Summer Internship Report 2017

Fletcher North, C’17
Hometown: Birmingham, Alabama

Biochemistry Research Assistantship: Coronaviruses
Sewanee, Tennessee

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

The Smith lab studies coronaviruses, specifically Murine Hepatitis Virus (MHV). Each research assistant was given one drug to screen against MHV, and determine efficacy as a possible treatment. Responsibilities included cell culture maintenance, plaque assays, DNA/RNA/protein purification, various forms of PCR, and electroporation.

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?

We elucidated two drug candidates as potential treatments. These drugs have previously been untested against this family of viruses, so this work is highly publishable and will be a large source of knowledge for future studies in the same field. This position provided me with a better understanding of virology practices as a whole, not to mention allowed me to practice a variety of molecular biology techniques necessary in the field.

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?

All of the biology/biochemistry classes at Sewanee taught me the basics and concepts needed to jump right into this research project. Lab courses provided previous experience with molecular techniques.

In what way were your teamwork skills strengthened?

When we obtained odd results or an experiment failed outright, we needed to sit down and discuss what the results meant or where we failed. This was often not a simple process and required some serious thinking.

How did your internship affect your career plans?
My internship only increased desire to pursue a research career in this or similar fields.

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?

Only met a few people at Vanderbilt when we presented our research to the team there.

Words of thanks to your internship funding donors:

Thank you for the opportunity to work on my passions. Additionally, the funding given here has also increased our knowledge in the field of virology, especially in regards to therapeutics for viruses which have no current treatment options.