

## Abstract

Bacterial gastroenteritis is one of the leading infectious disease which causes high morbidity and mortality worldwide. The current study was designed for the screening and to check antibacterial resistance pattern of various drugs on *Salmonella* and *Shigella*, isolated from the children exhibiting diarrheal infections. Stool samples were collected from public and private hospitals in sterile conditions. Selective medium, *Salmonella Shigella* agar, was used for initial screening of samples. Then pure cultures were isolated and subjected to check the antibacterial susceptibility patterns of various antibiotics, plants based Nano-particles and crude plant extracts. Seven antibiotics solution (Amoxicilin, ceftriaxone, chloramphenicol, ciprofloxacin, oxytetracycline, Doxycycline, Azomax) & one antibiotic disc (Cefixam) were subjected to check the susceptibility pattern. Four prepared solutions of silver Nano particles of *Cassia fistula*, *Euclyptus*, *Azadiracta indica*, *calotropis proceri* & four plant extracts (*Cassia fistula*, *Euclyptus*, *Azadiracta indica*, *calotropis proceri*) were applied to all the isolated pure strains. Zone of inhibition were recorded for analytical recording.

**Key words:** Gastroenteritis, *Salmonella*, *Shigella*, antibiotic susceptibility, diarrhea and Nano-particles.