

## Synthesis and antimicrobial activities of new 2-substituted-5-[isopropyl thiazole]-1,3,4-oxadiazoles and 1,2,4-triazoles

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The need of new antimicrobial agents is greater than ever because of the emergence of multidrug resistance in common pathogenic microbes, the rapid emergence of new infectious diseases and the use of multidrug resistant pathogens in bioterrorism. Resistance of microbes to the effects of antibiotics has been a major problem in the treatment of diseases.

Despite the availability of highly potential antitubercular agents, tuberculosis remains primary cause of comparatively high mortality worldwide. The statistics shows that around three million people throughout the world die annually from tuberculosis and today more people die from tuberculosis than ever before. Therefore, the development of new drugs with activity against multi drug-resistant (MDR) TB, extensively drug-resistant (XDR) TB and latent TB is a priority task.

A special interest has been focused on five membered heterocyclic compounds, among them 1,2,4-triazole and 1,3,4-oxadiazole derivatives represent a novel emerging major chemical entities as antimicrobial agents. The azole antitubercular may be regarded as a new class providing truly effective drugs, which are reported to inhibit bacteria by blocking the biosynthesis of certain bacterial lipids and/or by additional mechanisms. Triazoles, in particular, clubbed 1,2,4-triazole counterparts of thiazoles, are among the various heterocycles that have received much attention as potential antimicrobial agents.

### Biography

Mallikarjuna B. P. has completed his Ph.D. at the age of 34 years from Andhra University. He is the director of IIMT College of Pharmacy, a premier pharmacy institution. He has published more than 25 papers in reputed journals and serving as an editorial board member of reputed journal. He also acts as reviewer in many journals.

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