# Research Scientist – CSOF6

Role summary for potential applicants

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| Advertised Job Title**:** | Research Scientist – Biomedical Imaging and Theranostic Development |
| Reference Number**:** | 58164 |
| Classification**:** | CSOF6 |
| Salary Range: | AU$109k to AU$128k per annum, plus up to 15.4% superannuation  |
| Location**:** | Herston (Brisbane) Queensland |
| Tenure: | Indefinite |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | [ ]  Australian Citizens Only[ ]  Australian/New Zealand Citizens and Australian Permanent Residents Only* [x]  All Candidates
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| Functional Area**:** | Research Scientist  |
| % Client Focus - Internal: | 50% |
| % Client Focus - External: | 50% |
| Reports to the: | Team Leader (Dr Jason Dowling) or Leader, Probing Biosystems Future Science Platform |
| Number of Direct Reports: | 0 |

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| **Role Overview:** |
| The Research Scientist in Biomedical Imaging and Theranostic Development will help facilitate the development of a novel translational theranostics research program, building biomedical innovation in precision medicine across CSIRO and our academic and industry partners. The position will contribute to multiple aspects of this research program; from the early discovery and development phase to validation of targets in preclinical and clinical imaging studies. The role will also include assistance in the translation of technologies with commercial partners. The Research Scientist will work with a team of CSIRO researchers and academic collaborators to develop new medical technologies and therapeutics which will have significant impact on patients with difficult to treat cancers. A key aspect of the role will be supervising preclinical and clinical imaging studies using advanced MRI and molecular imaging technologies. The role of the Research Scientist on these projects will include: * Assisting to bring together the required expertise within CSIRO and external partners to develop an innovative theranostics research program in oncology.
* Working closely with clinicians to ensure technology has significant impact on patients.
* Designing innovative imaging and bioinformatics platforms to support validation of new targets.
* Playing a leading role in helping to guide the commercialisation of new theranostic agents or related therapeutic technologies.
* Assisting in the development of novel strategies with a commercial focus to fast track new cancer therapeutics into the market.

The position forms part of the Australian e-Health Research Centre (AeHRC) Medical Image Analysis Team – currently comprising six staff and as many students, as part of the Biomedical Informatics Group e-Health Program within CSIRO Health and Biosecurity. The role requires close collaboration with the Leader of the Probing Biosystems Future Science Platform, to help facilitate transition of technologies into the AeHRC research program. |

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| **Duties and Key Result Areas:** |
| * Carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
* Be part of a dynamic team within CSIRO and external partners developing the next generation of precision medicine technologies for oncology applications, driving innovation from the bench top to the clinic.
* Help develop the next generation of theranostic agents for difficult to treat cancers, such as pancreatic, ovarian, brain, colorectal and lung cancers.
* With external partners, develop a reliable platform for testing new theranostic targets at both preclinical and clinical stages.
* Help develop a framework of advanced MRI and PET imaging technologies, including bioinformatics platforms to enable validation of new theranostics and therapeutics for cancer.
* To assist in the preparation of small biomolecules for both imaging and therapy in preclinical models by using conjugation chemistry for radionuclide labelling of novel targets.
* To assist in the development of new business models and commercialisation strategies to facilitate translation of precision medicine technologies to the market.
* Publish results in leading clinical and technical journals and present research to both technical and non-technical audiences at national and international conferences.
* Grow and maintain scientific citizenship, and collaborations with international and local partners.
* Supervise and mentor junior researchers and students.
* Communicate effectively and respectfully 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.
* Other duties as directed.
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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 and significant research experience in a relevant discipline area, such as medical imaging (MRI and PET), image processing (PET quantitation and pharmacokinetic modelling), small biomolecule imaging, with a background in statistical analysis of preclinical and clinical studies.
* **Communication:** High-level written and oral communication skills including the ability to publish research results, prepare reports, and present the results of scientific investigations at national and international conferences and stakeholder meetings.
* **Publications and grants: A strong record of publication in quality, peer reviewed journals along with evidence of funding from peer reviewed sources.**
* **Behaviours: A history of professional and respectful behaviours and attitudes in a collaborative environment.**

***Essential Criteria:***1. Experience in some key aspects in the development of novel theranostics or therapeutics in any field of oncology.
2. Demonstrated competency in both MRI and PET imaging, especially relating to preclinical studies using animal models.
3. Demonstrated competence in applying advanced image informatics platforms to measure biodistribution of uptake of novel agents in solid tumours.
4. Proven ability to perform conjugation chemistry for labelling small biomolecules with radionuclides for imaging and therapy in the preclinical domain.
5. Demonstrated competence and experience in research innovation, problem solving and application of knowledge, as evidenced by publications and research experience.
6. Proven ability to work independently and as part of a team to prototype research ideas and develop them into demonstration and/or proof of concept systems.
7. A record of science innovation and creativity, plus the ability and willingness to incorporate novel ideas and approaches into scientific investigations.

**Desirable Criteria:**1. An understanding of the translation and commercialisation pathway of new theranostics to the market.
2. Licence to handle PET radionuclides.
3. A general understanding of cancer physiology.

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

**In your application and at interview you will need to demonstrate alignment with these behaviours.*****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 apply for this position online at <https://jobs.csiro.au/> and enter requisition number **58164**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’).Please load one document containing your CV and a brief cover letter which outlines your interest in the role and your motivations for applying (Maximum 2MB). At the end of the online application process, you will also be required to respond to some screening questions. Where text responses are required, to avoid being timed out of the system we recommend that you prepare your responses offline and paste them into the appropriate spot prior to submitting your application.If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian 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:**Professor Stephen Rose**via email: Stephen.Rose@csiro.au or telephone: **+61 7 32533620**.*Please do not email your application directly to Professor Rose. 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). **The Australian e-Health Research Centre (AeHRC)** is the leading national research facility applying information and communication technology to improve health services and clinical treatment for Australians.Find out more! <https://aehrc.com>**About CSIRO Probing Biosystems Future Science Platform:** To meet the challenge of improved healthcare delivery, Probing Biosystems is focussed on developing new technologies for the expanding medical technologies and pharmaceuticals (MTP) sector. This includes new point-of-care medical devices, wearable and implantable sensors for improved health surveillance and novel therapeutic discovery pipelines for precision medicine. Emerging technologies involving living model systems of human tissue are also being targeted to accelerate drug development and enhance biosecurity control for the nation.Find out more! <https://research.csiro.au/biosystems/> |