Provide an overview of the organization/research project and a summary of your responsibilities, tasks, and/or projects.

This summer I continued my research in the field of aquatic biology. While scrutinizing the mosquito fish (Gambusia affinis), each subject was required to participate in a behavioral learning assay. This study was performed with the aim to determine if the Gambusia affinis had the potential to learn colors and associate the color with a reward. The overall experimental layout included two colored walls on either the left or right side of a 10-gallon test tank; ultimately dividing the tank into three different subsections: left, middle, and right. One wall consisted of the color blue + food reward and the other consisted of the color yellow + no reward. The location (left or right) of each colored wall varied randomly to prevent biases.

In terms of the test subjects, there were two lab-born groups: high stress and no stress. The high stress group was exposed to AM/PM alarm cues for two days prior to testing, whereas the no stress group was exposed to AM/PM water cues for two days prior to testing. The test pair subjects from each group were then exposed to the behavioral learning assay for four days, with the final day being the exam. To perform this assay, each test pair was initially placed into an acclimation cup within the middle of the tank. Upon removal, the latency of time for each test pair to enter either the blue reward sector or the yellow + no reward sector was recorded. This was performed twice a day for four days, with each sector being reversed during the second trial of each consecutive day. The fourth day, however, only consisted of one trial of the exam. The exam ultimately determines if the mosquito fish has learned that the blue sector contains the food reward. The data for this project is currently being compiled and assessed.
During your internship, what did you accomplish or how did you make a difference? In what ways did you grow in your professional and technical skills?

During this internship, I mastered the skills of developing an experiment by constructing preliminary models which ultimately lead to the final experimental model, and expeditiously organizing data. Further professional skills such as communicating with professors and being able to articulate studies were also improved.

Describe a problem that you helped to solve at your internship. What skills or knowledge from your education at Sewanee helped you address the problem?

The only major predicament that required my attention during my internship included raising the pH of majority of the subject tanks to a balanced 7. Majority of the tanks experienced random fluctuations in pH. Some fluctuations were profusely acidic and lead to death among some of the field collected and lab-born subjects. Solving this issue with my professor and lab mate using knowledge from previous chemistry courses was quite satisfying.

In what way were your teamwork skills strengthened?

Teamwork skills were strengthened when the entire team went to Lake Cheston to collect a plethora of mosquito fish from some of the utmost swapiest sections. A great abundance of field collected subjects were acquired as a result of us all working together. Additionally, my teamwork skills were improved immensely upon solving the pH predicament previously mentioned.

How did your internship affect your career plans?

My internship furthered my urge to apply for graduate school. My admiration for biology, whether it be aquatic biology or molecular biology, is absolute. The only way to satisfy and further my knowledge for the biological sciences is to attend graduate school and pursue, for instance, a molecular biology and genetics program of my interest.

In what ways did your internship cause you to encounter people of different backgrounds from your own? What steps did you take to communicate effectively with such persons? What did you learn from such persons' perspectives?

As an African-american male and a minority within the Sewanee community, I must encounter individuals of different backgrounds everyday. The primary way to effectively communicate with individuals from such contrasting backgrounds is to communicate professionally. From the primary environment in which I resided, which consisted of biology, it is only right to state that we all share nearly the same perspectives when it comes to the biological sciences.

Words of thanks to your internship funding donors:

Fellow internship donors, I would like to thank you all for everything that was provided. I am very grateful for you all!