

## Researching Cell Communication Cell Communication Student Worksheet

Name \_\_\_\_\_

Date \_\_\_\_\_

As you have learned, hormonal and neural communication is essential for normal body functioning in all animals, including humans. Two examples of diseases in which cell-to-cell communication is disrupted are diabetes and multiple sclerosis (MS). Cellular communication can also be disrupted by environmental factors such as drugs. Heroin and DDT are examples of chemicals that resemble normal neurotransmitters and hormones, respectively. As a result, they disrupt the functioning of the brain and endocrine system.

The class will work in groups of 3-4, researching cell communication. Your group can choose to research a disease in which normal cellular communication is disrupted. You may instead research a drug that disrupts cell-to-cell communication.

The final presentation will be due on \_\_\_\_\_. Each group must present its research on a large poster board. The following must be included on the poster board:

- Name of disease or drug researched
- Description of disease or drug
- Symptoms associated with disease or drug
- How many people in the United States (and the world, if possible) are affected by the disease or drug
- Exactly how the disease or drug disrupts normal cell communication (A colorful and descriptive diagram will be helpful here)
- Treatments

The following are some website suggestions to help you begin your research. Do not limit yourself to the information on these sites. It is best to use sites that are part of a medical community (such as a university or medical school) or a large organization (such as the Multiple Sclerosis Association). Consult your teacher if you are unsure of the information on a particular website.

- Neuroscience for Kids: Explore the Brain and Spinal Cord  
<http://www.bonus.com/contour/neuroscienceforkids/http@@/faculty.washington.edu/chudler/introb.html>
- NIH (NIDDK): Endocrine and Metabolic Disease  
<http://www.niddk.nih.gov/health/endo/endo.htm>
- EndocrineWeb.com <http://www.endocrineweb.com/index.html>

- CBR, Tulane, and Xavier Universities: Environmental Estrogens and Other Hormones <http://www.tmc.tulane.edu/ECME/eehome/basics/action/>
- Canadian Environmental Corps: Endocrine Disrupting Substances in the Environment <http://www.ec.gc.ca/eds/fact/index.htm>

**Topic chosen by group** \_\_\_\_\_