# Research Scientist – CSOF5

Role summary for potential applicants

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| Advertised Job Title**:** | FSP Research Scientist - Sensing Killing Platform |
| Reference Number**:** | 38001 |
| Classification**:** | CSOF5 |
| Salary Range: | $92,591 - $100,199 plus up to 15.4% superannuation |
| Location**:** | Ecoscience precinct, Dutton Park, Brisbane, QLD |
| Tenure: | Specified Term until June 2020 |
| Relocation assistance**:** | Will be provided to the successful candidate if required |
| Applications are open to: | [ ]  Australian Citizens Only[ ]  Australian Citizens and Permanent Residents Only* [x]  All Candidates
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| Functional Area**:** | Research Scientist |
| % Client Focus - Internal: | 100 |
| % Client Focus - External: | 0 |
| Reports to the: | Warish Ahmed (Senior Research Scientist), Claudia Vickers (FSP Leader) |
| 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.

In this role, you will be working within a motivated and high performing team to develop a sensing- killing platform that is capable of eradicating the opportunistic pathogen Legionella pneumophila. The platform will be flexible, allowing targeting of other pathogens in the future. Your success in this role will be underpinned by your record of science innovation and creativity, and your ability and willingness to incorporate novel approaches into platform development. The position will work in close collaboration with Aquatic Ecosystem and Public Health Microbiology Team at CSIRO Land & Water located at the Ecosciences Precinct (ESP) in Dutton Park through senior research scientist Dr. Warish Ahmed, with colleagues located nearby at The University of Queensland through A/Prof. Claudia Vickers’ research group, and with collaborators at Macquarie University. |

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| **Duties and Key Result Areas:** |
| You will establish new research areas and undertake cutting edge research and that will lead to the development of a novel microbial sensing-killing platform within the CSIRO and the collaborative institutions (Macquarie University, University of Queensland)As a CSOF5 level scientist with CSIRO’s SynBio FSP you are expected to:* Carry out innovative, impactful research of strategic importance to CSIRO that will lead to novel and important scientific outcomes under the supervision of senior research scientists.
* Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Produce high quality scientific journal articles, technical/progress reports and contribute to research proposals and present at national and international conferences as agreed with team members.
* Undertake regular reviews of relevant literature and patents.
* Develop follow-on funding and commercialization pathways involving intellectual property (IP) from the project and related activities.
* Develop and execute an engagement plan with regulators, industry, environmentalists and the community to evaluate their views on the use of new technologies in the resource sector.
* Work effectively as part of a multi-disciplinary, often regionally dispersed research team, to undertake independent scientific investigation and carry out associated tasks under the guidance of more senior research scientist.
* Under the guidance of Senior Research Scientists work collaboratively and honestly with internal and external collaborators (Macquarie University and University of Queensland), clients and partners to help define and satisfy objectives for the research project.
* Apply for funding and assist senior team members in writing grant proposals.
* Contribute to the development of innovative concepts and ideas for further research.
* Maintain collaboration with colleagues within your team, the business unit, across CSIRO, partner universities and industries.
* Supervise students (PhD, MSc and Honors) as required.
* Provide effective coaching and on-the-job training to technical staff and students to ensure experiments are established in accordance with research design.
* Communicate effectively and respectfully with all staff and clients 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 by the senior team members
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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed****Pre-Requisites:**** Applicants must hold a PhD in bacterial synthetic biology, molecular biology, bio- engineering or a related discipline, and appropriate post-doctoral/research experience (at least 3 years).
* 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.
* A history of professional and respectful behaviours and attitudes in a collaborative environment.

***Essential criteria**** Strong background knowledge and demonstrated ability to design and carry out experiments, analyse and interpret data in bacterial synthetic biology, molecular biology, bio-engineering or a related discipline.
* Experience in genetic circuit design and construction.
* Knowledge of CRISPRi dCas9 technology.
* Demonstrated originality, creativity and innovation in solving conceptual and experimental problems and introducing new directions and approaches.
* Outstanding publication record of peer reviewed journal articles and reports in disciplines specifically related to the position.
* Demonstrated experience in working with interdisciplinary teams and communicate effectively with multiple audiences.

***Desirable criteria**** Working knowledge on Field Emission Electron Scanning Microscope (FESAM), CAD tools, SBML language, modelling and simulation using SynBio or related software packages would be an advantage.
* Experience working with CRISPRi dCas9 technology.
* Knowledge of bacterial quorum sensing mechanisms.
* Knowledge of antimicrobial peptides.

***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 contactDr Warish Ahmed by email at Warish.Ahmed@csiro.au or by phone at +617 3833 5582 or +614 23927474**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. |