# 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 Multi-omics for microbiome functionality for bioremediation and waste treatment |
| Job Reference | 76726 |
| 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) | Adelaide, SA |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to | Research Science Supervisor / Microbiomes for One Systems Health – Future Science Platform |
| Client Focus – Internal | 90% |
| Client Focus – External | 10% |
| Number of Direct Reports | 0 |
| Enquire about this job | Anna Kaksonen via email at [anna.kaksonen@csiro.au](mailto:anna.kaksonen@csiro.au) or phone +61 8 9333 6253  Or  Jason Kirby via email at [jason.kirby@csiro.au](mailto:jason.kirby@csiro.au) or phone +61 8 8303 8478 |
| 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.**

The position will be part of CSIRO’s **Microbiomes for One Systems Health - Future Science Platform (FSP).** CSIRO FSPs work on frontier science that underpins innovation to support and develop industries for Australia. They are an investment in science that underpins innovation that has the potential to help reinvent and create new industries. FSPs allow the development of capability and capacity for a new generation of researchers to work with CSIRO on future science.

The Microbiome FSP is developing new understanding of microbiome connectivity across the environment to human continuum and how system perturbations impact on microbiome functionality, diversity and systems health. A key objective is to capture greater benefit from microbiome interactions through more informative and predictive frameworks for functionality and by targeted interventions. Capacity to directly manipulate microbiomes across hosts and environments will provide new opportunities for bio-based solutions to be developed and applied to improve host and environmental health and for increased benefit to plants, animals and humans.

The portfolio of research within the Microbiome FSP is focussed on new science that address; systems connectivity, predictive frameworks and deliberate Interventions through the application of multi-omic tools to analyse point and system level change and associated measures of functionality both within and across interconnected biomes. The science portfolio of the FSP spans multiple CSIRO Business Units that address key focal areas; i) Environment, Soil & Plant Health, ii) Food Chain & Production ii) Diet, Gut and Health and iv) Optimized Industry & Urban Processes. This CECR Postdoctoral Fellowship will sit in the Microbiome FSP: Optimized Industry & Urban Processes research theme.

Further information: <https://research.csiro.au/microbiome/>

### Duties and Key Result Areas:

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

* As part of a multidisciplinary research team, carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
* Develop, lead, and manage the experimental program and deliverables on multi-omics for microbiome functionality for bioremediation and waste treatment with support from the senior research team.
* Apply multi-omics techniques and bioinformatics analysis to identify environmental drivers, key indicators for microbiome functionality and targets for manipulation to achieve microbe-mediated benefits in biodegradation of persistent organic contaminants (for example, per- and poly-fluoroalkyl substances, mixed plastics and plasticisers, and recalcitrant petroleum hydrocarbons).
* As part of the Microbiome FSP: Optimized Industry & Urban Processes research theme examine the effectiveness of designer microbiomes and delivery systems in test beds for biodegradation of persistent organic contaminants and wastes.
* Work independently and as part of a team to successfully achieve project outputs and outcomes.
* Carry out research investigations requiring originality, creativity, and innovation
* 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.
* Record, manage, and analyse data/information using relevant domain data science techniques.
* Produce progress reports and high quality scientific papers suitable for publication in peer review journals together with co-authors.
* Prepare appropriate conference papers and present those at national and international conferences.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, regionally dispersed project team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Make a contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans.
* Undertake appropriate training and development courses to proactively 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, such as microbiology, biotechnology, molecular biology, systems biology, biochemistry or a related field.

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. Practical experience in microbial multi-omics and bioinformatics analysis, particularly high-resolution mass spectrometry-based techniques (e.g., metabolomics, proteomics) for community analysis or related screening purposes.
2. Experience in leading and managing research projects using microbial multi-omics techniques on environmental samples to deliver outcomes in agreed timelines.
3. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.
4. High level of written and oral communication skills with a demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications, and conference presentations.
5. **The ability to work effectively independently and as part of a multi-disciplinary project team, plus the motivation and discipline to carry out autonomous research.**
6. Experience in responsible and ethical behaviour in research, inclusiveness, and work health and safety practices and procedures.

## **Desirable:**

1. Demonstrated hands-on experience in genomics, transcriptomics, proteomics, metabolomics, aseptic culture techniques.
2. Experience in using microorganisms for the biodegradation of contaminants and wastes.
3. Demonstrated understanding of the environmental drivers of microbiomes in soil, ground/surface water and wastes, including e.g. organic carbon chemistry.

To be appointed to this CERC Postdoctoral Fellowship role within CSIRO, candidates will be expected to commence employment by June 2022. The CERC Postdoctoral Fellow is 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 $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 may 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 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/)!

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)