

# HRB invest €8 million in new health research

Self-harm, stroke, breast cancer and diabetes are just some of the topics to be addressed by emerging investigators.

14 June 2019 The Health Research Board (HRB) emerging investigator awards are designed to create a pipeline of researcher leaders who will improve health, influence clinical practice and inform health policy across a broad range of areas.

According to Dr Darrin Morrissey, Chief Executive at the HRB says,

‘We want this investment to advance the skills and expertise of researchers, while at the same time generating research outcomes that have strong potential to impact on people’s health, patient care or health policy.’

In a highly competitive process, a total of 11 awards were selected by an international panel from 45 eligible applications. They address a broad range of health areas including Breast Cancer, Type II diabetes, stroke, osteoarthritis, self-harm, sepsis, TB, clinical guidelines, gender differences in cardiovascular disease, Chronic Obstructive Pulmonary Disease. A short synopsis and contact details for the emerging investigators are provided below\*.

Dr Morrissey continues;

‘The HRB is committed to training and to enhancing career paths for people across all disciplines in health research. This programme of funding will ensure that researchers can take the next steps in their research career as independent investigators, demonstrate leadership potential and build a complementary support team. All successful applicants in winning funding demonstrated a strong research vision and identified a career path beyond the duration of the funding award which is very promising for the future of health research in Ireland.’

For more information on the scheme contact

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For more information on individual projects contact the researchers or their press office – see details below.

\*Key topics being addressed

1. . PProviding Improved care for Self-harM: a mixed-methods study of intervention, economic and implementation outcomes from a national clinical programme

**Researcher:** Dr Eve Griffin

**Contact details:** Lynne Nolan, Office of Marketing and Communications, UCC. e [Lynne.nolan@ucc.ie](mailto:Lynne.nolan@ucc.ie), t +353 21 490 2371, m +353 87 210 1119.

**Institution:** University College Cork

This project will examine how routine management of self-harm in acute settings impacts on patient outcomes, with regards repeat self-harm, suicide and premature mortality. It will evaluate if the introduction of a national clinical programme for self-harm in Irish hospitals has led to improved outcomes for individuals as well as cost savings. The project will also identify the barriers and facilitators to implementing services in Ireland, in order to inform and optimise service delivery.

2. The impact of mutations in PI3K/AKT pathway gene loci on response to PI3K inhibitor

**Researcher:** Dr Alex Eustace

**Contact details:** Eimear Brady, DCU Communications Office, e [Eimear.brady@dcu.ie](mailto:Eimear.brady@dcu.ie), m +353 87 260 4085.

**Institution:** Dublin City University

This project aims to examine how changes in genes which occur in a patients' breast cancer might be used to predict whether specific patients could benefit from a new group of drugs. The aim of the project is to try and select the 'right women' for the 'right treatment', reducing the need for broad spectrum chemotherapy which is associated with damaging side effects.

3. Comparison of staphylococcal species from the oro-nasal cavity, periodontal pockets and foot ulcers of patients with type II diabetes: a potential microbial reservoir for diabetic foot ulcer infection.

**Researcher:** Dr Brenda McManus

**Contact details:** e [Brenda.mcmanus@dental.tcd.ie](mailto:Brenda.mcmanus@dental.tcd.ie), t (+353 1) 6127364

**Institution:** Dublin Dental University Hospital, Trinity College Dublin

This project will look at how gum disease, and the bacteria that cause it, might increase the risk of diabetic foot ulcer infection by bacteria living in the mouth and nose. If successful, the research could open up new ways to prevent foot ulcer infections in diabetic and other patients.

4. Developing a new approach to stroke rehabilitation for the upper limb based on TMS neurofeedback

**Researcher:** Dr Kathy Ruddy

**Contact details:** Ciara O Shea, Communication Office, Trinity, e [coshea9@tcd.ie](mailto:coshea9@tcd.ie), t +353 1 8964337, m + 353 87 7422657.

**Institution:** Trinity College Dublin

This project aims to develop a brain computer interface that will allow stroke patients to stimulate damaged areas of the brain in an effort to re-activate the damaged region and help restore movement and function to paralysed muscles.

5. Harnessing the power of the Gut-Lung Axis: How Dietary Short-Chain Fatty Acids Balance Inflammatory Outcomes in Chronic Obstructive Pulmonary Disease

**Researcher:** Dr Natalia Munoz-Wolf

**Contact details:** Ciara O Shea, Communication Office, Trinity, e [coshea9@tcd.ie](mailto:coshea9@tcd.ie), t +353 1 8964337, m + 353 87 7422657.

