Outline for Rotation Report: Atwood Lab

Introduction (about one page);

Brief literature review including citations of the papers in the bibliography.

* Hedgehog Signaling
  + Uncontrolled activation 🡪 developmental defects and cancers like BCC
  + Pathway logistics: HH ligand binds to PTCH1 receptor, activates SMO which then goes to the cytoplasm and GLI transcription occurs and target gene transcription can occur
  + Mutations in Ptch1, SMO and GLi can cause uncontrolled activation of HH pathway 🡪 BCC
    - Drugs developed to inhibit SMO but has found resistance
      * Must look at mutations of Gli downstream to smoothened which can lead to tumorgenesis and resitance
      * Multi site phos regulates GLI activation and can upregulate HH signal and tumor growth
        + Look at kinase activity on these phos sites
  + Look at different kinases and their inhibitors

Hypothesis that was to be tested (or statement of purpose if the goal was limited to

developing technique or reagents).

Materials and Methods (about one page):

This does not need to be as detailed as the protocols you included in the proposal.

Results (about one page):

If you got some quantitative results, don’t forget to include a measure of variation

(e.g. standard error) and of the statistical significance of any differences. If you

include micrographs, ALWAYS include a scale bar to show the size of the object.

Discussion (about one page)

Do NOT start this section with a literature review! Start it with a VERY brief

summary of your results, then discuss what they mean. If you did not get good

results, discuss why this was and how the project could be improved.

Bibliography (5-10 references):

Citations and references must be generated using a citation manager program, not

manually