

Environmental deprivation delays the maturation of motor pyramids during the early postnatal period

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The effects of environmental deterioration upon the development of motor cortex was studied in 30 Sprague-Dawley albino rats during lactation (1st-18th postnatal days). The use of Golgi-Cox-Sholl methodology allowed qualitative and particularly quantitative evaluations since impregnation of neurons take place at random without any selectivity. Morphometric studies were assessed by measuring layers II-III pyramidal neurons, basal dendritic branching, under camera lucida. Early environmental impoverishment results in a highly significant decrease in the number and length of peripheral branches and terminal dendrites. These results extend previous observations made predominantly in non-motor cortices which indicate that during early postnatal life restrictions or enrichments of the environment may be associated with quantitative changes in the differentiation of cerebrocortical neurons. It is of utmost importance to consider that the potential effects of different types of epigenetic cu