



Abstracts

FOR

5th International Symposium on Phytochemicals in Medicine and Food

(5-ISPMF)

AUGUST 25 – SEPTEMBER 01 2021, NANCHANG, CHINA



PP50: Phenolic profile of *Cynara scolymus* L. and *Silybum marianum* (L.) Gaertn. aqueous and hydromethanolic extracts

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The flowers and leaves of *Cynara scolymus* L. (artichoke) and the leaves of *Silybum marianum* (L.) Gaertn. (milk thistle), medicinal plants native to the Mediterranean Basin, are used in the treatment of liver, spleen, and gallbladder disorders^[1], and for their cholagogue, choloretic, and choliokinetic actions, as also for the treatment of dyspepsia and as anti-diabetics^[2], respectively. The beneficial properties of medicinal plants are often ascribed to their phenolic composition, among a large diversity of phytochemicals. Thereby, the aim of the present study was to obtain and compare the phenolic profiles of artichoke and milk thistle aqueous and hydromethanolic (80% ethanol, v/v) extracts, using HPLC-DAD-ESI/MS. The aqueous extract of artichoke presented a higher concentration of phenolic compounds than the hydromethanolic extract, with slight differences between the respective profiles; the major flavonoid found in the aqueous and hydromethanolic extract was luteolin-7-*O*-glucuronide, followed by luteolin-7-*O*-glucoside. Monocaffeoylquinic acid derivatives were only present in the hydromethanolic extract, being 5-*O*-caffeoylquinic acid the most abundant one, while dicaffeoylquinic acid derivatives were mostly identified in the aqueous extract; 1,3-*O*-dicaffeoylquinic acid was the most abundant one in both extracts. Regarding milk thistle preparations, similar profiles were observed, with only quantitative differences between them. The aqueous extract revealed a higher phenolic compounds concentration than the hydromethanolic extract, with apigenin-7-*O*-glucuronide as the major compound quantified in both preparations. Total flavonoids were higher in the aqueous extract, with apigenin-7-*O*-glucuronide, luteolin-7-*O*-glucuronide, and apigenin-*O*-deoxyhexosyl-glucuronide as the main constituents. The phenolic acids found in the hydromethanolic extract included 5-*O*-caffeoylquinic and protocatechuic acids. Besides these phenolic acids, the hydromethanolic extract also revealed high levels of luteolin-7-*O*-glucuronide. Overall, the aqueous extracts presented higher phenolic contents than the hydromethanolic extracts in both plants, which could be related with the heat treatment to which infusions were subjected.

Acknowledgments:

The authors are grateful to the Foundation for Science and Technology (FCT, Portugal) for financial support through national funds FCT/MCTES to CIMO (UIDB/00690/2020); national funding by FCT, P.I., through the institutional scientific employment program-contract for C. Pereira and L. Barros contracts and M.G. Leichtweis PhD grant (2020.06706.BD).

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