**M7A2: Essay: Human Diseases and the Microbiome**

We have heard so many claims being made about how manipulating the human gut microbiome can improve our health, treat disease, etc. It can be overwhelming. In this essay assignment, you will focus on one particular disease or condition, and then examine both the claims and the research that is being done on the gut microbiome and this health concern. This essay will allow you to utilize the analytical thinking tools you have developed first in the Science Tool Kit exercises and then in other assignments in this course.

Completing this activity will assist you in mastering Module Level Outcomes 2 and 3.

**First, watch:**

* You will watch portions of [Medical Revolution: The Gut Microbiome (Links to an external site.)](http://vlib.excelsior.edu/login?url=http://fod.infobase.com/PortalPlaylists.aspx?wID=103647&xtid=94805) [Video file, 48:58 minutes]. This video is broken up into multiple segments.  To view the assigned portions please do the following:
	+ Go to the EC Library [NS110 Research Guide for Human Microbiome Assignment (Links to an external site.)](http://libguides.excelsior.edu.vlib.excelsior.edu/NS110).
	+ You will be set up for **Step #1**.  As Step #1 indicates, click and watch the embedded video (Introduction: Medical Revolution: The Gut Microbiome [Video file, 02:34 minutes]).
	+ Then, click on **Step #2** on the top left side of the NS110 Research Guide page. You will see a list of diseases/conditions: Obesity, Anti-aging, Diabetes, Cancer, Emotions, Autism and communication, and Mental health.
		- Decide which disease/condition you are most interested in researching.
		- Click on a video(s) within that disease/condition category to view.

**Next, read/review:**

* Review the assigned readings for information about the human gut microbiome and the disease/condition you selected.
* Click on **Step #3** of the [NS110 Research Guide for Human Microbiome Assignment (Links to an external site.)](http://libguides.excelsior.edu.vlib.excelsior.edu/NS110) and select your chosen disease/condition from the drop-down menu.  You will find additional resources on your topic.

**Next, submit the following:**

* Write a 750 – 1000 word essay (3-4 pages, not including the title and reference pages) on what you have learned about the gut microbiome’s influence on the disease/condition you have selected.
* Be sure to include the following points in your analysis:

1. How do scientists think the gut microbiome influences this disease/condition?

2. What kinds of research have been reported so far (e.g., just hypotheses or actual lab experiments using mice/other animals or human subjects)? Describe the research and ideas discussed in the video and your readings.

3. How would you describe the current level of understanding about the gut microbiome and the disease/condition you selected?

4. Are therapies or treatments now being used for patients with this disease/condition? Do you think this a good thing or a bad thing, and why?

5. Did you find any sensationalizing or grandiose claims being made for therapies that use the gut microbiome to treat this disease/condition? Do the claims differ from what you found in the research? Explain any differences you have found.

6. Would you recommend that someone suffering from this disease/condition try the therapies you examined? Why or why not?