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Fucanomics and galactanomics

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Abstract

Glycomics turned out to be a very extensive project where its subdivision is consequently emerging. This is seen by the growing number of terminologies used to define subprojects concerning particular classes of bioactive carbohydrates. Sulfated fucans (SFs) and sulfated galactans (SGs) are relatively new classes of sulfated polysaccharides (SPs) that occur mostly in marine organisms, and exhibit a broad range of medicinal effects. Their structures are taxonomically dependent, and their therapeutic actions include benefits in inflammation, coagulation, thrombosis, angiogenesis, cancer, oxidation, and infections, although only at the four first systems, structure-function relationships have been provided in more details. Some red algae, marine angiosperm and invertebrates express SPs of unique structures composed of regular repeating oligomeric units of well-defined sulfation patterns. This fine pattern of structural regularity is quite rare among any naturally occurring long SPs, and enables accurate structure-biofunction correlations. Seeing that, fucanomics and galactanomics may comprise distinguished glycomics subprojects. This talk will discuss the relevance that justifies the international recognition of these subprojects in the current glycomics age associated with the beneficial outcomes that these glycans may offer in drug development.

Biography