 

**Postdoctoral Researcher**

**Computational and In-Vitro Mechanobiology of Regulatory T cells in Multiple Sclerosis**

**College of Science and Engineering, National University of Ireland Galway**

**Ref. No. NUIG RES 165-22**

Applications are invited from suitably qualified candidates for a full-time Postdoctoral Researcher position on the development of computational and in-vitro models to investigate regulatory T cell mechanobiology for MS immunotherapy. This fixed term position is funded through the Higher Education Authority North-South Research Programme involving collaboration between the All-Ireland Multiple Sclerosis Research Network (AIMS-RN), the Biomechanics Research Centre (BioMEC) at The National University of Ireland Galway (NUI Galway), and the Regenerative NeuroImmunology research group at Queen’s University Belfast (QUB).

**Organisation:** The All-Ireland MS research network (AIMS-RN) brings together engineers, scientists, and clinicians on the island of Ireland to support research that targets disease progression in Multiple Sclerosis. NUI Galway has world-recognized expertise in biomedical science and engineering and the Discipline of Biomedical Engineering has a particularly strong track-record of developing innovative diagnostic and therapeutic solutions to healthcare challenges through interdisciplinary and strategic research activities. NUI Galway is also home to the world-class SFI national research centre for medical devices (CÚRAM), which is embedded in the vibrant Galway Med-Tech ecosystem.

**Job Description:** Efficient myelin regeneration remains an unmet clinical need that has the potential to be neuroprotective and functionally restorative for patients with all types of MS.Regulatory T cells hold tremendous potential for myelin regeneration and MS immunotherapy. The successful candidate will developchemo-mechanicalfinite element models of immune cell remodelling to optimise therapy outcomes. They will further develop associated in-vitro models to characterise T cell mechanobiology, working closely with experimental partners at QUB. The ideal candidate should hold a PhD in Biomedical Engineering or a related discipline and have a strong background in computational biomechanics or mechanobiology. The candidate will be expected to have performed original scientific research in the above area of domain. Candidates should have excellent communication and organizational skills and have strong documentation, oral and interpersonal skills. The position requires communication with the different partners of the collaborative research programme, and thus excellent communication skills are mandatory.

Relevant publications: Dombrowski *et al*., *Nature Neuroscience* (2017); doi: 10.1038/nn.4528

McEvoy *et al*. *Nature Comms* (2020); doi: 10.1038/s41467-020-19904-5

**Essential Requirements:**

* Applicants must have a primary degree and Ph.D. in biomedical engineering, or a related discipline
* Expertise in cell/tissue biomechanics
* Expertise in finite element analysis for biomedical research
* Experience with cell culture (cell lines or primary culture)
* Evidence of scientific publication and dissemination of results at conferences commensurate with career stage
* Excellent verbal / written communication and organizational skills

**Desirable Requirements:**

* Experience with computational and/or experimental mechanobiology
* Experience with molecular biology analysis techniques (immunohistochemistry, fluorescent microscopy)
* Experience working with primary T cells
* Experience working in a team
* Passionate about mechanobiology and development of advanced computational engineering solutions

**Salary**: €39,132 per annum

**Start date**: Position is available from September 2022

**Continuing Professional Development/Training**:

Further information on research and working at NUI Galway is available on [Research at NUI Galway](http://www.nuigalway.ie/our-research/) Researchers at NUI Galway are encouraged to avail of a range of training and development opportunities designed to support their personal career development plans. NUI Galway provides continuing professional development supports for all researchers seeking to build their own career pathways either within or beyond academia.  Researchers are encouraged to engage with our Researcher Development Centre (RDC) upon commencing employment - see [www.nuigalway.ie/rdc](http://www.nuigalway.ie/rdc) for further information.

Further information on research and working at NUI Galway is available on [Research at NUI Galway](http://www.nuigalway.ie/our-research/)

For information on moving to Ireland please see [www.euraxess.ie](http://www.euraxess.ie)

Further information about the All Ireland Multiple Sclerosis Research Network (AIMS-RN) is available at <https://aims-rn.org/>

Informal enquiries concerning the post may be made to Dr Eoin McEvoy at [eoin.mcevoy@nuigalway.ie](mailto:eoin.mcevoy@nuigalway.ie) or Prof Denise Fitzgerald at [d.fitzgerald@qub.ac.uk](mailto:d.fitzgerald@qub.ac.uk)

**To Apply:**

Applications to include a covering letter, CV, and the contact details of three referees should be sent via e-mail (PDF attachments only) to Dr Eoin McEvoy at [eoin.mcevoy@nuigalway.ie](mailto:eoin.mcevoy@nuigalway.ie)

Please put reference number **NUIG RES 165-22** in subject line of e-mail application.

**Closing date for receipt of applications is 5.00 pm, 21st July 2022**

All positions are recruited in line with Open, Transparent, Merit (OTM) and Competency based recruitment.

National University of Ireland Galway is an equal opportunities employer.

 

