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## **Regulation of Synaptogenesis by PSD-95**

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Synaptogenesis involves various steps including synaptic adhesion, assembly of pre- and postsynaptic proteins, generation of dendritic protrusions, and trafficking of synaptic proteins. PSD-95 is one of the key component of the postsynaptic density (PSD), which is a postsynaptic membrane specialization containing macromolecular multiprotein complexes. We isolated a novel family of cell adhesion molecules termed NIMO (for neuronal synapse inducing molecule). NIMO proteins are mainly present at excitatory and postsynaptic sites. NIMO lacking the C-terminus shows a limited spine localization suggesting that NIMO requires PSD-95 binding for its synaptic localization. In addition, results from neuron-fibroblast coculture, overexpression, bead aggregation, dominant negative inhibition, and siRNA knockdown experiments suggest that NIMO proteins are involved in the formation and differentiation of excitatory synapses.