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Biomarker discovery in cardiovascular disease and role of LC/MS

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Metabolomics and lipidomics play an increasingly important role in the understanding and diagnosis of cardiovascular disease. Lipid profiling in cardiovascular disease drug discovery whether targeted or untargeted is key to provide an insight in the mechanism of action and to prove target engagement. This is particularly important in the early stages of target identification and validation. Furthermore, metabolic tracing of pathways and flux analyses plays a pivotal role because it allows for early indication of lipid target efficacy and aid in the interpretation of phenotypic differences when steady state concentration measurements are insufficient. In this presentation we will present a number of examples using UPLC/high resolution TOF MS which highlights how this technology may be applied to exploratory biomarkers of the metabolic syndrome. The examples will include; perturbation of diet, genetic knockdowns, transcriptome/lipidome relationships, metabolic tracers and metabolic flux of lipids.

Biography

Jose Castro-Perez is the Director of Health Sciences Marketing. Prior to this, he spent part of his career as the Team Leader of Biomarkers and Translational Research at Merck, USA. He has published 62 publications and numerous scientific patent applications. He attained his BSc in Chemistry from King's College in London (UK) and subsequently received his MSc in Clinical Biochemistry and Molecular Biology from the University of Surrey (UK). He obtained his PhD at the University of Leiden (Netherlands) in Metabolomics and Biomarker discovery. In 2014, he was awarded by Thompson Reuters with the prestigious Highly Sited Researcher Award.

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