

Worksheet on Cell Communication
Biology 100C Course

1. The series of steps by which a signal on a cells surface is converted into a specific cellular response is called the ____**Signal Transduction Pathway**____.
2. Are the general aspects of cell signaling pathways similar in various organisms? What is the basis for your yes or no answer?

Yes. Those in yeast and mammals are strikingly similar and there are other similarities between signaling systems in plants and bacteria.

3. What two types of **Local Signaling** in multicellular animals are described in your textbook? (Know what each type represents) (see Figure 11.3)

Paracrine signaling and Synaptic signaling

4. Plants and animals use this type of signaling for signaling at greater distances and over a diffuse area.

Hormonal Signaling - also called Endocrine Signaling

5. What System in an animal's body transports hormones?

Circulatory System

6. How can cells communicate when they are in direct contact with one another? (see Figure 11.4)

Gap Junctions in animal cells; Plasmodesmata in plant cells; Interaction of cell surface molecules (glycoproteins) in cell-cell recognition

7. What are the three stages of the cell signaling process?

Reception – Transduction – Response