**FINAL PROJECT**

You have choice either the Written Project **OR** the Programming Project. Either one is acceptable, but the written project is recommended if programming is “not your thing”. NOTES:

1. All final projects need to include your last name at the beginning of the file names as we have done all year with the lab exercises.
2. You are expected to do your own individual work. Whether you choose the paper or the coding project, the assignment needs to clearly be your own writing and effort.

A. **Written Project** - Follow the instructions in **FINAL\_WRITTEN\_PROJECT\_2022-11-30**. You will also need to refer to the KobayashiEtAl2017.pdf paper.

B. **Programming Project** – Follow the instructions in **FinalPythonProgProj\_F2022.py**

**GRADUATE STUDENTS ONLY**

Graduate students will also have the choice of the Written Project or the Programming project (above) but will also be expected to add the following:

A. **Programming Project Addition** - If you choose the programming project, you will need to also do the Biopython programming assignment:

Follow the instructions on: BiopythonFinalProjectXXXXXX.py

Information on Biopython: <http://biopython.org/>

Installation instructions for Biopython: <http://biopython.org/wiki/Download>

(You can use the **pip install biopython** command in a terminal window on the Mac on Linux. There are also instructions for installation on Windows.)

B. **Written Project** **Addition** - If you choose the written project, you will need to add the following:

1. Add a 2-paragraph Introduction (limit: 1 page) with 8 to 10 additional references.
   1. Paragraph 1: Background on the gene you selected (name, function, physiological role…etc.)
   2. Paragraph 2: The goal or purpose of your study.
2. Add a 2-paragraph Result section (limit: 1 page) describing the figures and tables.
   1. This section should ONLY be a description of the results in the figures and tables. Do not discuss the meaning of the results.
   2. Calendar

      Description automatically generatedYou should reference to the figures and the tables. See the section “Jacalin-like lectin domain proteins” page 5 of the Kobayashi paper for a good example. (The only part of this section I do not like is the first sentence which is a sentence that belongs in the Introduction rather than the Results.)

The layout of the paper should look like this --->