ENZYMATIC GLYCOSYLATION OF ELLAGIC ACID

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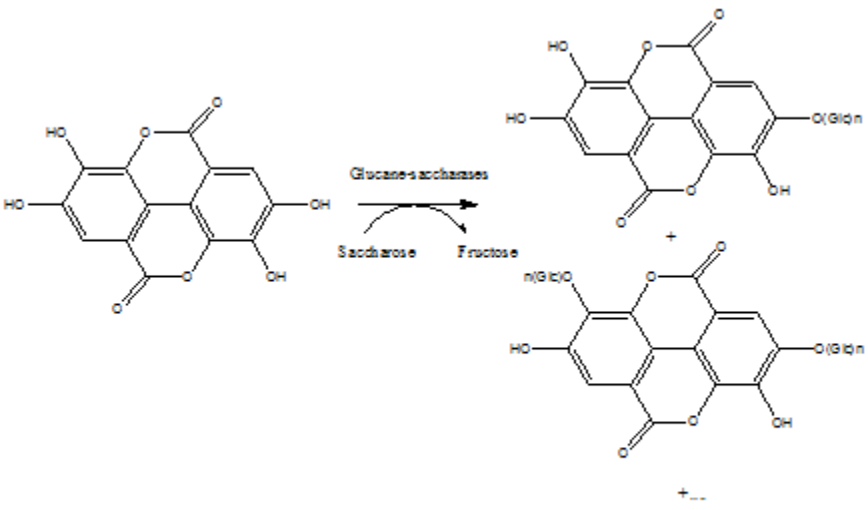
Ellagic acid is a natural biomolecule with several biological properties[i] such as anti-oxidant activity. However the poor solubility of this compound limits its bioavailability and its potential for pharmaceutical or cosmetic application.[ii] It's well-known that glycosylation can significantly improve the physicochemical and biological properties of small molecules.[iii] Enzymatic glycosylation of this compound would be a solution to access a more soluble ellagic acid through a sustainable and environmentally friendly process. Glucansucrases, that use sucrose as donor substrate to transfer a glucose unit, are highly promising catalysts to glycosylate high valuated biomolecules.[iv]



Ellagic acid glucosylation using glucansaccharases

Herein we report the results of the screening of glucansucrases for the glycosylation of ellagic acid. Due to the poor solubility of this compound, co-solvants and different amounts of sucrose were also screened to find the best conditions for this biocatalytic reaction.

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