Synthesis, Characterization and Biological Activity of (N₁E, N₂Z)-N₁, N₂-Bis ((1-Phenyl-3-Aryl-1H-Pyrazol-4-Yl) Methylene) Benzene-1, 2-Diamines

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ABSTRACT

Seven novel Pyrazole ring containing Schiff’s bases (N₁E, N₂Z)-N₁,N₂-bis((1-phenyl-3-aryl-1H-pyrazol-4-yl)methylene) benzene-1,2-diamines (6a-g) have been synthesized from 1-phenyl-3-aryl-1H-pyrazole-4-carbaldehyde (4a-g), and benzene-1, 2-diamine (5) by Microwave Irradiation method. The newly synthesized compounds were characterized by using IR, ¹H-NMR, ¹³C-NMR, Mass spectral data and Elemental analysis. These compounds were evaluated for their antibacterial activity against Gram positive viz. Staphylococcus aureus and Bacillus subtilis and Gram negative viz. Escherichia coli, Klebsiella pneumoniae strains using a micro dilution method. Synthesized compounds showed activity against a panel of microorganisms.

Keywords: (E)-1-phenyl-2-(1-phenylethylidene)hydrazine, 1-phenyl-3-aryl-1H-pyrazole-4-carbaldehyde, Schiff’s base, Antibacterial activity.