

Position Description

Date: September 2026 **Ref:** 2085

Position | Tūranga: Internship – Genomic Characterisation of Sheep Immune Function Using Targeted Long-Read Sequencing

Responsible to Tō kaiwhakahaere:	Science Team Leader, Tricia Johnson, Principal Scientist, Shannon Clarke, Senior Scientist, Kathryn McRae and Scientist, Rebecca Clarke
Group Tari:	Digital Agriculture
Function Wāhanga:	Animal Genomics
Team Tīma:	Animal Genomics
Location Wāhi:	Invermay, Dunedin
Employment Type Momo Mahi:	Fixed Term – 12 weeks
Korn Ferry Grade Taumata Korn Ferry:	12

Organisational context

The Bioeconomy Science Institute Maiangi Taiao is New Zealand's newest public research organisation, formed through the merger of AgResearch, Plant & Food Research, Manaaki Whenua - Landcare Research, Scion, and the New Zealand Food Innovation Network. Our purpose is to drive innovation and commercial outcomes in the bioeconomy, using research and technology to support enduring economic growth and resilience, a healthy environment and beneficial social outcomes for New Zealand. We pursue opportunities to lift innovation, commercial outcomes, and adoption of advanced technology to drive economic growth across New Zealand. Through world-leading science, we drive innovation across agriculture, horticulture, forestry, aquaculture, biotechnology, and manufacturing. We protect and enhance ecosystems, strengthen biosecurity and climate resilience, and develop cutting-edge bio-based products and technologies.

We honour Te Tiriti o Waitangi and embed te ao Māori throughout our transformation journey. As we come together, we are committed to learning and growing together through inclusive, equitable, and culturally responsiveness ways of working. All roles contribute, in ways relevant to their work, to giving effect to our Te Tiriti commitments through partnership, participation, protection and equity.

Role purpose | Te Take o te Tūranga

This internship will contribute to a research project developing a targeted long-read sequencing panel to investigate the genetic basis of immunocompetence in sheep. The project aims to identify key immune-related genes and genomic regions associated with disease resistance and resilience, supporting future livestock breeding and health programmes. The student will work with sheep pangenome resources, genomic databases, bioinformatic tools and laboratory methods to help design and validate a sequencing panel capable of detecting both single nucleotide polymorphisms (SNPs) and structural variants (SVs). This role provides an opportunity to gain practical experience in livestock genomics, bioinformatics and advanced sequencing technologies.

Accountabilities | Ngā whakaritenga

- Review scientific literature and genomic resources to identify candidate immune-related genes and genomic regions associated with sheep health and disease resistance.
- Evaluate sheep pangenome datasets to characterise genetic diversity and prioritise targets for sequencing panel development.
- Assist with the design and assessment of capture probes for targeted long-read sequencing applications.
- Conduct bioinformatic analyses to validate target regions, assess probe performance, and interpret sequencing results.
- Support laboratory workflows including DNA quality assessment, library preparation, sequencing panel testing, and documentation of methods and results.
- Prepare summaries, reports, and presentations of project findings.

About you | Ō Pūmanawa

We are seeking a motivated student who:

- Is currently enrolled in, or recently completed, an undergraduate degree in genetics, genomics, bioinformatics, molecular biology, biotechnology, immunology, animal science, computer science, or a related field.
- Has an interest in livestock genomics, animal health, genetics, immunology, or bioinformatics.
- Enjoys analysing complex biological data and solving scientific problems.
- Has strong analytical skills and attention to detail.
- Is able to work independently and collaboratively within a research team.
- Has good written and verbal communication skills, including the ability to present scientific findings.
- Has some experience with biological data analysis, coding, or bioinformatic tools (desirable but not essential).
- Is motivated to learn new laboratory and computational techniques

Information And Records Management | Te Whakahaere | Ngā Mōhiotanga Me Ngā Putu Raraunga

- Ensure that information and records are maintained, created, and disposed of in compliance with relevant statutory, regulatory, and Institute policy requirements, documenting business transactions and activities securely and following established policies and procedures.

Health, Safety, And Wellbeing | Hauora, Haumaru Me Te Oranga

- Contribute to a positive health, safety and wellbeing culture by taking reasonable care for their own health, safety and wellbeing and that of others; complying with legislative requirements, organisational

policies and standard operating procedures; reporting hazards, incidents, near misses, and safety observations; and promoting psychological wellbeing through open communication and the early recognition of stress, fatigue, and mental health concerns.

Organisational objectives | Ngā Whāinga Tōpūtanga Katoa

- Actively develops and applies the cultural capability relevant to their role and contributes to giving effect to the organisation's Te Tiriti o Waitangi Framework
- Ensures that all information created or received during your work is managed as per the Institute's Information Management policy. This includes naming, storing, classifying, and ensuring it is available to other employees.
- Actively participates in the Bioeconomy Science Institute Maiangi Taiao performance process, including setting objectives and having a robust development plan. Proactively and constructively contributes to performance conversations and personal development.
- Takes responsibility to understand and apply Institute policy, processes, systems, and procedures daily.
- Commits to accurate and timely information sharing and recordkeeping as per set organisational standards.
- The accountabilities set out above are not exhaustive. Therefore, it may be necessary for you to undertake other reasonable accountabilities as required, which are within your abilities.