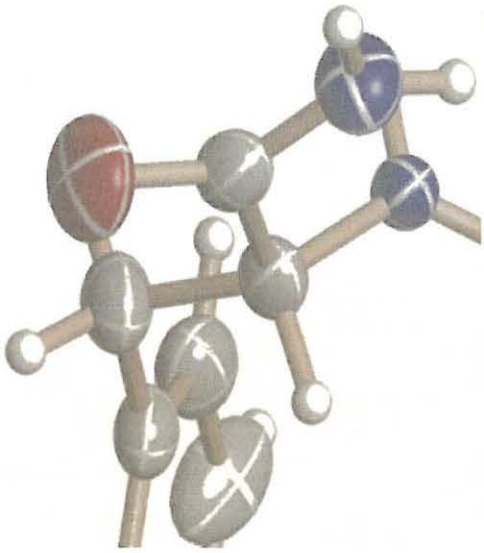

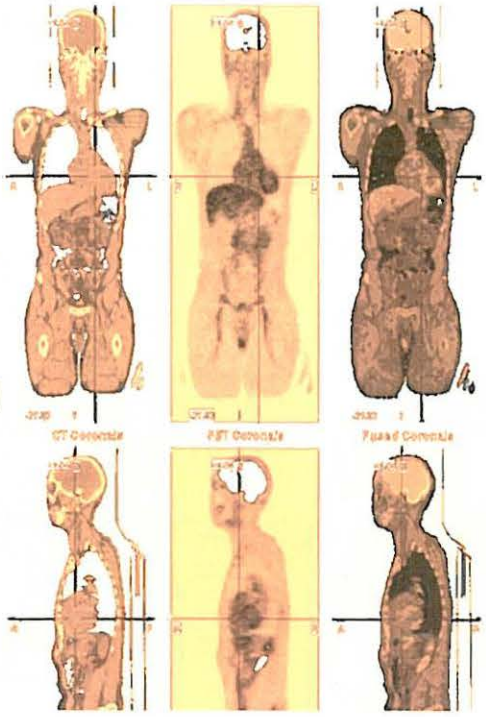

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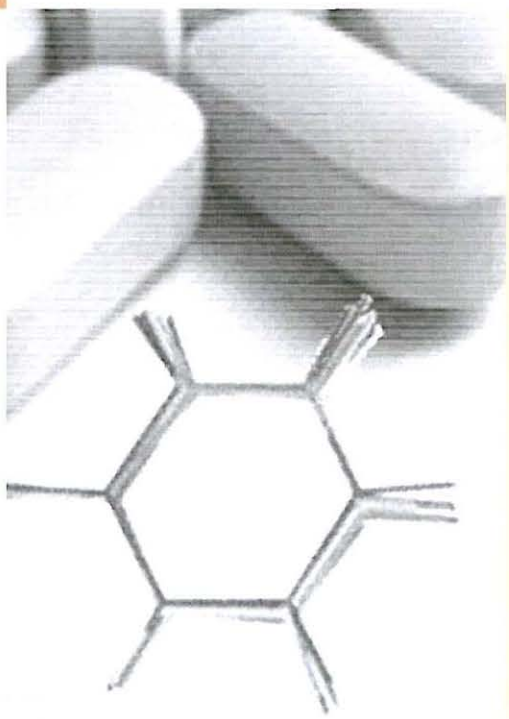

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Juglansregia L. leaves as a source of bioactive phenolic compounds

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Walnut (*Juglansregia L.*)leaves are considered a source of healthcare compounds, and have been widely used in traditional medicine for treatment of skin inflammations, hyperhidrosis and ulcers and for its antidiarrheic, anti-helmintic, antiseptic and astringent properties [1]. Furthermore, they have been reported as a source of phenolic compounds [2,3].The beneficial effects derived from those compounds with interesting properties, such as anticarcinogenic, antimutagenic and cardioprotective activities, have been attributed to their antioxidant activity [3].

In the present study, the phenolic composition of walnut leaves was determined and compared with previous reports.The analysis was carried out by reversed-phase high performance liquid chromatography coupled to diode array detection and mass spectrometry with electron spray ionization (HPLC-DAD-ESI/MS),after extraction with methanol:water (80:20 v/v).

Twenty five compounds were identified and quantified:seven phenolic acid derivatives (caffeicacid and *p*-coumaric acid derivatives), two dimers and one trimer ofprocyanidins, tenflavonols (quercetin, myricetin and kaempferol derivatives), and fivetaxifolin*O*-pentosides. 3-*O*-Caffeoylquinic acids and a quercetin*O*-pentosidewere the most abundant phenolic compounds in the studied sample. This study provides a more complete characterization of phenolic compounds of walnut leaves, as previous reports only described eight[2] and ten [3] compounds.As far as we know, this is the first time that the presence of procyanidins and taxifolinderivatives was reported in walnut leaves. Moreover, it highlights the use of the mentioned species as a source of bioactive compounds.

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