

Name: \_\_\_\_\_ Due Date: \_\_\_\_\_

# Cell Pathology Research Assignment

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## INTRODUCTION:

Pathology refers to the study of disease, which is the malfunctioning of an organism's normal processes leading to negative consequences for the organism. Therefore, "cell pathology" refers to the disruption of normal cell processes in a way that has a negative consequence for the organism. In this assignment, you will research a specific example of cell pathology. Your research will focus on a particular cellular structure, its normal roles within the cell, and the consequences for the cell and organism when that function is disrupted. A major concept to keep in mind throughout this assignment is the dynamic nature of cells. That is, cells are active systems that are constantly working to maintain homeostasis; they are not the static cartoons that you see in biology textbooks.

## ASSIGNMENT PROCEDURES:

1. You will be assigned one of the cellular structures listed in the table below.
2. Conduct research on your topic. The goal of your research is to describe the normal role of the assigned cellular structure and the consequences for the cell and organism when that function is disrupted. If possible, you should describe a specific disease or condition that leads to the malfunctioning of the cellular structure.
3. You must locate at least three sources and provide references.

FORMAT	TOPIC
Keynote Pages newsletter iMovie	1. Cell Membrane 2. Cytoskeleton 3. Ribosome 4. Cell Wall 5. Nucleus 6. Rough ER or Smooth ER 7. Vesicle 8. Golgi Apparatus 9. Lysosome 10. Mitochondrion 11. Chloroplast 12. Vacuole

# Cell Pathology Research Assignment: *SCORING RUBRIC*

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Name: \_\_\_\_\_

Topic: \_\_\_\_\_

In order to receive full credit, your product must meet each of the following criteria.

Component	Points Possible	Points Earned
<b>1. Cellular Structure:</b> <ul style="list-style-type: none"><li>- Location in the cell (what organelles is it near and general location)</li><li>- Physical structure thoroughly described</li></ul>	5 15	
<b>2. Normal Function:</b> <ul style="list-style-type: none"><li>- Function of cellular organelle described</li><li>- Describe why the organelle is important to survival of the cell AND the organism</li></ul>	15 5	
<b>3. Cell Pathology:</b> <ul style="list-style-type: none"><li>- At least 1 specific disease example should be thoroughly discussed<ul style="list-style-type: none"><li>o Definition of the disease/disorder</li><li>o Details of how the disease interrupts cell processes – this will be a very full paragraph of information detailing how the pathology works</li><li>o Overall effect on the cell</li><li>o Overall effect on the organism</li></ul></li></ul>	10 25 5 10	
<b>4. References:</b> <ul style="list-style-type: none"><li>- At least three (3) creditable sources are used. All information and graphics sources are properly cited and ownership of all words, images, and ideas is clearly indicated.</li></ul>	10	
<b>TOTAL SCORE:</b>	100	

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