# Position Details

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

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| The following information is for applicants | |
| Advertised Job Title | CSIRO Postdoctoral Fellowship in Economics of Biotechnologies |
| Job Reference | 75482 |
| Tenure | Specified Term of 3 years  Full-time |
| Salary Range | AU$88,163 to AU$96,573 p.a. (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Canberra, ACT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens, Australian Permanent Residents and Australian temporary residents currently residing in Australia (visa sponsorship may be provided to eligible onshore candidates) |
| Position reports to the | Team Leader/SynBio FSP Application Domain Leader |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Walter Okelo via email at [walter.okelo@csiro.au](mailto:walter.okelo@csiro.au) or phone +61 2 6218 3880 |
| 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. |

### 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 position will deliver a transformational approach to maximising the impact of synthetic biology science in Australia and support the development of the Australian bioeconomy. The Postdoctoral Fellow will help to achieve our desired future state of being a global leader in transdisciplinary research and help Australia to become a recognized global leader in social and economic approaches to synthetic biology research, development, and industry growth.

The Postdoctoral Fellow will join a group of economists and social scientists and collaborate with researchers from CSIRO and external collaborators to drive application of economics in biotechnology research and development. In this role, the Postdoctoral Fellow will consider and assess the wider economic impacts of biotechnologies including the economic viability of various natural products and/or biobased materials obtained from bioprocesses and the disruptive potential of new biotechnology on value chains, local and regional economies, and to the nation. The Postdoctoral Fellow will apply their research in the fields of synthetic biology, precision fermentation, waste valorisation, and circular economy.

Our science solutions will integrate economic perspectives in synthetic biology/gene technology approaches to generate responsible, positive, and measurable outcomes for our stakeholders and customers.

### Duties and Key Result Areas:

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

* + Carry out predominantly quantitative data analysis and conceptual framing using economic science theories incorporating – for example – evaluating the economic implication of a disruptive biotechnology, ensuring the Fellow receives well-rounded training for a future career in the field of economics of biotechnologies.
  + Develop innovative concepts, theories, tools, and models related to techno-economic research and economics of biotechnologies.
  + Identify and evaluate the ways selected biotechnology processes interact with the wider economy.
  + Undertake targeted literature reviews relevant to the specific aspect of work being undertaken as it develops.
  + Develop relationships and engagements with the industry and government to better understand the Australian bioeconomy including the techno-economic pathway of producing selected biobased products, the disruptive effect or other effects of selected biotechnologies, and potential for the bioeconomy to positively disrupt existing economic relationships to enhance sustainability via the circular economy.
  + Produce high quality scientific papers suitable for publication in high impact journals, client reports, and grant proposals.
  + Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
  + 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.
  + Utilise design thinking methodology to plan and prepare research proposals.
  + Carry out research investigations requiring originality, creativity, and innovation
  + 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.
* Other duties as directed.

[**The CERC Postdoctoral Fellow learning and development program**](http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships)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

## **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 across applied economics, such as engineering economics, resource economics, agricultural economics, green economics, or regional economics.

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. Strong background knowledge and demonstrated ability to apply economics in one or more of the following areas: synthetic biology, biotechnology, circular economy, or related fields
2. Demonstrated originality, creativity, and innovation in solving conceptual and experimental problems and introducing new directions and approaches.
3. The ability to work effectively as part of a multi-disciplinary, regionally dispersed team, plus the motivation and discipline to carry out autonomous research.
4. A sound history of publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents
5. 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.
6. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

## **Desirable:**

1. Fluency in process modelling, value chain, and wider economic impact analysis.
2. Deep understanding of bio-based processes (e.g., fermentation), environmental and sustainability assessments.
3. Remain productive, positive, and resilient in complex, ambiguous and/or uncertain environments.

To be appointed to this CERC Postdoctoral Fellowship role within CSIRO, candidates will be expected to commence employment by December 2021/January 2022. 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 ($85,361). 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.
* The successful candidate may be required to undertake a pre-employment medical examination prior to commencement.
* 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 propositions**

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 [here](https://www.csiro.au/en/careers/postdoctoral-fellowships)!

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

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

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