INFORMATION FOR CANDIDATES

for appointment as

Assistant Research Fellow (Fixed-term, Part time)

DEPARTMENT OF BIOCHEMISTRY
FACULTY OF BIOMEDICAL SCIENCES

PRIME FUNCTION

To undertake high quality research in the Rare Disorder Genetics lab, focused on the genetics of microcephaly and associated neurodevelopmental disorders funded through a University of Otago Research Grant (UORG) awarded to Dr Sankalita Ray Das. This project will be focused on undertaking functional experiments to characterise a novel disease-associated gene.

MAIN OBJECTIVES

- Investigate the functional effects of candidate neurodevelopmental disease variants using molecular biology tools, specifically focusing on transcript levels, protein expression, and protein stability.
- Establish and maintain various human cell lines, including iPSCs where applicable, to serve as models for microcephaly and associated disorders.
- Organise and maintain clinical information and progress on study participants to a high level.
- To assist the PI to achieve relevant research outputs.
- To assist in the management of laboratory facilities to ensure efficient and productive research.

KEY TASKS

- Cell culture: Apply expertise in mammalian cell culture (and preferably iPSC culture), establish, expand, and maintain the cell lines.
- Molecular Biology: Perform core molecular biology techniques including qRT-PCR and western blotting. Conduct specialised assays to assess protein dynamics, specifically siRNA-mediated depletion and protein stability assays.
- Data Management: Accurate record keeping of experimental procedures and results. Analysis of data including statistical analysis.
- Meetings/Reports: Take an active role in laboratory meetings, raising general laboratory management issues, reporting back of experimental outcomes and data. Participate in the writing of manuscripts for submission to international peer reviewed journals.
- General Laboratory tasks: Ensure that the laboratory and all equipment is maintained to a high standard, and that stocks of chemicals and consumables associated with the project are maintained.
- Such other related tasks as required.

EXPECTED OUTCOMES

- Successful delivery of research objectives within the fixed-term period.
- Consistent contribution to the research, ensuring project deadlines are met through proactive time management.
- Accurate and efficient data collection, analysis and storage.
- Excellently maintained laboratory notebooks, and transfer of data into research manuscripts.
- Adherence to appropriate ethical standards.
- Standards of work to a very high level.
- Regular communication and discussion with the PI and other members of the Bicknell lab group.

RELATIONSHIPS

Directly responsible to:	Professor Louise Bicknell with functional reporting to Dr Sankalita Ray Das.
Supervision of:	Junior staff including summer students or junior postgraduate students, as may be required from time to time.
Functional relationships with:	Academic staff Professional staff

BUDGETARY RESPONSIBILITY

Expenditure for consumables up $3000.

PERSON SPECIFICATION

- An Honours or Master's degree in genetics, molecular biology, or a related discipline.
- Demonstrated experience in the maintenance of human cell lines; specific experience with iPSC culture is highly preferred.
- Proven hands-on experience in PCR, western blotting, and immunofluorescence.
- Familiarity with assays for assessing protein stability, or siRNA depletion, is advantageous.
- Proficiency in using imaging software (e.g., ImageJ) and standard data analysis tools.
- Highly organised and methodical with a proactive "can-do" attitude.
- Very strong organisation skills.
- Ability to relate to a wide range of staff and students.
- Ability to work as part of a team and work in a variety of settings independently.