The Chemical Differentiation of Nerve Cells

The development of the intricate network of nerve cells that makes up the nervous system requires each cell to "choose" a transmitter substance appropriate to its specific connections with other cells.

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The flow of information through the nervous system is determined by the particular pattern of connections made by the neurons, or nerve cells, with one another and with other bodies such as muscles and glands. The action potentials generated by the innervating neuron and the receptors present on the target cell? The investigation of these questions has involved the collaboration of electrophysiologists, biochemists and electron microscopists in several laboratories.

Neurons do not project directly to the muscle but make excitatory cholinergic synapses on neurons in a ganglion, a station outside the spinal cord; the efferent neurons in turn innervate the heart muscle. The sympathetic nervous system...