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## Synthesis, spectral, molecular docking and antimicrobial studies of some substituted 4-([1,1'-biphenyl]-4-yl) pyrimidine-2(1*H*)-thiones

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Some substituted 4-([1,1'-biphenyl]-4-yl)pyrimidine-2(1*H*)-thione derivatives were synthesized by one-pot three-component synthesis reaction of 4-acetyl biphenyl, various substituted aryl aldehydes and thiourea in the presence of sodium hydroxide. In this reaction, the yield was more than 85%. The synthesized pyrimidine thiones were characterise by their physical constants, micro-analysis and spectroscopic data. The molecular docking study of these pyrimidinethiones was investigated with protein interaction-affinity measurements. Using the Bauer-Kirby technique, the antimicrobial abilities of synthesized pyrimidinethiones were evaluated.

**Keywords:** Pyrimidinethiones, 4-acetylbiphenyl, thiourea, NMR spectra, Molecular docking, anti-microbial activities