



NEUROBIOLOGY OF REMISSION AND RELAPSE OF THE DEPRESSIVE EPISODE

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Neuronal plasticity is a basic physiologic phenomenon of the central nervous system and consists in the capacity of brain cells to acquire new information from external environment and to process it in order to provide an adequate response to different stimuli. Thus, emotional, pharmacological stimuli as well as changes in hormone secretion have all the capacity of inducing both morphological and functional modifications in nerve cells that may result in an enhancement or decrease in dendritic spine formation.

Recent neurobiological and clinical studies have demonstrated that the depressive episode that is not adequately treated may alter almost irreversibly the trophic capacity and plasticity of neuronal cells. Depressed subjects that are not adequately treated (duration-dosage) undergo frequent and repetitive relapses. In the long term, the clinic episode is often associated to a reduction in the volume of several brain regions (hippocampus, amygdala, cerebral cortex). These studies have also demonstrated that the efficacy of antidepressant drugs is, at least in part, mediated by their capacity to stimulate neuronal trophism, to induce neurogenesis, and, in general, to exert neuroprotective effects. Altogether, these experimental and clinical studies suggest that the phenomenon of neuronal plasticity is crucial in the pathophysiology and therapy of depression.