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**Title:** Antimicrobial effects of Eucalyptus globulus extracts on Brucella melitensis 16M in vitro

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**Abstract:** Background & Objective: Brucellosis is a worldwide zoonosis caused by members of the genus Brucella. The disease is accidentally transmitted to humans during occupational contact with infected animals or by consumption of contaminated animal products. The antibiotic treatment of brucellosis has disadvantages including the relapse rates and the toxicity especially in children and pregnant women. Brucella melitensis is the most prevalent species causing human brucellosis in worldwide. Eucalyptus globulus is one of the most widely used medicinal plants in folk medicine throughout the world.

Methods: In this study, Eucalyptus globulus leaves collected from Ahvaz region during February 2011. Collected plant materials were air-dried under shade at room temperature. Then aquatic, ethanolic and acetonic extracts of Eucalyptus globulus leaves prepared and property of antibacterial activity of extracts carried out by broth macrodilution and agar well diffusion methods. The synergism of Eucalyptus globulus extracts with four antibiotics (tetracycline, gentamycin, rifampin and SXT) was determined by disc diffusion method.

Results: Results indicated that MIC and MBC of Eucalyptus globulus aquatic extract for Brucella melitensis 16M were 10.81 mg/ml and 21.62 mg/ml and for acetonic extract were 0.64 mg/ml and 1.29 mg/ml and ethanolic extract were 0.31 mg/ml and 0.63 mg/ml, respectively. All of extracts were shown inhibition zone further than 11mm between 1:10 to 1:160 of dilutions for Brucella melitensis 16M.

Conclusion: This study indicate that Eucalyptus globulus extracts have antibacterial activity against Brucella melitensis 16M, therefore these extracts can be use in production of new drugs to treatment of human and animals brucellosis.

**Keywords:** Antibacterial effects, Brucella melitensis 16M, Eucalyptus globulus extracts.

**Presentation:** Poster