Original Paper

Antibacterial activity of methanol, acetone and aqueous extracts of Wild Rose gall against *Staphylococcus aureus* and *Enterococcus faecalis*

Haghparasti A (M.Sc)¹, Mohammadi-Sichani M (Ph.D)²*, Tavakoli M (M.Sc)³

¹M.Sc in Microbiology, Department of Microbiology, Falavarjan Branch, Islamic Azad University, Isfahan, Iran.
²Assistant Professor, Department of Microbiology, Falavarjan Branch, Islamic Azad University, Isfahan, Iran.
³Academic Instructor, M.Sc in Medical Entomology and Vector Control, Lorestan Agricultural and Natural Resources Research Center, Khoramabad, Iran.

Abstract

**Background and Objective:** Nowadays, microorganisms have high resistance to antibiotics due to indiscriminate and unnecessary consumption. Treatment of infections caused by resistant bacteria has become difficult and expensive. Galls wild rose created by wasp's species *Diplolepis mayri*. This study was done to evaluate antibacterial activity of methanol, acetone and aqueous extracts of Wild Rose gall against *Staphylococcus aureus* and *Enterococcus faecalis*.

**Methods:** In this experimental laboratory study, the methanol, acetone and aqueous extracts of wild rose galls in 15.6, 31.3, 62.5, 125, 250 and 500 mg/dl were prepared by Soxhlet apparatus. Antibacterial activity of extracts was determined using well diffusion. MIC and MBC were determined by microdilution method. The active compounds of gall were evaluated by GC-MS.

**Results:** The inhibition zone of 500 mg/ml methanol, acetone and aqueous extracts of wild rose gall were 27.3, 26.7 and 20.0, respectively. The inhibition zone of wild rose gall was similar to imipenem (antibiotics). The extract concentration was related with antibacterial activity. The gall rose methanol extract showed the highest antibacterial effect. The MIC and MBC of methanol extract against *Staphylococcus aureus* and *Enterococcus faecalis* was 62.5, 31.3 mg/ml, respectively.

**Conclusion:** This study showed that aqueous, methanol and acetone extracts of wild rose galls have strong antibacterial activity.

**Keywords:** Wild Rose gall, Antibacterial activity, *Staphylococcus aureus*, *Enterococcus faecalis*

*Corresponding Author: Mohammadi-Sichani M (Ph.D), E-mail: mohamadi_m@iaufala.ac.ir*

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