INFORMATION FOR CANDIDATES

for appointment as

Lecturer in Functional/Clinical Anatomy
(Confirmation Path)

DEPARTMENT OF ANATOMY
OTAGO SCHOOL OF MEDICAL SCIENCES

THE DEPARTMENT'S CONTEXT

The origins of the Department coincide with the first legislation in New Zealand that allowed the setting up of a licensed School of Anatomy in 1876. An Anatomy Museum was established around 1880. The Department was established as the Department of Anatomy in 1905. The Department had its first BSc Honours graduate in 1990. The name of the Department was changed to the Department of Anatomy and Structural Biology in 1991 and back to the Department of Anatomy in 2011. Since 1996, it has been one of five Departments of the Otago School of Medical Sciences (OSMS). This School is located administratively within the Division of Health Sciences.

The Department now has 36 academic/teaching staff, 62 research-only staff (both academic and general) and 42 general staff. It has a net annual budget in excess of $16M, with external research income accounting for around 40% of the total income.

The University is divided into large administrative Divisions under the headings of Sciences, Health Sciences, Humanities and Commerce/School of Business. The Division of Health Sciences incorporates the Dunedin School of Medicine, Otago School of Medical Sciences, School of Physiotherapy, School of Dentistry, and School of Pharmacy in Dunedin, and the Christchurch and Wellington Schools of Medicine. Although the Department of Anatomy falls under the administration of the Division of Health Sciences, it is closely allied with, and teaches into, the Division of Sciences. The Head of the Department of Anatomy reports directly to the Dean of the Otago School of Medical Sciences, who in turn is responsible to the Pro-Vice-Chancellor, Division of Health Sciences.

Aotearoa/New Zealand is a multicultural society. It is unique in its relationship with the indigenous people, who consist of a vast number of tribal groups (iwi), and who collectively are referred to as ‘Māori’. The University of Otago is committed to the articles of the Treaty of Waitangi, New Zealand’s founding document. To meet its obligations under the Treaty of Waitangi, a Memorandum of Understanding was established between the University of Otago and Te Rūnanga o Ngāi Tahu (the ‘mana whenua’, or tribal authority, within the geographical area of the University) in 2001. The University seeks to fulfill its obligations under the Treaty of Waitangi in all aspects of its activities: teaching, research, professional activity, and service. It also consults with Ngāi Tahu in terms of its research activities, and endeavours to encourage participation of Māori at all levels of study. The University has further articulated its obligations to the Treaty of Waitangi in its Māori Strategic Framework (2007 – 2012), which provides a strategic platform for Māori development across six key goals. The document is available at:

The Department encourages applications from researchers with an interest and capability in Māori Health research.

THE DEPARTMENT OF ANATOMY - MANAGEMENT AND STAFFING

The Department is led by a Head and Deputy Head of Department with an Executive Committee and a number of standing and ad hoc committees. The Department operates as a Cost Centre within the Otago School of Medical Sciences. This gives the Department the flexibility to establish its own priorities and act accordingly. The Department’s budget is based on the number of equivalent full-time students it attracts, and income that is earned from its assessment for Performance-Based Research Funding. For the current year, the budget is of the order of $9 million. This figure excludes external research funding, which for the current year, is of the order of $7 million.

The current staff profile of the Department of Anatomy is:

<table>
<thead>
<tr>
<th>Academic Staff</th>
<th>General Staff</th>
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</thead>
<tbody>
<tr>
<td>8 Professors</td>
<td>3 Technical Managers</td>
</tr>
<tr>
<td>3 Associate Professors</td>
<td>6 Administrative staff</td>
</tr>
<tr>
<td>13 Senior Lecturers</td>
<td>1 Departmental Secretary</td>
</tr>
<tr>
<td>5 Lecturers</td>
<td>3 Finance staff</td>
</tr>
<tr>
<td>3 Professional Practice Fellows</td>
<td>7 IT staff</td>
</tr>
<tr>
<td>4 Teaching Fellows</td>
<td>22 Departmental Technical staff</td>
</tr>
<tr>
<td>4 Senior Research Fellows</td>
<td>17 Research Technicians/Assistants</td>
</tr>
<tr>
<td>21 Research/Postdoctoral Fellows</td>
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<tr>
<td>20 Assistant Research Fellows</td>
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<tr>
<td>2 Honorary staff</td>
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This includes full-time and part-time staff.

THE DEPARTMENT OF ANATOMY - TEACHING

The Department has teaching responsibilities in the Division of Health Sciences, and the Division of Sciences.

