



Anti-inflammatory Effects of *Fritillaria ussuriensis* Maxim

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SUMMARY. Bulbs of *Fritillaria ussuriensis* Maxim., usually known as *Bulbus Fritillariae ussuriensis*, (BFU) has been used as antitussive, antiasthmatic and expectorant in traditional herbal medicine. In this study, the aqueous extract of BFU (BFUE) was evaluated for its anti-inflammatory activity. Meanwhile, the content of PGE₂ and MDA in inflammatory exudates was measured to explore the anti-inflammatory mechanisms of BFUE. In order to identify the active components of BFU, the total alkaloids (TA), the total flavonoids (TF) and the total saponins (TS) were evaluated for their bioactivities. Results showed that BFUE inhibited carrageenin-induced paw edema, xylene-induced auricular edema and acetic acid-induced vascular permeation in a dose-dependent manner, and it revealed obvious inhibitory effects on the increase of PGE₂ and MDA. TF showed the highest anti-inflammatory effects on auricular edema induced by xylene in mice, and TS at a dose of 400 and 200 mg/kg also showed good effects ($P < 0.01$), but TA had no effect on this anti-inflammatory model. These results indicated that the *Bulbus Fritillariae ussuriensis* had good anti-inflammatory effects, which might be related to the reduction of PGE₂ and MDA levels, and TF and TS might be the active components for this activity.

KEY WORDS: Alkaloids, Anti-inflammatory effects, Bulbs, flavonoids, *Fritillariae ussuriensis*, Saponins.

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