Enzymatic Synthesis of Valuable Bioactive Compounds

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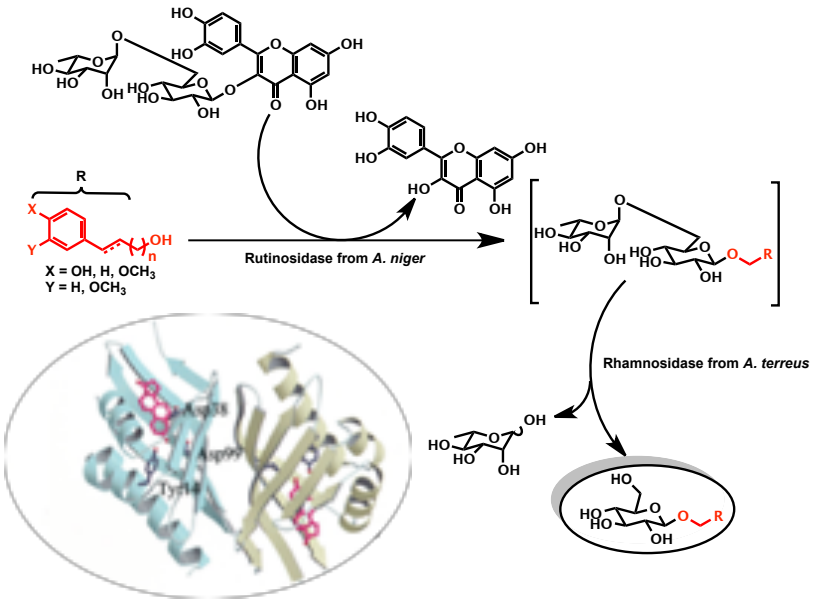
A sustainable and convenient, one-pot two-enzyme method for the glucosylation of arylalkyl alcohols was developed (**Scheme 1**). The reaction scheme was based on a transrutinosylation catalyzed by a rutinosidase from *A. niger* using the cheap and commercially available flavonoid rutin as glycosyl donor, followed by a selective 'trimming' of the rutinoside unit, catalyzed by a rhamnosidase from *A. terreus*. Both these enzymes were available to us as heterologous proteins produced by a recombinant strain of *P. pastoris*.

This process allowed the facile preparation of several natural bioactive glucosides, which could be isolated in up to 80% yield without the need of silica-gel chromatography.[1]



Scheme 1: Enzymatic one-pot glucosylation

1. Bassanini, I.; Jana Krejzová, J.; Panzeri, W.; Monti,D.; Křen, V.; Riva. *ChemSusChem.* **2017**, *10(9)*, 2040-2045.