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## Metal complexes of 3-{[(1Z)-1-phenylethylidene]amino}-2-thioxoimidazolidin-4-one, Synthesis, Characterization and cytotoxic activity

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**Abstract:** A series complexes of Co(II), Ni(II), Cu(II),Pd(II),Pt(IV) and Cd(II) were synthesized with new heterocyclic ligand 3-{[(1Z)-1-phenylethylidene]amino}-2-thioxoimidazolidin-4-one. This ligand was characterized by C.H.N.S analysis, FTIR, UV-Vis, <sup>1</sup>HNMR, <sup>13</sup>CNMR and Mass spectral analysis, the synthesized complexes were identified and their geometrical were suggested in solid state by using (FT-IR) and (UV-Vis) spectroscopy, elemental analysis (C.H.N.S), flame atomic absorption technique, in addition to magnetic susceptibility and conductivity measurements. The anticancer activity of the ligand and their metal complexes have been extensively studied on HeLa cancer cell line.

**Key words :** Schiff base, 2-thioxoimidazolidin-4-one, 2-thioxoimidazolidin-4-one complexes, spectral data, anticancer activity, MTT assay.

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