In the Division of Health Sciences, the Department contributes to the teaching of medical (annual intake of 280 students), dental (65 students per annum), physiotherapy (120 students per annum), medical laboratory science (20 students per annum), and pharmacy students (115 students per annum), covering topics of functional/clinical anatomy, histology, embryology, and neuroanatomy. It also contributes modules in 100-level biology papers in cell biology (up to 1700 students per annum) and human biology (up to 1800 students per annum) as part of a Health Sciences First Year programme. The Department also offers a major in Reproduction, Genetics and Development as part of the Bachelor of Biomedical Sciences (BBiomedSc) programme. In 2009, the Department introduced a part-distance taught Postgraduate Diploma in Surgical Anatomy (endorsed by the Royal Australasian College of Surgeons). In 2012, 24 students are enrolled in the course.

In the Division of Sciences, the Department offers a BSc degree in Anatomy, papers in Biological Anthropology and teaches Physical Education students. Science papers taught by the Department include human biology (cells and systems), neurobiology, reproductive and developmental biology,
and an introduction to biological anthropology, at 200-level; and functional anatomy, cell biology, neurobiology, reproductive biology, developmental biology, the biological anthropology of the human skeleton, and anatomical research principles at 300-level. The Department teaches up to 280 students in each of its four 200-level papers, and up to 115 students in each of its six 300-level papers. The Department also offers a BSc(Honours) programme in Anatomy and contributes to Honours degrees in Neuroscience, Biological Anthropology, and Genetics.

At the postgraduate level the following research programmes are available: Postgraduate Diploma in Science, Master of Science and Doctor of Philosophy. The Department also offers supervision for medical students undertaking a Bachelor of Medical Science (Honours) degree and supervision for Bachelor of Biomedical Sciences (Honours) students. Currently there are 140 students working on either 400-level papers or theses, including 70 PhD students in the Department.

THE DEPARTMENT OF ANATOMY - RESEARCH

The main research interests of the Department's staff lie in biological anthropology, clinical and functional anatomy, developmental biology, neuroscience, and reproductive biology, with an emerging emphasis on the use of genomics. Considerable interchange and collaboration occurs between research staff, both internally and within the wider scientific community.

The Department has a Research Committee that has, as one of its major aims, the enhancement of the research culture in the Department. The Committee has input into many issues which impact on research, including the provision of appropriate research infrastructure and space for research laboratories, the provision of support and mentoring for research workers, and the support of academic staff applying for internal and external research funding.

The Department has become increasingly successful at securing external research funding in recent years. For the past two years, research funding has been of the order of $6-7 million per annum. Many members of academic staff hold research grants. Departmental staff publish in a wide range of academic journals, with 90 - 110 papers published per annum in international peer-reviewed journals over recent years.

Staff of the Department are involved in a considerable amount of collaborative research. There exist strong links with staff of different departments in the Otago School of Medical Sciences and the University and with special centres such as the Centre for Reproduction and Genomics (in collaboration with AgResearch), the Centre for Neuroendocrinology, Keratec Ltd, and the Brain Health Research Centre. A significant number of international collaborative links also exist.

All academic staff are encouraged to make use of the University’s provisions for conference and study leave. The majority of academic staff receive support for conference travel from a fund administered by the Dean of the School of Medical Sciences. In the three year period 2009-2011, the Department received an average of approximately $70,000 per annum from the School’s Travel Fund.

Research Interests of Academic Staff
The research interests of all academic staff can be viewed on the Department’s website at http://anatomy.otago.ac.nz/staffresearch.
Publications
For a listing of the Department's publications, please visit the Department’s webpage at http://anatomy.otago.ac.nz/publications.

THE DEPARTMENT OF ANATOMY - RESOURCES

Research Resources within the Department
The Department of Anatomy is a well-resourced Department. Research is a central part of the Department’s functioning and informs its undergraduate teaching, as well as its postgraduate activities.

The Department has three large, multi-purpose, well-equipped laboratories, each servicing several research groups. Other research groups in the Department are accommodated in smaller, sometimes single-user, also well-equipped, laboratories. The Department is beginning to move towards ‘clustering’ its research activities, with a view to providing shared facilities for these clusters.

In addition to the multi-purpose laboratories, the Department has several specialised facilities including:

- A clinical anatomy research area with dissection microscope and access to cadaver specimens through the Department’s body bequest programme, and plastination and other specialised preservation techniques (e.g. corrosion casting, skeletonisation). In addition, there are established links with radiologists at the adjacent Dunedin Hospital, an imaging suite, and the potential to access modern ultrasound equipment for research.
- An ‘ancient DNA’ laboratory developed specifically for handling minute ancient DNA fragments in an ultra-clean environment.
- A Behavioural Phenotyping Unit with individually ventilated housing for mice (rat housing being developed), two operant suites, a catwalk testing system, mouse and rat rotarods, mazes and a dedicated surgical area.

