

## PhD opportunity in Tumour Immunology

**A fully funded 4-year PhD studentship** (€18,000 per annum stipend) is available in the research group of Dr. Aideen Ryan. The Ryan laboratory is based in NUI Galway's Lambe Institute for Translational Research located on the grounds of Galway University Hospital. The candidate will be enrolled in a structured PhD programme in Pharmacology & Therapeutics and will have the opportunity to take generic and discipline specific training modules. **The Lambe Institute** boasts a state-of-the-art research infrastructure including imaging, histology, flow cytometry, molecular biology, gene vector and mammalian stem cell culture, with external access to pre-clinical core facilities which are coordinated by a team of fully trained technical support staff.

**Overview of research:** The Ryan laboratory investigates potential clinical utility of immunotherapies (e.g. immune checkpoint inhibitors) targeting **stromal cells for the treatment of metastatic colon cancer**. The successful candidate will work in an interdisciplinary environment involving immunologists, cancer researchers, gastroenterologists, colorectal surgeons and pathologists at NUI Galway and Galway University Hospitals. The PhD studentship is funded through an SFI Frontiers for the Future Programme (FFP) award to Dr. Aideen Ryan, and the candidate will be co-supervised by Dr Oliver Treacy.

**Ryan research group focus and project description:** Research in the Ryan group focusses on identifying and targeting immunosuppressive mechanisms driven by stromal cells. Stromal cells in the tumour microenvironment (TME) are often predictive of poor prognosis and immunosuppression. Recently, we described an immunological function for stromal cells mediated by the glycoprotein PD-L1 in preventing CD8<sup>+</sup> T cell cytotoxicity (O'Malley et al, 2018. Cancer Immunol Res). Glycosylation is associated with increased risk of disease progression and poor survival in many cancers. In addition to influencing homing, cell trafficking and drug resistance, glycosylation in the TME is thought to enable immunosuppression, in part via engagement of inhibitory checkpoint-like receptors. This project will aim to uncover novel glycosylation-dependent immune checkpoint targets to overcome stromal cell immunosuppression in the TME and restore anti-tumor immunity in the context of colorectal cancer. The project will be developed with national and international academic and industry collaborators.

**Required qualifications:** Applicants should have a BSc and/or MSc in Immunology or Cancer Biology/Cancer Immunology, or other relevant discipline. Candidates must have a keen interest in tumour microenvironment cellular interactions. Additionally, candidates should be enthusiastic, driven and possess strong communication and organizational skills with the ability to produce results and prioritize tasks. Ideally, applicants will have laboratory experience in cancer cell biology, cellular immunology, stromal cell culture and analysis, and/or animal models.

**Closing date for applications: January 31<sup>st</sup> 2021 at 5:00 pm.**

**Start Date:** Available as soon as possible. Please email a short cover letter outlining your reasons for applying and suitability as a candidate and CV (including the contact details of at least 2 referees) to Dr. Aideen Ryan (aideen.ryan@nuigalway.ie) with the subject heading "PhD Studentship in Tumour Immunology" For informal enquiries, contact Dr Ryan or Dr Treacy (oliver.treacy@nuigalway.ie).