

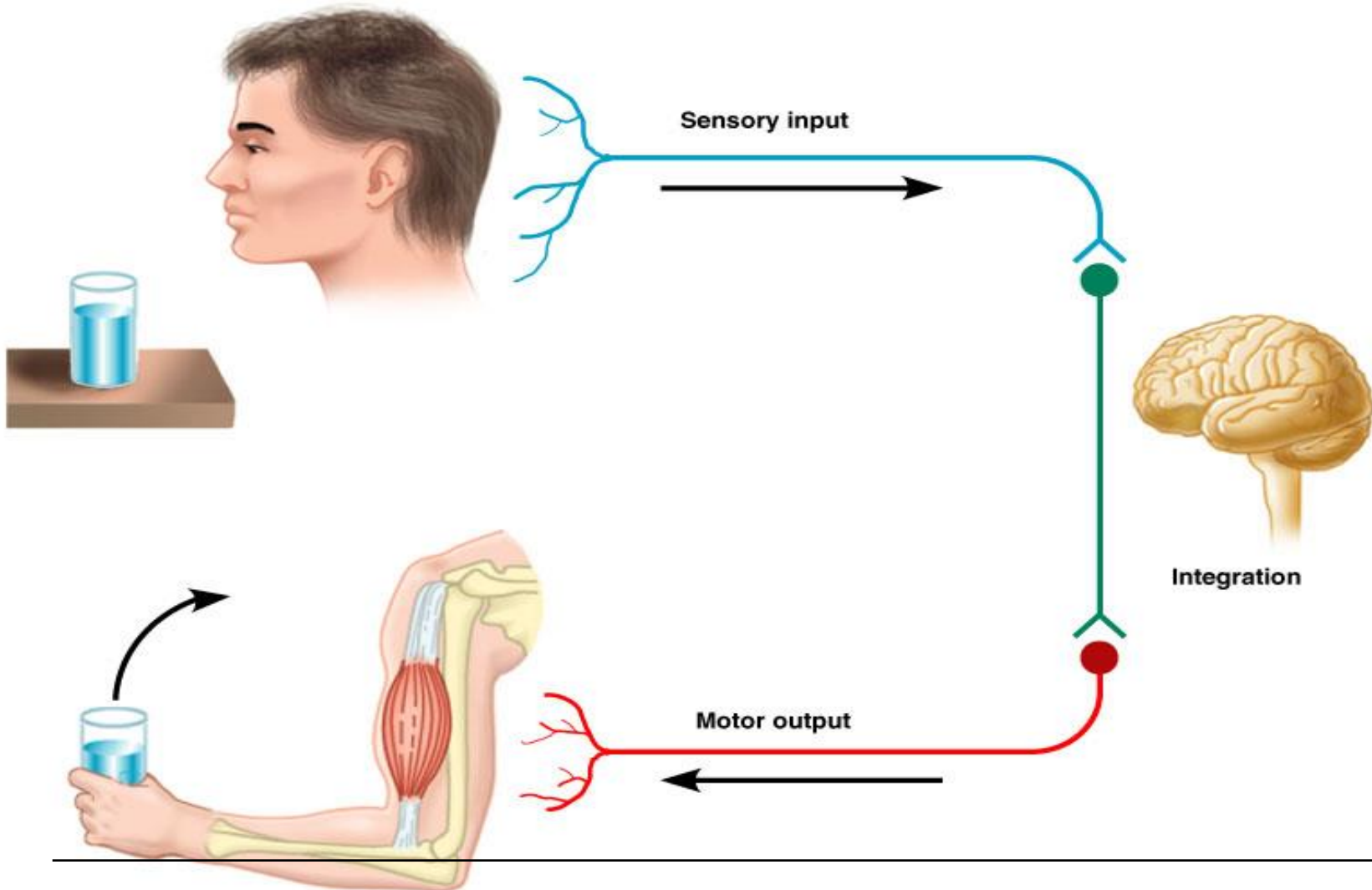
# NERVOUS SYSTEM

[FirstRanker.com](http://FirstRanker.com)

# NERVOUS SYSTEM

- Rapid communicating system of body carrying electromagnetic impulses
- Integrates the information that it receives from, and coordinates the activity of, all parts of the bodies
- Performs higher mental functions

