

**Title of Article:** Anxiolytic and behavioural effects of microwave radiation exposure

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**Abstract:** This paper reports the effects of low SAR MW exposures on explorative activities and anxiolytic behaviours Sprague Dawley rats. 30 rats of both sexes, 6-8 weeks old, weighing 90 -130 g were exposed to various values of SAR from MW generator model ER660E from Toshiba UK. Exploratory activity studies were carried out using white-painted wooden board with 4 elevated plus maze (EPM) holes 1 cm diameter and 2 cm depth. Anxiolytic studies were carried out using EPM and Y-maze models. The mean number of dips in the explorative study varied with time after exposure from a minimum of 1.1 in females exposed to 2.39 W.kg<sup>-1</sup> 6 days post-exposure to 15.4. 1 h post-exposure to SAR of 0.48 W kg<sup>-1</sup>, the number reduced from 15.6 ± 4.88 to 8.5 ± 0.58 in males and from 14.8 ± 1.51 to 8.3 ± 0.44 in females. In the anxiolytic activity studies, the variation in the percentage time spent at open end of maze models was from a minimum of 3.92 % with SAR of 2.39 W kg<sup>-1</sup> in males 1 h post exposure, to 75.11 % in females after 15 days. 1 h after exposure, it reduced from 79.13 to 28.45 with females and increased gradually with time to attain the control value after 15 days. These results showed that MW exposures influence the anxiolytic and exploratory behavioural activities in rats.