



# Celia RODRIGUEZ PEREZ

**Institution:** Institute of Food & Health, University College Dublin

**Academic Mentor:** Professor Lorraine Brennan

**Commercial Partner:** Kerry Group Ltd

**Commercial Mentor:** Cal Flynn

Celia received her PhD in Chemistry from the University of Granada. During her predoctoral study, she was awarded fellowships at the Richardson Centre for Functional Foods and Nutraceuticals, in Manitoba, Canada, and the Institute of Food Science Research, Madrid.

Celia has been involved in four national, two EU-funded and one internationally funded projects. She has published 19 research articles in JCR-indexed journals, authored a book and co-authored four book chapters. She has presented 24 communications to international conferences, of which six have been published in JCR-indexed journals.

Her research explores different steps of nutraceutical and functional food development including the optimisation of extraction methods for obtaining bioactive rich-extracts from different plant material to the evaluation of their in-vitro and in-vivo bioactivity.

*See case study overleaf*

## Professor Lorraine Brennan

Professor Brennan is Head of Nutrition at UCD leading research focused on Nutrition, Health and Biomarkers. She is a work package leader in the Food Biomarker Alliance initiative, FoodBall, director of the European Nutrigenomics Organisation and Secretary of the Irish Section of the Nutrition Society. Prof Brennan has been published in more than 180 peer-reviewed JCR-indexed journals, including *Nature*, *Diabetes* and *Diabetology*.

## Cal Flynn

Cal Flynn has 40 years' experience in the food industry, initially managing a chemical analysis laboratory and later, managing and setting quality assurance standards. He went on to lead product development teams for ingredient and retail consumer products. He has launched several new products and product manufacturing lines and now works in a senior management role leading the product innovation team at Kerry Group, with a focus on Nutrition and Taste.

leads a team of seven researchers for in-house R&D as well as external participations.

## Institute of Food & Health, University College Dublin

The UCD Institute of Food and Health is a globally recognised multidisciplinary research centre, with 34 principal investigators. It divides into four main research areas: food quality & processing, nutrition and health, food safety and food chain sustainability.

## Kerry Group Ltd

Kerry Group is global leader in food, beverages and pharmaceuticals; and a leading supplier of chilled food products to Irish and International markets. It employs over 800 R&D scientists and is the world's biggest and most technologically advanced developer of taste and nutrition solutions.

## Celia's project

---

The UCD Nutrition, Biomarkers and Health research group has a metabolomics platform which includes the following instrumentation: 600 MHz NMR machine, LC-qTOF MS, GC-qTOF-MS and GC-MS. Celia is employing metabolomics-based techniques to identify and quantify small metabolites in biological samples such as urine and plasma.

The instrumentation available to her is state-of-the-art and allows the identification and quantification of hundreds of compounds in one biological sample at a time.

This in turn will allow the identification and quantification of relevant biomarkers of food intake and use them to assess relationships with metabolic health and to develop a personalised nutrition feedback system that incorporates biomarkers and demonstrates its utility in improving dietary intake.

---