The Fifth Ligand Assignment: Due in class.

Ligand Assignment 5: Find one ligand that binds to a transition metal that you will call “bio-inspired” or biologically relevant. Please sign up for a **unique** ligand: Give both the name and a Lewis structure for your ligand (which can be submitted as a ChemDraw structure).

Questions:

1. Give the name of the ligand and the name of one complex that it forms with a selected metal (Find an example that has been posted on the CCDC or PDB data base).

2. Sketch your complex or include a screen capture file of your structure.

3. Draw the Lewis Structure of the ligand and determine the geometry and hybridization of the atoms used directly in bonding to the metal

4. Is it charged or neutral (determine if it can or will deprotonate when it binds)?

5. Is it a chelating or monodentate ligand?

6. What is the symmetry of the metal ligand complex you have chosen to show in 1.

7. Is there any other interesting chemistry associated with this ligand?

8. Is it a strong, medium or weak field ligand (if you aren’t sure, say “I anticipate that….”)?

9. Is it a hard or soft ligand?

10. Give a literature reference as well as a CCDC or PDB reference code for your metal structure discussed in 1 and 5.