# 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 Industrial Biotechnology  |
| Job Reference | 89741 |
| 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) | Werribee, VIC |
| 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)
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| Position reports to the | Dr Lesley Duffy (Team Leader) |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr. Mya Myintzu Hlaing via email at Myintzu.Hlaing@csiro.au or phone +61 3 9731 3262 |
| 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 or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas 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 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 Fellows **are appointed for three years or full-time equivalent** and will work closely with leading Research Scientists or Engineers in in their respective field. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.

This project will address the fundamental scientific and technical challenges associated with real-time early detection of contaminants at various stages of food supply chains.

The CERC Fellow will develop their skills at the interface of Food microbiology & Food Science (Werribee & Coopers Plains, Ag&F) and within CSIRO across Business Units through working with researchers experienced in developing cutting edge science solutions that lead to impact through an innovative sensing platform to inform improved food safety and quality management decisions in agri-food chains. Throughout the project, the CERC Fellow will have the opportunity to join the multidisciplinary teams at their respective laboratories.

This role represents a key component for the development of new research approach and technologies platform (i.e., digital systems) that can be implemented through the food supply chains for real-time monitoring of food safety assurance. The role will be closely integrated with other members of the novel functional food products team providing technology platforms, and expertise to support research commercialisation and/or grant funding which will form the basis for developing similarly essential aspects related to food safety and quality (i.e., freshness markers, allergens, contaminants, and chemical residues) across the agriculture sector.

We are thrilled to be able to deliver on the commitment we made in our strategy to invest in frontier science with the CSIRO Agriculture & Food Winanga-y Postdoctoral Fellowship scheme. The name Winanga-y (pronounced win-na-gnay) is a cultural asset lent to us from the local Gamilaroi mob in Myall Vale. Winanga-y means to understand, know, remember, and think.

### Duties and Key Result Areas

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

* + Carry out research investigations in development of molecular imprinting-based surface enhanced Raman spectroscopy for real-time monitoring of contaminants in food requiring originality, creativity and innovation.
	+ Record, manage, and analyse data/information using relevant domain data science techniques.
	+ Produce high quality scientific papers suitable for publication in quality journals, for client reports, granting of patents or further research proposals.
	+ Proactively develop and lead collaboration with the CSIRO Data 61 Business Unit.
	+ 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 and apply non-academic impact methodology to research projects.
	+ 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 Zero Harm goals.
* 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
* Working and collaborating with others

## **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). The doctorate must be in a relevant discipline area, such as Biological Physics, Food Sciences, Microbiology, Biomedical Engineering or Material Engineering. Please note: To be eligible for this role you must have **no more than 3 years** (full-time equivalent) of relevant research experience.
2. Experience in polymer and biomaterial research, surface chemistry and characterisations, molecular imprinting polymers, optical sensing.
3. Experience in the bio-spectroscopy chemical analysis combined with chemometric statistical analysis specifically in the use of Raman spectroscopy, Surface-enhanced Raman spectroscopy (SERS), Molecular Imprinting Technology and self-assembled SERS platform for specific molecule detection.
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.
7. A demonstrated can-do mindset that facilitates respect, collaboration, support, inclusiveness and accountability in the workplace.

## **Desirable**

1. Basic knowledge of Microbiology, bio-chemical sensors for biomedical and agri-food technological applications.
2. **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.**
3. **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.**

## **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.

To be appointed to this CERC Fellowship role within CSIRO, candidates will be expected to commence employment by 31 January 2023. Candidates are also required to have **submitted** their doctoral thesis 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 backpaid 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 Clearance or equivalent. Please note that individuals 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 propositions**

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%22%20%5Co%20%22Agriculture%20%26%20Food-%20CSIRO%20website) for 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:

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