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SYNTHESIS, CHARACTERIZATION, AND BIOLOGICAL EVALUATION OF NOVEL SULPHONAMIDE-BASED BENZOTRIAZOLE DERIVATIVES

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Abstract. A novel group of benzotriazole compounds based on sulphonamide was made *via* a multi-step process that included diazotisation, condensation, and cyclisation. The synthesis method made it easy to add the pharmacophores of benzotriazole and sulphonamide to a hybrid scaffold. The structures were confirmed using IR, ^{1}H and ^{13}C NMR, ESI-MS, and elemental analysis. The synthesized compounds displayed structural diversity and yields ranging from good to excellent. The compounds were evaluated for antitubercular and antimalarial activities, with derivatives 18g and 18n showing notable inhibition against *Mycobacterium tuberculosis* H37Rv and *Plasmodium falciparum* 3D7 strain, respectively.

Keywords: nitrogen heterocycle, pyrazolyl-pyrazoline hybrid, antitubercular activity, antimalarial activity, structure-activity relationship.