

Communication

## Synthesis and Anti-Bacterial Activities of Some Novel Schiff Bases Derived from Aminophenazone

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**Abstract:** A series of 1,5-dimethyl-2-phenyl-1,2-dihydro-3*H*-pyrazol-3-one-containing Schiff bases were synthesized, characterized and screened for their antibacterial activities. The structures of the synthesized compounds were established by spectroscopic (FT-IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR, MS) and elemental analyses. The anti-bacterial activities (with MIC values) of compounds were evaluated. The anti-bacterial screening results reveal that among the six compounds screened, four compounds showed moderate to good anti-bacterial activity. Among the tested compounds, the most effective compounds against four bacterial strains, viz. *Escherichia coli*, *Staphylococcus aureus*, *Salmonella typhimurium* and *Streptococcus pyogenes*, are [(2-Chlorobenzylidene)amino]-1,5-dimethyl-2-phenyl-1,2-dihydropyrazol-3-one (4) and [(1,5-Dimethyl-3-oxo-2-phenyl-2,3-dihydro-1*H*-pyrazol-4-ylimino)methyl]benzotrile (5) with MIC values of 6.25 µg/mL.

**Keywords:** Schiff bases; aminophenazone; antibacterial activity; ciprofloxacin

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### 1. Introduction

Compounds containing the -C=N- (azomethine group) structure are known as Schiff bases, usually synthesized from the condensation of primary amines and active carbonyl groups. Schiff bases are well known for their biological applications as antibacterial, antifungal, anticancer and antiviral agents