**\*\* ONLY TEXT AND IMAGES APPEARING INSIDE THE RED BOXES WILL BE GRADED\*\***

1. Myoglobin  
   Download and run the posted myoglobin pymol script.  
     
   Using what we have learned about non-covalent interactions, describe how the heme group interacts with the protein. Are any of the interactions covalent?

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Describe the interaction of iron interacts with the heme. What is the geometry (distances, angles, and shape) of the Fe-Heme complex?

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Describe how the iron interacts with the protein.

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Describe how O2 interacts with the iron.

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Change the colors, or the representation, and insert an image of myoglobin here.

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1. Hemoglobin  
   Download and run the posted hemoglobin pymol script.  
   Describe fundamental differences between the structures of myoglobin and hemoglobin?

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What are the differences in the heme, iron and oxygen interactions in myoglobin and hemoglobin?

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What is the fundamental difference in function of myoglobin and hemoglobin?

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Change the colors, or the representation, and insert an image of hemoglobin here.

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