Abstract
The flavonoid isolated from ethyl acetate fraction of methanolic extract of leaves of *Choletbrookea oppositifolia*, exhibited distinct antimicrobial activity when tested against 185 bacteria belonging to both Gram positive and Gram negative types. Minimum Inhibitory Concentration (MIC) of fraction Cop1 was determined following CLSI Guidelines. This herbal component significantly inhibited many bacterial strains at low levels; out of 55 *Staphylococcus aureus* 19 were inhibited between 50 and 100 μg/ml while 20 were inhibited at 200 μg/ml. All strains of *Bacillus* spp were inhibited at 100 μg/ml level. Ten of 27 *Escherichia coli* failed to grow between 50 and 200 μg/ml of Cop1 and 10 others were inhibited at 400 μg/ml concentration. Among 32 strains of *Shigella* and *Salmonella* many had MIC value between 100 and 200 μg/ml. Out of 50 vibrios 6 failed to grow at 50 μg/ml of Cop1; while 31 vibrios were inhibited between 100 and 200 μg/ml of extract. Strains of *Proteus* and *Pseudomonas* were less sensitive, while clebsiellae were resistant to Cop1. *In vivo* studies with this component showed that it could offer statistically significant protection (p < 0.001) to Swiss Albino mice challenged with 50 X Minimum Lethal Dose (MLD) of a virulent bacterium, *Salmonella enterica* serovar Typhimurium NCTC 74.