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Glycotechnology Lab at CIC biomaGUNE**A sweet journey into the
quantification, synthesis
and biological roles of
carbohydrates****Tuesday, 30th January
12.00 p.m.**

CIC biomaGUNE - Seminar Room

Carbohydrates are essential biomolecules that are found ubiquitously in every living species. The roles of carbohydrates, also known as sugars, glycans, or saccharides are multiple; they are the main energy source for humans and one of the major components of the cell wall of plants. However, despite these renowned functions, carbohydrates also have a relevant role in recognition events related to health and disease and from the structural point of view. Therefore, the detection and quantification of the different glycans is of paramount interest.

In this talk, the relevance of stable isotope labelling of N-glycans to provide internal standards that aid in the absolute and relative quantification of N-glycans in complex matrices by isotopic dilution will be expounded, focusing on the development of new routes to obtain these isotopically labelled standards. This topic will include the expression of human and bacterial glycosyltransferases to enable the synthesis of multiple glycoforms. Finally, the role of the glycans in the folding and stability of the glycoprotein CD14, the main co-receptor of LPS, will be explained.