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# Synthesis, characterization and pharmacological evaluation of some 1, 2, 4-triazole derivatives

**Arvind Kr Singh**
Kashi Institute of Pharmacy, India

A novel series of 1, 2, 4-triazole derivatives (D-1-D-8) had been synthesized. Ethyl esters of benzoic and 4-substituted benzoic acids were synthesized using ethanol and conc. sulphuric acid. In the second step, hydrazides of these esters were prepared. This hydrazide was converted into potassium salt of dithiocarbazinate using carbon disulfide and potassium hydroxide which on cyclization formed derivatives (D-1-D-2). Derivatives D-3 was formed by reacting D-1 with 4-methylbenzenesulfonyl chloride in dry pyridine. Derivatives D-4 to D-8 were synthesized by mixing aqueous solution of 10% NaOH in different primary amines and then heated with potassium salt of dithiocarbazinate. The structures of newly synthesized compounds were established on the basis of 1H NMR and Mass spectroscopic techniques. The newly synthesized compounds were screened for their *in vitro* antibacterial and antifungal activity. *In vitro* anti-bacterial and antifungal activity was evaluated by Disc Diffusion method. Ofloxacin and Clotrimazole were used as standard drug respectively. The results revealed that compounds D-3 and D-4 exhibited good antibacterial activity and D-1 and D-2 had moderate antibacterial activity as compared with standard drug Ofloxacin, while compounds D-5 to D-8 exhibited moderate antifungal activity as compared to standard drug Clotrimazole.

## Biography

Arvind Kr Singh has completed his PhD at the age of 32 years from NIMS University Jaipur Rajasthan. He is the working as an Associate Professor at Kashi Institute of Pharmacy Varanasi. He has published more than 25 papers in reputed journals.

adi_arv26@rediffmail.com