# 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: Nose-to-Brain Transmission of Viruses |
| Job Reference | 74421 |
| Tenure | Specified Term of 3 years |
| Salary Range | AU$88,163 to AU$96,573 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Geelong, Victoria |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents * Australian temporary residents currently residing in Australia (visa sponsorship may be provided to eligible candidates) |
| Position reports to the | Team Leader, Pathology & Pathogen Biology |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact John Bingham via email at john.bingham@csiro.au or phone +61 3 5227 5000 |
| 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 of 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 Postdoctoral Fellow will be based at the Australian Centre for Disease Preparedness (ACDP) in Geelong. The project will integrate into and expand on-going research at ACDP to understand neuropathogenesis of viral infections and devise new strategies for protection of neurological health in infection and disease. The successful candidate will contribute capabilities to develop advanced ex-vivo model systems of olfactory neuroepithelium and study novel cellular mechanisms enabling the nose-to-brain transmission of respiratory and neurotropic viruses. The fellow will also explore these model systems to adapt virus-inspired mechanisms to develop potential new tools for nose-to-brain delivery of therapeutic agents. The ex-vivo systems will include human model systems using stem cell technology and primary explant cultures from animals in 2D and 3D using techniques such as microfluidics. The fellow will design and perform experiments in high-containment laboratories to identify the viral mechanisms in these model systems using advanced light microscopy (confocal and electron microscopy) and biochemical, genetic and cell biology methods.

### Duties and Key Result Areas

Under the direction of senior research scientists,

* Carry out innovative, impactful research of strategic importance to CSIRO that will lead to novel insights into viral pathogenesis of the nervous system.
* Conduct research investigations requiring originality, creativity and innovation, specifically to develop models of olfactory neuroepithelium for studies in viral pathogenesis and control.
* Plan and design relevant studies into the *ex vivo* development of olfactory models and their utilisation for viral pathogenesis and control, including compiling and submitting documentation for institutional and regulatory approval.
* Record, manage, and analyse data/information using relevant domain data science techniques.
* Undertake regular reviews of relevant literature and patents and apply these findings to the research project objectives.
* Produce high quality scientific papers suitable for publication in quality journals, for client reports and granting of patents.
* Prepare appropriate conference papers and present those at conferences.
* Contribute to the development of innovative concepts and ideas for further research.
* Make a contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans.
* 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.
* Proactively undertake development to grow effective researcher capabilities to support career goals.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Undertake an appropriate training and development program developed by CSIRO.
* 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 virology, neurobiology, immunology, cell biology or molecular biology*.*

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. Experience in advanced cell culture techniques such as generation of organoids, primary cell cultures, microfluidic cell culture systems and stem cell-derived model systems.
2. **The ability to work effectively as part of a multi-disciplinary research team, plus the motivation and discipline to carry out autonomous research.**
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.
6. A willingness to comply with AAHL’s microbiological security and safety requirements, including being vaccinated against rabies and other pathogens.

## **Desirable**

1. Demonstrated experience in neuroscience research, in particular identifying novel neurobiological mechanisms associated with development, function and degeneration of nervous systems.
2. Experience in biochemical and cell biological methods, including molecular cloning and gene editing techniques.
3. Skills in virology techniques.
4. Experience in confocal microscopy methods, including fluorescently labelled protein analysis, live-cell imaging and advanced brain tissue imaging.
5. Knowledge in analysis of drug delivery systems to the brain in animal or cell culture models.

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 security and health clearance requirements.

* The successful applicant will be required to obtain and provide a National Police Check or equivalent.
* The successful candidate will be required to obtain and maintain a National Health Security (NHS) security clearance.
* The successful candidate will 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).

**Security Assessment and Microbiological Security Requirements for Personnel Working on the ACDP Site**

* The nature of our work requires that each person working on site must comply with the conditions described below.
* The appointee is required to pass a security clearance at a level appropriate to duties of the position.  Confirmation of the appointment is subject to obtaining that clearance.
* It is essential that all work on exotic or emerging diseases carried out at ACDP is conducted in a safe manner to prevent the escape of the disease agents used, and to this end, all activities and personnel will be subject to appropriate microbiological security measures. Consequently, while working at ACDP, you may not reside on a property on which are kept any of the following animals: sheep, cattle, pigs, goats, horses, asses and mules, any other cloven-hoofed animal, fowls, turkeys, geese, domestic ducks, caged birds, emus or ostriches. Personnel working with diseases of aquatic animals may not keep aquarium fish at their place of residence and personnel working with cane toad material must avoid contact with amphibians.
* In addition, for a period of seven days after working in the microbiologically secure area of AAHL, personnel may not have close contact with any of the above animals, amphibians or birds or the actual places where these animals are held or visit any aquatic animal farm or aquatic animal hatchery.
* Working in the barrier maintained Small Animal Facility requires avoidance of additional animals such as mice, rats, guinea pigs, rabbits and poultry 3 days prior to arrival.
* Personnel must abide by Occupational Health, Safety and Environment regulations. Safety signs and directives issued by CSIRO personnel must always be complied with.

**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 the CSIRO [Australian Centre for Disease Preparedness](https://www.csiro.au/en/Research/Facilities/ACDP)