

ABSTRACT

Glutamate mediates most of the excitatory neurotransmissions in the central nervous system of mammals. Its effect depends on the presence of glutamate receptors on postsynaptic neurons. NMDA receptors are class of the ionotropic glutamate receptors and are necessary for normal brain function such as synaptic plasticity, learning, memory and correct development of neurons. NMDA receptors are also involved in the pathophysiology of many neurodevelopmental and neuropsychiatric diseases. The aim of this work is to evaluate the current knowledge of the role of the intracellular part of NMDA receptors for their function, particularly with respect to the regulation of their localization at excitatory synapses. In addition, it also provides an overview of the genetic changes found in this part of the receptor, their effect on the functional properties of the receptor and then also a possible link to specific disease.