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## Antioxidant, anti-inflammatory and gastroprotective activity of *Filipendula ulmaria* (L.) Maxim. and *Filipendula vulgaris* Moench

Stevan Samardžić<sup>a\*</sup>, Jelena Arsenijević<sup>a</sup>, Dragana Božić<sup>b</sup>, Marina Milenković<sup>b</sup>, Vele Tešević<sup>c</sup>, Zoran Maksimović<sup>a</sup>

<sup>a</sup>Department of Pharmacognosy, University of Belgrade — Faculty of Pharmacy, Vojvode Stepe 450, 11221, Belgrade, Serbia

<sup>b</sup>Department of Microbiology and Immunology, University of Belgrade — Faculty of Pharmacy, Vojvode Stepe 450, 11221, Belgrade, Serbia

<sup>c</sup>Faculty of Chemistry, University of Belgrade, Studentski trg 12–16, 11158, Belgrade, Serbia

\*Corresponding author: Stevan Samardžić. Tel: +381 11 3951 321. stevans@pharmacy.bg.ac.rs

### Abstract

#### *Ethnopharmacological relevance*

Meadowsweet (*Filipendula ulmaria* (L.) Maxim.) and dropwort (*Filipendula vulgaris* Moench) are herbaceous perennials employed in folk medicine for their antirheumatic, antipyretic and anti-ulcer properties.

#### *Aim of the study*

To assess ethnomedicinal claims through investigation of antioxidant, anti-inflammatory and gastroprotective effects of *F. ulmaria* and *F. vulgaris* lyophilized flower infusions (LFIs) as well as the *F. vulgaris* isolated flavonoids spiraeoside, kaempferol 4'-*O*-glucoside, astragalin 2''-*O*-gallate, mixture of hyperoside 2''-*O*-gallate and isoquercitrin 2''-*O*-gallate, and a tannin tellimagrandin II.

#### *Materials and methods*

Free radical scavenging activity of the tested samples was determined by examining their ability to neutralize DPPH and OH radicals *in vitro*, whereas reducing properties were assessed in Ferric Reducing Antioxidant Power (FRAP) assay. Anti-inflammatory activity was studied *ex vivo* in human platelets by monitoring the effect on eicosanoid biosynthesis. Gastroprotective action was estimated in animal model of acute gastric injury induced by ethanol.

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