Case Study: METABOLOMICS 1

Research Question

Can we identify and quantify lipid biomarkers associated with total dietary fat intake and further examine the relationship between those lipid biomarkers with health parameters?

Our Approach

Dietary fat is an important component of diet and clearly serves a number of essential functions. However, the diet high in fat and saturated fat has been linked to a range of chronic diseases such as obesity, cardiovascular disease and metabolic syndrome. Our aim was to identify biomarkers associated with dietary fat intake. The metabolomics platform offers analysis for a wide range of lipid metabolites. We performed targeted lipid analysis and measured 145 lipids including phospholipids, sphingolipids and acylcarnitines. Potential dietary biomarkers were identified and linked with health parameters. The work enabled us to progress our understanding of the relationship between diet and health.

Resulting Publication: O'Gorman et al. (2017) Exploring the links between diet and health in an Irish cohort: a lipidomic approach. *Journal of Proteome Research*, 16(3), 1280-1287

Testimonial

"Obtaining absolute identification of metabolites is a major challenge and the expertise of the Core staff was a major advantage in this regard. Furthermore, their knowledge in advanced statistical tools make a major difference for data analysis".

Dr Aoife O'Gorman

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Offering imaging solutions to academic and commercial clients in a customisable range of services at each stage of the research pathway; from experimental design to final publication.

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