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Antimicrobial Activity of Prenylflavanones

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Among two flavanones [YS01, YS02] and eight prenylflavanones [YS03-YS10], preliminary screening with fifteen test bacterial strains showed that YS06 was the most active agent. YS06 exhibited highly significant antimicrobial action when tested against 228 bacterial strains comprising two Gram-positive and six Gram-negative genera. The in vitro susceptibility test was carried out by determining the minimum inhibitory concentration (MIC) of YS06 by agar dilution technique. Twenty-two out of fifty strains of *Staphylococcus aureus* were inhibited at 25 to 50 μ g/mL of the agent. YS06 also inhibited strains of *Salmonella*, *Shigella* and a few strains of *Escherichia coli* strains were also highly sensitive to YS06, while *Klebsiella* spp. and *Pseudomonas aeruginosa* were much less sensitive. In *in vivo* study, YS06 offered significant protection ($p < 0.001$ according to chi-square test) to Swiss albino mice (challenged with 50 minimum lethal dose (MLD, virulent bacterium) at concentrations of 160 and 80 μ g/mouse.