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Independent Study and Mentorship

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Global Implications of Plant Biochemistry

Assessment 7 - Research

Date: 10/19/18

Subject: Plant and Environmental Biochemistry

MLA Citation:

“General Concepts of Plant Biochemistry.” *OMICS International*, Biochemistry and Physiology: Open Access, 21 May 2018, www.omicsonline.org/open-access/general-concepts-of-plant-biochemistry-2168-9652-1000234.pdf. Accessed 16 Oct. 2018.

Assessment:

The following article written by Monica Butnariu introduces general concepts about plant biochemistry and addresses its global implications. The article describes, at length, how the study of biochemistry came to be thorough description of its history and in return applies it to contemporary society and how industrial growth affects living processes. In addition to gaining new information, this article brought up new questions as well as new ideas such as: how growing temperatures due to industrial production affect the metabolic rates of various living organisms and also how the topic of biological chemistry first came to be?

Because of my growing interest in the environmental factor of biological chemistry, I decided to focus my research on a specific areas of biochemistry which is plant biochemistry to further explore the subtopics of the environmental side. After thoroughly reading this article, the ecological side to biological chemistry was equally intriguing. It gave a new perspective to current global warming issues by relating the problem back to the molecular level of organisms. After analyzing and assessing this article, this research assessment cleared up questions from previous assessments. For example, the previously confused topic of the discovery of the gene and its role in the informational transfer in the cell was cleared up. The article described DNA structure to gene expression and addressed who produced such results.

After completing this assessment I was able to make connections back to my environmental studies class. This class discussed changes in human activity that impacted plant life such as pollution. Likewise, the article and the environmental studies class both consider that humans can benefit from exploiting plant biochemical pathways. I wish to continue learning how an ecological footprint affects plants and other living organisms at a molecular level. Therefore, I hope to incorporate these topics into my original work as a possible study or survey type that benefits the community and environment.

To my ISM journey, this research assessment helped to expand my knowledge not just over plant biochemistry but biochemistry as a whole. The article encompassed most of the chemical processes in living organisms such as photosynthesis in plants and provided background information over biomolecules and other cellular components. This helped me to assess the major components of biochemistry and their roles in the cell such as: lipids, carbohydrates, proteins, and nucleic acids. Prior to this assessment, I researched organic carbon

cycles in the ocean. By using my knowledge, I was able to connect how carbon cycles are affected by a plant's biochemistry.

In conclusion, I am satisfied with the amount of information I was able to take away from this research assessment. For next assessments, I plan to complete an interview assessment about a biochemist professional studying and experimenting with environmental biological chemistry. In addition, I hope to get more insight from professors teaching biochemistry to see their perspective, a non-research perspective. However, I am still interested in researching and experimenting and wish to continue and find interviews around this field. In the future, I would like to also explore the field of forensics biological chemistry to gain insight over that subtopic as well.

Linked to annotated website from Scribble:

[Document 1](#)