

Investigating the ability of a β -diketiminato ligand with thioether tethers (a Schiff base) to coordinate to d^8 and d^9 metal center complexes whose characterization can help explain interactions between cisplatin and sulfur-containing biological molecules. Cisplatin is a known chemotherapy agent that has been FDA approved for use against reproductive cancers since 1978. Potential complexes to help investigate these interactions include **compound 1**, a dimetallated molecule with **compound 2** as a backbone. In this work the Schiff base, **compound 2**, was synthesized by reaction of acetylacetone with 2-aminothiophenol. In addition to the desired product, **compound 3** was isolated as a byproduct using column chromatography and characterized using X-ray crystallography. **Compound 2** was characterized using ^1H and ^{13}C NMR. It was then reacted with $(\text{PPh}_3)_2\text{NiCl}_2$ in air-free processes using Schlenk techniques. This presentation will discuss the synthesis of the ligand as well as the interaction of **compound 2** with metal complexes.