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COMMENTARY

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Study of Neuroscience: Types, Function and Pathology

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Introduction

Neuroscience is the study of nervous system. It is the science of many fields including physiology, anatomy, molecular biology, development biology, cytology, computer science and mathematical modeling to understand the basic and emerging features of neurons, glia and sensory circuits. The scope of neuroscience has grown over time to include various methods used to study the nervous system in different scales. The techniques used by neuroscientists abound, ranging from the study of individual cells and cells of the brain to the conception of sensory, motor, and cognitive functions in the brain. They are able to communicate with neurons and other types of cells through specialized connections called synapses, in which electrical or electrical signals can be transmitted from one cell to another. Many neurons produce a thin axoplasmic fiber called the axon, which can extend to distant parts of the body and can quickly absorb electrical signals, contributing to the activity of other neurons, muscles, or glands in their connective tissue. Neurologists would like to understand all aspects of the nervous system, including how it works, how it grows, and how it can be altered or repaired. Neurological analysis is therefore performed at many levels, from cellular and cellular levels to systems and cognitive levels. Certain topics that form the focus of research change over time, driven by a constantly evolving knowledge base and the emergence of evolving technology. Advances in electron microscopy, computer science, electronics, functional neuroimaging, and genetics and genomics have all been major drivers of progress. Questions in neuroscience systems include how neural circuits are formed and used anatomically and physiologically to produce functions such as reflexes, multisensory integration, motor integration, circadian rhythms, sensory responses, learning, and memory. Various medical nanoparticles in the treatment of neurological disorders show promising results in mediating drug transport throughout the brain-blood barrier. The use of nanoparticles in antiepileptic drugs improves therapeutic efficacy by increasing blood bioavailability, as well as providing a degree of control over the timing of release. Although nanoparticles can aid therapeutic drugs by modifying body structures to achieve the desired results, indirect increases in toxicity often occur in early drug trials. In addition, the production of nanomedicine for drug testing is economical, which hinders progress in its use. Nanomatadium usually works with scales between classical and quantum laws. Because of the uncertainty associated with the length scale acting on nanomaterials, it is difficult to predict their behavior before in vivo studies. Neuropathology focuses on the differentiation and pathogenic mechanisms of the central nervous system and muscle diseases, with an emphasis on morphologic, microscopic, and chemical modifications. Major branches of neuroscience include: Active neuroscience, Cognitive neuroscience, Active neuroscience, behavioral neuroscience, Cellular neuroscience, Clinical neuroscience, cognitive neuroscience, Computational neuroscience, Cultural neuroscience , Developmental neuroscience, Evolution Neuroscience, Neurogenetic Neuroscience Neuroinformatics, Neurolinguistics, Neuro-ophthalmology, Neurophysics, Neurophysiology, Neuropsychology, Paleoneurobiology, Social neuroscience and Systems neuroscience. The designers focus on such analogies and model brain function as a neural circuit. The breakthrough in computational modeling of neurons has led to the development of stereochemical models that accurately predict acetylcholine receptor-based synapses operating at microsecond time scale. Anesthesiology focuses on pain perception, as well as modification of pharmacologic consciousness. Neurology works with diseases of the central and peripheral nervous system, such as amyotrophic lateral sclerosis and stroke, as well as their treatment.

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Conflict of Interest

The authors declare no conflicts.

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