

Position Title	Research Associate
Classification	Level A
School/Division	Medical School
Centre/Section	Centre for Medical Research
Supervisor Title	Associate Professor
Supervisor Position Number	FSR
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Your work area

This position is based within the Laboratory Targeted Drug Delivery Imaging & Therapy, led by Associate Professor Juliana Hamzah and is part of the UWA Centre for Medical Research within Health and Medical Sciences, based at Harry Perkins Institute of Medical Research (Perkins) in Nedlands.

Reporting structure

Reports to: Associate Professor

Your role

As the appointee, you will have the opportunity to work in a multidisciplinary team of clinicians, cell biologists, physiologists, chemists and imaging specialists. You will gain expertise in a diverse range of methods encompassing material science, chemistry, physiology, biochemistry, cell and molecular biology.

You will primarily focus on production of nanomaterials, optimisation of nanoparticle-drug conjugation and functionalisation, and assessment of their biodistribution, safety and efficacy in preclinical animal models. and conducting comprehensive studies to characterise their treatment effects at tissue, cell, and molecular levels. Additionally, you will actively contribute to protocol development, results interpretation, and manuscript writing. Your involvement will extend to assisting in the preparation of grant application and overseeing the reporting process. This position offers a valuable opportunity to.

This position involves actively engaging in research activities associated with drug delivery technology and preclinical research. This includes working with nanomaterials for drug encapsulation, in vitro cell culture assays and in vivo animal models of diseases. The role requires development and optimisation of nanomaterials, drug encapsulation, conducting treatment studies on organ cultures and preclinical models, analysing the treatment effects and interpreting the outcomes of the studies. You will assist with reporting and communicating scientific data to our groups, collaborators and scientific meetings.

Your key responsibilities

Design and perform a wide variety of research laboratory tasks and experiments, making detailed observations, analysing data, and interpreting results with the help of supervisors

Develop optimal nano-formulation for drug delivery

Administer drugs and monitor treatment response in animals

Perform repeated intravenous injections in animals and assess the treatment efficacy and safety on disease burden and disease progression

Perform imaging studies involving microscopy including electron microscopy

Draft manuscripts for publication in scientific journals including generating the text and publication quality figures

Present summaries of the project at lab and institutional meetings, and at conferences.

Write regular reports summarising the analyses conducted, the results obtained, your interpretation of the results and suggestions of next steps including troubleshooting.

Write ethics applications and reports

Document standard operating procedures for each method

Perform troubleshooting of experiments performed by those under your direct supervision

Prepare animal ethics reports and other regulatory documents

Support in writing grant application

Your specific work capabilities (selection criteria)

A PhD or equivalent in material science, chemistry, nanotechnology, pharmacology or related fields

Strong research background in nanomaterial synthesis, functionalisation and nanomedicines

Strong research background in drug delivery systems

Highly experienced in preclinical studies using animal models, primary cells and cell lines

Experienced in imaging studies including microscopic imaging and electron microscopy (TEM and Cryo TEM)

Demonstrated capacity to form hypotheses, test them and follow through to draft and publish papers in any of the above areas.

Ability to work independently, show initiative and work productively as part of a team.

Strong attention to detail, organizational skills, and maintenance of highly accurate and comprehensive records

The ability to supervise research assistants and students

Experience in tissue histology, including immunohistochemistry and immunofluorescence techniques, and pathological analysis is desirable

Experience in developing and troubleshooting new assays is desirable

Special requirements (selection criteria)

Comply with Human and Animal Ethics requirements

Some out of hours work may be required

Compliance

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

The University's Code of Conduct hr.uwa.edu.au/policies/policies/conduct/code/conduct

Inclusion and Diversity web.uwa.edu.au/inclusion-diversity

Safety, health and wellbeing safety.uwa.edu.au/