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In-vitro antibacterial study of *Withania somnifera* root extracts on Human Pathogenic Bacteria

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ABSTRACT

The current work is designed to study the possible antibacterial effect of plant extracts against some known bacterias . Studies on the antibacterial activity of root extracts of *Withania somnifera* (L.) was assessed with zone of inhibition studies and minimum inhibitory concentration. The bacteria used includes *Streptococcus mutans*, *Streptococcus pyrogens*, *Salmonella typhimurium* and *Vibrio cholerae*. This extract shows antibacterial activity against these experimental strains. Inhibition zones are revealed by methanol extract which are reasonably more than the ethanol extract. For methanol extract *Vibrio cholerae* exhibits the least inhibition zone (31.12 ± 0.11 mm), where as *Streptococcus mutans* shows the highest inhibition zone (35.33 ± 0.49 mm). Likewise, the ethanol extract, *Streptococcus mutans* exhibits the highest inhibition zone (33.33 ± 1.04 mm) and *Vibrio cholerae* exhibits the least inhibition zone (29.21 ± 0.52 mm). the most susceptible bacteria strain was *Salmonella typhimurium* for both ethanol and methanol extract, while *Streptococcus mutans* was also one of the most susceptible Gram-positive bacteria. This study can open up a new outlook in research of medicines.

Keyword: *Withania somnifera*, antibacterial, agar cup plate

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Website: <http://heb-nic.in/cass/>

Received on 10/01/2021

Accepted on 16/01/2021 © HEB All rights reserved

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