Receptor: Nmda (N-Methyl D-Aspartic Acid) Encyclopedia Article

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The NMDA receptor is a protein on the surface of neurons (nerve cells). When the major excitatory NEUROTRANSMITTER, GLUTAMATE, binds to this protein, the central pore of the NMDA receptor channel opens—then cations (the ions of sodium, potassium, and calcium) are able to cross the cell membrane. The movement of cations through the pore results in neuronal excitation.

The NMDA receptor is one of several cell receptor surface proteins activated by glutamate. The HALLUCINOGEN PHENCYCLIDINE (PCP) blocks the open channel of the NMDA receptor preventing cation flow. It is believed that overactivation of the NMDA receptor could be responsible for the neuronal cell death observed following some forms of stroke; it may even be involved in the cell death associated with neurodegenerative diseases.

See Also

Neurotransmission; Drug)

Bibliography

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