# Position Details

## Research Projects- CSOF4

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| The following information is for applicants |
| Advertised Job Title | Molecular Laboratory Research Technician  |
| Job Reference | 77868 |
| Tenure | Specified term of 2 years (with possibility for extension)Full-time |
| Salary Range | AU$85k - AU$96k per annum, plus up to 15.4% superannuation |
| Location(s) | Black Mountain (Canberra) ACT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian Citizens and Permanent Residents
* New Zealand Citizens
* Australian temporary residents who have the right to work for the expected duration of the term (at least to end of December, 2023), with no requirement for sponsorship.
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| Position reports to the | ANIC Team Leader Phylogenomics |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Andreas Zwick via email: Andreas.Zwick@csiro.au or phone 02 6246 4289 |
| 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

The Molecular Laboratory Research Technician position is based in the Australian National Insect Collection (ANIC) in Canberra, and works closely with research scientists and technicians from the ANIC and other National Research Collections and State Collections. The position will support the [National Biodiversity DNA Library initiative](https://research.csiro.au/dnalibrary/), which is building a library of DNA reference sequences based on taxonomically identified collection specimens. These sequences provide references for a variety of molecular species identification and cutting-edge biodiversity survey methods, e.g., DNA barcoding of individual specimens, meta-barcoding and eDNA surveys. The eDNA sampling of aquatic and terrestrial environments is poised to revolutionise the way we [monitor Australia’s natural environment](https://ecos.csiro.au/edna-barcode-library/), but it relies on a complete reference library of DNA barcodes.

As part of a team, the Molecular Laboratory Research Technician carries out the molecular lab work for National Biodiversity DNA Library and related projects. This includes primarily the use of established protocols, robotic systems and high-tech laboratory equipment to generate whole genome shotgun sequence data for many thousands of Australian animal and plant specimens in a high-throughput fashion (up to 1,536 samples at a time). The platform technology is novel, and the Molecular Laboratory Research Technician uses initiative to improve and continue the development of the platform.

The [National Biodiversity DNA Library](https://research.csiro.au/dnalibrary/) will be a globally unique and significant national infrastructure. It is powered by developments from the CSIRO’s [Environomics Future Science Platform](https://research.csiro.au/environomics/), in particular novel platform technology for [high-throughput collection genomics](https://research.csiro.au/environomics/team-research-projects/high-throughput-collection-genomics-of-highly-variable-dna-samples/) for the large-scale sequencing of whole genomes from old specimens in the National Research Collections Australia and other collections. The combination of degraded / fragmented DNA from up to 150y old samples and high-throughput DNA sequencing poses a unique challenge, and cutting-edge technology like [acoustic liquid handling](https://www.beckman.com/liquid-handlers/echo-525) is used to reduce potential cross-contaminants and to miniaturise reactions to the nano-litre scale.

### Duties and Key Result Areas:

* Liaise with internal and external stakeholders to understand their needs with respect to specimens and tissue samples, DNA sequence analyses and delivery of results.
* Carry out molecular laboratory work that includes, but is not limited to, high-throughput DNA extractions and DNA library building.
* Contribute to the improvement and development of cutting-edge platform technology.
* Help establish and use a Laboratory Inventory Management System (LIMS) to track samples, laboratory products and data throughout the process.
* Work collaboratively across the collections to support the relocation to the new facility.
* Contribute to the communication of research techniques and may collaborate on drafting presentations to, and/or detailed written reports for, clients and the scientific and/or technology community.
* Under general direction participate in planning projects and accept responsibility for the scheduling and completion of major parts of projects.
* Provide coaching, on-the-job training and instruction to colleagues, on activities pertaining to the immediate work area and responsibilities, allocate activities, direct tasks and manage resources to meet objectives, as required.
* Adapt and/or develop original experimental methods and ideas in support of existing and further research, promptly addressing where methods may not be defined and initiative is required in seeking new approaches to meet experimental and/or technological needs.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, regionally dispersed team, to carry out tasks in support of CSIRO’s scientific objectives.
* 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.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A relevant qualification or equivalent work experience in molecular genetics / biology.
2. Extensive practical experience in molecular genetics laboratory work.
3. Proven ability to carry out long, complex workflows according to protocol and in a reliable and reproducible manner.
4. A demonstrated ability to work efficiently on multiple projects in parallel.
5. A history of both successful teamwork and working independently to meet agreed objectives.

## **Desirable:**

1. Experience with robotic liquid handling and/or high-throughput systems.
2. Experience in the use of a Laboratory Inventory Management System (LIMS).
3. Experience with DNA sequence data analyses.
4. Experience using of High Performance Computing resources.

## **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.

Special Requirements

The successful candidates will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us at [CSIRO Online](http://www.csiro.au/)

Find out more about the CSIRO [National Research Collections Australia](https://www.csiro.au/en/about/facilities-collections/Collections)

Find out more about the CSIRO [Environomics Future Science Platform](https://research.csiro.au/environomics/)

Find out more about the CSIRO [High-throughput Collection Genomics project](https://research.csiro.au/environomics/team-research-projects/high-throughput-collection-genomics-of-highly-variable-dna-samples/)

Find out more about CSIRO’s role in the [National Biodiversity DNA Library](https://research.csiro.au/dnalibrary/)

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