**Institution:** Trinity College Dublin

This project will examine how the gut microbiome and the diet might influence the onset and flare ups of Chronic Obstructive Pulmonary Disease (COPD), a respiratory condition that is the third leading cause of death worldwide. If successful it could open up nutritional therapy approaches to manage COPD and benefit over half a million people in Ireland and 250 million worldwide.

6. Engineering RNA-based therapeutics for treatment of sepsis and sepsis induced multiple organ dysfunction syndrome

**Researcher:** Dr Piotr Kowalski

**Contact details:** Lynne Nolan, Office of Marketing and Communications, UCC. e [Lynne.nolan@ucc.ie](mailto:Lynne.nolan@ucc.ie), t +353 21 490 2371, m +353 87 210 1119.

**Institution:** University College Cork

This project aims to explore the therapeutic potential of RNA molecules (RNA is a ribonucleic acid, which fulfils many biological roles and is essential for all living organisms) to treat and prevent multiple organ failure during sepsis. It will also develop new polymers and nano-sized particles to deliver these new class of RNA-based drugs to cells in lungs and kidneys.

7. SCaRLeT: Sex differences in Cardiovascular Risk across Life course Transitions

**Researcher:** Dr Linda O'Keeffe

**Contact details:** Lynne Nolan, Office of Marketing and Communications, UCC. e [Lynne.nolan@ucc.ie](mailto:Lynne.nolan@ucc.ie), t +353 21 490 2371, m +353 87 210 1119.

**Institution:** University College Cork

Heart disease is still the leading cause of death around the world, but women and men do not experience heart disease equally. This project aims to improve understanding of how risk factors that can be prevented and changed (like smoking, obesity and alcohol use) relate to heart disease risk in females and males, throughout life, using many different approaches in world-leading studies. This can inform new ways to address these important heart disease risk factors, which are still the greatest driver of heart disease today in the population.

#### 8. IMPlmentation of osteoArthritis Clinical guidelines Together

**Researcher:** Dr Clodagh Toomey

**Contact details:** Alan Owens, Communications Officer, University of Limerick, e [alan.owens@ul.ie](mailto:alan.owens@ul.ie) t 061-213000, m 087-9086633.

**Institution:** University of Limerick

This project will explore how best to ensure that exercise and education programmes can be delivered so that patients with hip and knee problems have both access to, and the support they need, in order to participate in exercised based therapies.

#### 9. Evidence synthesis and translation of findings for national clinical guideline development: addressing the needs and preferences of guideline development groups

**Researcher:** Dr Barbra Clyne

Contact details: Jane Butler, RCSI Senior Communications Officer, e [communications@rcsi.ie](mailto:communications@rcsi.ie), t +353 1 402 8610, m +353 87 7531877.

**Institution:** Royal College of Surgeons in Ireland

This project aims to develop a toolkit to equip members of National Clinical Guideline Development Groups on how to select the best approaches to evidence synthesis in the development of Irish national clinical guidelines. The project will also explore how the results of evidence synthesis methods are presented and how guideline development groups use this evidence to develop recommendations.

#### 10. Defining the consequences of innate immune training on protective versus pathogenic T cell responses in patients with tuberculosis

**Researcher:** Dr Sharee Basdeo

**Contact details:** Ciara O Shea, Communication Office, Trinity, e [coshea9@tcd.ie](mailto:coshea9@tcd.ie), t +353 1 8964337, m + 353 87 7422657.

**Institution:** Trinity College Dublin

It was recently discovered that some types of immune system cells could be trained to be more effective at fighting Mycobacterium tuberculosis (Mtb). This project will compare different ways to train those specific immune system cells and see which might be the most effective way to enhance the immune system's ability to deal with Mtb.

#### 11. Investigating breast cancer risk factors to understand breast cancer epidemiological outcomes

**Researcher:** Dr Maeve Mullooly

**Contact details:** Jane Butler, RCSI Senior Communications Officer, e [communications@rcsi.ie](mailto:communications@rcsi.ie), t +353 1 402 8610, m + 353 87-7531877

**Institution:** Royal College of Surgeons in Ireland

This project will examine the breast cancer risk factor, mammographic breast density (MBD). Using data from the National Breast Screening Programme, this project will assess associations between MBD and clinical breast cancer characteristics, including how well patients survive their diagnosis. The research will improve knowledge on how this risk factor influences tumour aggressiveness.