



**Synthesis, Characterization And Biological Significance of Some Novel Schiff Base Transition Metal Complexes Derived from 4-Aminoantipyrine And Dihydropyrimidine of Vanillin**

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Accepted on 5<sup>th</sup> April 2014

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**ABSTRACT**

*A novel series of transition metal complexes of Ni(II), Zn(II), Cd(II) and Hg(II) have been synthesized from the Schiff base derived from dihydropyrimidine derivative of vanillin ( Biginelli Product ) and 4-aminoantipyrine. These complexes have been characterized from their elemental analysis, melting point, molar conductance, mass, UV-Vis, IR, <sup>1</sup>H-NMR and <sup>13</sup>C-NMR spectral studies. The data show that the complexes have composition of the ML<sub>2</sub> type. The UV-Vis, magnetic susceptibility data of the complexes suggest a tetrahedral geometry around the central metal ion except the Ni(II) complex, which has a square planar geometry. The antimicrobial screening of the ligand and its complexes have been extensively studied on bacteria like E.coli, Vibrio spp., Staphylococcus aureus, Pseudomonas aeruginosa, Bacillus spp., Vibrio parahaemolyticus, Salmonella spp., Aeromonas spp., Klebsiella spp., Proteus spp. and fungi such as Candida albicans, Aspergillus flavus, Pencillium spp., Aspergillus niger, Trichophyton. The results also indicate that the metal complexes are better antimicrobial agents as compared to the Parent Schiff base ligand and Biginelli product.*

**Keywords:** 4-aminoantipyrine derivatives, Ni(II), Zn(II), Cd(II) and Hg(II) metal complexes, Schiff base complexes, Antimicrobial studies.

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