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**Title:** A survey on the antibacterial activity of Cassia fistula against some bacterial pathogens  

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**Abstract:** Introduction: Cassia fistula, is a flowering plant in the family Fabaceae. Its leaves are compound, with 4-8 pairs of opposite leaflets. It produces flowers which are golden yellow and hang in showering bunches of up to 40 cm long eating. The blooms are followed by production of two-foot-long, dark brown, cylindrical, woody seed pods which persist on the tree throughout the winter before falling to litter the ground. There are many Cassia species around the world which are used in herbal medicine. This study was designed to examine in vitro anti-bacterial activity of methanolic and ethanolic extracts of C. fistula.  

Materials and methods: The inhibitory effect of methanolic and ethanolic extracts of C. fistula was tested against 3 Gram positive: Bacillus cereus, Staphylococcus aureus and Staphylococcus epidermidis and 5 Gram negative: Salmonella typhi, Klebsiella pneumonia, Escherichia coli, Pseudomonas aeruginosa, and Proteus mirabilis bacterial species by standard disc diffusion method at various concentration from 600 mg/ml to 50 mg/ml. The viability of bacterial species in contrast to these extracts was analysed by determining minimum inhibitory concentration and minimum bactericidal concentration.  

Result: The extracts of C. fistula was active against: B. cereus, S. aureus, S. epidermidis, E. coli and K. pneumonia. The zone of inhibition for these bacterial species for methanolic extract was 8, 12, 13, 22 and 25 mm, and about ethanolic extract was 9, 13, 15, 26 and 23 mm, respectively. MIC and MBC of ethanolic extract for S. aureus, E. coli, S. epidermidis and K. pneumonia were 80 mg/ml, 80 mg/ml, 160 mg/ml and 160 mg/ml (all were bacteriostatics) and in case of methanolic extract were 40 mg/ml-80 mg/ml, 80 mg/ml, without effect and 160 mg/ml, respectively.  

Conclusion: Based on the results of this study it can be concluded that the extracts of this plant can be used as a potential antibacterial substance against some bacterial pathogens such as S. aureus, E. coli, K. pneumonia and S. epidermidis which most of them are significant bacterial pathogens and drug resistance and recent epidemic has been reported around the world.  

**Cassia fistula, antibacterial activity**  

**Presentation:** Poster