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Telencephalin, a Molecule Necessary to Keep the Brain Pliable

Mammals have "pliable" brain functions such as "learning", "memory", "recognition", "emotion" and "decision-making". These higher-order brain functions are apparently maintained by means of the brain's "pliable" structure called "synapse", a junction between brain neurons, which flexibly changes its structure and function in response to external information.

How does the synapse change? We took notice of "telencephalin", a protein that is only expressed in the mammalian telencephalon that controls higher-order brain functions. Telencephalin promotes formation of dynamic and flexible protrusions called "dendritic filopodia", facilitating synapse remodeling and maintaining pliability of neural circuitry.

The research results were published in the February 8th issue of "*Journal of Neuroscience*".

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