

Antimicrobial Activities of Extracts from Sophorae Flos

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Abuse and inappropriate use of antibiotics have resulted in emergence of antibiotic-resistant bacteria, increased nosocomial infections and urgency of developing new drugs against antibiotic-resistant bacteria with high costs.

As a step to develop the new antimicrobial agents from plant, Sophorae Flos (flowers of *Sophora japonica* L. one of the traditional herb) was immersed in 80% methanol for one day at room temperature, an aliquot of a methanol extract was dried in evaporator, then resuspended and partitioned between water and ether-acetone (1:1, v/v, three times). Methanol extract concentrate, aqueous concentrate and ether-acetone concentrate were tested to determine the antimicrobial activity against *Staphylococcus aureus* (ATCC 65389), *Pseu-*

domonas aeruginosa (ATCC 9027), *Escherichia coli* (ATCC 11775L1), *Salmonella typhi* (ATCC 19430), *Candida albicans* (ATCC 10231) by agar diffusion method. Methanol concentrate showed antimicrobial activity against *Staphylococcus aureus* and *Pseudomonas aeruginosa*, aqueous fraction revealed only against *Staphylococcus aureus* and ether-acetone concentrate showed antimicrobial activity against all the tested microorganisms. After thin layer chromatography and column chromatography biologically active yellow powder was obtained.

These results suggested that extract of Sophorae Flos would be one of the candidates for antimicrobial agent through further studies.