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P69 HPLC-DAD-(ESI)-MS/MS analysis as the first step to metabolic fingerprinting of medicinal herbs: the case of underexploited *Euphorbia* species

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The genus *Euphorbia* comprises more than 2,000 species widely distributed in Asia, Africa and Latin America. They have been extensively used in folk medicine to treat disorders such as abdominal pain, skin diseases, tumors, wart, among others¹. Although the well-recognized ethnopharmacological relevance of *Euphorbia* species, most of them have not been studied yet, such as *Euphorbia hirta* and *Euphorbia jokinii*. In this context, screening the bioactive molecules potentially responsible for the observed medicinal effects is an initial, but key step for discovering novel active compounds and understanding the mechanisms of action underlying their biological activities. Thus, this study aimed at determining the phenolic compounds composition of *E. Hirta* and *E. jokinii*. Both plants were freeze-dried, milled, and extracted with ethanol:water (60:40 v/v) for 3 hours at 45 °C. After centrifugation, the extracts were freeze-dried, re-suspended in ethanol:water (20:80 v/v), filtered and injected into the HPLC-DAD-(ESI)-MS/MS system. The phenolic profile of *E. Hirta* and *E. Jokinii* revealed mainly the presence of flavonoids and galloyl derivatives. Thirty-two compounds were tentatively identified in *E. Hirta* and twenty-two in *E. Jokinii*. Quercetin 3-*O*-rhamnoside was the major compound in both species, with *E. Hirta* showing the highest content (10.5 mg/g vs 8.2 mg/g extract). Our results indicate that *E. Hirta* and *E. Jokinii*, yet underexploited *Euphorbia* species, are interesting sources of flavonoids. Further studies should evaluate the relationship between these compounds and the biological activities of these plants, as well as establish possible related mechanisms of action.

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