# Postdoctoral Fellowship – CSOF4

Role summary for potential applicants

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| Advertised Job Title**:** | Postdoctoral Fellowship – Microbial Ecology of Coastal Environments |
| Reference Number**:** | 43884 |
| Classification**:** | CSOF4 |
| Salary Range: | AU $80K to AU $91K plus up to 15.4% superannuation |
| Location**:** | Clayton, Victoria Australia |
| Tenure: | Specified Term of 3 years |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | * All Candidates |
| Functional Area**:** | Research Scientist / Engineer - Postdoc |
| % Client Focus - Internal: | 90% |
| % Client Focus - External: | 10% |
| Reports to the: | Team Leader Environmental Genomics |
| 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 Environmental Genomics Team at CSIRO Oceans and Atmosphere uses state-of-the-art genomics-based assays to understand microbial processes in a range of natural and engineered environments. This project focuses on estuarine sediments links between microbial community composition and activity and biogeochemical function. The role will be closely aligned with the role of a Biogeochemist to provide the measurement of biogeochemical process rates at fine spatial scales, complimenting microbial community structure and activity information. These data will, in turn, be used to parametrize process models with biological data to better understand and predict the fate of organic matter entering near coastal areas.  The Postdoctoral Fellow will undertake independent and innovative research which aims to:  - establish links between the structure, transcriptional status and biogeochemical processes occurring in near coastal zones.  - investigate the functioning and resilience of the microbial nitrogen cycling in estuarine sediments.  - provide data to validate and improve current process models.  - contribute to the establishment of a baseline dataset of microbial community composition in a representative range of Australian estuaries. |

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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. * Molecular investigation of sediment microbial community structure and activity, experimental design and sample collection using model sediment/water systems, both ex situ (microcosms) and (in situ). * Maintenance of microcosms for investigation of microbial community and biogeochemical processes. * Organise and conduct field sampling in marine environments. * Collection of samples and extraction of DNA and RNA from marine sediments and water column. * Metagenome library preparation, qPCR, etc. * Analysis and interpretation of sequence data from metagenomic shotgun and amplicon libraries. * Application of statistical methods to link environmental and biological data. * Undertake regular reviews and be abreast 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. * Assist with the supervision of postgraduate students. * 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:** |
| ***Pre-Requisites:***   1. **Education/Qualifications:** A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as Microbial/Molecular Ecology.   ***Please note:*** *To be eligible for this role you must have* ***no more than 3 years*** *of relevant postdoctoral experience.*   1. **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.** 2. **Publications: A record of publications in quality, peer reviewed journals.** 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.   ***Essential Criteria:***   1. Demonstrated experience in the extraction of DNA/RNA from sediments and with standard molecular methods (PCR, qPCR, RT-PCR) 2. Demonstrated experience producing and analysing metagenomic and metatranscriptomic data 3. Demonstrated experience in conducting field sampling in marine areas. 4. Demonstrated experience in the application of statistical methods to link environmental and biological data. 5. **The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, plus the motivation and discipline to carry out autonomous research.** 6. A record of science innovation and creativity, plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.   **Desirable Criteria:**   1. Familiarity with marine biogeochemical cycles. 2. Familiarity with biogeochemical process models. 3. Experience in the establishment and maintenance of marine sediment mesocosms.   **CSIRO Values:**  As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to Excellent science, Inclusion, trust & respect, Health, safety & environment and Deliver on commitments.  In your application and at interview you will need to demonstrate alignment with these behaviours.  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 ($78,479).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 provide enough information relevant to the selection criteria for this position to enable the assessment panel to determine your suitability, and upload one document containing your CV/resume and cover letter.  If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside 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 Levente Bodrossyvia email: lev.bodrossy@csiro.au or phone: +61 3 6232 5456  Please do not email your application directly to Dr Bodrossy. 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. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  **We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.**  **Find out more!** <https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance>  **CSIRO Oceans and Atmosphere**  CSIRO Oceans and Atmosphere is uniquely placed to deliver significant economic, social and environmental benefits for Australia and the region. We seek to secure Australia’s future through our seas and skies.  Find out more! <http://www.csiro.au/en/Research/OandA>  The Environmental Genomics Team is located in Hobart, offering outstanding life quality. **Hobart** is home to the largest co-located team of bluewater oceanographers and ocean climate scientists in Australia.  CSIRO works closely with the University of Tasmania, the Australian Antarctic Division, the Integrated Marine Observing System and the Antarctic Climate and Ecosystems Cooperative Research Centre. This team is recognised globally as a leader in ocean climate research. You will benefit from direct access to a group of scientists studying the oceans from the tropics to Antarctica, using both observations and models, and their interaction with the atmosphere, cryosphere and biosphere. A large peer group of PhD students and postdoctoral researchers will enrich your experience. We work with colleagues from around the world and you will have the opportunity to take advantage of these international collaborations. As the national focal point for bluewater ocean research, we organize numerous international workshops and symposia, and host many international visitors. The team has a high diversity across gender and race, and supports a flexible family-friendly workplace.  Hobart is a small and sophisticated city flanked on the west by pristine wilderness areas.  It has a vibrant arts and music scene. There are many high quality schools located in the city, and quality day-care facilities close to our CSIRO site, which is located on the downtown waterfront.  For further information please feel free to contact Levente Bodrossy (lev.bodrossy@csiro.au) |