



Research article

***In-vitro* antibacterial activity of sequential crude extracts from *Datura stramonium* seeds**

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Abstract

The growing phenomenon of antibiotic resistance, particularly to pathogenic microorganisms, in current medicine, has directed the concern of scientists for finding novel antimicrobial agents from plant origin with negligible side effect. The present study was aimed to phytochemical investigation and antimicrobial activity of seed extract of *Datura stramonium* in sequentially with different organic solvents. For this, antimicrobial properties were tested against bacteria *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* and *Bacillus subtilis* by cup plate method. Among the tested bacterial *Klebsiella pneumoniae* was the most inhibited majorly with the chloroform extract. *Daturastramonium* chloroform seed extract produced maximum zone of inhibition 26 mm against *Klebsiella pneumoniae* and 12 mm against *Bacillus subtilis* and 13 mm against *Escherichia coli*. *Datura Stramonium* methanol seed extract produced maximum zone of inhibition 27 mm against *Pseudomonas aeruginosa* and 15 mm against *Bacillus subtilis*, 14 mm against *Staphylococcus aureus* and 19 mm against *Escherichia coli*. *Datura stramonium* petroleum ether seed extract produced 16 mm zone of inhibition against *Escherichia coli*. *Datura stramonium* aqueous seed extract exhibits 24 mm zone of inhibition against *Bacillus subtilis*. All the experienced solvent extracts showed potential antimicrobial activity Index against various tested microorganisms. Owing to the results, it can be concluded that the extracts of the *Datura stramonium* can be used to design different herbal antimicrobial agents