# Postdoctoral Fellowship – CSOF4

Role summary for potential applicants

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| Advertised Job Title**:** | CSIRO Postdoctoral Fellowship – Novel approaches for the early diagnosis of infectious diseases |
| Reference Number**:** | 52122 |
| Classification**:** | CSOF4 |
| Salary Range: | AU $83K to AU $91K plus up to 15.4% superannuation |
| Location**:** | CSIRO Australian Animal Health Laboratory (AAHL), Geelong, Victoria, Australia |
| Tenure: | Specified Term of 2 years and 4 months |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian Citizens Only  Australian Citizens and Permanent Residents Only   * All Candidates |
| Functional Area**:** | Research Scientist / Engineer - Postdoc |
| % Client Focus - Internal: | 100% |
| % Client Focus - External: | 0% |
| Reports to the: | Research scientist |
| Number of Direct Reports: | 0 |

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| **Role Overview:** |
| **Postdoctoral Fellowships** at CSIRO provide opportunities to scientists and engineers, who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships will help launch their careers, provide experience that will enhance their career prospects, and facilitate the recruitment and development of potential leaders for CSIRO.  Postdoctoral Fellows **are appointed for up to three years** and will work closely with a leading Research Scientist or Engineer 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.  The Postdoctoral Fellow will join a research team that is developing novel assays for the early detection of infectious diseases both in human and animals. A particular focus will be around host-encoded microRNAs, a class of small RNA molecules found in circulating biofluids. The Fellow will define the nature of early microRNA activities in diseases, assess their applicability to reveal details of host immune responses to diseases and disease pathogenesis. There are three major objectives in the project:  a) To define the host microRNA responses to diseases. The Postdoctoral Fellow will assess in vitro and in vivo host microRNA responses to diseases that exact a significant toll on human health that will act as comparisons to test microRNA profiling specificity.  b) To develop readouts for microRNA expression profiles. To date microRNA profiles have been developed using a time-consuming pipeline involving RNA purification, RNA sequencing, rigorous bioinformatics analysis of datasets and validation by PCR. The Postdoctoral Fellow is in an exciting position to develop new methods for rapid measurement of microRNA expression levels as we streamline this process.  c) To define the function of microRNAs during disease. Similar to host molecules such as hormones and cytokines, microRNAs are signalling molecules that carry out physiological functions. Analysis of microRNA targets thus presents a novel avenue in the characterisation of cellular factors aiding in disease pathogenesis. The Postdoctoral Fellow will gain experience in recently developed technologies to define microRNA function by identifying microRNAs in complex with mRNA target genes, allowing sensitive and specific detection of miRNA-mRNA interactions and isolating high quality mRNA suitable for analysis by microarray or RNAseq. Bioinformatics will then define which host pathways are regulated during early host responses. |

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| **Duties and Key Result Areas:** |
| * Under the direction of senior research scientists, carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes. * To define the host microRNA responses to infectious diseases. * To develop readouts for microRNA expression profiles. * To define the function of microRNAs during disease. * Contribute to other research areas – including understanding the lifecycle of emerging infectious diseases such as Hendra virus and studying immunity to zoonotic pathogens in the natural host. * Undertake regular reviews of relevant literature and patents. * Produce high quality scientific and/or engineering papers suitable for publication in quality journals, for client reports and granting of patents. * Prepare appropriate conference papers and present those at conferences as agreed with your supervisor. * 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. * 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   ***CSIRO’s postdoctoral training program***is developed between the Postdoctoral Fellow and a CSIRO scientist. 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   <http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships> |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***  **Education/Qualifications:** A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as molecular biology, genetics, microbiology or immunology*.*  ***Please note:*** *To be eligible for this role you must have* ***no more than 3 years*** *of relevant postdoctoral experience.*  **Communication: High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including at national and international conferences.**  **Publications: A record of publications in quality, peer reviewed journals.**  **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.  ***Essential Criteria:***   1. A demonstrated track record in molecular biology, genetics, virology or immunology. 2. Demonstrated ability to analyse information, make independent, correct and timely decisions to achieve project goals and to contribute to the development of collaborations. 3. Previous involvement in multi-party collaborationswhere successful partnerships and/or outcomes have resulted***.*** 4. Demonstrated ability to work independently under minimal supervision while contributing to overall team performance and proven ability to meet performance deadlines during the course of the project. 5. A record of science innovation, applying creativity and originality to problem solving, plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.   Note: clear examples of collaborations such as publications, time spent in other labs or grant applications should be included in CV or cover letter.  **Desirable Criteria:**   1. Research experience in microRNAs. 2. Research experience in animal disease models and/or bioinformatics. 3. Practical knowledge in working under biocontainment conditions.   **As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to**:   * Excellent science * Inclusion, trust & respect * Health, safety & environment * Delivery on commitments.   *In your application and at interview you will need to demonstrate alignment with these behaviours.*  **Eligibility:**  To be appointed as a 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 (AU $80,833).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.  ***Other special requirements:***  *Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).-* [*http://www.ielts.org/default.aspx*](http://www.ielts.org/default.aspx) |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at <https://jobs.csiro.au/> and enter requisition number **52122**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’)  Please load your CV and a brief cover letter outlining your interest in the role and your motivations for applying (Maximum 2MB). At the end of the online application process, you will also be required to respond to some screening questions. Where text responses are required, to avoid being timed out of the system we recommend that you prepare your responses offline and paste them into the appropriate spot prior to submitting your application.  If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: If you do not already have the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV please add these before uploading your CV.  **Contact:** If after reading the selection documentation you require further information please contact:  **Dr Cameron Stewart** via email: [Cameron.Stewart@csiro.au](mailto:Cameron.Stewart@csiro.au) or telephone: **+61 3 5227 5601**.  Please do not email your application directly to Dr Stewart. Applications received via this method will not be considered.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. We serve governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  At **CSIRO Health and Biosecurity** we’re working with our partners, assembling strong multidisciplinary research teams to tackle major national and international health and biosecurity challenges. In doing so we're protecting the health of our farming sector, environment, people, and our way of life. |