**Quiz: P – Values!**

In the article“Antithrombotic Potential of Grape Juice and RedWine for Preventing Heart Attacks” (Folts, John D., *Pharmaceutical Biology*, Dec98 Supplement, Vol. 36, p21), a study involving red and white wine was conducted. In particular, the researchers wanted to see if the consumption of these wines could aid in the treatment of atherosclerosis (hardening of the arteries). The subjects in the study first had their blood tested for “blood platelet aggregation” (that is, the clumping of platelets in the blood). Then, they consumed 5 ml/kg of either red or white wine. Then, they had their blood tested again for aggregation. Platelet aggregation decreased (*P* < 0.01) after the **red**wine but there were no significant changes after the ***white*** wine (P > 0.05). If platelet aggregation is lessened, then the treatment effect shows potential for helping lessen the effects of atherosclerosis.

1. (**1 point**) With both the red and white wine portions of the study, what is H1?
2. (**1 point**) With both the red and white wine portions of the study, what is H0?
3. (**1 point**) ***p***(the data showed lowered platelet aggregation |the **red** wine had no lowering effect)
4. (**1 point**) ***p***(the data showed ***non***lowered platelet aggregation |the **white** wine had no lowering effect)
5. (**1 point**) Based on answer **c**, does **red** wine appear to be significantly lowering blood platelet aggregation? **YES NO**
6. (**1 point**) Based on answer **d**, does **white** wine appear to be significantly lowering blood platelet aggregation? **YES NO**
7. (**1 point**) What type of error could you have made with respect to **red** wine? **Type 1 Type 2**
8. (**1 point**) Define that error, in context.
9. (**1 point**) What type of error could you have made with respect to **white** wine? **Type 1 Type 2**
10. (**1 point**) Define ***that*** error.