Synthesis, Characterization, and Biological Activity of Transition Metals Complexes with Mefenamic Acid (NSAIDs)[1]

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Abstract—A new series of transition metal complexes have been synthesized with [(2,3-dimethylphenyl)-amino]benzoic acid (Mefenamic acid) in 1 : 1/1 : 2 M : L ratio. The complexes have been characterized by elemental analysis, FT-IR and UV–Vis spectroscopy. Antifungal, antibacterial, antitumor, antioxidant (DPPH, H_2O_2 induced DNA damage) activity of the complexes and DNA interaction with the complexes were studied. The results revealed that the ligand and most of synthesized compounds did not demonstrate significant antibacterial activity unlike [Ni(Mef)(H_2O)Cl] that exhibited pronounced activity against *F. Solani*. Antitumor activity of the products was higher than that of the free ligand.

Keywords*:* mefenamic acid, transition metals, complexes, IR, UV–Vis, conductance, antibacterial, antifungal, antitumor, antioxidant activity, DNA interaction

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