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Qualidade dos alimentos:
novos desafios

Resumos

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Editores/Coordenação

Joana S. Amaral

João C.M. Barreira

Lillian Barros

Isabel C.F.R. Ferreira

Isabel Mafra

M. Beatriz P.P. Oliveira

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Novel flavones in *Lamium* L. genus

Olívia R. Pereira^{a,b}, *Maria R.M. Domingues*^c, *Artur M. S. Silva*^c, *Susana M. Cardoso*^{a,d,*}

^aCERNAS - ESA, Instituto Politécnico de Coimbra, Coimbra, Portugal, ^bDTDT, ESSa, Instituto Politécnico de Bragança, Bragança, Portugal, ^cDepartamento de Química & QOPNA, Universidade de Aveiro, Aveiro, Portugal, ^dCIMO - ESA, Instituto Politécnico de Bragança, Bragança, Portugal

*scardoso@esac.pt

Lamium L. (Family: Lamiaceae alt. Labiatae) is a genus includes about forty species distributed in Europe, Asia and Africa. Many plants of this genus have been used as emergency or famine food during the specific decades of starvation. Currently, they are consumed raw or cooked as a vegetable, and they are a component of several dishes and of food supplements. Additionally, many *Lamium* L. species have been used in traditional and officinal medicine for the treatment of several disorders [1]. Despite the importance of the flavonoid compounds in the beneficial activities of plants, there are few studies focusing this class of second metabolites.

In this context, the present work aims to determine the phenolic composition of a *Lamium album* L. extract, contributing for the chemical characterization of this genus. For that, the main phenolic compounds of an ethanolic extract of aerial parts of *L. album* L. were determined by means of HPLC-DAD, ESI-MS techniques and the structure of the major flavone was confirmed by NMR spectroscopy. The phenolic extract of *L. album* L. was composed by significant amounts of isoscutellarein derivatives with typical UV spectra maxima at 278, 302 and 333 nm. This aglycone (MW 286 Da) was herein detected for the first time in the genus *Lamium*, counteracting previous chemotaxonomic studies [2] The main isoscutellarein derivatives in the ethanolic extract was assigned to isoscutellarein-7-*O*-(6-*O*-acetyl- β -allosyl)(1 \rightarrow 2)- β -glucoside on the base of its in its characteristic mass spectrometry fragmentation pattern m/z 651 \rightarrow 609 \rightarrow 285 \rightarrow 241, 243, 199, 175 and NMR data. The other isoscutellarein derivatives detected in the enriched phenolic extract included the 7-*O*-allosyl(1 \rightarrow 2)glucoside (MW 610 Da) and its isomer, the 4'-*O*-methyl-7-*O*-allosyl(1 \rightarrow 2)glucoside (MW 624 Da) and the 4'-*O*-methyl-7-*O*-(6-*O*-acetylallosyl)(1 \rightarrow 2)glucoside (MW666).

Overall, the present study greatly contributes for the knowledge of *Lamium* genus polyphenols.

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