Specialist research facilities are also available:

- Research light microscopy with associated image capture computers
- A laser computer micro-dissection system
- Tissue culture
- In vivo animal imaging with a FxPro in-vivo animal imager capable of detecting fluorescence, bioluminescence, radio-isotopes and x-ray in sedated mice and rats
- Stereology with optical dissector microscope, and new Stereo-investigator software
- DNA sequencing with a Roche GS Junior, an Applied Biosystems 5500XL sequencer, and an Applied Biosystems 3730XL capillary sequencer
- Multiple cryostats, two freezing stage microtomes, and various microtomes and vibratomes for histological preparation. Additional advanced histology facilities are available in the University’s Histology Unit

The Department also hosts:

- The Centre for Electron Microscopy, which is well equipped for ultrastructural studies. It has two transmission electron microscopes (TEMs), with digital camera systems, and will be purchasing a new Cryo TEM with electron tomography capability in the next few months. There is a well-equipped preparation lab, and an extensive range of cutting equipment for sample preparation. The Centre also houses three scanning electron microscopes (SEMs), one
being a recently purchased field emission gun SEM. A recent addition is a liquid nitrogen generator allowing easy access to liquid nitrogen for research requirements.

- The Centre for Confocal Microscopy, which has three confocal microscopes configured for structural biology and dynamic investigations, and a micro-CT scanner.

The Department also houses an anthropological collection of human skeletal material comprising North Island Maori and Moriori remains, and specimens from archaeological sites in the South Pacific islands.

Teaching Resources within the Department
The Department has some excellent teaching facilities and resources. Of note are:

- The modern dissecting room which can seat 200 students or can be divided to provide two separate classrooms with seating for 100 students each. The room is fully-ventilated and equipped with closed circuit television with LCD screens and a wireless computer network.
- The body bequest programme administered by the department, together with a prosection and plastination programme that provide human anatomy teaching material.
- A world class anatomy museum which contains over 2000 catalogued specimens and models, a collection of approximately 2000 radiographs, and a bone osteology collection.
- A modern histology classroom that can seat 120 students. The room provides a wireless computer network, data projection and closed circuit television with LCD screens for excellent audio-visual capabilities. Olympus compound microscopes are provided for student use and each student can also access three sets of slides (general histology, reproduction and development, neuro).
- An advanced science classroom that can seat 40 students, and is equipped for techniques such as tissue culture, histology, immunohistochemistry, small animal work and molecular biology. Olympus compound and dissecting microscopes are provided, and the room is equipped with closed circuit television for teaching purposes.
- Access to the Otago Centre for Electron Microscopy and the Otago Centre for Confocal Microscopy for teaching activities.
- Support for all teaching activities from an excellent IT team within the Department.

DUTIES AND RESPONSIBILITIES

Research
The successful applicant will be expected to:

- Be committed to excellence in research and have proven research ability/excellence.
- Develop an independent and ongoing research programme with external funding success.
- Publish quality-assured publications, at an acceptable rate.
- Be part of a dynamic Clinical Anatomy Research Group (http://carg.otago.ac.nz/), contributing on a regular basis.
- Attend, and present research at, national and international symposia.
- Attract and supervise research students at 400-level and above.
Teaching
The successful applicant will be expected to:
- Be committed to excellence in teaching.
- Teach within their area of expertise, and also contribute to other areas within the Department’s teaching commitments at both the undergraduate and postgraduate level, as appropriate. This will include curriculum, course, paper and assessment development and implementation, as appropriate.

Service
The successful applicant will be expected to:
- Participate in Departmental administrative tasks as required.
- Contribute to administrative activities within the Clinical Anatomy Research Group.
- Contribute to professional and/or community organisations as appropriate.

Compliance
The successful applicant will be expected to:
- Remain fully compliant with all University regulations and policies for safe and ethical conduct in all activities. This includes compliance with HSNO, GMOs, hazardous chemicals, and the ethical requirements for the use of animal and human material, as appropriate.
- Engage in Māori consultation prior to research, as appropriate.
- Develop and maintain an awareness of the University’s Māori Strategic Framework and work towards implementing aspects of this. This can include learning basic Te Reo (Māori language) and/or becoming aware of cultural issues, etc.

QUALIFICATIONS
All applicants will hold a PhD or equivalent higher research qualification, and ideally also hold a professional clinical qualification.

DATE OF APPOINTMENT
It is hoped that the successful applicant will be able to commence duties in February 2013, but the start date may be negotiable.