

Mechanism of Neuronal Development and Synapse Formation

Michela Matteoli
CNR Institute of Neuroscience
Dept. Medical Pharmacology
University of Milan

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Over the past decade, evidence has accumulated indicating that, during development, the construction of synapses—the sites of communication between neurons—might rely on the utilization of preassembled sets of synaptic proteins, which have already accumulated in the axon and are highly mobile, before getting recruited to the sites of contact with the postsynaptic neuron.

In this review, we discuss evidence from most recent publications pointing to the existence of active vesicle traffic and turnover in developing neurons, which lead to the construction of new synaptic sites.