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Phenolic extracts of *Fragaria vesca* L. roots with anti-*Candida* potential: chemical characterization and *in vitro* antifungal capacity

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Candida species, considered a commensal microorganism of the human flora, have caused a profound impact at public health level. Furthermore, there are alarming numbers of microorganisms with acquired drug resistance, contributing to the inefficacy of antifungal agents [1]. Thus, efficient alternatives to the current antifungal agents and without side effects need to be discovered.

Plants comprise numerous bioactive compounds responsible for a wide variety of bioactive properties. *Fragaria vesca* L. (wild strawberry), belongs to the Rosaceae family and its fruits are commonly used for culinary purposes. Only its leaves are used for medicinal purposes, due to the astringent (hemostatic and antidiarrheal), diuretic, depurative and tonic effects [2]. A few studies have been carried out in order to evaluate the bioactive potential of its roots [3], but to the authors knowledge, no reports are available regarding its antifungal potential against *Candida* species. Thus, the aim of the present study was to evaluate the antifungal potential of the hydromethanolic extract obtained from *F. vesca* roots, against nineteen *Candida* strains, belonging to *C. albicans, C. glabrata, C. parapsilosis* and *C. tropicalis* species.

At the tested concentration (50 mg/mL), a most pronounced inhibitory effect was observed against *C. tropicalis* and *C. parapsilosis* (inhibitory zones varying between 9-10 and 10 mm, respectively). The obtained results remained similar after 24h, 48h and even 72h. Considering the evidenced antifungal potential, and taking into account its chemical composition, the observed effects could be attributed to the presence of phenolic compounds, such as flavan-3-ols, being (epi)catechin derivatives (mainly procyanidins) the main compounds found, as also elagic acid derivatives. Further studies should be conducted in order to identify the active principle(s) responsible for the observed effects and the corresponding mechanism of action.

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