Date 29/03/2023

**Applications are invited for a PhD research position within the SCHOOL OF SCIENCE, ATLANTIC TECHNOLOGICAL UNIVERSITY (ATU), DONEGAL, IRELAND**

**TITLE**: Evaluation of the therapeutic potential of microRNAs (miRNAs) for diabetes and related metabolic disorders.

**SUPERVISORY TEAM**: Dr. Andrew McCloskey (lead-PI, ATU Donegal), Prof. Neville McClenaghan (co-PI, ATU Sligo)

**DURATION**: Funded for 4 years, full-time.

**LOCATION**: ATU Donegal, Port Rd, Gortlee, Letterkenny, Co. Donegal

**DESCRIPTION**: A fully-funded PhD opportunity for a candidate to join a multidisciplinary team led by *Atlantic Technological University* to investigate the therapeutic potential of microRNAs in the treatment of diabetes.

Diabetes represents one of the biggest socioeconomic challenges of our time, particularly considering the global incidence of diabetes is projected to increase to 700 million by 2045. This alarming trend coupled with inherent limitations of established anti-diabetic drugs to tightly manage and control diabetes demonstrates a pressing need for novel approaches to diabetes therapy. Recent advances in groundbreaking molecular technologies now open new possibilities to investigate intricate molecular mechanisms that contribute to development of complex metabolic disorders. In particular, having been termed the “master regulators” of critical cellular processes, microRNAs offer an exciting new field of discovery science and present great potential of generating a new class of therapeutic targets and agents. This project will utilise a variety of advanced molecular techniques (e.g. CRISPR/Cas9 gene editing) to reveal the regulatory role of select microRNAs that modulate insulin secretion from pancreatic beta cells and regulate glucose homeostasis. New understanding of the metabolic role of specific microRNAs will aid discovery and development of so-called "advanced therapy medicinal products” (ATMPs) with diagnostic/therapeutic utility in diabetes.

**PROFILE REQUIREMENTS**:

The candidate must have at least a 2.1 honours B.Sc. (essential) and/or a M.Sc. (desirable) in a subject relevant to the proposed area of study (e.g. biochemistry, biomedical science, food science). Candidates with experience in cell culture, molecular biology, bioinformatics, genetic engineering and associated computational tools will be considered favourably. The candidate must be fluent in English with excellent oral and written communication skills. A full clean driving licence is desirable. The project will be based at ATU Donegal, however, the candicate may be required to spend a period of time with collaborators at ATU Sligo and/or Ulster University, Coleraine to meet the demands of the project. The candidate will be expected to work independently on their own initiative and as part of a dynamic team. The candidate must work effectively with project collaborators and be willing to acquire the broader skills necessary for the successful completion of a PhD project.

**EXPECTED STARTING DATE**: September 2023.

**PROJECT DURATION:** 4 years

**CONDITIONS:**

* Scholarship €15,500 (4 years) and the fees will be paid (€3,000 per annum).
* Postgraduate fees for EU and for Non-EU students will be covered by the project.
* Material costs of the project will be covered.
* IELTS/TOEFL certificate is required for candidates applying from non-English speaking countries. ATU Sligo’s approved [English Language Entry Requirements](https://www.itsligo.ie/international/homepage-it-sligo-international/english-language-requirements/) for postgraduate students is IELTS 6.0 (Overall) with no component score less than 5.5.

**TO APPLY**: Interested applicants are required to, read the terms & conditions, complete an application form (both available on the research page <https://www.itsligo.ie/research/>) that will include (in a single document):

* Curriculum Vitae (to include 2 referees)
* A copy of transcript of results.
* Proof of English language competency, if English is not the native language.
* A cover letter outlining personal motivation to pursue a PhD and how you meet the requirements of the position.

Completed applications should be submitted to to the Research office, Atlantic Technological

University Sligo Campus, at [sean.walker@atu.ie](mailto:sean.walker@atu.ie)

**FURTHER INFORMATION:** For queries relating to this opportunity, please contact Dr. Andrew McCloskey ([andrew.mccloskey@atu.ie](mailto:andrew.mccloskey@atu.ie))