

Abstract

The activity of tryptophan hydroxylase was measured in the rat brainstem and cortex by the rate of in vivo accumulation of 5-hydroxytryptophan after inhibition of aromatic amino acid decarboxylase with 3-hydroxybenzyl-hydrazine. The activity of the enzyme was higher at mid-dark than mid-light in the two brain areas. Chronic administration of clomipramine increased the enzymatic activity at the two times of day to different levels of significance. In contrast, chronic mianserin led to a decrease but only to different levels of significance in the cortex. The significance of these results are discussed in relation to the theories implicating circadian rhythms in the mechanism of antidepressant action.