# 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 Synthetic Polymer and Bioconjugation Chemistry  |
| Job Reference | 75475 |
| Tenure | Specified Term of 3 years Full-time |
| Salary Range | AU$88,163 to AU$96,573 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Clayton, Victoria |
| 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 |
| Client Focus – Internal | 90% |
| Client Focus – External | 10% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Lewis Blackman via email at Lewis.Blackman@csiro.au or phone +61 3 9545 2925 |
| 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. |

### 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.**

### Biologic drugs are an increasingly important class of therapeutics used in a range of applications from vaccines to chemotherapy. The Postdoctoral Fellow will be involved in developing next generation biologic drug candidates through incorporation of polymeric materials and other important functionalities.

### The Postdoctoral Fellow will join the Biomedical Manufacturing Program within the CSIRO Manufacturing Business Unit, supported by a highly multidisciplinary team. While the Postdoctoral Fellow’s focus will be in synthetic bioconjugation chemistry, they will be supported in this work by a wide variety of expertise in areas such as polymer chemistry, materials science, microbiology, pharmacology, and cell biology. The project has a strong translational focus, with the aim of Intellectual Property generation and ultimately commercialisation of technologies developed within.

### Duties and Key Result Areas:

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

* Using rational design and bioconjugation knowledge, propose novel synthetic targets as candidate materials in consultation with the team.
* Plan and perform synthetic chemistry experiments to generate novel therapeutics.
* Perform biochemical and/or enzymatic assays, and employ spectroscopic and chromatographic techniques, to characterise the structure and behaviour of the novel materials.
* With guidance from team members, perform microbiological testing of candidate materials in bacterial culture.
* Use structure-activity relationships to screen, optimise, and identify leads from prepared candidates.
* Facilitate the flow of information and ideas throughout the multidisciplinary team.
* Be encouraged to take ownership of the project and help shape the path of the work.
* Produce high quality scientific articles suitable for publication in high quality journals, client reports, and/or patent applications.
* Prepare appropriate conference papers and present them at conferences as agreed with your supervisor.
* Undertake regular reviews of relevant literature and IP.
* Maintain confidentiality when dealing with commercially sensitive information.
* Work collaboratively with colleagues within your team, the business unit, and across CSIRO.
* Communicate effectively and respectfully with all staff, clients, and suppliers in the interests of good business practice, collaboration, and enhancement of CSIRO’s reputation.
	+ 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.
	+ 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, such as chemistry 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. Demonstrated experience and problem-solving skills in bioconjugation of macromolecules and/or biopolymers and purification methods thereof.
2. Strong organic and/or polymer synthesis skills.
3. Knowledge of, and/or experience with, bioanalytical techniques (including one or more from SDS-PAGE, ELISA, Western blot, colorimetric assays, circular dichroism, tryptophan fluorescence, FRET analysis, or isoelectric point determination).
4. Experience with polymer and small molecule characterisation (e.g. NMR, SEC, FT-IR, MS, MALDI-ToF, etc.).
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 sound history of publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents.
7. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

## **Desirable:**

1. Remain productive, positive and resilient in complex, ambiguous and/or uncertain environments.
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.**

**Preference will be given to candidates with skills in one or more of the following areas:**

1. Experience with cell-based *in vitro* models for material assessment. Experience with bacterial assays, including work with biofilms, would be highly beneficial.
2. Demonstrated problem solving skills in assay development (biochemical and/or microbiological) is highly desirable but non-essential.
3. Demonstrated experience with analysis of DNA/RNA, or other biopolymers, would be beneficial.
4. Experience with drug delivery/ pharmacokinetics would be beneficial.
5. Some understanding of antimicrobial resistance would be beneficial.

If you fit the essential criteria and some of the above desirable criteria, and are keen to work with CSIRO, please consider applying for this exciting role.

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 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 [Manufacturing](https://www.csiro.au/en/Research/MF)