# Chapter 9: Cell Communication

#### Learning Objectives:

* Biology I: V2 – Outline representative mechanisms that cells have evolved for communicating and coordinating their functions in a living organism; V4 – Apply knowledge of cellular regulatory mechanisms to explanations of aberrant cell behavior
* Biology II: II8 – Describe the structure and function of the nervous system, the musculoskeletal system, the respiratory system, and the mechanisms of internal transport and regulation in various organisms; V1 – Explain how regulatory mechanisms at the level of the whole organism ensure balance in living systems that interact continuously with their environments; compare regulatory mechanisms within and across species.

1. Group Project:

Prepare a 5 slide minimum presentation on one of the following conditions that involve faulty cell communication. Include: A) a brief summary of the disease; B) which signaling pathway is affected; C) how the faulty communication is responsible for the signs/symptoms of the disorder; D) how the treatment, if any, corrects the faulty signaling. Here is a good starting resource: (<http://www.auburn.edu/academic/classes/biol/6190/CellSignalingBiology/csb012.pdf>) Check with you instructor if you would like to select a different topic than these suggested:  
Heroin addiction  
Tuberculosis  
Alzheimer’s disease  
Asthma  
Manic depression

2. In-Class Project:

A) Find the correct answers to Review Questions #5 to 14 on page 276. Note the page of Chapter 42 on which you found the answer. Be prepared to share your group’s answers with the rest of the learning community.  
  
B) Find the correct answers to Review Questions #15 to 22 on page 277. Note the page of Chapter 42 on which you found the answer. Be prepared to share your group’s answers with the rest of the learning community.

3. Outside of Class Homework:

Answer the following Critical Thinking Questions on page 277 and 278: 23, 25, 27, 28, 31, 34, 35