# 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 Algae Metabolic and Molecular Genetic Technologies |
| Job Reference | 93326 |
| Tenure | Specified Term of 3 yearsFull-time  |
| Salary Range | AU$92,624 to AU$101,459 (pro-rata for part time)plus up to 15.4% superannuation |
| Location | Hobart, Tasmania, Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Project Leader, Environment |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dion Frampton via email at dion.frampton@csiro.au and Kim Lee Chang via email at Kim.Leechang@csiro.au  |
| 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).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### 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.**

Future Science Platforms (FSPs) represent an investment in science that underpins innovation and can help reinvent and create new industries for Australia.

Nationally and internationally, reaching net-zero emissions and beyond will require new methods of permanently removing significant amounts of carbon from the atmosphere that are fast, scalable, and responsible. CarbonLock, CSIRO’s Permanent Carbon Locking Future Science Platform (FSP) will address this challenge by driving radical innovation at the nexus of biology, chemistry and engineering in negative emissions technology and their integration to permanently remove atmospheric carbon dioxide in novel and unconventional ways.

The CERC Fellow will work within a multidisciplinary team as part of the CarbonLock FSP, with a focus on algae-based solutions. Algae are natural consumers of carbon dioxide and have a diverse and complex biosynthetic capacity to convert this carbon dioxideinto many potential bioproducts: a process that will require enhancement and acceleration for potential negative emissions outcomes to be fully realised. The CERC Fellow will use a combination of culturing, metabolic and genetic approaches to investigate possible routes to accelerated algal conversion of carbon dioxide to bioproducts, taking advantage of leading-edge ‘omics analyses to inform effective and sustainable manipulation strategies. The CERC Fellow will explore alternative and efficient ways to increase bioproduct synthesis and processing via culture-based ecophysiological and metabolic manipulation, having access to biological resources including the Australian National Algae Culture Collection. They will benefit from working within a dynamic team of experts and by exposure to broad scientific expertise spanning the spectrum from basic biology and biochemistry to applied technology integration.

### Duties and Key Result Areas

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

* + Contribute to a research project investigating algae carbon-based bioproducts via understanding of metabolic and molecular mechanisms of biosynthesis and by utilising state-of-the-art techniques in molecular biology, genomics and biotechnology.
	+ Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
	+ Undertake regular reviews of relevant literature and patents.
	+ Communicate results through regular team meetings and FSP presentations.
	+ Recognise and harness opportunities for innovation and the generation of new theoretical perspectives, and progress opportunities for the further development or creation of new lines of research.
	+ Carry out research investigations requiring originality, creativity and innovation and when appropriate share outcomes through publication in refereed journals and through academic seminars or other presentations at national and international conferences.
	+ 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 Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* 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 algal or plant science, microbiology, and/or biochemistry, with a strong background in biotechnology and molecular biology.

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

1. Demonstrated experience in the use of molecular biology methodologies to problems in algal, plant or microbial metabolite or bioproduct biosynthesis.
2. Evidence of experience in biosynthetic pathway elucidation and/or manipulation using approaches including gene expression analysis, mutagenesis and RNAi techniques, and/or genome editing technologies (e.g., CRISPR-Cas).
3. Evidence of experience with algae, plant or microbial growth facilities, including algae/microbial culturing or plant propagation and maintenance.
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.

## **Desirable**

1. Experience with work in PC2 level laboratory settings.
2. Experience in working with algae and/or cyanobacteria and related bioinformatics.
3. Experience in organic chemistry or biochemistry.
4. Remain productive, positive and resilient in complex, ambiguous and/or uncertain environments.
5. **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 as a CERC Fellow within CSIRO, candidates are 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 ($89,680). 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 is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will undertake a pre-employment background check. 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 proposition**

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.

To find out more about the CarbonLock FSP, please visit [our website](https://research.csiro.au/carbonlock/). To learn more about CSIRO, visit [CSIRO Online](http://www.csiro.au/) 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