# Research Scientist – CSOF5

Role summary for potential applicants

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| Advertised Job Title**:** | Molecular and Cellular Biologist, organelle/symbiont engineering |
| Reference Number**:** | 38044 |
| Classification**:** | CSOF5 |
| Salary Range: | $92,591 - $100,199 plus up to 15.4% superannuation  |
| Location**:** | Black Mountain, Canberra, ACT |
| Tenure: | Specified Term until June 2020 |
| Relocation assistance**:** | Yes |
| Applications are open to: | [ ]  Australian Citizens Only[ ]  Australian Citizens and Permanent Residents Only* [x]  All Candidates
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| Functional Area**:** | Research Scientist/Engineer |
| % Client Focus - Internal: | 100 |
| % Client Focus - External: | 0 |
| Reports to the: | Chris Hardy, Team Leader (L&W) |
| Number of Direct Reports: | No direct reports  |

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| **Role Overview:** |
| [Future Science Platforms](http://www.csiro.au/en/About/Future-Science-Platforms) are an investment in science that underpins innovation and that has the potential to help reinvent and create new industries for Australia. FSPs will see us grow the capability of new generation of researchers and allow Australia to attract the best students and experts to work with us on future science. They are strategic investments aimed at developing capacity in areas of identified future importance for Australia. FSPs are both impact and science focused, developing innovative scientific solutions with industry, government and university partners. They support world class, coherent and creative research teams which integrate science and delivery over the long term, looking to the future science needs of CSIRO and our partners with a 5 to 10 year vision. To position Australia to build a vibrant synthetic biology research and development community to support the bio-based industries and ecoengineering activities of tomorrow, CSIRO has established the [Synthetic Biology FSP](https://research.csiro.au/synthetic-biology-fsp/) (SynBioFSP). Synthetic Biology (SynBio) is the design and construction of biological parts, devices, and organisms (usually based on DNA-encoded componentry); and their application for useful purposes. The SynBioFSP has a mission to develop capacity in synthetic biology within CSIRO and across Australia, in a collaborative and transparent manner. Science capability will be strongly aligned with CSIRO business unit capabilities and will allow CSIRO to deliver novel future outcomes for external partners. The program has a $13 million funding envelope over the first three years. We aim to:1. Build the foundational capabilities to advance SynBio research, including significant investment in social licence to operate
2. Drive national coordination by making these foundational capabilities widely available to the broad research community, governments, and industry for the development of novel industrial products, pharma, biocontrol agents, and strategies for building ecosystem resilience to environmental change, and
3. Build strong partnerships, collaborations, and connections across the innovation sector to develop these novel products and applications responsibly.

The Synthetic Biology FSP (SynBioFSP) is developing a research portfolio which will be spread across CSIRO and a wide variety of partner organisations (universities, industry, NGOs, other research organisations, etc.), both national and international. The research portfolio is dynamic and will evolve over time on the basis of strategy and performance. Research projects will sit within one or more priority [Application Domains](https://research.csiro.au/synthetic-biology-fsp/application-domains/) (Environment & Biocontrol, Chemicals & Fibres, Organelles & Endosymbionts) and one or more [Science Domains](https://research.csiro.au/synthetic-biology-fsp/science-domains/) (Integrative Biological Modelling, Engineering Novel Biological Components, Assembling Novel Biosystems, Maximising Impact). The SynBio FSP will embed a social and behavioural science agenda to address issues around social licence to operate.The capacity to engineer organelles and symbionts could deliver enormous impacts to industries across the SynBioFSP application domains. Efficient organelle engineering tools have proven to be a major challenge for the synthetic biology community, and their development is a core strategic objective within the SynBioFSP. All evidence suggests that genome editing tools like CRISPR-Cas9 would function in organelles if the component parts could be transported into the appropriate cellular compartments. In this position you will focus on understanding protein and RNA transport from the nucleus and cytoplasm into organelles and endosymbionts, initially focusing on Drosophila melanogaster as a model system. You will use this knowledge to develop effective tools to engineer the genomes of organelles and symbionts in this and other plant and animal systems targeted within the SynBioFSP. |

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| **Duties and Key Result Areas:** |
| * Identify and characterise mechanisms regulating intracellular translocation of proteins and RNA between the nucleus, cytoplasm, and organelles/symbionts.
* Develop efficient genome engineering tools for organelles/symbionts through adaptation of existing tools and/or development of novel tools.
* Communicate findings through seminars, research reports and publication in high-impact international journals.
* 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.
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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 in a relevant discipline area such as molecular biology, cell biology, or biochemistry, with at least 3 years’ relevant postdoctoral research 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.**
* **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.

***Essential criteria***1. Demonstrated capability to conduct innovative research in molecular biology, cell biology, and/or biochemistry
2. Demonstrated ability to develop experimental plans and pursue novel research approaches
3. Demonstrated originality, creativity and innovation in solving problems and introducing new directions and approaches
4. Demonstrated ability to meet performance deadlines under minimal supervision, and to work **effectively as part of a multi-disciplinary, regionally dispersed research team** to achieve shared goals through cooperation
5. Evidence of strong written and oral communication skills, including publications in international scientific journals

***Desirable criteria***1. Experience with organelles, symbionts or intra-cell trafficking of proteins and/or nucleic acids.
2. Research experience with insect cell lines, or equivalent.
3. Experience with the use of CRISPR-Cas9 genome editing tools.

***CSIRO Values:***As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to: * Excellence in science,
* Inclusion, trust & respect,
* Health, safety & environment
* Deliver on commitments.

In your application and at interview you will need to demonstrate alignment with these behaviours. |

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| **Other Information:** |
| **How to Apply**Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers). You will need to upload your cover letter and resume/CV as ONE document, expressing your interest in the role and addressing each of the Selection Criteria. Please provide sufficient relevant information to enable the selection panel to assess your suitability against the Selection Criteria. Should your application proceeds to the next step, you may be asked to provide additional information.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**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 Owain Edwards by email at owain.edwards@csiro.au or by phone at +61 8 9333 6401 or +61 4 3887 7180.**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). **About the SynBio FSP Future Science Platform** For more information, see the [Synthetic Biology FSP](https://research.csiro.au/synthetic-biology-fsp/) website. |