

Poster Session 2 – Pharmacognosy

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Isolation and investigation of antimicrobial activity of total flavonoids of *Elaeagnus angustifolia*

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Elaeagnus angustifolia has been used in folklore medicine for the treatment of respiratory infections, diarrhoea, tetanus and acute fever (Ayenchi 1991). In this study, the antibacterial activity of aqueous and polyphenolic fraction of *E. angustifolia* fruit (maceration method) against clinical isolates of *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Proteus mirabilis* and *Klebsiella pneumoniae* was evaluated using the hole plate method. Gentamicin was used as a positive control at 2 µg/disc. Aqueous extract was prepared by maceration and polyphenolic fraction was prepared by the method introduced by Markham (1982). The data were expressed as mean values ± s.e.m. and tested using Student's *t*-test.

The aqueous extract and polyphenolic fraction were tested at concentration of 2, 3 and 5 mg/hole. While both aqueous extract and polyphenolic fraction showed antibacterial activity against *S. aureus* (10 mm diameter inhibition zone) and *P. mirabilis* (11 mm inhibition zone), no activity was observed against *S. pneumoniae* and *K. pneumoniae*.

Gentamicin was significantly active against sensitive bacteria compared with aqueous extract and polyphenolic fraction ($P < 0.001$).

Ayenchi, Y. (1991) *Medical plants of Iran*. Tehran University Press, Tehran, pp 8–12
Markham, K. R. (1982) *Techniques of flavonoid identification*. Academic Press, London, pp 1–10
