



## Anti-Advanced glycation end-product and free radical scavenging activity of plants from the yucatecan flora

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Mots-clés	Antioxydant activity [8], Diabetes [9], glycation-end products [10], traditional medicine [11]
Résumé en anglais	<p>Background: Formation and accumulation of advanced glycation end-products (AGE) is recognized as a major pathogenic process in diabetic complications, atherosclerosis and cardiovascular diseases. In addition, reactive oxygen species and free radicals have also been reported to participate in AGE formation and in cell damage. Natural products with antioxidant and antiAGE activity have great therapeutic potential in the treatment of diabetes, hypertension and related complications. Objective: to test ethanolic extracts and aqueous-traditional preparations of plants used to treat diabetes, hypertension and obesity in Yucatecan traditional medicine for their anti-AGE and free radical scavenging activities. Materials and Methods: ethanolic extracts of leaves, stems and roots of nine medicinal plants, together with their traditional preparations, were prepared and tested for their anti-AGE and antioxidant activities using the inhibition of advanced glycation end products and DPPH radical scavenging assays, respectively. Results: the root extract of <i>C. fistula</i> (IC<sub>50</sub>= 0.1 mg/mL) and the leaf extract of <i>P. auritum</i> (IC<sub>50</sub>= 0.35 mg/mL) presented significant activity against vesperlysine and pentosidine-like AGE. Although none of the aqueous traditional preparations showed significant activity in the anti-AGE assay, both the traditional preparations and the ethanolic extracts of <i>E. tinifolia</i>, <i>M. zapota</i>, <i>O. campechianum</i> and <i>P. auritum</i> showed significant activity in the DPPH reduction assay. &lt;65Conclusions: the results suggest that the metabolites responsible for the detected radical-scavenging activity are different to those involved in inhibiting AGE formation; however, the extracts with antioxidant activity may contain other metabolites which are able to prevent AGE formation through a different mechanism.</p>

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