A major component of the biology curriculum at Longwood University is learning to be able to write effectively in multiple contexts within the discipline. This includes writing for journals, grants, and general audiences. Semester long research papers throughout all of my courses have been a staple. I have not only improved my grammar skills, but also, I’ve improved my ability to organize and communicate research. While oral presentations convey passion for a topic, written research allows other scientists to be able to build off of your work. Through my Biol 324: Genetics and Biol 488: Senior Capstone courses I have learned to write in a variety of disciplines. Genetics experimentation and writing is much different than that of a conservation or general reflection-based paper. Showing off that you can be versatile when writing over a variety of topics can help you stand out immensely!

In Biology 324, we were tasked with designing our own semester long research project based on beer yeast. My group decided to overexpress the gene ACC1 to see if the overproduction would cause a change in aroma post-fermentation. After designing and carrying out the experiment, unfortunately, we yielded no results. The transformation process didn’t work out, therefore not true results were obtained. Although no official colonies were produced for fermentation, we were able to write a formal paper explaining our process. As all papers do, I had lots of background research, where my introduction explained the specifics of my experiment choice and the components that went along with it. I then wrote out detailed methods, few results that came from PCR and gel electrophoresis, and a discussion section. In the discussion, I was able to reflect on what could’ve gone wrong, and how I would alter the experimentation to yield better results in the future. Rather than an ecology-based paper, there were lots of cellular terms and processes explained. Although this section of biology isn’t what I prefer to study, I believe it’s important to improve your skills on all aspects.

 In Biology 488, we read a book called *The Immortal Life of Henrietta Lacks.* This book summarized the life of Henrietta Lacks and her family, who became famous through the ethical and racial despair caused by scientists. Henrietta had cancer and had her cells stolen during her treatment process at Johns Hopkins. These cells ended up being used in group breaking cancer research without her knowledge. Author, Rebecca Skloot, interviewed Lacks’ family and helped to put the pieces together, which described the story and injustice of the African American community at the time. For my paper, I was tasked with discussing the risks and benefits of altruistic science versus profit-driven science. Using examples from the book, I was able to determine that you can’t have everything one way or another. Individuals may have pure intentions when wanting to conduct research, but money will always be a factor. In the biology curriculum at Longwood, many classes focus on the scientific writing and representation of data. In this instance, I felt that I was able to discuss science in a different light. Rather than focusing on results, I was able to focus on the people effected by the process of conducting scientific research.

\*In Biology 488, my last artifact for section 3.1 is my final research proposal paper. The final version has not been submitted yet, because it’s still in the editing stage. I plan to add this artifact at the end of the semester as soon as the final has been completed. \*