# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Scientist in Computational Biology |
| Job Reference | 76770 |
| Tenure | Indefinite |
| Salary Range | AU$115k to AU$135k pa (pro-rata for part-time) + up to 15.4% superannuation  This role is offered on a full-time or part-time (minimum 0.8 FTE) basis |
| Location(s) | Canberra (Black Mountain) ACT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Position reports to the | Group Leader |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Melania Figueroa via email at melania.figueroa@csiro.au or phone +61 2 6218 3416 |
| 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

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

Research in the Traits program at CSIRO Agriculture and Food is increasingly involving complex machine learning and computational approaches to address biological problems at scale and deliver outcomes with industry impact. The Research Scientist will contribute to this evolving digital transformation through engagement across a variety of project areas including in host-microbe interactions and protein engineering, with a base in the Crop Immunity group. They will apply high level skills in computational biology to address novel bioinformatic challenges and complex or ill-defined biological questions, and develop new research areas facilitated by data analytics, modelling and machine learning tools. The scientist will participate in staff supervision and the development of cross-Program and cross-Business Unit projects and foster collaborations within and outside of CSIRO. This includes participation in CSIRO Synthetic Biology (SynBio) and Microbiome (MOSH) Future Science Platforms which address new scientific challenges for Australia.

### This role is offered on a full-time or part-time (minimum 0.8 FTE) basis.

### Duties and Key Result Areas

* Under general direction, use professional expertise, knowledge of other disciplines and research experience/achievement to formulate, develop and complete an approved research program with general direction as to the aims of their activities.
* Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research and explore opportunities to apply research expertise to other significant research programs.
* Use computational biology to address novel bioinformatic challenges and complex or ill-defined biological questions in the field of plant-microbe interactions to alleviate the crop productivity constraints.
* Develop new and cutting-edge research areas facilitated by data analytics, modelling and machine learning to complement existing disease management strategies in agriculture.
* Communicate results internally through regular research team meetings and group level presentations.
* Communicate results externally through preparation and presentation of appropriate conference papers and scientific manuscripts suitable for publication in quality journals and the preparation of documents for patent applications.
* Maintain awareness of state-of-the-art scientific approaches through regular reviews of relevant literature and patents.
* Lead and supervise staff to ensure that experiments are established in accordance with the research design and are completed within the agree timeframes and budget.
* Act as a trusted advisor, utilising knowledge of the clients’ business and understanding of their underlying needs.
* Anticipate industry and/or community needs and market direction through client liaison and networking.
* Maintain confidentiality when dealing with commercially sensitive information.
* 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 research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

## **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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

## **Selection Criteria**

#### Essential

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

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field such as computational biology, bioinformatics or related discipline coupled with significant relevant research or industrial experience.
2. Detailed knowledge and research experience in the application of computational approaches to molecular plant-microbe interactions and gene discovery as well as the application of cutting-edge techniques for plant or pathogen genomics and other data intensive analyses.
3. Demonstrated experience in the application of bioinformatics and machine learning approaches to biological problems and development and implementation of novel approaches and/or software tools to challenging questions.
4. A strong record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations, and demonstrated success in development of funding applications and engagements with external partners to support novel research ideas.
5. High level written and oral communication skills with the ability to represent the research group effectively internally and externally, including the presentation of research outcomes at national and international conferences.
6. A strong history of impactful publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents.
7. Experience in supervision of staff and/or students.
8. Evidence for national and/or international recognition and leadership in the field.

## **Desirable**

1. Experience or an understanding of the biology underpinning novel crop protection tools such applications involving RNA molecules, proteins or metabolites.

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.

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* 1. People First
  2. Further Together
  3. Making it Real
  4. Trusted

Find out more about CSIRO [Agriculture and Food](https://www.csiro.au/en/Research/AF)