



**Synthesis, Characterization and antimicrobial Evaluation of 2-((2E)-2-[(1-aryl-3-phenyl-1H-pyrazol-4-yl)methylidene]hydrazinyl)-4-phenyl-1,3-thiazoles**

**M.Abdul Rahiman<sup>1\*</sup>, S.H.Yogesh<sup>1</sup>, H.M.Ravikumar<sup>1</sup>, G.H.Suryateja<sup>1</sup>,  
J.J. Pruthviraj<sup>1</sup> and G.N.Ravikumar<sup>2</sup>**

1. Department of PG Studies in Chemistry, Government Science College, Hassan-573 201, Karnataka, **INDIA**

2. Research and Development centre, Bharathiar University, Coimbatore-641046, TamilNadu, **INDIA**

Email: [rahiman.hsn@gmail.com](mailto:rahiman.hsn@gmail.com)

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**ABSTRACT**

*A series of 2-((2E)-2-[(1-aryl-3-phenyl-1H-pyrazol-4-yl)methylidene]hydrazinyl)-4-phenyl-1,3-thiazoles were synthesized by the condensation of 4-substituted phenacyl bromides with substituted pyrazoline thiosemicarbazones. The thiosemicarbazones were in turn prepared by the reaction of 1-aryl-3-phenyl-1H-pyrazole-4-carbaldehyde with thiosemicarbazide in the presence of sodium acetate. The structures of newly synthesized compounds were characterized by elemental analysis, IR, <sup>1</sup>H-NMR and mass spectral data. All compounds were screened for their antibacterial and antifungal studies. Compounds containing chloro and nitro groups showed promising activity.*

**Keywords:** Pyrazoles, thiosemicarbazones, thiazoles, antibacterial activity, antifungal activity.

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