

KINETIC PROPERTIES OF STRICTOSIDINE GLUCOSIDASE FROM CATHARANTHUS ROSEUS AND OF THE NEW GLUCOSIDASE FROM STRYCHNOS MELLODORA IN PRESENCE OF STRICTOSIDINE, DOLICHANTOSIDE AND PALICOSIDE

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Strychnos meliodora is a primitive species from a phylogenetical point of view, containing significant amounts of glucoalkaloids, especially dolichantoside (1) and palicoside (2) [1] whose structures are closely similar to strictosidine (3), the recognized exclusive precursor of monoterpenoid indole and quinoline alkaloids [2,3]. It is a potential source of glucoalkaloids useful for biotechnological experiments and studies concerning the biosynthetic pathway from those alkaloids.

Strictosidine glucosidase (SG), a highly specific enzyme isolated from *Catharanthus roseus*, was known to convert only strictosidine and his 10-methoxylated analogue [4]. In the first part of our studies, we pointed out a conversion of the new substrates 1 and 2 by this enzyme, measured the kinetic parameters K_M and V_{max} for each substrate and compared them with strictosidine ones [5]. Results confirmed the high specificity for 3. SG was also more specific for 1 than for 2.

Looking for glucosidase activity in the powdered material of *Strychnos meliodora*, a high conversion of 1 and 2 was observed after an incubation with different protein extracts. The new glucosidase from *Strychnos meliodora* was then purified from leaves by an ultra-centrifugation process and the kinetic parameters K_M and V_{max} of this enzyme in presence of 1, 2 and 3 were measured. This glucosidase from *Strychnos meliodora* presents similar values for 1 and 3 and is much less specific for 3 than SG. Like SG, it is also less specific for 2.

In continuation of our enzymatic studies, we plan now to purify and determine the structures of the conversion products obtained from substrates 1 and 2.

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