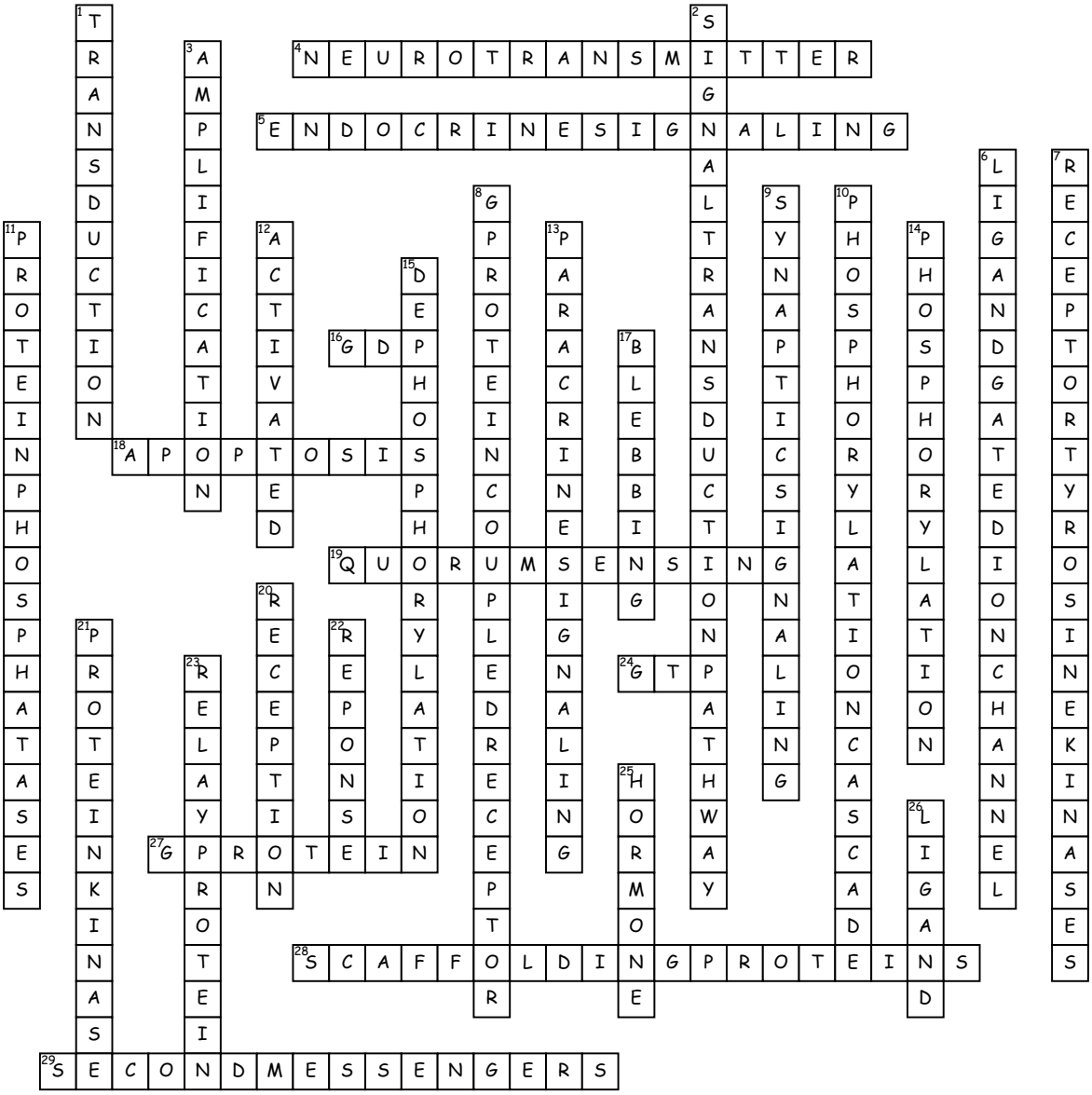
Name: _____ Date: _____ Period: _____

Cellular Communication Vocabulary Crossword Match the word to the definition.



Across

4. Messenger of neurologic information from one cell to another.

5. Occurs when endocrine cells release hormones that act on distant target cells in the body.

16. Monetary value of all the finished goods and services produced within a country's borders in a specific time period.

18. Process of programmed cell death that occurs in multicellular organisms.

19. System of stimuli and response correlated to population density.

24. Generated by one of the enzymes in the citric acid cycle.

27. Guanine nucleotide-binding proteins, are a family of proteins that act as molecular switches inside cells, and are involved in transmitting signals from a variety of stimuli outside a cell to its interior.

28. Crucial regulators of many key signaling pathways.

29. Molecules that relay signals received at receptors on the cell surface — such as the arrival of protein hormones, growth factors, etc. — to target molecules in the cytosol and/or nucleus.

Down

1. Process by which foreign DNA is introduced into a cell by a virus or viral vector.

2. A set of chemical reactions in a cell that occurs when a molecule, such as a hormone, attaches to a receptor on the cell membrane.

3. Strengthening of stimulus energy during transduction.

6. Ionotropic receptors, are a group of transmembrane ion channel proteins which open to allow ions such as Na+, K+, Ca2+, and/or Cl− to pass through the membrane in response to the binding of a chemical messenger, such as a neurotransmitter.

7. The high-affinity cell surface receptors for many polypeptide growth factors, cytokines, and hormones.

8. Seven-transmembrane domain receptors, 7TM receptors, heptahelical receptors, serpentine receptor, and G protein–linked receptors (GPLR), constitute a large protein family of receptors, that detect molecules outside the cell and activate internal signal transduction pathways and, ultimately, cellular responses.

9. Similar to paracrine signaling but there is a special structure called the synapse between the cell originating and the cell receiving the signal.

10. Sequence of events where one enzyme phosphorylates another, causing a chain reaction leading to the phosphorylation of thousands of proteins.

11. An enzyme that removes a phosphate group from the phosphorylated amino acid residue of its substrate protein.

12. Convert (a substance, molecule, etc.) into a reactive form.

13. Form of cell-to-cell communication in which a cell produces a signal to induce changes in nearby cells, altering the behavior or differentiation of those cells.

14. The transferring of phosphoryl group from a donor to the recipient molecule.

15. A common biochemical process in which a phosphate group is removed from an organic compound through hydrolysis.

17. The bulging out of a part of a cell below the plasma membrane or expansion of air-filled tissue, as occurs in the lungs in bullous emphysema.

20. Target cell's detection of a signal via binding of a signaling molecule, or ligand.

21. Kinase enzyme that modifies other proteins by chemically adding phosphate groups to them (phosphorylation).

22. Any behavior of a living organism that results from an external or internal stimulus.

23. Can control different processes in the cell including the cell cycle.

25. A chemical substance produced in the body that controls and regulates the activity of certain cells or organs.

26. Substance that forms a complex with a biomolecule to serve a biological purpose.