# NERVOUS SYSTEM



# COMMONLY USED TERMS

## Gray Matter

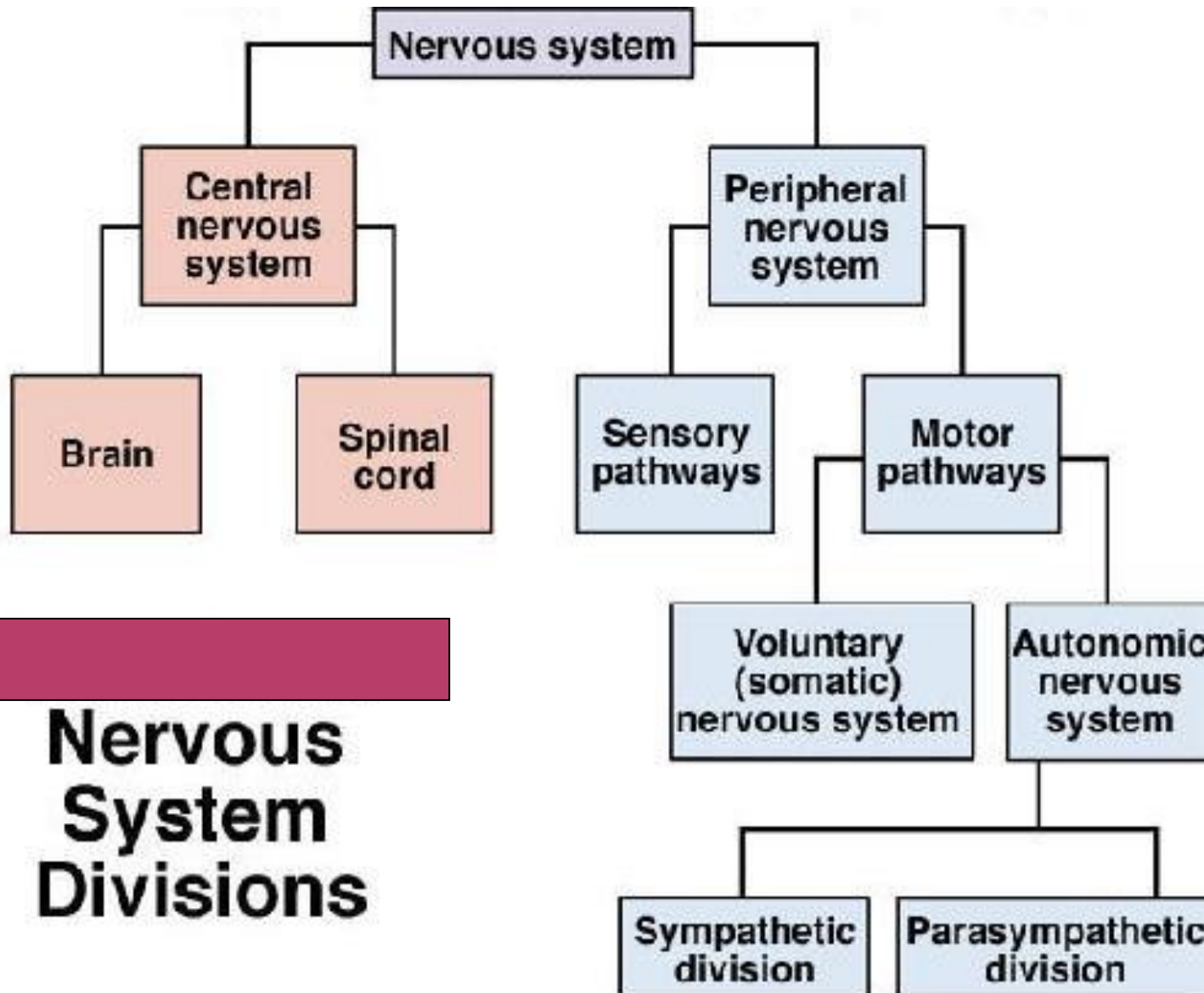
It is the collection of nerve cell bodies in central nervous system

## White Matter

In the central nervous system, the gathering of nerve fibers is called white matter.

