**RFP lab key**

Title-5 pts

Purpose-5 pts

Reference to Materials &Methods in Amgen Biotech Sequence Lab Manuals-5 pts

Experimental overview-1 sentence per part of lab-10 pts (2.5 pts each)(examples below)

2a-verification of plasmid using RD. Cut DNA with two different enzymes to cut out RFP/ARA from plasmid and verify correct size of the two resulting fragments

4a-electrophoresis of digested plasmid fragments to see if they are present and correct size

5a-transformation of recombinant plasmid into bacteria and expression of RFP gene into protein

6-HIC-chromatography using hydrophilic interaction to separate the RFP protein from other proteins in the E. coli extract

Results-

2a-Questions-before the lab questions (5 pts), Ch 2a questions (5 pts), 3 Stop and Think questions (5 pts)

4a-gel, labelled (5 pts), before the lab questions (5 pts), Ch 4a questions (5 pts), 3 Stop and Think questions (5 pts)

5a-description of results on petrie dishes (5 pts) questions, before the lab questions (5 pts), Ch 5a questions (5 pts), 4 Stop and Think questions(5 pts)

6-description of RFP before and after purification (5 pts), picture of protein gel labelled (5 pts)

6a questions- before the lab questions (5 pts), Ch 6a questions (5 pts), 4 Stop and Think questions(5 pts)

Analysis/Conclusion

4a-describe and explain gel results (5 pts)

5a-how did you know transformation worked? Describe results on petrie dishes with the different kinds of media. What was the error in this part of the procedure? (5 pts)

6 how did you know if you purified RFP? Describe column appearance during purification, protein elution fraction, protein gel results (size and purity) (5 pts)

Insert picture of gel (5 pts), describe purity (1 band or more?), size (compare to ladder) and concentration (how dark are the bands) (5 pts)