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## Effect of electromagnetic field induced by radio frequency waves at 900 to 1800 Mhz on growth plate in growing rats

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The aim of the study was to investigate the effects of electromagnetic fields (EMF) exposure on growth plates in growing male rats. For this aim, 33 rats with 2-days-old age were divided into three groups. The rats in control group were kept in the normal conditions with no exposure of EMF. Group 2 and 3 were exposed to 900 and 1800 MHz EMF respectively for 2 hours/day for 90 days at the same time and every day in the pie cage restrainer. The rats in the EMF group experienced a more rapid weight gain and increase in length ( $p<0.05$ ). Calcium, growth hormone, estradiol and testosterone levels in the EMF groups were higher ( $p<0.05$ ). The Safranin O staining density of femoral growth plate was lowest in the reserve zone of rats exposed to 1800 MHz and was increased in the proliferative zone of the control group ( $p<0.05$ ). The trabecular zone was thinnest among all zones and the reserve and proliferative zones were thicker ( $p<0.05$ ) than other zones in 1800 MHz group. In conclusion, 1800 MHz and 900 MHz EMF may cause prolong the growth phase in growing rats.

### Biography

Hatice Ozlem Nisbet has received her DVM from Uludag University, Faculty of Veterinary Medicine in 1990 and her PhD from Uludag University at Faculty of Veterinary Medicine, Department of Surgery in 1997. Following a period in private referral practice she returned to the university in 2004. She is a Researcher and Lecturer in Ondokuz Mayıs University, Faculty of Veterinary Medicine, Department of Surgery, Turkey. She has authored/co-authored over 35 articles in scientific journals.

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