**Cell: Cell Signaling**

**ACROSS**

2 Alternate name for a substrate which binds to a receptor

8 The location of receptor molecules is the cell ______.

9 Signals carried by kinase cascades most often enter the _______ of the cell.

14 Enzyme that transfers phosphate groups onto substrates

15 Small diffusible molecules like cAMP that act as transduction molecules in a signaling pathway (2w)

16 This type of receptor allows small charged atoms to enter the cell (2w)

17 The type of signaling observed at nerve synapses

18 The type of signaling that occurs when insulin is released from the pancreas

**DOWN**

1 An ion that acts as a second messenger

3 Small pores between two cells that allow the sharing of small signaling molecules (2w)

4 Enzyme that creates GDP from GTP

5 Bacterial toxin that interferes with signaling in the intestine leading to severe water loss/dehydration.

6 Used to share water and nutrients, a form of direct signaling, in plants.

7 Third phase of a signaling pathway

10 Second phase of a signaling pathway

11 Activated by one type of receptor which causes this molecule to release GDP and bind to GTP (2w)

12 First phase of a signaling pathway

13 Enzyme that removes phosphate groups from substrates