

As a student in the STEM field, when a professor tells you that your final is not a lengthy and challenging exam but simply a research paper and presentation, you give a sigh of relief. In the honors seminar, Virus Hunting, Dr. James Culver instructed us that throughout the semester we would be using research to propose solutions to various world problems. Being that the class was called 'Virus Hunting', our research either needed to propose a way to treat or cure current and prevalent viral infections or to use viruses to help fix a pertinent world problem. Intrigued by how viruses cause infection and by novel gene editing techniques discussed in class, I decided to research how we could use gene editing to treat and or cure HIV/AIDs.

My research began by my using the libraries databases to expand on the information that I had already learned and discussed in class. To do this I began by using the World Cat database on the library's website to find articles that gave descriptions of the prevalence of the disease throughout the world and a general overviews of how it affects the people who are infected. After gaining an array of basic facts about the virus I wanted to find out what makes this virus so dangerous and exactly how it replicates within the body. To do so I again used the libraries website to go to the database finders, where I discovered the PubMed database.

PubMed is the database that I used to find almost all of the information for my project. With thousands of articles on my two topics, gene editing and HIV/AIDs, I had to use techniques that I learned in my research class, FIRE 120, to narrow down the number of articles that appeared. Focusing on HIV/AIDs first, I used the advanced search option to only show me articles that were researched based, not reviews, and articles that had been published within the last 10 years. Still having hundreds of articles on my topic match those criteria, I decided to narrow my search margin again by including the NOT and AND commands. This greatly narrowed down the number of articles to a manageable amount, so I repeated this process throughout my research to find information on the HIV/VIRUS and gene editing. In my research I discovered that there are people who are immune to HIV/AIDs due to a genetic mutation. This discovery became the bases for my entire project.

Throughout the semester everyone in the class was scheduled to meet with Dr. Culver to discuss our research topics and ideas. Meeting with him was very helpful, because he helped to narrow down our topics and make sure that we were using reliable and informative sources. Dr. Culver also helped to change the direction of my project. Originally my project focused on using gene editing to produce children that were immune to the viral infection. However, after talking to Dr. Culver, I realized that I should change the focus of my research because of the controversy associated with 'designer babies'. Instead, I changed the main point of my research from prenatal prevention to the treatment and possible cure of those individuals who were already infected with HIV/AIDs. Dr. Culver's guidance throughout the semester really helped to shape my final project.

From this project I learned a lot about my research topic and the research process as a whole. The skills that I developed and improved upon will be beneficial in reaching my future career goals. After college, I hope to go onto to receive my MD/PhD., and both fields will require me to do a copious amount of online research. My career goals will also require me to be able to understand the scientific research

articles that I find. I had to use both of these skills throughout my research, in order to formulate an efficient and functional proposal.

During my research in the future I would, gather my information from more databases. For this specific research proposal all of my resources had to be from scholarly journals so almost all of my information was found using PubMed. Even though this was efficient for this assignment, I found that by using the database, a lot of my sources were very similar in what type of information they were presenting and how it was presented. By using different databases for my research I should be able to find more diverse sources. The library could help improve my research experience by creating a database of other students' research. Each year teachers often assign similar research projects, and coming up with ideas for projects is easier when you have multiple examples to look at. By the library creating a database of previous research it allows students in the following years to sample the research to gain potential ideas. It also allows students to easily find sources if they have similar topics. In general, the library provides very good resources for student research, and many of the resources were very helpful throughout my research.