

**ALPHABETICAL BRAIN™ VOCABULARY
HUMANIST FAMILY BRAIN STUDY**

DETAILS ABOUT THE NUCLEUS OF A NEURON

Brain Flash Card #5

August 1, 2019

**WHAT IS THE NUCLEUS OF A NEURON?
AND WHY IS IT SO IMPORTANT?**

The nucleus of a neuron is the source of action potential spikes of biochemical current (signals/impulses) that are sent down an axon filament to cross a synaptic gap when it is activated by a new experience or some old habit.

All of your 100-200 billion neurons have nuclei (plural for "nucleus") capable of sending action potential spikes.

The action potential spikes are what cause your hundreds of billions of neurons to connect and activate with each other or with your muscles, senses, internal organs, and glands through your hundreds of trillions of synapses.

Nucleus of a Neuron Image

Therefore, it is very important to understand that the nano-microscopic quantum effects inside neurons are caused by the microtubules inside each nucleus of a neuron along with your DNA. In addition, each neuron cell body contains other essential organelles, such as mitochondria and Ribosomes, which are the more well-known parts of each neuron cell body in all of your neuron cells in your entire brain and nervous system or connectome.

Your mitochondria are the batteries or energy suppliers of each neuron cell and your ribosomes are the RNA that translates or expresses the DNA information into proteins by the process known as protein synthesis.

The cell body contains those parts in the cytoplasm that surrounds the nucleus of each of your neuron cells. They are all essential ingredients for producing your "sparks of life" or action potential spikes.

The fundamental function of the nucleus of a neuron is to be the "engine" of each of your neuron cells. Each of your hundreds of billions of neuron cells is a building block of your consciousness and memory, which means your self-identity and your free will.

Note: See in context: neurons #2, dendrites #3, axons #4, glial cells #6, synapses #7, potentiation #8, plasticity #10, cerebrum #11, and prefrontal cortex #12.

RECOMMENDATION: You may print this pdf version and read it and edit it by adding or deleting ideas. Then, you can read your edited version of these ideas according to a reinforcement schedule, such as a few hours later and a few days later and then several times in the next week or two. This strategy can help you take advantage of the power of the spaced-repetition method of memorization. Such deep introspection can change your adaptive self-identity and increase your self-esteem (positive emotions about yourself). **Remember always:** *You are your adaptive memory!*