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(57) Abstract :

The present invention is directed towards the Synthesis, structural elucidation, cytotoxic activity and plant growth regulatory activity of novel Schiff base Ni(II)complex of ligand LH [2-(1-(2-fluorophenyl)ethylenedene)]hydrazinecarbothioamide. In vitro anticancer activity of ligand LH and its Ni(II) complex was screened against A549 (human lung cancer cell line)and L929 (mouse normal fibroblast cell line). Ni (II) complex i.e. (Ni (L)2.2H2O) exhibited a significant cytotoxic effect towards A549 cell line with a mean IC50 value of 36.43 μ while it is not toxic towards L929 i.e. mouse normal fibroblast cell line. Plant growth regulatory activity of ligand LH and its Ni(II) complex performed on Cicer arietinum exhibited good results at optimum concentration.

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