



Sir Owen Glenn PhD Scholarship in Immunotherapy, Liver Cancer and Microbiome

Scholarship Guidelines

The *Sir Owen Glenn PhD Scholarship in Immunotherapy, Liver Cancer and Microbiome* will be awarded to an applicant of excellent research potential, enabling them to undertake a research project within the UNSW Medicine Clinical School of Medicine, St George & Sutherland Campus.

The purpose of the scholarship is to support an allied health, nursing, medical professional or scientist to advance their career by providing them training and mentorship to build their capacity to undertake original research.

The intention of this scholarship is to support an applicant who has limited research experience therefore current higher degree research candidates (or those who have already completed a research higher degree) are unable to apply.

ELIGIBILITY

- The Scholarship is open to students with qualifications in medicine, allied health, nursing, and science.
- Priority will go to candidates working in or pursuing a postgraduate research degree in the fields of immunotherapy, liver cancer or microbiome field
- At the time of the Scholarship application, the applicant must have submitted their postgraduate degree research application for admission, online to the Graduate Research School, UNSW. Applicants must have applied for the St George & Sutherland Clinical School's programs (1772 (Medicine)). The Scholarship will not be awarded until the application for admission has been accepted by UNSW, and the candidate has enrolled. (Note: applicants can commence application for both simultaneously, to expedite processing time).
- The Scholarship is available to both new and existing students.
- The Scholarship is available to full-time students.
- The Scholarship is available to both domestic and international students. Priority will be given to students who are already in Australia.
- The Scholarship is available to only PhD Research candidates only and does not include Masters candidates.
 - Domestic applicants are not permitted to hold concurrent awards, for example Australian Government Research Training Program (RTP) Scholarship or the University Postgraduate Award (UPA).
 - International applicants may hold additional awards to cover their tuition fees. This Scholarship is unable to be used to pay tuition fees, however this could be paired with a TFS fee component

if it meets the TFS stipend requirements (eg yearly indexation, 3.5 years duration + leave allowances, as per [UNSW Higher Degree Research Scholarships Procedure](#)). In such case, applicants should apply simultaneously to the GRS and this scholarship as the TFS stipend needs to be confirmed during admission assessment.

TERM OF AWARD:

The Scholarship will be awarded for three years for PhD candidates.

AWARD STRUCTURE:

The Scholarship will be in line with the current UNSW University Postgraduate Award rates (2022 rate of \$28,854 per annum for 3 years). The scholarship will be paid fortnightly.

For more information about Higher Degree Research Scholarships, please refer to the [UNSW Higher Degree Research Scholarships \(including RTP Scholarships\) Policy](#) and the [UNSW Higher Degree Research Scholarships \(including RTP Scholarships\) Procedure](#).

INSTRUCTIONS TO APPLICANTS:

Applicant

The applicant must submit a completed application form adhering to all word counts, research proposal (as detailed below), their academic transcript and proof they have submitted an application for admission to UNSW's PhD Research programme via the UNSW Graduate Research School website:

<https://research.unsw.edu.au/how-apply>.

Research Proposal

Background

Hepatocellular carcinoma (HCC) is the commonest subtype of primary liver cancers and the third leading cause of cancer-related deaths worldwide. Due to improved therapeutics for viral-related HCC, it has been projected that obesity and non-alcoholic fatty liver disease (NAFLD)-related HCC will become the most frequent cause of HCC.

For patients with advanced stage HCC, there remains ineffective therapeutics. Given the increasing potential of immunotherapy targeting immune checkpoint molecules in many cancers, there is increasing momentum for its use in HCC. However, only atezolizumab and bevacizumab combination immunotherapy has shown promise, and that is still with safety and efficacy concerns.

Interestingly, the gut microbiota has been shown to improve immunotherapy. In clinical and pre-clinical studies on melanoma, manipulating the gut microbiota through faecal microbiota transplantation (FMT) has been shown to be able to modulate the response rate to immunotherapy. However, the role of the gut microbiota in HCC and the efficacy of FMT as an adjunct therapy for HCC remains to be understood.

Aims

The aim of this project is to:

1. Investigate the effect of immunotherapy on gut microbiota composition and development of HCC
2. Assess in a mouse model of HCC the effects of the FMT from HCC patients who are responders vs non-responders to immunotherapy on anti-tumour responses
3. Investigating FMT as an adjunct therapy for HCC

Methodology

The main methodologies include:

- Processing clinical samples
- Mouse model of HCC, including injections and FMT through oral gavage
- Molecular analysis techniques (qPCR, metagenomics analysis, metabolomics analysis)
- Histological staining and analysis (immunofluorescence, immunohistochemistry, H&E)
- Flow cytometry

Significance of the proposal

A sub-group of patients with HCC are non-responsive to immunotherapy. Evidence from recent studies in melanoma indicates FMT as a promising adjunct therapy to increase response rate to immunotherapy. Findings from this project will be the first to explore the impact of FMT as an adjunct therapy for HCC.

SELECTION

Each applicant will be assessed on their ability to demonstrate:

- Academic Merit
- Leadership skills (school, workplace or community)
- Extra-curricular activities (sporting, cultural activities, volunteer/work experience)
- Aptitude and commitment to studies in a UNSW Medicine program
- Reasons for undertaking study at UNSW Medicine and how the program can develop their skills, network of peers and business thinking.

Applications must provide evidence supporting the above criteria in your online application.

Unanswered application questions or claims without supporting documentation will not be assessed. Late applications/supporting documentation will not be accepted.

UNSW reserves the right not to award a scholarship, where there is no applicant of sufficient merit, or if the applicant does not meet the scholarship eligibility and/or selection criteria.