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GABAergic Neurons in the Motor Thalamus and Thalamic Reticular Nucleus of Monkeys with Experimental Cortical Focal Epilepsy. C. E. Ribak, S. Farbin, and R. A. E. Bakay (University of California, Irvine, CA; and Emory University, Atlanta, GA, U.S.A.).

Previous studies of the alumina gel model of cortical focal epilepsy have shown a significant loss of GABAergic neurons and axon terminals at the epileptic focus. Since the epileptic focus is created in the hand region of the motor cortex and this area projects to the ventral lateral posterior nucleus (VLp) and the reticular nucleus (TRN) of the thalamus, an examination of GABA neurons in these latter regions was made to determine whether GABAergic neurons are also reduced in number in the thalamus. Immunocytochemical methods for the detection of glutamic acid decarboxylase, the synthesizing enzyme for GABA, were used to identify the GABAergic neurons in VLp and TRN. The GABAergic neurons in VLp displayed small, round cell bodies that had a mean area of $121 \mu\text{m}^2$, whereas those in TRN had fusiform-shaped cell bodies with a mean area of $173 \mu\text{m}^2$. The number of GABAergic neurons per unit area in both these brain regions did not differ between the two sides of the thalamus in brains treated with alumina gel. Therefore, degeneration of GABAergic neurons in the brains of monkeys with cortical focal epilepsy appears to be restricted to the cortex.