

Study of Amyloid Precursor Protein Developmental Changes in Homogenate, Membrane and Soluble Fractions Derived from Rat Brain, Skeletal Muscle, Kidney and Liver

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In previous studies we have shown marked changes in the amyloid precursor protein (APP) expression during the period of synaptic contact formation, indicating an important role of APP in the synaptogenetic process. In the present study we investigated the changes in APP expression during ontogenesis at protein level in homogenate, membrane and soluble fractions from rat brain in order to obtain further data on the changes of APP processing/secretion. We also followed up the changes of the content of APP in skeletal muscle, kidney and liver.

The results show an increased expression of APP during synaptogenesis in brain. In the other organs a clear tendency of change in the content of APP is observed only in skeletal muscle. The lack of changes in postnatal development in kidney and liver confirms the hypothesis that the secretion of APP is a brain/nervous tissue-specific process.

Key words: amyloid precursor protein, ontogenetic changes, expression, peripheral organs