



STUDYDADDY

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Make Transgenic fly lab

1. (1 pt) You must submit a screen shot of your successful mutant flies at the end of the “Make Transgenic fly lab”. This screenshot will be submitted to a Discussion after completing the lab. When submitting the worksheet – please answer: Where you successful in your experiment? What went wrong?
2. (0.5 pts) What gene are you attaching to the *period* gene to visualize when transcription occurs? Which organism does this gene come from?
3. (0.5 pts) What key molecular “tool” is used to create the construct of per/luc genes that will jump into the *Drosophila* genome?
4. (0.5 pts) How will we know if the construct has incorporated into the *Drosophila* genome?
5. (1 pt) **Complete part A** of Performing a sequence analysis in the “Make Transgenic lab” to confirm that the correct *period* gene is incorporated into the plasmid construct. In the BLAST sequence, what color means a good match? What chromosome is *period* gene found in *Drosophila*?

Testing Transgenic flies

1. (0.5 pts) About what time of the day does the fly have peak luciferase expression?
2. (0.5 pts) Does the Per gene continue to oscillate regardless of external light/dark cues?
3. (0.5 pts) What time did the peak luciferase expression become after the shift in light/dark cycle?



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