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

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## 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.