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Synthesis and Antimicrobial Evaluation of Some 1-Phenyl-3-(5-phenyl-1*H*-imidazol-1-yl)thiourea Derivatives

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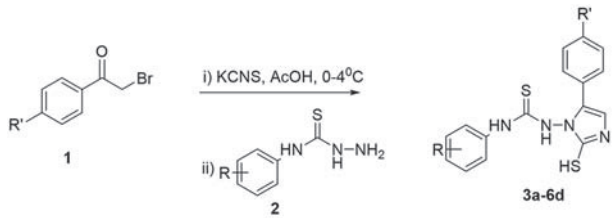
ABSTRACT A series of 17 1-phenyl-3-(5-phenyl-1*H*-imidazol-1-yl) thiourea derivatives (**3a-6d**) was synthesized and tested for their antibacterial and antifungal activity along with their minimum inhibitory concentration values against various pathogenic and non-pathogenic microorganisms. Some of the synthesized compounds displayed excellent activity against various bacteria and fungi. Most of the synthesized compounds were found to be remarkably active against Gram-positive bacteria such as *Staphylococcus aureus* (NCIM 2122) and *Bacillus subtilis* (MTCC 121) and Gram-negative bacterial strains such as *Escherichia coli* (MTCC 118), *Salmonella typhi* (NCIM 2501), *Klebsiella pneumoniae* (MTCC 3384), and *Pseudomonas aeruginosa* (NCIL 2306). Among which compounds **3a**, **3b**, **4a**, **4b**, **5a**, **5b**, **6a**, and **6b** showed the maximum activity against above bacteria as antibacterial but less effective than the standard ciprofloxacin and norfloxacin. All compounds (**3a-68**) showed moderate activity against fungal strains such as *Candida albicans* (MTCC 227) and *Aspergillus niger* (NCIM 1056).



KEYWORDS Imidazole derivatives, Antibacterial, Antifungal activities.