

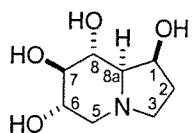
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## Simple diastereoselective synthesis of indolizidine alkaloids : 6-Epicastanospermine and 1,6-diepicastanospermine

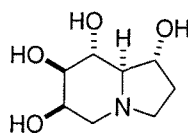
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Polyhydroxylated indolizidine alkaloids 6-epicastanospermine and 1,6-diepicastanospermine were obtained from D-glucono-d-lactone diastereoselectively. Key transformation included a stereoselective nucleophilic addition, and simple intramolecular cyclization. Among of synthesized compounds, 6-epicastanospermine 2 showed a strong inhibitory activities against  $\alpha$ -glucosidase ( $IC_{50} = 31 \text{ mM}$ ) and  $\beta$ -glucosidase ( $IC_{50} = 36 \text{ mM}$ ).



Castanospermine 1



1,6-Di-*epi*-castanospermine 2