## Tracts

Bundle of nerve fibers connecting nuclei

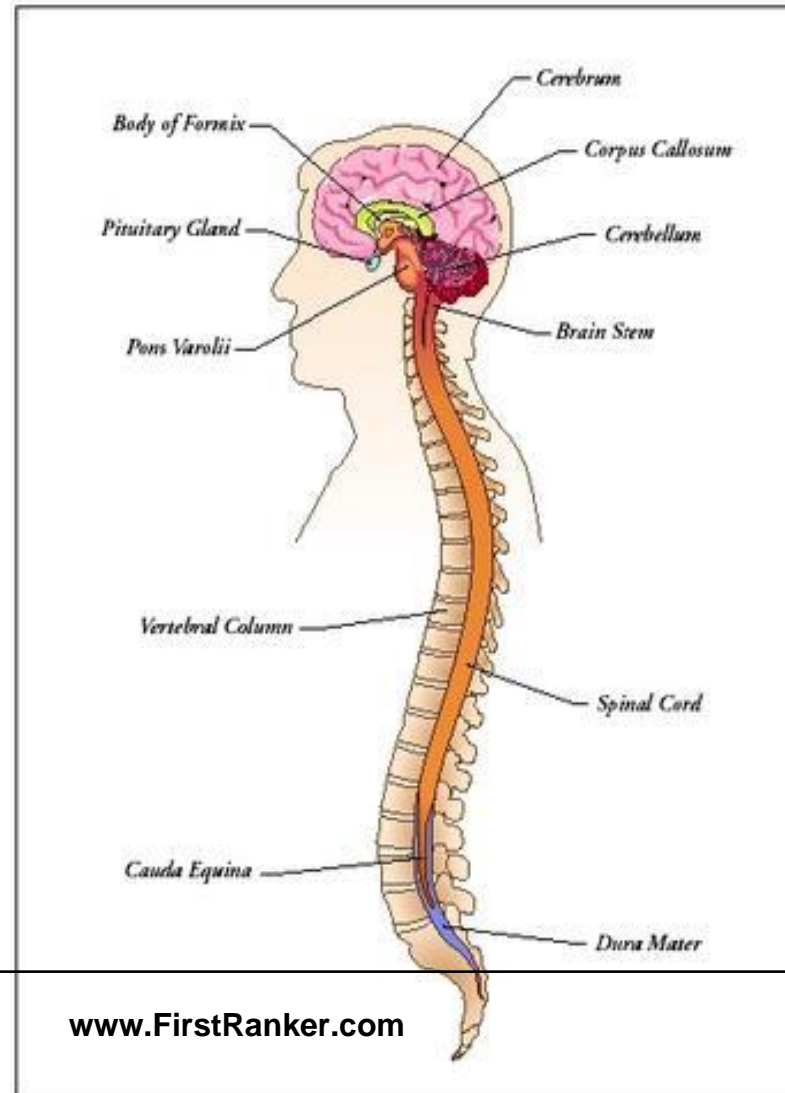


# Nervous System Divisions



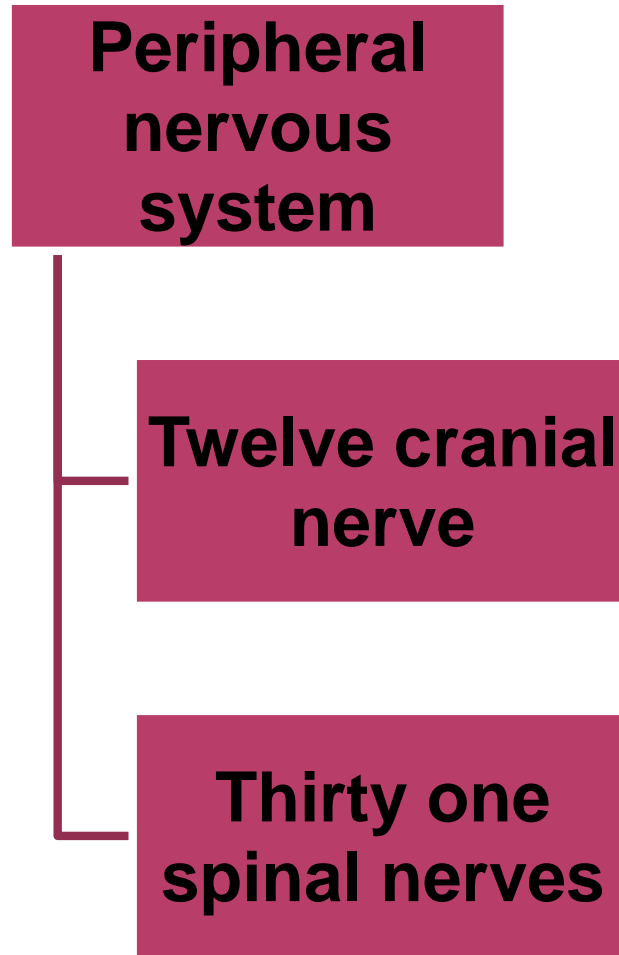
# CENTRAL NERVOUS SYSTEM(CNS)

