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Authors: Sadia Ashraf, Aftab Ahmad Anjum, Ali Ahmad, Sehrish Firyal, Saba Sana, Asma Abdul Latif



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In vitro* activity of *Nigella sativa* against antibiotic resistant *Salmonella enterica

Sadia Ashraf^a, Aftab Ahmad Anjum^{a1}, Ali Ahmad^a, Sehrish Firyal^b Saba Sana^a and Asma Abdul Latif^c

^aDepartment of Microbiology, University of Veterinary And Animal Sciences Lahore

^bInstitute of Biochemistry and Biotechnology, University of Veterinary And Animal Sciences Lahore

^cDepartment of Zoology, Lahore College for Women University Lahore

Highlights:

- *Salmonella enterica* has resistant against commonly used antibiotics.
- Methanolic extract of *Nigella sativa* has antibacterial effect against *S. enterica* isolates of human and poultry origin.
- Essential oil of *N. sativa* showed anti-salmonella activity .
- Aqueous extract of *N. sativa* did not show antibacterial activity against *Salmonella*.
- The concentration that is considered as safe for cells is more than MIC value for bacteria.

ABSTRACT

Salmonellosis is a major food-borne disease worldwide and antimicrobial resistance in *Salmonella* is a public health problem. Phytochemicals are alternative therapeutics to treat antibiotic resistant *Salmonella*. Biochemically identified *Salmonella enterica* of human and poultry origin (n=10) were confirmed by polymerase chain reaction. Susceptibility to antibiotics was determined by Kirby Bauer disc diffusion method. *In-vitro* anti-salmonella activity of *N. sativa* essential oil and extracts (aqueous and methanol) was determined against antibiotic

¹ Corresponding author: Department of Microbiology
University of Veterinary and Animal Sciences, Lahore Pakistan
Email address: aftab.anjum@uvas.edu.pk

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