time |
| Salary Range | AU$89,926 to AU$98,504 pa + up to 15.4% superannuation |
| Location(s) | Canberra, ACT |
| Relocation Assistance | Will be provided to the successful candidate if applicable |
| Applications are open to | All Candidates |
| Position reports to the | Group Leader Dr. Melania Figueroa |
| Client Focus – Internal | 0% |
| Client Focus – External | 100% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr. Melania Figueroa via email at Melania.figueroa@csiro.au or phone +61 2 6218 3416 |
| How to apply | Apply online at <https://jobs.csiro.au/>  Internal applicants please apply via **Jobs Central**  If you experience difficulties when applying, please email [careers.online@csiro.au](mailto:careers.online@csiro.au) or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the area that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

**CSIRO Early Research Career (CERC) Fellowships** provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant research experience. These fellowships aim to develop the future leaders of the innovation system through:

* a differentiated career development program to deliver capability excellence and breadth across all facets of the national innovation system,
* research training via strategic research and development projects with a clear focus that will deliver real impact through science and engineering excellence,
* an innovative culture supporting the development and demonstration of original thinking and expertise leading to peer-recognition, and
* opportunities to develop skills and experience in collaborative research teams to effectively work within national and global multi/transdisciplinary and multi-stakeholder environments.

CERC Fellows **are appointed for three years full-time or equivalent.**

The CERC Postdoctoral Fellow will work with Dr Melania Figueroa as part of the cereal rust resistance research group, in a project with the goal of preventing losses in oat production due to the impact of oat crown rust disease. Rust fungi are important pathogens of plants and display diverse complex lifestyles and epidemiology. The CERC Fellow will take a systematic approach to deliver solutions for oat rust protection suitable for Australia. They will investigate components that confer rust resistance in the genetic pool of the Australian oat breeding germplasm in context to the genetic diversity of crown rust in the country. They will identify optimal combinations of genetic resistance sources and define unique opportunities for crop protection while refining resources to study this pathosystem. The CERC Fellow will benefit from working within a world leading team and through exposure to a broad scientific context spanning the spectrum from basic biology to applied delivery of science research to achieve industry outcomes. They will be part of a large multidisciplinary team conducting research at the leading edge of the field of plant-pathogen interactions and with a strong record of high impact publications.

### Duties and Key Result Areas:

Under the direction of the senior research scientists, the CERC Postdoctoral Fellow will:

* + Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
  + Contribute to a research program aimed at understanding the molecular mechanisms of oat rust resistance and pathogen virulence by utilising state-of-the-art techniques in genotyping and genomics.
  + Undertake regular reviews of relevant literature and patents.
  + Communicate results through regular team meetings and group level presentations.
  + Recognise and exploit opportunities for innovation and the generation of new theoretical perspectives, and progress opportunities for the further development or creation of new lines of research and external investments.
  + Carry out research investigations requiring originality, creativity and innovation and when appropriate share outcomes through publication in refereed journals and through academic seminars or other presentations at national and international conferences.
  + Record, manage, and analyse data/information using relevant domain data science techniques.
  + Proactively undertake development to grow effective researcher capabilities to support career goals.
  + Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
  + Responsible handling of hazardous materials and microbial materials.
  + Other duties as directed.

The CERC Fellow learning, development and training programis developed between the CERC Fellow and their CSIRO supervisor. The program will focus on enhancing the Fellow’s capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:

* discipline-specific techniques and protocols,
* professional growth,
* project management,
* communication and influencing skills, and
* working and collaborating with others.

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as plant pathology, plant sciences, and/or breeding with a strong background in genetics and molecular biology.

Please note: To be eligible for this role you must have **no more than 3 years** (full time equivalent) of postdoctoral research experience.

1. Evidence of experience that includes the application of plant pathology methodologies to problems in crop improvement, especially genetics of cereals, and genetic resistance to biotrophic pathogens.
2. Evidence of experience with pre-breeding research encompassing field, glasshouse and wet-lab work.
3. Demonstrated experience in development or implementation of genotyping techniques, molecular gene markers and assessment of gene expression.
4. High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including the presentation of research outcomes at national and international conferences.
5. A sound history of publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents.
6. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

## **Desirable:**

1. Experience with discovery and validation of pathogen effectors.
2. Experience in working with oat and breeding programs and manipulation of rust pathogens.
3. Remain productive, positive and resilient in complex, ambiguous and/or uncertain environments.
4. **The ability to work effectively as part of a multi-disciplinary, potentially regionally dispersed research team, plus the motivation and discipline to carry out autonomous research.**

To be appointed as a Postdoctoral Fellow within CSIRO, the successful candidate will be expected to have **submitted** their PhD at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be CSOF4-1 (AU$87,068). Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six-month period from commencement date), the salary will be increased to the negotiated level and the difference will be back-paid to the Officer’s start date.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- https://ielts.com.au/

**Our value proposition**

We want CERC Fellows to join our world class science, engineering and digital teams to solve big, complex problems that make a real difference to the future of Australia and the world.

You'll get to work with some of the most talented minds in their fields, not just in Australia, but in the world. At CSIRO, we spark off each other, learn from each other, trust each other and collaborate closely to achieve more than we could individually.

Find out more about our CSIRO Early Research Career (CERC) Fellow Experience Employee Value Proposition (EVP) [here](https://www.csiro.au/en/careers/postdoctoral-fellowships).

**About CSIRO:**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Agriculture and Food](https://www.csiro.au/en/Research/AF) more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* 1. People First
  2. Further Together
  3. Making it Real
  4. Trusted