

Title: **New metallic compounds with ligands derived from Hpyrimol. Study of their interaction with DNA.**

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The new ligands (*E*)-4-(((pyridine-2-ylmethyl)imino)methyl)aniline (**L1**) and (*E*)-2-(((5-bromopyridin-2-yl)methylene)amino)phenol (**L2OH**) have been prepared by the condensation of 4-aminobenzaldehyde and 2-pycolylamine or 5-bromopycolynaldehyde and 2-aminophenol respectively. The reaction of L1 with Na_2PdCl_4 produce a mixture of the compounds $[\text{PdCl}_2(\text{L1})]$ and $[\text{PdCl}_2(2\text{-pycolylamine})]$, this last one due to the ligand hydrolysis. The presence of a phenolic ring with a hydroxyl group susceptible to be deprotonated in ligand L2OH causes that the reaction of this ligand with Na_2PdCl_4 or $[\text{PtCl}_2(\text{DMSO})_2]$ produce a mixture of the compounds $[\text{MCl}(\text{L2O})]$ and $[\text{MCl}_2(\text{L2OH})]$, $\{\text{M} = \text{Pd (II), Pt (II)}\}$. The ligand L2OH acts as a (N,N',O) tridentate donor group in the former one compound or as a (N,N') bidentate ligand in the second one. Modifying the pH it is possible to obtain pure compounds, but the $[\text{MCl}_2(\text{L2OH})]$ complexes synthesized are very unstable in solution.

The ligands and the metallic compounds were characterized by elemental analysis, infrared spectroscopy (IR) and mono- and two-dimensional NMR spectroscopies. It was also possible to determinate the crystalline structure of L2OH by X-ray diffraction.

The interaction with DNA was studied for $[\text{MCl}(\text{L2O})]$ $\{\text{M} = \text{Pd (II), Pt (II)}\}$ and $[\text{PtCl}_2(\text{L2OH})]$ complexes by UV-Vis and fluorescence spectroscopies, circular dichroism and electrophoresis.

The complexes that, in general, present more interaction with DNA are $[\text{PdCl}(\text{L2O})]$ and $[\text{PtCl}_2(\text{L2OH})]$.

Keywords: Pd(II) and Pt(II) complexes, DNA interaction, Schiff bases.