POSITION DESCRIPTION

Position Title: Research Fellow
Organisation Unit: School of Dentistry
Position Number: 
Type of Employment: Full Time, Fixed Term (3 Years)
Classification: Academic Research Level B

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world’s top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland’s highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research
areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

Organisational Environment

The Faculty of Health and Behavioural Sciences is a strong faculty that has a coherent focus on health and well-being underpinned by a clear integrative theme related to preventative health and behaviour change. Furthermore, the Faculty provides the opportunity for the allied health sciences to have a strong voice and great visibility within the University.

The Faculty currently includes six schools and three research centres:
- School of Dentistry
- School of Health and Rehabilitation Sciences
- School of Human Movement and Nutrition Sciences
- School of Nursing, Midwifery and Social Work
- School of Pharmacy
- School of Psychology
- Centre for Youth Substance Abuse Research
- RECOVER Injury Research Centre
- Queensland Alliance for Environmental Health Sciences

More information about the Faculty is available at: http://habs.uq.edu.au/.

The School of Dentistry

The UQ School of Dentistry has a long and proud tradition of 81 years of strength in dental education and research, and attracts high achieving students nationally and internationally. UQ is a leading source of expertise in the local, national and international dental community and has been a key contributor to achieving effective solutions to contemporary issues and challenges. The School has strong collaborations within and outside the dental profession.

As part of the Faculty of Health and Behavioural Sciences, the School of Dentistry offers the Bachelor of Dental Science (Honours) program and specialist post-graduate programs (Doctor of Clinical Dentistry). The School of Dentistry also has a growing cohort of research higher degree students.

Research within the School is focused on a number of themes, and crosses a range of areas from laboratory based research through to technologies applied in clinical practice and dental public health.

Further details about the School's teaching programs, research interests and other activities may be accessed on the School's web site at http://www.dentistry.uq.edu.au/.

Further information about the Faculty and School is available at http://health.uq.edu.au/
The Oral Health Centre (OHC)

The OHC opened in January 2015. This award winning building is the largest and best equipped facility for patient treatment, dental education and research in Australasia. The OHC has over 150 chairs across 11 clinics and 2 general anaesthetic theatres, a PC2 laboratory catering to a range of laboratory based research, 2 clinical simulation laboratories, 2 auditoriums and a seminar room complex.

The OHC’s location on the Herston campus provides an excellent interface with other disciplines and health services, with the nearby Royal Brisbane & Women’s Hospital, the UQ Faculty of Medicine and School of Public Health, and the UQ Centre for Clinical Research. New teaching and research facilities (including expanded simulation labs) and new equipment at the forefront of current technology used in dentistry have allowed the School of Dentistry to commence a refreshed and innovative undergraduate dental program, along with an expanded range of postgraduate programs.

The Oral Health Alliance (OHA)

From January 2017, the OHA integrated the activities of Metro North Hospital and Health Service Oral Health Services and the UQ School of Dentistry to establish world-class activities in clinical teaching, research and service provision in oral health, headquartered around the state-of-the-art Oral Health Centre on the co-located Royal Brisbane and Women’s Hospital and UQ campus at Herston.

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.

DUTY STATEMENT

Primary Purpose of Position

The position holder will work as part of a research team focusing on tissue engineering strategies for periodontal and oro-facial regeneration.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Undertake research on areas within the scope of the project, including, but not limited to:
  - preparation of 3D printed and electrospun scaffolds for tissue engineering applications;
  - preparation of nanstructured biomaterials, especially metals;
  - cell seeding and analysis through functional assays;
  - drug delivery through tissue engineered constructs;
  - biofunctionalization of metallic and polymeric biomaterials, materials analysis including composition and topographical evaluation (confocal and scanning electron microscopy); and
  - culture of mammalian cells including oral fibroblasts, mesenchymal stem cells and macrophages.
Experience with small and large animal models of periodontal and oro-dental regeneration

- Work towards developing the regulatory frameworks for clinical translation of tissue engineering strategies for periodontal and oro-facial regeneration, including:
  - Having an understanding of the regulatory framework established by the Therapeutic Goods Australia (TGA) for the testing of tissue engineered constructs into humans
  - Expertise in the workflow aspects of translating clinical imaging data into individualized three dimensional printed scaffolds
  - Understanding of the regulatory requirements (International Standardization Organization) established for the manufacturing of implantable tissue engineered constructs

- Coordinate and contribute to the development of scholarly papers and reports.
- Work with colleagues and students at the University in the development of joint interdisciplinary research projects and in a proactive and collaborative manner.
- Ensure the research facilities, consumables and materials in the lab are well maintained for the day to day business of the research group/s.
- Assist and be actively involved in the application of competitive research grants from internal or external resources.

**Other**

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

- The University's Code of Conduct.
- Requirements of the Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or Institute/School.
- The adoption of sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures.
- Requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related responsibilities and procedures developed by the University.

**Organisational Relationships**

The position reports to Professor Saso Ivanovski, School of Dentistry.
SELECTION CRITERIA

Essential

- Applicants must have at least a PhD or equivalent.
- High level technical skills and experience in biomaterials and additive manufacturing.
- Ability to design and conduct research experiments with limited supervision.
- Demonstrated ability to evaluate and interpret results and presentation of analysed data.
- Preparation of scientific reports with high standards, ability to prioritise own workload, work independently and meet deadlines.
- High level of communication and interpersonal skills and the ability to work collaboratively with colleagues.

Desirable

- Broad knowledge of regenerative medicine.
- Understanding of tissue engineering principles and willingness to work with animals.
- Expertise with small and large animal models.
- Understanding of the workflow aspects of translating patient imaging data into additively manufactured customized implantable tissue engineered constructs.
- Experience with the regulatory environment governing the implantation of tissue engineered constructs into humans.

Seminar

Applicants invited for interview may be expected to present a seminar in conjunction with the selection interview process.

Qualification Verification

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.

The University of Queensland values diversity and inclusion.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples. For further information please contact our Australian Indigenous Employment Coordinator at: atsi_recruitment@uq.edu.au
Applications are also encouraged from women.
This role is a full-time position; however flexible working arrangements may be negotiated.