# Position Description

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

The following information is for applicants

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| Advertised job title**:** | CSIRO Postdoctoral Fellowship in Genome Engineering and Biocontrol |
| Job reference: | 61829 |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | All Candidates |
| Percentage of client focus - internal: | 80% |
| Percentage of client focus - external: | 20% |
| Reports to the: | Team Leader |
| Number of direct reports: | Project Leader |
| How to apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon.  Please do not email your application directly to Prof Paul Thomas or Mark Tizard. Applications received via this method will not be considered by the selection panel. |
| Contact details to discuss this position: | Prof Paul Thomas via email [paul.thomas@adelaide.edu.au](mailto:paul.thomas@adelaide.edu.au)  Mark Tizard via email [Mark.Tizard@csiro.au](mailto:Mark.Tizard@csiro.au) |
| If you have difficulty applying please contact: | Call 1300 984 220 or email [csiro.online@csiro.au](mailto:careers.online@csiro.au) between 8.30 am and 5 pm Australian east coast time. |

## Role Overview:

**CSIRO Early Research Career (CERC) Postdoctoral Fellowships** provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships aim to develop the next generation of 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 Postdoctoral Fellows **are appointed for three years or part time equivalent.**

This CERC Postdoctoral Fellowship is in the field of genome engineering and involves a unique collaboration with one of Australia’s leading mouse genome engineering facilities at the University of Adelaide, under Professor Paul Thomas. It will also link with a major international initiative lead by Island Conservation, the Genetic Biocontrol of Invasive Rodents (GBIRd), that is investigating strategies to save endangered island-based bird species from the impact of mice and rats (currently tackled poorly by poison baiting). The Fellow will work with Prof. Thomas to design, develop and construct mouse molecular genetic systems with the objective of population growth limitation (alternatives to classically described gene drive systems), with the aim to utilize the biocontainment speciality of the Australian Animal Health Laboratory (AAHL) to handle and examine the function of such systems, with the highest degree of safety and control.

## Duties and Key Result Areas:

* Under the direction of senior research scientists and engineers, CERC Postdoctoral Fellows:
* Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes – with a particular focus on opportunities in genome engineering and biocontrol systems
* 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 – particularly at the interface between animal and molecular systems with population and landscape modelling of biocontrol deployment
* Utilise design thinking methodology to plan and prepare research proposals – particularly through extending networks to work with and access international resources for conservation and invasive species control
* Apply non-academic impact methodology to research projects – particularly in the area of social impact and acceptability of genetic approaches to conservation and the environment
* Carry out research investigations requiring originality, creativity and innovation
* Work as a bridge between CSIRO and the University of Adelaide to maximise the benefit of the collaborative interface
* Produce high quality scientific papers suitable for publication in quality journals, for client reports and granting of patents
* Prepare appropriate conference papers and present those at conferences as agreed with your supervisor
  + Record, manage, and analyse data/information using relevant domain data science techniques.
  + Travel to conferences, workshops, collaboration meetings and trainings as required.
  + 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 plans and policies, Diversity initiatives and Zero Harm goals
* Other duties as directed.

**The CERC Postdoctoral Fellow learning and development program**is developed between the CERC Postdoctoral Fellow and their CSIRO supervisor. The program will focus on enhancing the Fellows’ 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
* Working and collaborating with others

<http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships>

## CSIRO Competencies:

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **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.

## Essential Criteria:

*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 *genome engineering or recombinant DNA techniques applied in animal systems.*

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

1. Demonstrated high level skills in molecular biology in particular genome engineering tools such as CRISPR.
2. A strong knowledge of animal genetics such as mouse molecular genetics.
3. A history of professional and respectful behaviours and attitudes in a collaborative environment.
4. **High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including publishing in peer reviewed journals and/or authorship of scientific papers, reports, and presenting at national and/or international conferences.**
5. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

## Desirable Criteria:

1. Research experience that complements Essential Criterion 1, such as transgenic technologies applied in complex animal or plant systems.
2. Experience or working knowledge of biocontrol methodologies particularly molecular genetic approaches.
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 CERC Postdoctoral Fellow within CSIRO, candidates are required 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$ 83,687 plus up to 15.4% superannuation)*.* 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 security/national police/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents 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/>

Appointment to this role will require the following:

• National Police Check

• National Health Security Check

As the appointment may require work to be undertaken at the Australian Animal Health Laboratory (AAHL) candidates should be aware of and able and willing to comply with the following Security Assessment and Microbiological Security Requirements for Personnel Working on the Australian Animal Health Laboratory (AAHL) Site:

The nature of our work requires that each person working on site must comply with the conditions described below.

* The appointee is required to pass a security clearance at a level appropriate to duties of the position. Confirmation of the appointment is subject to obtaining that clearance.
* It is essential that all work on exotic or emerging diseases carried out at AAHL is conducted in a safe manner to prevent the escape of the disease agents used, and to this end, all activities and personnel will be subject to appropriate microbiological security measures. Consequently, while working at AAHL, you may not reside on a property on which are kept any of the following animals: sheep, cattle, pigs, goats, horses, asses and mules, any other cloven-hoofed animal, fowls, turkeys, geese, domestic ducks, caged birds, emus or ostriches. Personnel working with diseases of aquatic animals may not keep aquarium fish at their place of residence and personnel working with cane toad material must avoid contact with amphibians.
* In addition, for a period of seven days after working in the microbiologically secure area of AAHL, personnel may not have close contact with any of the above animals, amphibians or birds or the actual places where these animals are held, or visit any aquatic animal farm or aquatic animal hatchery.
* Working in the barrier maintained Small Animal Facility requires avoidance of additional animals such as mice, rats, guinea pigs, rabbits and poultry 3 days prior to arrival.
* It is usual practice in laboratories where work with infectious disease agents is carried out, to collect a blood sample from personnel and store serum for future reference. This is a safety precaution, so that if any person becomes ill in the future, serum samples are available for testing.
* Personnel must abide by Occupational Health, Safety and Environment regulations. Safety signs and directives issued by CSIRO personnel must be complied with at all times.
* Access restrictions apply to the Werribee Animal Health Facility (WAHF) site that is associated with, but remote from, the AAHL site.

**Our value proposition**

We want CERC Postdoc 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.

CSIRO Early Research Career (CERC) Postdoctoral Fellow Experience Employee Value Proposition (EVP). Find out more! <https://www.csiro.au/en/careers/postdoctoral-fellowships>

## About CSIRO:

At CSIRO we solve the greatest challenges through innovative science and technology. See more [online](http://www.csiro.au/)!

Find out more about the CSIRO [Australian Animal Health Laboratory](https://www.csiro.au/en/Research/Facilities/AAHL)

Find out more about CSIRO [Health and Biosecurity](https://www.csiro.au/en/Research/BF)

Find out more about CSIRO [Land and Water](https://www.csiro.au/en/Research/LWF)