- Brain and Spinal cord
- 95% of total neural tissue
- Perform integration and coordination



# PERIPHERAL NERVOUS SYSTEM

- **ALL OF NEURAL TISSUE OUTSIDE CNS**
- **Links CNS with all of body tissues & outside world**



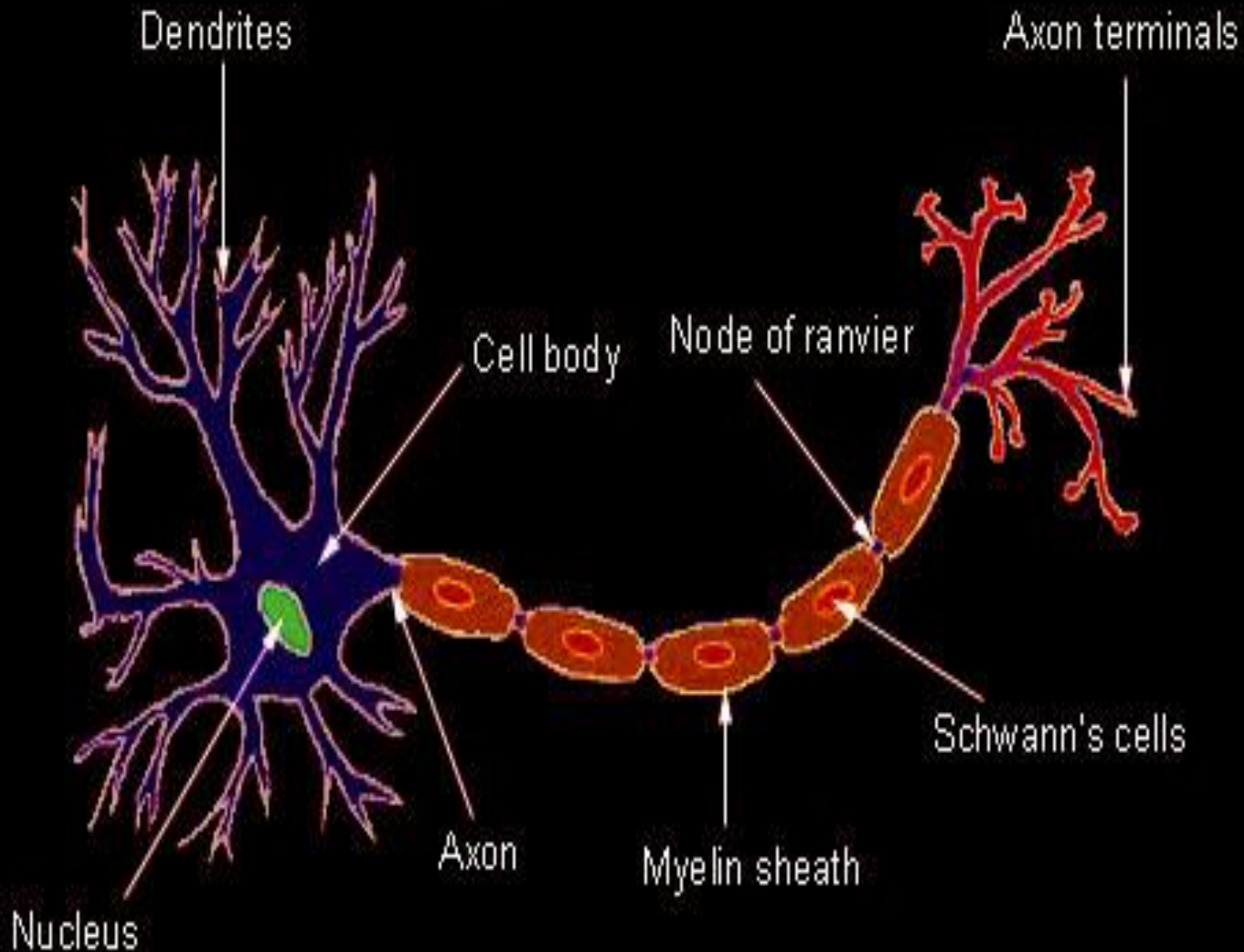


# COMPOSITION OF NERVOUS SYSTEM

The two principal cell types of the nervous system are:

