



SPECIAL EU PROGRAMMES BODY

Project Case Study: Centre for Personalised Medicine - Acute Kidney Research Cluster

THEME:

Research and Innovation

FUNDING (ERDF+MATCH):

€8,628,985.36

MATCH FUNDERS:

Department for the Economy and the Department of Business, Enterprise and Innovation, NHS Highland and University of Highlands and Islands

LEAD PARTNER:

Ulster University

PROJECT PARTNERS

Voscuris, Healthcare Analytics Limited, Letterkenny Institute of Technology, NHS Highlands, NI Clinical Research Services, NUI Galway, Randox, Randox Teoranta, United Health Group (Optum), University of Highlands and Islands, Western Health and Social Care Trust, Letterkenny General Hospital, C-TRIC, Donegal Clinical and Research Academy.

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 www.ulster.ac.uk/cpm

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The Centre for Personalised Medicine (CPM) brings together 14 partners from academia, health services and industry to work together to address key challenges in heart disease; emergency surgery; acute kidney injury; diabetes, and dementia.

One of the research clusters is focusing on Acute Kidney Injury Research to help improve renal clinical decision making.

The Acute Kidney Injury (AKI) research cluster of CPM primarily aims to identify and assess the value of biomarkers in predicting adverse outcomes such as Chronic Kidney Disease (CKD) following an AKI. To achieve this, a cross-border collaboration between Altnagelvin and Letterkenny University Hospital's was established.

The academic team also work closely with industry to quantify genomic and proteomic biomarkers. RANDOX biosciences have optimized and provided multiplex CKD and AKI arrays that the AKI team are in the process of clinically validating. The cluster is also communicating with Olink[®] proteomics in Sweden with the aim of identifying novel biomarker signatures for AKI progression, using a novel unbiased multiplex technology.

At the start of November 2019 the team had recruited 222 participants (39 AKI and 135 CKD). Participants are recruited from all areas of the hospitals including renal, cardiology, intensive care and emergency surgery wards. Three main cohorts are being generated; AKI, CKD and apparently healthy. Follow ups are also obtained, AKI participants are followed up after three months and CKD after 12 months.

“Renal clinicians routinely face the challenge of making decisions for a patient’s treatment based on biomarkers which give an overview of general kidney function. However they provide little information about the damage which may be caused to the kidney itself. Furthermore, these biomarkers generally offer little predictive information for the future of the patient’s kidney health. This project aims to investigate whether several novel biomarkers, not currently used in the clinical setting would have value for producing a biomarker-based decision-making framework.”

Sean McCallion, AKI research cluster PhD researcher

