Sam Kane

Goal 1.2 Reflection

Analyze the Major Principles of Cell and Molecular Biology

Through the curriculum of Longwood’s Biology program, one of the main pillars is cell and molecular biology. To meet this goal, I took one course within the pillar, Biology 324 – Genetics, and outside of the pillar I took Biology 120 – Integrative Biology and Biology 250 – Introduction to Genetics and Cell Biology. Throughout these three courses and their varied coursework, I feel that I gained an adequate knowledge for the major principles of cell and molecular biology. This idea was a recurring theme throughout many of the courses I took and had great overlap with courses that weren’t even necessarily cell or molecular biology based.

Biology 324

Within Genetics we conducted a semester long research project in regard to gene expression. My semester long project involved mixing gene expression with resveratrol. Resveratrol had many different factors associated with it, including speeding up or slowing down the process of apoptosis, thus leading to cancer killing benefits. Resveratrol is also a naturally occurring substance, making it highly useful in a laboratory setting. This could lead to resveratrol being used extensively when it comes to cell or molecular biology research.

Biology 120

Throughout Integrative Biology we conducted a research project regarding various bacteria on various surfaces around campus. This research project gave my group members and myself a new found understanding of just how dirty and widespread bacteria can be on surfaces you’d never think of.

Biology 250

Throughout Introduction to Genetics and Cell Biology, there was a semester long research project. My project had to do with sampling and testing the microbial diversity in two locations: a retention pond and a local creek. These two locations drain into an even larger water source being the Appomattox river, thus allowing our research to serve as a small sample size of the potentially millions of bacteria floating around in our potential drinking water.