- **NEURONS**
  - Functional unit
  - Excitable cells that transmit electrical signals
  - Arranged in an integrated network
- **SUPPORTING CELLS**
  - Non conducting cells
  - Cells that surround and wrap neurons
  - In the CNS called Neuroglia/Glia
  - In the PNS Schwann cells and Satellite cells

## Structure of a Typical Neuron



# NEURON CLASSIFICATION

## ◉ STRUCTURAL

### ■ Unipolar

single, short process

### ■ Bipolar

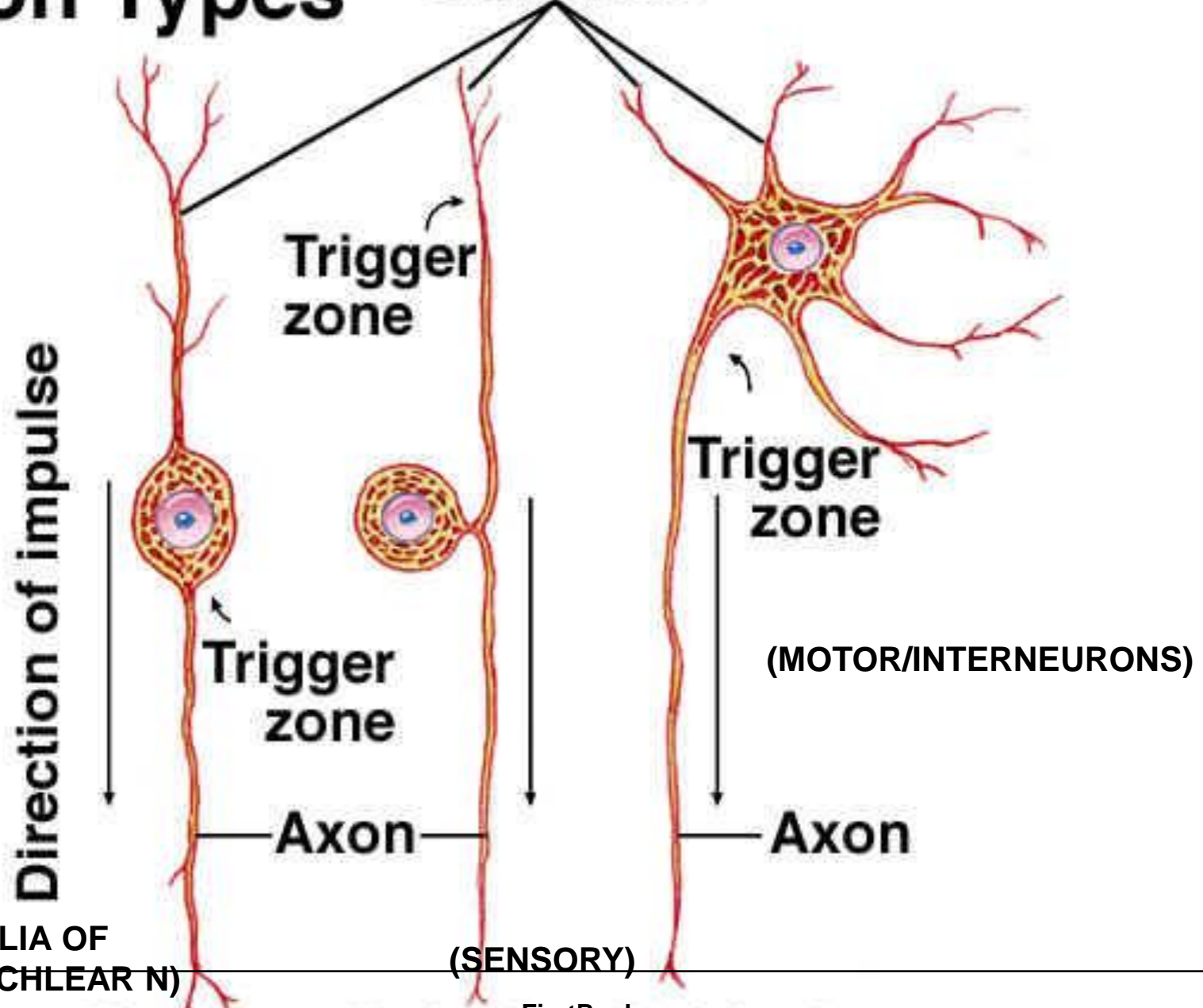
two processes (axon and dendrite)

