1. Why does a homotropic effector give a sigmoidal $V_0$ vs $[S]$ plot, but a heterotropic effector does not?

2. A suicide inhibitor of ATCase called PALA that closely resembles aspartate inhibits the enzyme completely at high concentrations, but at very low concentrations actually stimulates it. Propose a mechanism consistent with this observation.

3. Contrast the effectiveness of inhibition of enzyme activity by zymogens versus allosteric effectors.

4. Why does feedback inhibition not work with zymogens?

5. Describe how ATCase regulation is effective at measuring the “pulse” of a cell.