INFORMATION FOR CANDIDATES

Postdoctoral Fellow (Neurophysiology)
(Fixed-term)

DEPARTMENT OF PHYSIOLOGY
OTAGO SCHOOL OF MEDICAL SCIENCES

General Information

A statement of general information for applicants for academic posts within the University is attached.

Information about the Department

Information about the Department of Physiology can be viewed at:
http://www.otago.ac.nz/physiology

Information about the Laboratory and the project


This project is jointly funded by the Health Research Council and Neurological Foundation of New Zealand. It centers on the neurophysiological actions of a new class of drug for the treatment of Parkinson’s disease (PD). Adenosine antagonist drugs are showing promise as adjunctive treatment for PD with reduced propensity to induce dyskinesia. This project will explore the basis of these actions by investigating the action of adenosine A2A antagonist drugs on the activity of single neurons in the basal ganglia in the unilateral 6-OHDA lesion rat model of PD, and in the L-DOPA-induced dyskinesia model. Recordings will be made in free-moving rats using chronically implanted extracellular electrodes.

Duties and Responsibilities

Prime function

To conduct research on the project “Neurophysiological basis of a novel treatment for Parkinson’s disease”.
Main Objectives

- Generate unilateral 6-OHDA-lesion rat model of Parkinson’s disease, and L-DOPA dyskinesia model, and perform behavioural assessments to quantify outcomes.
- Record activity of single neurons in GPe of these animals, and in sham lesioned controls in awake free-moving conditions, using chronically implanted electrodes.
- Analyze the effect of A2A antagonist and L-DOPA treatment on GPe neuronal activity.

Key tasks

The Postdoctoral Fellow will be primarily responsible for:

- The planning, conduct, analysis and reporting of all experiments for all the above objectives, working with the assistance of an Assistant Research Fellow.
- Preparation of scientific articles for publication in scientific journals.

Relationships

Directly responsible to:  Associate Professor Brian Hyland.
Functional relationship with:  Assistant Research Fellow (Roseanna Smither); Other members of the research group; Technical and Administrative staff of the Department of Physiology; staff of the Hercus Taieri Resource Unit.

Person specification

The Postdoctoral Fellow will have completed a PhD in a neuroscience related field. An ideal skill base will include experience in stereotaxic surgery in rodent, extracellular single-unit recording (use of spike discrimination and data analysis software) and research involving chronic lesion models generated by infusion of neurotoxin to specific brain areas. Generic skills required include aptitude for animal care and handling, stereotaxic surgery, behavioral monitoring, drug administration (i.p., s.c., p.o.). and good hand-eye co-ordination for assembly of microwire implants. A thorough approach to laboratory practice and record keeping is essential. Evidence of ability to prepare scientific papers for publication would be an advantage. The project requires a high level of personal independent input for the generation and maintenance of chronic animal disease models, and the ability to work co-operatively with other team members to reach the research goals.

Date of Appointment

Applicants should state the date on which they would be free to take up the appointment. Appointment is available for three years from 1 October 2007.

Salary

The salary for a Postdoctoral Fellow is $58,568 per annum.
Contact Person

Specific enquiries may be directed to Associate Professor Brian Hyland, Department of Physiology, Tel 03 479 7342, Email brian.hyland@otago.ac.nz

Offer of the Position

Should the University wish to offer you the position, a formal, written letter of offer will follow any verbal discussions that might be held with you. It is recommended that you do not resign from your current employment until you have received our written offer. The contents of this formal letter of offer and its attachments will constitute the entire agreement between the employee and the employer, and will supersede all previous representations, negotiations, commitments and communications, either written or oral between the parties. Any agreements will only be binding on the employer where they have been formally offered by the Human Resources Division and accepted by the employee.

Applications


University of Otago
PO Box 56
Dunedin
NEW ZEALAND

Tel 64 3 479 8269
Fax 64 3 479 8279
Email job.applications@otago.ac.nz

While this position is open to applications from outside of New Zealand, unless otherwise stated relocation assistance will not be available should the successful applicant currently reside elsewhere in the world.