



POSITION DESCRIPTION

- Job Title:** Postdoctoral Research Fellow
- Organisation Unit:** School of Chemistry and Molecular Biosciences and The Australian Institute of Bioengineering and Nanotechnology
- Reference Number:** 3017965
- Type of Employment:** Full time, fixed term for 1 year, with the possibility of a one year extension.
- Classification:** Research Academic Level A or B
- Remuneration:** A salary package consisting of:
\$67,958 to \$72,949 p.a. (Research Academic Level A) or \$76,789 to \$91,187 (Research Academic Level B), plus employer superannuation contributions of 17% (total package will be in the range \$79,511 - \$85,351 p.a. for Academic Level A and \$89,843 - \$106,689 p.a for Academic Level B).
- For staff entitled to 17% employer contributions, UniSuper does not mandate a level of member contribution to superannuation. However, in order to receive the full standard range of benefits under UniSuper, the member must pay 7% contribution from their salary (or a salary sacrifice equivalent contribution of 8.25%). It will be assumed that a 7% member contribution will apply unless the member formally notifies UniSuper of a decision to pay a lesser member contribution (or no member contribution).
- Other options for salary sacrifice include a motor vehicle, laptop computer, campus car parking and "in-house" benefits.
- Closing Date:** **2 May 2011**
- Further Information:** Professor Melissa Brown,
Email: hos@scmb.uq.edu.au
- Professor Matt Trau
Email : m.trau@uq.edu.au

BACKGROUND

Organisational Environment

An experienced and enthusiastic postdoctoral research scientist is required to join an exciting National Breast Cancer Foundation funded national collaborative research program that aims to develop nanoscaled biosensors to predict outcome of patients with advanced breast cancer.

The collaborative team is lead by Professor Matt Trau and comprises research groups headed by Professor Trau (UQ AIBN), Professor Melissa Brown (UQ SCMB), Dr Glenn Francis (PA Hospital, Brisbane), Professor Susan Clark (Garvan Institute), Professors John Forbes and Rodney Scott (University of Newcastle), and Associate Professor Alexander Dobrovic (Peter MacCallum Cancer Institute).

The position will work between Professor Melissa Brown and Professor Matt Trau's research groups at The University of Queensland.

Professor Melissa Brown's research group is interested in the transcriptional and epigenetic regulation of gene expression, and mammary gland and breast cancer biology. Current studies include studies investigating transcriptional, post-transcriptional and epigenetic regulation of breast cancer associated genes. The laboratory is located in the Molecular Biosciences building and is part of the School of Chemistry and Molecular Biosciences (SCMB). SCMB is a distinguished multidisciplinary school for teaching and research that encompasses the traditional academic disciplines of Chemistry, Biochemistry and Molecular Biology, Molecular Genetics, Molecular Cell Biology and Microbiology. The School is well equipped for contemporary molecular genetics and cell biology research, and is supported by the University's outstanding molecular bioscience infrastructure, including confocal microscopy, proteomics, microarray and transgenic animal facilities.

Professor Trau's group are developing a range of nanoscaled biosensors for genomics, proteomics, epigenetics, drug screening and diagnostics. Successful development of biomarkers for use in the clinic, or for point-of-care applications, requires input from a wide range of disciplines, including medicine, molecular biology and nanotechnology. Professor Trau's research group is housed in The Australian Institute for Bioengineering and Nanotechnology (AIBN), which is adjacent to the School of Chemistry and Molecular Biosciences. The AIBN is an exciting new research institute that abandons traditional boundaries to focus research effort into areas that will provide great benefit for human health, manufacturing, information technology and the environment. The unique capabilities of the AIBN come from merging the skills of the engineer, chemist, biologist and computational scientist to conduct a world-class research program in nano-scale science, technology and engineering, technology transfer and commercialization. The Research Professionals of the AIBN are leaders in the fields of bioengineering and nanotechnology.

Information for Prospective Staff

Information about the University, State of Queensland, living in Brisbane and employment at the University is at the University's web site. (<http://www.uq.edu.au/staff>)

For a comprehensive guide to family friendly work practices and services visit the Work and Family web site at <http://www.uq.edu.au/equity/index.html?page=11661>

DUTY STATEMENT

Primary Purpose of Position

The successful applicant will contribute to a National Breast Cancer Foundation funded project to develop nanoscaled biosensors to predict outcome in patients with advanced breast cancer.

Duties

Duties and responsibilities include, but are not limited to:

- Validation of epigenetic and genetic biomarkers for their value in predicting disease outcome in patients with advanced breast cancer.
- Development of nanoscaled biosensors to detect these biomarkers in tumour tissue and in blood
- Presentation of results in high quality peer-reviewed journals
- Presentation of results on a regular basis at national and international conferences
- Maintaining a strong awareness of the literature
- Contributing to regular laboratory meetings
- Contributing to training and supervision of research students
- Contributing to aspects of lab management.

Administration

- Comply with the University's Code of Conduct (see the University's web site at <http://www.uq.edu.au/staff/employment/>)

Occupational Health and Safety:

- Comply with requirements of Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or School.

Reporting Relationships

The position reports to Professor Melissa Brown and Professor Matt Trau.

SELECTION CRITERIA

Qualifications

Essential

- Ph.D. in the area of chemistry, nanotechnology and / or molecular biology.

Knowledge and Skills

Essential

- Demonstrated skills in chemistry, nanotechnology and/or molecular biology in a research context.
- Practical experience in DNA-based disease biomarker validation and / or DNA-based biosensor development, incorporating a range of DNA read-out technologies
- Evidence of research productivity at the interface of chemistry and molecular biology, including first author publications in international peer-reviewed high impact journals.
- Evidence for effective research supervision of undergraduate or postgraduate research students.
- Experience in oral and/or poster presentations at in-house meetings, national and international conferences
- Strong recommendations from postgraduate and postdoctoral (if applicable) advisors

Desirable

- Postdoctoral experience
- Experience in DNA methylation analysis
- Experience in mutation analysis
- Experience in next generation sequencing
- Experience in Colloid and Surface Science
- Experience in Physical Chemistry
- Experience in the development of novel DNA analysis technology
- Experience or interest in technology commercialization.
- Track record of working effectively with multi-disciplinary research teams

Personal Qualities

Essential

- An interest in and enthusiasm for research in disease biomarker validation and biosensor development
- Self-motivated in achieving goals.
- Effective oral and written communication skills
- Ability to develop effective relationships with members of the research group and those of collaborating researchers,
- Ability to accept responsibility and show initiative
- Ability to work independently with minimum supervision
- Ability to supervise honours and postgraduate students

