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SYNTHESIS, ANTICANCER, AND ANTIOXIDANT ACTIVITIES OF NEW AZOMETHINE DYE AND ITS CO(III) COMPLEX

Haitham Kadhim Dakheel[1], Wafaa Fadhil Abbas[2] & Khalid J.Al-Adilee[3]

[1]Research Scholar, Department of Chemistry, College of Education, University of Al-Qadisiyah, Diwaniya 1753, Iraq

[2]Research Scholar, Ministry of Water Resources, Directorate of Cree River, Iraq

[3]Research Scholar, Department of Chemistry, College of Science, University of Al-Qadisiyah, Diwaniya 1753, Iraq

ABSTRACT

In this study, azomethine ligand. (L) and its Co(III) complexe was characterized by the elemental analayses, mass spectra, ^{1}H and ^{13}C NMR ,infrared.Molecular structures of the azomethine ligand was determined by single crystal. X-ray diffraction studies.The harmonic oscillator. model of aromaticity (HOMA) indexes for. Rings of synthesized azomethine ligand was. calculated so order to. investigate of enamine tautomer in the solid state. In ligandc (L), the central. shows non-aromatic character with HOMA index value of 0.4872 suggesting the keto-amine tatutomer. In the solid state. In the structure of. the Co(III) complexes, the central metal atom is. coordinated to two phenolate oxygen. atoms and two imine nitrogen atoms of two azomethine molecule in a distorted octahedral geometry. The synthesized azomthine ligand and its Co(III) complexe were screened for their cytotoxicity against HeLa (human uterus carcinoma) .cell lines. Finally, antioxidant capacities of the compounds were determined by different antioxidant tests such as, free radical scavenging activity, metal chelating activity, and reduction power activity.

KEYWORDS: *Azomethine, Co(III) Complex, Antioxidant, Atiprolifeartive Activities,Crystal Structure*

Article History

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