Case Study: PROTEOMICS - MASS SPECTROMETRY 3

Research Question

We wanted to probe for the potential existence of a glycolytic metabolon in cells exposed to hypoxia. The existence of such an entity would have important implications for cellular physiology and multiple disease processes.

Our Approach

Intestinal epithelial cells were exposed to increasing periods of hypoxia and individual glycolytic enzymes were immunoprecipitated. Using mass spectrometry, we were able to identify the hypoxia-induced association of enzymes involved in glucose metabolism. The data reveal evidence supporting the existence of a hypoxia-inducible glycolytic metabolon.

Resulting Publication: *Currently being written up for journal submission and also forming the basis of a 2022 ERC Advanced Award Application (GLYCOPLEX).*

Testimonial

"The MS facility and in particular Eugene Dillon has been up-front and central in the continuing success of this project. Without the facility, this project would simply not have been possible. We are most grateful for the expert assistance provided and the outstanding quality of service and expertise provided".

Prof. Cormac Taylor
Principal investigator

Sarah Kierans
PhD Student

UCD School of Medicine & UCD Conway Institute

Expertise:

We offer the dedicated strategic support of our expert team, both before mass spectrometry (sample preparation and separation) and after (data analysis, bioinformatics) to enable our research and commercial partners to take full advantage of their results.

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