

## **Paper 2: Pathways A-C Results and Conclusion Write-up**

The objective of the second paper write-up is to continue developing expertise in communicating scientific findings in written form. All written text should be in Times New Roman, 12 pt font, and 1-inch margins. Put page numbers in the bottom right. Bold section titles similar to how it's shown below. Tables may be in a smaller font if preferred, no smaller than 9 pt font. The Results section should be double-spaced, but keep figure and table legends single-spaced. Make sure terms are italicized or capitalized appropriately if needed (e.g. species names have a format like this: *Homo sapiens*). Use continuous line numbers on the left side (see <http://tiny.cc/linenumbers> for how in Microsoft Word) as shown here. There is not a page limit, but I anticipate 2-3 paragraphs in the Results section, and 1-2 paragraphs for your Conclusion paragraph. See below for information on what tables and figures I am looking for.

To submit, put your name in the header, along with the words "Paper 2: Pathways A-C". **Submit using 'Assignment Upload' on BB as a PDF, with filename "<YourName>\_Paper2\_Draft1.pdf". I will print these out for both the peer review and my feedback. The due date is Wednesday, October 26, at 1:30 pm EST.**

### **Results** (should be double-spaced, but not shown here)

Follow similar instructions regarding structure to that required for your first paper (i.e. a *brief* summary of the purpose/question and general methodology – enough to help a reader recreate your experiment assuming they know the basics of the software you're using. Typically, you will share the purpose and all the general methodology before discussing any results. Don't forget to use parenthetical citations following the Pechenik format (Chapter 5) where appropriate.

Remember that you developed a hypothesis as part of your findings. One can think of your hypothesis here as your KEY result. Remember to organize your results so that you first emphasize a KEY result, followed by supporting evidence, and lastly any discrepancies. Remember that your results are for stating what you found, and not discussion – be careful not to interpret anything here. Don't forget to cite figures and tables as appropriate.

Remember the guidelines from Pechenik Chapter 9 (Week 4 reading) – above all else, we are looking for enough information conveyed for the reader to understand what you did and what your major findings were, with enough convincing support that they have confidence in the results to the same level that you have confidence. However, you must also state all discrepancies clearly at the end, which you can discuss further in your Discussion/Conclusion.

### **Conclusion** (should be double-spaced, but not shown here)

Here, we are adding 1-2 paragraphs to re-iterate your question/project, summarize your findings, discuss/resolve your discrepancies, and reconcile evidence and discrepancies to arrive at a final conclusion. You are welcome to cite primary research or review articles as you see fit, but it is not required for the Paper2 assignment.

**Figures and Tables** (legends should be single-spaced)

**A**

Make sure figures are above their corresponding legends.

**B**

If using more than one panel, put A, B, C...next to each panel on top left side and note how each panel differs in the legend.

**Figure 1. Title of figure must be bolded and give general summary of what is included.** A brief overview of the methods used to generate the figure should be shared, no more than 1-2 sentences. If there are subfigures, label them and provide an overview of each, e.g. (A) Description of subpanel A; (B) Description of subpanel B. Provide details after brief explanation of figure and methods that assist reader in interpreting figure (explaining color coding, important symbols, etc). Figure legend should be below figure, follow the format shown here, in numerical order, and be between the writing component and the References section. You must include a nicely rendered image of your *D. melanogaster* and target species genomic neighborhood sketches (can be hand-drawn or created on a computer, but must look nicely made and not a hurried sketch). Remember that the reader is expected to know nothing about this experiment and what the figure shows. Save results description for the Results section, not the legend.

**Table 1. Title of table must be bolded and give general summary of what is included.**

Methods are not always included, but any symbols the reader needs to understand the table should be included after the title or as a subscript under the table. Generally, the table legend is above the table itself, it should follow the format shown here, they should be in numerical order, and be after the figures and the References section. Make sure the table is nicely formatted in what you would deem presentable for publication. The example below with nothing filled in shows the minimum data required in the table, based on values in Table 2 (Part C) of your Pathways A-C worksheet. Note that you can use the provided format, or adjust it as preferred for what you think may be easier for the reader to understand. Remember that the reader is expected to know nothing about this experiment and what the table shows.

	2nd Closest Upstream*	Closest Upstream	Target Gene	Closest Downstream	2nd Closest Downstream
<i>D. melanogaster</i> Gene Symbol					
Strand (+/-)					
Gene Symbol from <i>blastp</i>					
Strand (+/-)					
NCBI RefSeq Gene Accession^					
E-value					
% Identity					

\*Subscripts at the bottom are usually a smaller font size than the written text. They have a marker like the \* (use a different one for each point you want to add) that should be placed in the related spot in the Table to indicate what the subscript refers to.

^You only need the predicted mRNA accession ID included, the protein accession is not required.

**References**

Make sure to cite BLAST (Johnson *et al.*, 2008, DOI: 10.1093/nar/gkn201) and the Genome Browser (Kent *et al.*, 2002, DOI: 10.1101/gr.229102) in your References and by parenthetical citation where appropriate. Use the Pechenik format modified as described in CP1, and place references in alphabetical order.