# Position Details

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

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| The following information is for applicants | |
| Advertised Job Title | CSIRO Winanga-y Postdoctoral Fellowship in Yeast Synthetic Biology |
| Job Reference | 74621 |
| Tenure | Specified Term of 3 years  Full-time |
| Salary Range | AU$89,926 to AU$98,504 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Black Mountain, Canberra ACT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All candidates |
| Position reports to the | Team Leader Metabolic Engineering, Synthetic Traits Group |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Thomas Vanhercke via email at [Thomas.Vanhercke@csiro.au](mailto:Thomas.Vanhercke@csiro.au) or phone +61 2 6246 4913  Contact Carol Hartley via email at [Carol.Hartley@csiro.au](mailto:Carol.Hartley@csiro.au) or phone +61 2 6246 4303 |
| 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) 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.**

We are thrilled to be able to deliver on the commitment we made in our strategy to invest in frontier science with the new CSIRO Agriculture & Food Winanga-y Postdoctoral Fellowship scheme. The word Winanga-y (pronounced win-na-gnay) is a cultural asset gifted by the Gomeroi Nation in Myall Vale to CSIRO's Agriculture and Food Business Unit to name the new Postdoctoral Fellowship Scheme. Winanga-y means to understand, know, remember, and think.

This role provides an exciting opportunity for a new CERC Postdoctoral Fellow position to develop novel Synbio-based platform technologies that improve secretion of high-value recombinant proteins in the commonly used yeast strain *Pichia pastoris* (*Komagaetella phaffii*). To maximize impact and commercial outcomes, the Postdoctoral Fellow will explore several strategies including comparative omics, development of high throughput assays, library screening for novel genetic components that regulate protein secretion and cutting-edge Synthetic Biology engineering to increase recombinant protein yields.

The project is jointly supervised by Thomas Vanhercke (CSIRO Agriculture & Food) and Carol Hartley (CSIRO Land & Water). Not only will the Postdoctoral Fellow have the unique opportunity to work on a joint strategic project that spans two CSIRO Business Units, but he/she will also be closely mentored by a highly multi-disciplinary team consisting of Senior CSIRO Scientists with world-leading expertise in Synthetic Biology, Precision Fermentation, Food Science, and Proteomics. During the course of their career, the Postdoctoral Fellow will have access to CSIRO’s new BioFoundry facilities and be able to tap into the extensive (international) collaborative networks offered by the CSIRO Synthetic Biology Future Science Platform and CSIRO Future Protein Mission, two strategic multi-disciplinary CSIRO initiatives that are directly aligned with the advertised Postdoctoral research project.

### Duties and Key Result Areas:

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

* + Undertake fundamental research including comparative omics to uncover novel mechanisms that regulate protein secretion in yeast Synbio chassis organisms such as *Pichia pastoris.*
  + Apply Synthetic Biology engineering principles as well as adaptive evolution strategies to increase the secretion efficiency of heterologous proteins in *Pichia pastoris* as an improved production platform strain.
  + Work closely with CSIRO Future Protein Mission, CSIRO Synthetic Biology Future Science Platform and CSIRO Company Creation teams to develop a proof of concept based on improved secretion of a high value protein target of immediate commercial interest to the food ingredient market.
  + Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes, novel Intellectual Property, and engagement with commercial partners as part of the broader impact delivery pathway. The Postdoctoral Fellow will have a high degree of flexibility and responsibility to determine the optimal research strategy(ies).
  + Utilise design thinking approaches to plan and prepare research proposals, and apply non-academic impact methodology to research projects.
  + Record, manage, and analyse data/information using relevant domain data science techniques.
  + Communicate results as high-impact publications and at public forums.
  + Proactively undertake development to grow effective researcher capabilities to support career goals.
  + Where needed, take up supervisory role(s).
  + 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.

[**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(s). 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, such as synthetic biology, precision fermentation or metabolic engineering.

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. Expertise in Yeast Synthetic Biology in common chassis strains such as *Saccharomyces cerevisiae* and/or *Pichia pastoris*.
2. Ability to thrive in a cross-cutting, multidisciplinary research environment.
3. 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.
4. A sound history of publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents.
5. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

## **Desirable:**

1. Experience in high throughput screening of yeast genetic libraries (knock-out and/or overexpression).
2. Experience in comparative omics analyses including proteomics and transcriptomics.
3. Knowledge of secretion systems in yeast.
4. Previous engagement with industry and commercial partners.
5. Ability to remain productive, positive and resilient in complex, ambiguous and/or uncertain environments.

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 ($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 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/), or access the links below!

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

* People First
* Further Together
* Making it Real
* Trusted

Find out more about CSIRO [Agriculture and Food](https://www.csiro.au/en/Research/AF)