

The World Stevia Organization would like to share this paper by Eva Petit & al on the **Development of screening methods for functional characterization of UGTs from *Stevia rebaudiana***.



Glycosylation is a key modification that contributes to determine bioactivity and bioavailability of plant natural products, including that of terpenoids and steviol glycosides (SVglys). It is mediated by uridine-diphosphate glycosyltransferases (UGTs), that achieve their activity by transferring sugars on small molecules. Thus, the diversity of SVglys is due to the number, the position and the nature of glycosylations on the hydroxyl groups in C-13 and C-19 of steviol.

This study aims to provide methods to characterize UGTs putatively involved in SVglys biosynthesis. After agroinfiltration-based transient gene expression in *Nicotiana benthamiana*, functionality of the recombinant UGT can be tested simply and directly in plants expressing it or from a crude extract.

The combined use of binary vectors from pGWBs series to produce expression vectors containing the stevia's UGT, enables functionality testing with many substrates as well as other applications for further analysis, including subcellular localization.

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Autors: Eva Petit & al.