

Effect of electromagnetic field exposure on brain tissue of sd rats from cellular wireless system

Dhirajkumar Gokulchand Agrawal*1, Dr. Paresh J. Shah², Dr. Krishnakant P. Adhiva³

*1, ²Department of Electronics and Telecommunication Engineering, Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, India
³Department of Computer Engineering, Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, India

*Corresponding Author: Dhirajkumar Gokulchand Agrawal

Abstract:

Epidemiological and experimental studies have attempted to evaluate EMF exposure and its effects on living organism by different researchers in their work. The main goal of this paper is evaluate effect of EMF exposure on brain tissue of SD rats from cellular wireless system through test group animals were exposed to electromagnetic field radiations for eight hours per day for thirty days. During exposure period, test animals were placed in Plexiglass boxes. Electromagnetic field radiation transmitter was fitted to the roof of the cage from inside. Rats were exposed to EMR radiations emitted from the transmitter. Control rats were not given any exposure. Histopathological evaluation and oxidative markers measurement were performed on brain tissue, significant decrease in SOD, GSH-PX, CAT, GR (Oxidative markers) level were observed. Brain tissue showed major histopathological alterations as compared to control groups represents that the EMF radiation exposure is a major factor related to EMF radiation toxicity.

Keywords:

Electromagnetic Exposure, Radiation, Cellular Wireless System, SD, SOD, GSH-PX, CAT, GR.