

Title: “**Synthesis of new metallic compounds with Schiff bases. Study of their interaction with DNA.**”

Student: Jordi Puiggalí Jou

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Supervisor/s: Dra. Amparo Caubet
Departament of Inorganic chemistry (UB)

Two new Schiff bases, ((2-(methyl(4-(((pyridin-2-ylmethyl)imino)methyl)phenyl)amino)ethan-1-ol (**AmpyBzOH**)) and ((*E*)-2-(methyl(4-(((pyridin-2-ylmethyl)imino)methyl)phenyl)amino)ethan-1-ol (**QuiBzOH**)) have been synthesized by an imine condensation reaction between *N*-methyl-*N*-(2-hidroxyethyl)-4-amino benzaldehyde and 2-picolylamine (for **AmpyBzOH**) and 8-Aminoquinoline (for **QuiBzOH**). The **AmpyBzOH** compound could react with the palladium salt Na₂PdCl₄ forming a complex of the type [PdCl₂(**AmpyBzOH**)]. **AmpyBzOH** acted as a bidentate ligand with two N donor groups. The *E*, *Z* isomer proportion of the palladium compound was found to be dependent on the reaction time. Therefore the (*E*) and (*Z*) isomers could be well-differentiated.

A literature search about platinum (II) and palladium (II) compounds coordinated with Schiff bases ligands was done. The searched complexes had good biological activity against a wide range of cancerous cells and showed potential applicability as chemotherapeutic agents. To a better understanding of the evaluation of biological properties and to establish an appropriate comparison between them, a new literature survey has been performed. DNA gel electrophoresis and circular dichroism spectroscopy appear as appropriate techniques to determine the interactions of the new compounds with the DNA. Cytotoxicity measurement techniques were also studied. Up to 29 palladium and platinum compounds were found with possible applications in some cancer treatment, this means that they had good biological responses concerning DNA interaction and cytotoxicity.

Key words: Schiff bases, palladium (II) and platinum (II) complexes, DNA interaction, cytotoxicity, antitumoral properties.