The Immunoreactivity of Calbindin on Cerebellum Cortex and Hippocampus of Mice Brain after One Week Exposure to Radiofrequency Radiation

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We investigated the effects of radiofrequency (RF) radiation on calcium binding proteins, reactive gliosis, and tumor genesis in mouse brain. Mice were exposed to radiofrequency radiation in the cage chamber with average specific absorption rate (SAR) of 1.6 W/kg and 4.0 W/Kg for one hour per day for five days. For histochemical studies, RF exposed brains were compared with sham control using calbindin D-28k antibody. The immunoreactivity of calbindin D-28k, a marker for calcium homeostasis was found to increase in dose-response manner in hippocampus and cerebellar cortex. This suggests that the short-term exposure to 835 MHz RF could induce disruption of calcium homeostasis and resulting neurobehavioral changes or brain tumor.