

Abstract

In present study, five resistant bacterial strains were tested for redressal of antibiotic resistance by using leaf extracts of *Oreganum vulgare* and *Polyalthia longifolia*. Standard phytochemical analysis method was used to determine the secondary metabolites present in leaf extracts. Antibiotic resistance redressal analysis was performed by using antibiotic susceptibility testing (AST) disc diffusion method. Seven antibiotics were tested for antibiotic resistance redressal activity against five antibiotic resistant bacterial strains. Maximum resistance redressal activity by leaf extracts of *Oreganum vulgare* and *Polyalthia longifolia* was shown against *Methicillin resistant staphylococcus aureus* and *Enterococcus faecalis*, minimum redressal activity against *Acinetobacter baumannii* while no antibiotic resistance redressal activity was shown against *Klebsiella pneumonia* and *Pseudomonas aeruginosa*. Maximum redressal of Cefoxitin resistance in *Methicillin resistance staphylococcus aureus* was given by Aqueous (AOV) *Oreganum vulgare*, Methanolic (MPL) and Ethyl acetate (EPL) *Polyalthia longifolia* extracts. Maximum redressal of Vancomycin resistance in *Enterococcus faecalis* was shown by Aqueous (AOV) *Oreganum vulgare*, and Ethyl acetate (EPL) *Polyalthia longifolia* extracts. Other extracts of *Oreganum vulgare* and *Polyalthia longifolia* also shown redressal activity with Ciprofloxacin, Levofloxacin, Amikacin, Linezolid and Meropenem against *Methicillin resistant staphylococcus aureus* and *Enterococcus faecalis*.