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

**Cell Signalling Video Project**

Your task is to create a unique video **demonstrating** and **explaining** a variety of aspects of cell communication. Your video should be a representation of your knowledge and understanding of cell communication. It is important to remember that signal reception, signal transduction, and cell response are all a continuous process, therefore your video should coherently connect these ideas.

Your video should creatively demonstrate these topics in whichever format appealing to you. Examples of videos include, but are not limited to, stop-motion claymation, newscast, song, etc. There is no required length for this video as long as it contains every aspect of the rubric below.

The video should be uploaded to YouTube and the link should be sent to my email

([soconnor@mscusd.org](mailto:socoonor@mscusd.org)) on or before the due date given in class. Only one group member must submit the video. Each group member's’ full name and your period should be included in the email.

Grading Rubric

|  |  |  |  |
| --- | --- | --- | --- |
| *Objectives* | *Evaluation Criteria*  *3 points : Excellent*  *2 points : Developing*  *1 point : Needs Improvement* | | |
| Signal Reception | * How conformational change of a protein is involved in cell signaling * How polar and nonpolar ligands are received differently by a cell | | |
| Signal Transduction | * How signal amplification occurs within a cell through the use of secondary messengers * What is phosphorylation and what is its role in transduction? | | |
| Cell Response | * What is the difference in a cytoplasmic response versus a response in the cell’s nucleus * How can two types of cells respond to the same signal in different ways? | | |
| G-Protein | * G-Protein signalling pathway | | |
| Creativity & Quality | * Time and effort are apparent * Effective use of a wide range of materials * Engaging and interactive | | |

Total \_\_\_\_\_ / 15

\*\* All materials used in the video will be representations of the aspects of cell communication. Because of this, it is important to make your audience aware of what the materials represent. For example, if you use a pipe cleaner for the cell membrane, you should state during your video that the pipe cleaner symbolizes the cell membrane in order to avoid confusion.

**Resources on Cell Communication**

See chapter 11 in the textbook

See the unit review packet handed out in class

**Links on Cell Communication**

http://learn.genetics.utah.edu/content/cells/insidestory/

**cAMP (secondary messenger)**

http://highered.mheducation.com/sites/0072943696/student\_view0/chapter10/animation\_\_second\_messenger\_\_camp.html

**Nonpolar ligands** http://highered.mheducation.com/sites/0072943696/student\_view0/chapter10/animation\_\_mechanism\_of\_steroid\_hormone\_action\_\_quiz\_1\_.html

**Signal Transduction**

http://media.pearsoncmg.com/bc/bc\_campbell\_concepts\_6/activities/c6eLib/activities/B05/B0504/st01/frame.html