Cell Bio Article 4

This class greatly enhanced my understanding about a diverse range of topics that we discussed this year. My understanding about diseases, development, and inheritance changed.

We discussed diseases by going over genetics and how one may be able to acquire some of these diseases. The genetic diseases we identified were sickle cell anemia, cystic fibrosis, and Down’s syndrome to name a few. Punnet squares were used to help recognize what the probability of individuals to inherit these diseases. These squares were assessed by evaluating what particular genes the parents may have. The parents could have the disease that being diagnosed or may be a carrier. The parents have three possible genotypes: homozygous, heterozygous dominant, and heterozygous recessive. Once the genotypes of both parents are discovered simple calculations are made to determine what the probability of the genotypes that the offspring may get. The trait the get depends on two things: their genotype and the whether or not the trait they get is supposedly dominant or recessive.

Case studies were used extensively on this topic thus increasing my interest in them. They were about sickle cell anemia, cystic fibrosis, and Down’s syndrome. This helped me because of the real life implications it had on the real world and their practicality on modern medicine.

We also discussed the development of the cell cycle and how cells grow and multiply. The cell cycle has G1 phase (which is when metabolic changes occur in order to prepare the cell for division) S phase (when genetic material begins to be replicated), G2 phase (growing phase), and the M phase (marks end of mitosis and beginning of cytokinesis).

This class made me understand these processes and caused me to develop a greater level of critical thinking to understand them as well. This much needed information will help as a doctor when assessing medical conditions related to genetic diseases and mutations. This material presents me a reasoning as to why these conditions occur and may help me lead a way to cure such ailments.

The learning goal that I feel I made the most progress on was the “Describe the flow of information from the DNA into functional molecules that determine cellular structure, function, and differentiation (Central Dogma of Molecular Biology).” This goal was my favorite because we were able to apply it to our research projects. The central dogma refers to transcription and translation. It explains how DNA is made into RNA and then how RNA is made into proteins. My group used this information when assessing our project. Our methods included making DNA from bacteria that we cultured and then used to software to determine what their RNA chain would be. We then used these sections of amino acids to determine what type of bacteria it was using a software.

The learning goal that I struggle on the most was “Describe mechanisms of cellular and nuclear divisions focusing on the activities of Mitosis and Meiosis.” This was because it took a deep level of thinking as to how the process come together. The jargon associated with this section was fairly incomprehensible to me and resulted in a fair amount of confusion and frustration with these topics. Evidence supporting my claim can be well represented by my test scores and answers on this topic.

I am currently a biology major pursuing a career in the medical field. I value these courses as they help me retain and sharpen my knowledge on a variety of topics. This class will especially be beneficial to me on the upcoming MCAT that I will be taking this summer. Things that will change as a purse this degree and lifestyle are my study habits and time management. My study habits are decent but still require a little more discipline as I tend to get distracted easily.

 Like every college student that suffers from CPS (Constant Procrastination Syndrome), I still desire to get the best grade possible in all of my classes. Another issue of mine is time management. I tend to not balance things in my life that well. For example, I may spend four hours on a ten-page paper due in my ornithology class that isn’t due until another month rather than spend that time on a cellular biology homework assignment due the next day. This lack of time management may result in a poor grade due to the feeling of being rushed.

The advice that I would give to students starting out in Biology 250 is to always keep their notes organized and listen to the professor at all times. Another thing that I would say is to always get plenty of rest and don’t feel over encumbered by heavy workload in this class or any other class for that matter. One of my saving graces for this class was the kindness of my professor. My professor always allowed me into her office hours to discuss the material regardless of how simple my questions were. My questions were quickly answered with a detailed version of the reasoning. So that would be my last advice, it is to never hesitate to ask a question.