

Bioc 565 – Protein Purification and Characterization
Homework 2 – Due Friday Oct. 12 (Answers to be posted Saturday Morning)

The following questions concern McDonough *et al.* (2006) *PNAS* 103:9814. PMID: 16782814 and the associated supplementary materials (linked through the *PNAS* web site). Each question is worth 5 points.

- (1) How was PHD2₁₈₁₋₄₁₇ purified?
- (2) Were all residues seen in the crystal structure?
- (3) What were the crystallization conditions for PHD2₁₈₁₋₄₁₇? Do these conditions compare favorably with those *in vivo*?
- (4) The authors state they examined dimer formation for PHD2 using analytical ultracentrifugation (personal communication). Briefly describe how this could be accomplished.
- (5) Briefly describe a means of determining the dissociation constant (K_d) for inhibitor binding to PHD2₁₈₁₋₄₁₇.