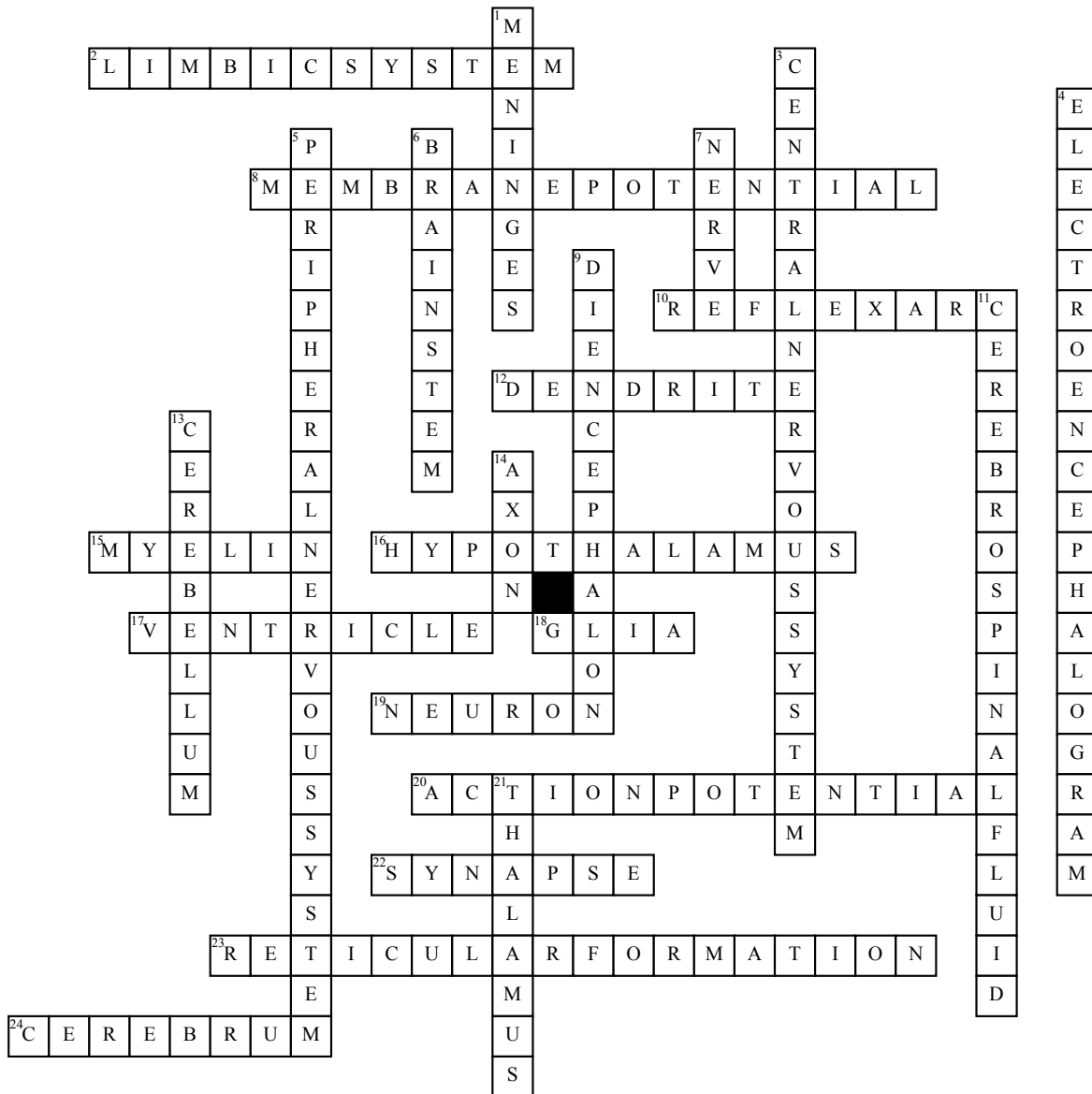


Central Nervous System



Across

2. parts of the brain involved in emotions and sense of smell; plays key role in coupling sensory inputs to short- and long-term memory; consists of the hippocampus, the hypothalamus and several other structures

8. difference in electrical charge between inside and outside of the plasma membrane

10. impulse conduction route to and from the central nervous system; smallest portion of nervous system that can receive a stimulus and generate a response

12. branching or tree-like nerve cell process that receives input from other neurons and transmits impulses toward the cell body (or toward the axon in unipolar neurons)

15. lipoprotein substance in the myelin sheath around many nerve fibers that contribute to high speed conductivity of impulses

16. important autonomic and neuroendocrine control center located inferior to the thalamus in the brain

17. a cavity, such as the large, fluid-filled spaces within the brain or the chambers of the heart

18. nonexcitable supporting cells of nervous tissue; formerly called neuroglia

19. nerve cell, including its processes (axons and dendrites)

20. nerve impulse, membrane potential of an active neuron

22. membrane-to-membrane junction between a neuron and another neuron, effector cell, or sensory cell; function to propagate action potential

23. located in the medulla where bits of gray and white matter mix intricately, this structure is involved in regulating input from sensory neurons, arousal, and motor control

24. largest and uppermost part of the human brain that controls consciousness, memory, sensations, emotions, and voluntary movements

Down

1. fluid-containing membranes surrounding the brain and spinal cord

3. division of the nervous system composed of the brain and spinal cord

4. graphic representation of voltage changes in the brain tissue used to evaluate nerve tissue function

5. nerves connecting the brain and spinal cord to other parts of the body

6. part of the brain containing the midbrain, pons, and medulla oblongata

7. bundle nerve fibers, plus surrounding connective tissue, located outside the brain and spinal cord

9. "between" brain; parts of the brain between cerebral hemispheres and the mesencephalon, or midbrain

11. plasma-like fluid that fills the subarachnoid space in the brain and spinal cord and in the cerebral ventricles

13. second largest part of the human brain; plays an essential role in the production of normal movements

14. in a neuron, the single process that extends from the axon hillock and transmits impulses away from the cell body

21. mass of gray matter located in diencephalon just above the hypothalamus; helps produce sensations, associates sensations with emotions, and plays a part in the arousal mechanism