



POSITION DESCRIPTION

Title:	Postdoctoral Research Officer
Area/Group:	Uterine Biology
Reporting to:	Guiying Nie
Date Last Updated:	19 June 2008

1. About Prince Henry's Institute

Prince Henry's Institute is a NH&MRC accredited, not-for-profit, independent medical research institute located at Monash Medical Centre in Clayton, Victoria, Australia. The Institute employs approximately 100 research staff, 20 administration/support staff and 50 undergraduate and postgraduate students.

Our research involves the investigation in the fields of reproductive health, hormone action, sex determination, cancer, diabetes, obesity and cardiovascular disease. The Institute works to improve the quality of life by finding and improving methods for prevention, diagnosis and treatment of a variety of health conditions.

2. Purpose of Position

The position is located on Level 4, reporting to Senior Research Fellow, Dr. Guiying Nie and Professor Lois Salamonsen. The role will study the biochemistry of a novel serine protease (Htr3) that is implicated in placental development and pregnancy-related disorders.

3. Accountabilities and Responsibilities

Leading a Research Project

- Characterising the biochemical properties of novel protein HtrA3 regarding its proteolytic activity, its binding proteins and substrates
- Identifying the role of HtrA3 in normal and abnormal placental development and related diseases
- Cell culture, protein expression, purification and characterisation
- Western blotting, immuno-precipitation and ELISA development
- Assistance with project development
- Assistance with regular reporting to funding bodies
- Applying for grants and awards (with assistance)
- Accurate analyses and interpretation of experimental results
- Statistical analysis of data
- Preparation of manuscripts and conference presentations
- Surveying literature for research and methodological advances

General Laboratory Responsibilities

- Supervision of students as appropriate
- General Involvement with Institute professional activities
- Regular attendance at group meetings

Compliance and Legislative Knowledge

- Comply with PHI policies and procedures and relevant appropriate legislation
- Meet Occupational Safety and Health, anti-discrimination, equal opportunity and other legislative requirements in accordance with the parameters of the position.

4. Working Relationships

Internal

- Uterine Biology Group Senior Research Fellow - Dr. Guiying Nie
 - Uterine Biology Group Head – Professor Lois Salamonsen
 - Other PHI research and administration Staff
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5. Selection Criteria

Qualifications

Essential

- PhD in a relevant life science and a strong biochemistry background

Knowledge & Skills

Essential

- Demonstrated skills in cell culture, protein expression, purification and characterization
- Mouse handling and knowledge in embryo implantation and placental development
- Meticulous approach to experimental work, data collection and interpretation
- Excellent organisational and computing skills
- Demonstrated innovative problem solving skills
- Accurate record keeping skills in accordance with good laboratory practice
- Well developed organisational and analytical skills
- Well developed written and oral presentation skills
- Developed interpersonal communication skills
- Ability to develop new techniques in the laboratory, to troubleshoot and interpret data
- Proficiency with common computer software and general laboratory operations
- Self-motivation, the ability to work in a team as well as independently

Desirable

- Experience in molecular biology and protease biochemistry

Experience

Essential

- Experience with mammalian cell culture
- Experience in protein expression, purification and characterisation including fractionation methods such as SDS-PAGE, Western Blot, ELISA development and general quantitative assay methods
- Demonstrated research productivity at a high level
- Statistical Analysis
- Good publication record

Desirable

- Strong background in biochemistry and protease characterisation
- Research experience in areas of embryo implantation and placental development

Personal Qualities

Essential

- Attention to detail through accurate documentation of results
- Demonstrated ability to work independently as well as in a team
- Self-motivation, enthusiasm, and demonstrated initiative
- Proven organizational and personal skills