*Effects of UV on Yeast* lab report Rubric

You may write this report with your lab partner(s) or you may complete it individually, if you wish. If you write this together with your lab partner(s), be sure to include a section titled “author contribution” at the end of the report that briefly states who worked on which section, who edited each section, who made each figure, etc. *Note: All members of the group will receive the same grade; if it is determined that some members contributed significantly less to the final product they may receive a lower grade.*

Break your report down into the following sections:

1. Title
2. Abstract
3. Introduction
4. Materials and methods
5. Results and Discussion (including figures with figure legends)
   1. Effects of UV treatment on WT vs. Mutant yeast.
   2. Results of the self-designed experiment
   3. General conclusion
6. References Cited
7. Author Contributions

*Please address the following points in your report sections.*

1. **Give your report a title.** It has to be concise, yet it needs to give your readers a good idea of the scope of your report. Don’t just call it “UV effects in yeast” or something else generic. What specifically did you test in the second half of this lab? Have the title convey that. Often times, good titles will state the actual findings of the work rather than just the question being asked.
2. **Abstract.** Write this section last! It is difficult to write before you spend a significant amount of thinking and writing about your data. Keep your abstract under 200 words. Abstracts typically have this general structure:
   1. Generally describe the topic your paper covers. Provide the reader with a brief background/context.
   2. State the problem/unknown you are attempting to investigate. What is your idea/hypothesis/question?
   3. State your approach/technique(s) you used to testing your hypothesis. Do not get into details here – that will go in the materials and methods section!
   4. What were your main findings and what was their importance?
3. **Introduction** Write a couple of paragraphs that outline your goals and purpose of your Yeast experiments. Begin generally, by discussing the dangers of UV light and how UV light damages DNA. Discuss briefly how our cells deal with DNA damage. Transition into the need to better understand if certain skin-protective creams, lotions etc. work better than others and how yeast are a great model organism to do so. Briefly outline why yeast can be used as a model organism: what is similar between yeast and humans? What is your main questions and how did you set out to answer it? What were your main findings?
4. **Materials and Methods.** Very briefly describe your overall process: Strains of yeast used, starter plates, streaking and plating yeast onto YED plates, treatments with protective creams/foil/fabric, etc., amount of time under UV light, growth conditions (it was overnight at 30°C). It is standard practice to use passive voice (Gasp!) in materials and methods. For example: Plates were streaked with 250 µL of yeast culture and grown overnight in a 30oC incubator.
5. **Results and discussion.** Break this into three parts:
   1. Effect of UV treatment on WT vs. UV-sensitive yeast
   2. Whatever you tested: give it a descriptive subheading/title.
   3. Conclusions

For parts a and b, present the results of each and discuss that they mean. For example, if you treated your yeast with varying SFP, what did you observe and what can be concluded? Do you accept or reject your hypothesis? If your data were not what you expected, what do you think happened? Are there any additional variables that you didn’t consider? What could be some of the sources of error in your experimental set up? How can the experiment be modified in the future? Wrap up your results and discussion section with a brief concluding paragraph. Be introspective and forward-looking. What did you learn and what would you want to learn in the future?

**Additional key points.**

* Use 12-point font, 1.5 spacing.
* Use images of your platesin figures to demonstrate any observed differences. Please aim to have 2-3 figures. One figure could be of your results, while another figure could be part of your introduction – something on DNA repair, yeast, sunscreens, etc. Figures should not just be stand-alone but be incorporated into your writing. For example, if you have a figure of your plates showing different treatments, refer to that figure in your writing: “As can be seen in Figure X, we were able to observe …” Figures can be at the back of your writing or embedded within. Provide a brief figure legend with each figure. If you are using a figure from a publication or a website, be sure to cite your source in the figure legend.
* It should be in prose/essay format and not a bulleted and disconnected catalog of your results. Actually discuss your results, use transitions between paragraphs and sections.
* You must provide a citation for any source of information other than yourselves: books, articles, websites, billboards, lab manuals, etc. Citation format you choose is up to you. SCE style is a good choice. Consult this website for details:
  + <https://writing.wisc.edu/Handbook/DocCSE.html>

**Points breakdown: 80 points in total**

* Title: 2 point
* Abstract 6 points
* Introduction: 12 points
* Materials and Methods: 10 points
* Results and discussion: 20 points
* Figures and Legends: 10 points
* In text citations and list of references: 10 points
* Grammar/syntax/transitions/cohesiveness: 6 points
* Author contribution: 4 point