### ■ Multipolar

three or more processes

# Neuron Types

## Dendrites



(RETINA/GANGLIA OF VESTIBULOCOCHLEAR N)

(SENSORY)

(MOTOR/INTERNEURONS)

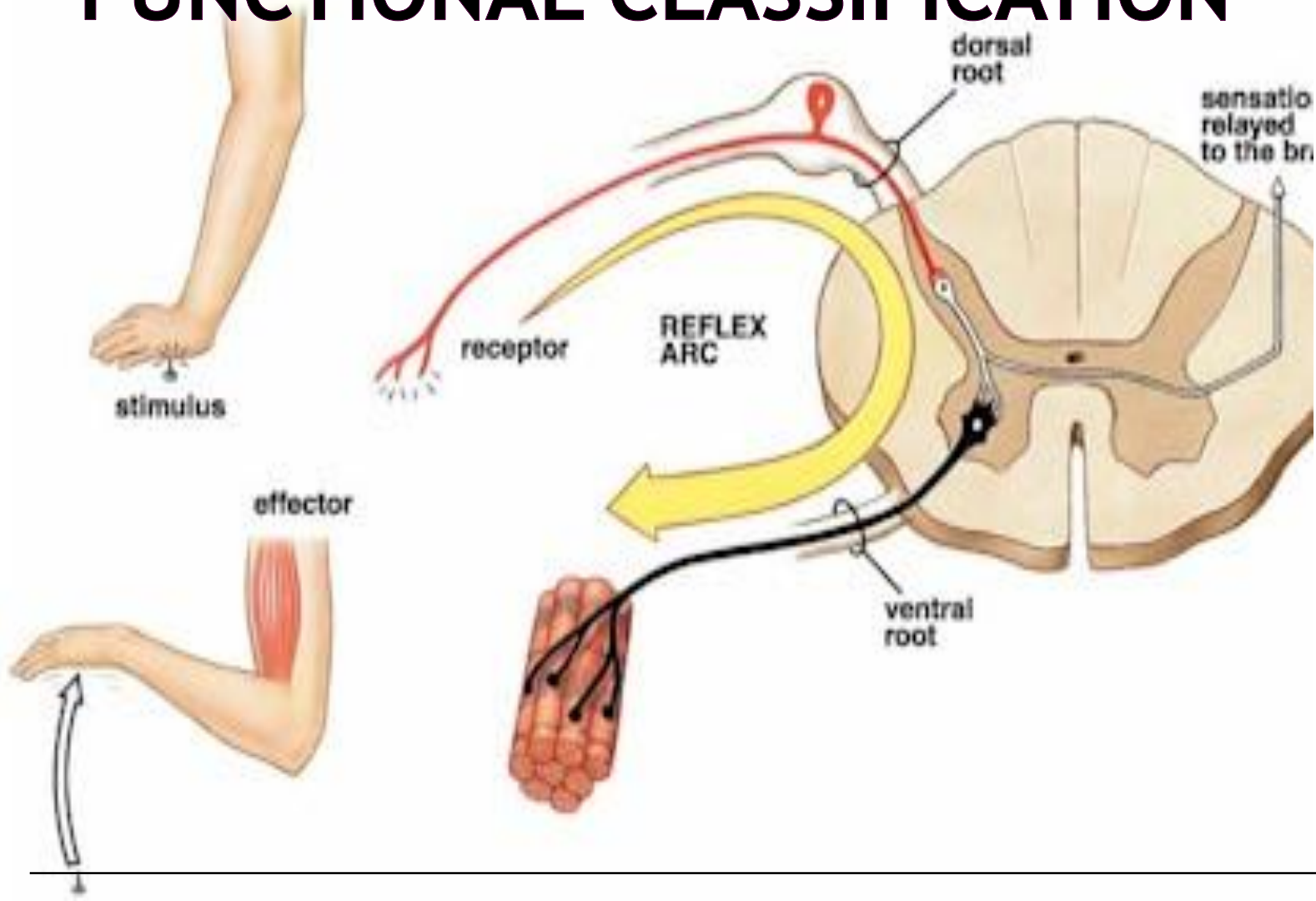
Bipolar Unipolar Multipolar

# NEURON CLASSIFICATION

## ○ FUNCTIONAL

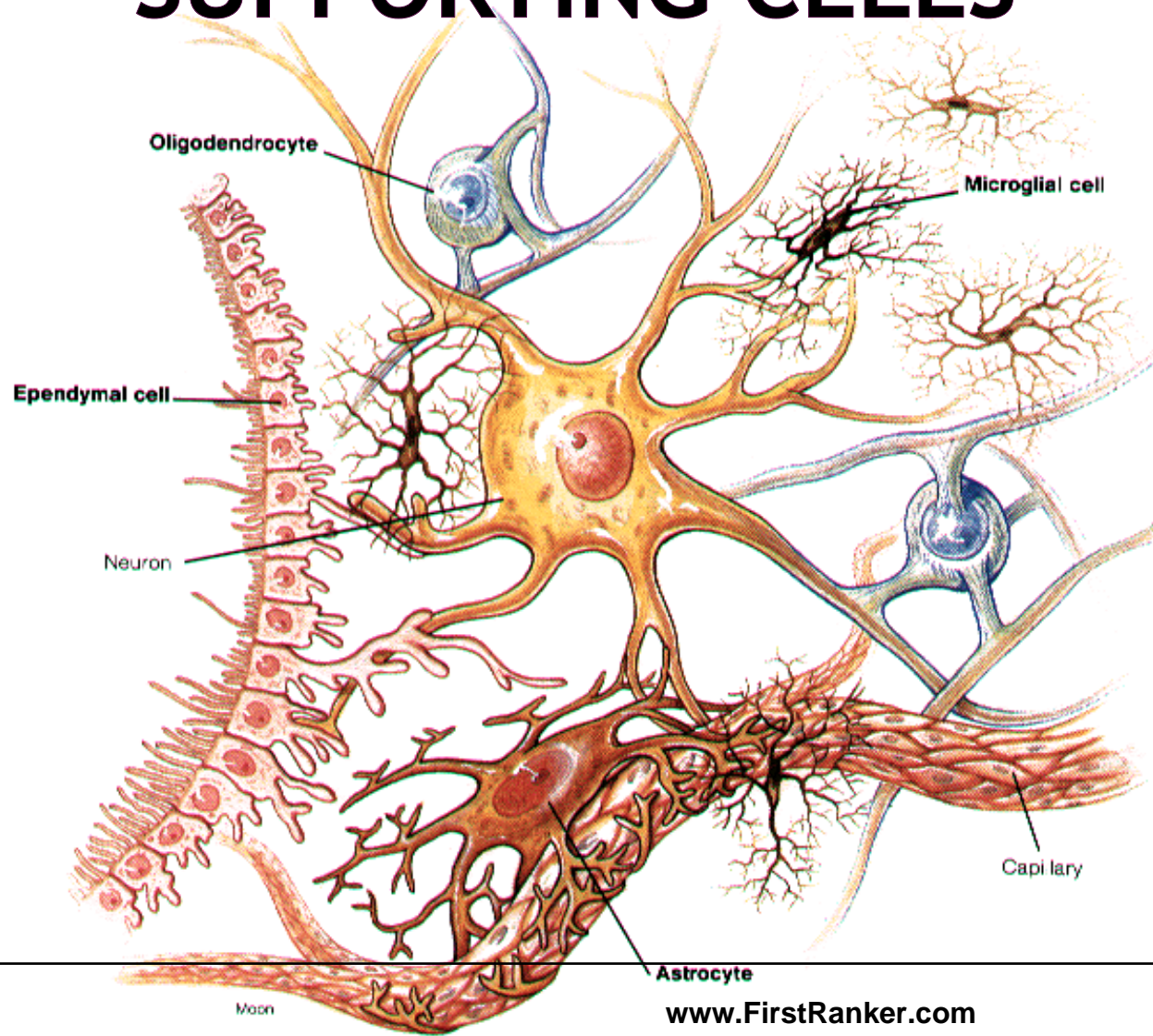
- Sensory (afferent) transmit impulses toward the CNS
- Motor (efferent) carry impulses away from the CNS
- Interneurons (association neurons) shuttle signals through CNS pathways

# FUNCTIONAL CLASSIFICATION





# SUPPORTING CELLS



Thank  
you