Position Details

Research Scientist/Engineer- CSOF5

THE FOLLOWING INFORMATION IS FOR APPLICANTS	
Advertised Job Title	Research Scientist/ Engineer: Biostatistics and molecular diagnostics
Job Reference	88042
Tenure	Specified Term of up to 3 years Full-time
Salary Range	AU$102,724k - AU$111,165 per annum (pro-rata for part-time) plus up to 15.4% superannuation
Location(s)	Westmead, Sydney, NSW
Relocation Assistance	Will be provided to the successful candidate if required
Applications are open to	• Australian/New Zealand Citizens • Australian Permanent Residents • Australian Temporary Residents, currently residing in Australia with a valid working visa to cover the length of the specified term without the requirement of visa sponsorship from CSIRO
Position reports to the	Team Leader
Client Focus – Internal	80%
Client Focus – External	20%
Number of Direct Reports	0
Enquire about this job	Kim Fung via email at Kim.Fung@csiro.au or phone +61 2 9490 8710
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.

Acknowledgement of Country

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our vision towards reconciliation.

Role Overview

The role of Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO's strategies. The Research Scientist/Engineer may be

engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Scientist/Engineer 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.

The successful candidate will be part of the award-winning Molecular Diagnostics Solutions team who have successfully developed and commercialised DNA-based (Colvera) and protein-based (ColoSTAT) diagnostics for colorectal cancer. The team is currently developing novel diagnostic tools and ex vivo technologies for cancer, metabolic disease, Alzheimer's disease and acute brain trauma and is seeking an enthusiastic Research Scientist/Engineer to contribute collaboratively by undertaking biostatistical analysis for strategic projects within the Business Unit.

The role offers the candidate an opportunity to utilise and build their broad set of biostatistics skills to assist and lead projects in biomarker identification, in silico modelling of biological platforms and work collaboratively with a talented molecular biology team to complete technical validation of new intellectual property. The Research Scientist/Engineer will be exposed to a range of cutting-edge technologies pertaining to clinical diagnostics translation and contribute to the development of the next-generation digital molecular biology laboratory.

Duties and Key Result Areas

- Utilise skills in biostatistics and feature selection for biomarker development that will assist IP development for a range of projects
- Utilise skills in statistical modelling assist with the development of ex vivo models for preclinical applications
- Collaborate and work with senior scientists to provide statistical input into the design of preclinical and clinical trials to validate biomarker assays in the appropriate clinical cohort
- Contribute to the development of a digital molecular biology lab for clinical diagnostic translation
- Under the supervision of more senior researchers, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
- Select the most profitable line of attack upon a problem, prepare detailed design proposals and experimental protocols.
- Draw on professional expertise, knowledge of other disciplines and research experience to recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
- Participate in identification of further opportunities which arise from research and initiate new lines of research.
- Undertake activities focused on one or more elements of larger research projects.
- Apply discretion to decide and implement strategies appropriate to the successful completion of work.
- Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
- Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
- Address problems promptly and in a constructive manner.

- Undertake experimental and/or observational research activities and supervise/train others to ensure experiments are established in accordance with research design.
- Provide supervision and coaching to students and technical staff.
- 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 Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Zero Harm goals.
- Other duties as directed.

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 biostatistics, computer science or a related discipline with comparable experience
2. Demonstrated experience in advanced statistical analysis and modelling in biomarker development studies and clinical diagnostics applications
3. Demonstrated experience in the application of statistical modelling to correlate experimental outcomes with clinical or phenotypic data
4. Proficiency in modern coding languages for statistical computing (R, Python, Julia preferred)
5. Knowledge of, and demonstrated application of design of experiment (DoE) principles for molecular assay design and -omics experiments
6. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
7. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.
8. The ability to work effectively as part of a multi-disciplinary research team and carry out tasks in a timely manner or to tight deadlines under general direction from senior scientists.

Desirable

1. Experience in dimensionality reduction and feature selection methods.
2. Experience with libraries relevant for genomics and machine learning, such as Bioconductor or scikit-learn
3. Experience contributing to documentation relating to human ethics applications for preclinical and clinical studies
4. Knowledge of wet lab experiments and molecular biology protocols
5. Comfortable in a hybrid work environment and within a team with diverse scientific backgrounds and experience
6. Experience with version control platforms such as Git and BitBucket
7. Experience with batch submission tools (such as Slurm) and working on HPC platforms

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 responses by adapting/creating and testing alternative solutions.

- **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.

- **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 change.

About CSIRO

We solve the greatest challenges through innovative science and technology. Visit CSIRO Online and https://www.csiro.au/en/about/people/business-units/health-and-biosecurity for more information.

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