Suppression of gastric ulcer in mice by administration of *Erigeron canadensis* extract

W. S. Park¹, J.-Y. Bae¹, M. S. Chun², H. J. Chung¹, S. Y. Han¹ and M.-J. Ahn¹
¹College of Pharmacy and Research Institute of Pharmaceutical Sciences, Gyeongsang National University, Jinju, Republic of Korea and ²Korea Science Academy, Pusan, Republic of Korea

*Erigeron canadensis* (*Conyza canadensis*) is an annual or biennial herb, widely distributed all over the Korea. It is also known to be horseweed or Canadian horseweed, or butterweed in North America and Central America¹. Although this plant has been used as a folk medicine to treat allergic diarrhea, stomatitis, otitis media, conjunctivitis, and acute toothache, and its several biological activities such as anti-inflammatory, anticoagulant and anti-platelet activities have been reported, the effect of this plant on gastric ulcer has not been investigated².

In our study, the 70% ethanolic extract (EEC) of the aerial parts of *E. canadensis* was found to protect the gastric ulcer induced by HCl/ethanol in mice. The administration of HCl/ethanol produced lesions on the gastric mucosa which were significantly and dose-dependently reduced from 74.4%, ulceration percentage to 14.4%, in the animals pretreated with this extract, *p.o.* at the doses of 1 (54.6 ± 10.2 mm²), 10 (21.6 ± 6.4 mm²) and 100 mg/kg (10.6 ± 4.5 mm²) (Fig. 1).

![Fig. 1](https://via.placeholder.com/150)

In case of the group pretreated with ECC at the dose of 100 mg/kg, the protective effect was higher than that of sucralfate used as a reference drug. Under histological evaluation, pre-treatment with EEC reversed the alterations such as inflammation, edema, moderate hemorrhage and a great loss of epithelium cells presented by HCl/ethanol treated stomachs, and the histological aspect was similar to those observed in normal stomach and the pretreated group with the reference drug.

EEC treatment decreased NO production in a murine macrophage cell line, Raw 264.7 in a dose-dependent manner as follows: 25, 40 and 64% reductions, respectively, at the concentrations of 1, 10 and 100 μg/ml. In addition, EEC did not affect on the cell viability and it showed potent DPPH radical scavenging activity.

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