



Recent scientific publications relevant to mobile telephony

March 2011

Details

Argentina: Asymmetries in Hip Mineralization in Mobile Cellular Phone Users, [Saraví, Journal of Craniofacial Surgery](#), 22(2):706-710, Published: March 2011.

'...The different asymmetries between right and left hip dual-energy x-ray absorptiometry values in nonusers and mobile phone users suggest that these devices may adversely affect bone mineralization.'

Bulgaria: An investigation impact of user's positions in closed space over SAR in the head induced from mobile phone, [Atanasov et al., The Environmentalist](#), Published online: 21 February 2011.

'...the highest obtained SAR values in closed space were with 8.5% (for 1 g), 6.7% (for 10-g average SAR), and 15.1% (for average SAR in whole SAM) higher than these of the free space.'

China: Induction of adaptive response: Pre-exposure of mice to 900 MHz radiofrequency fields reduces hematopoietic damage caused by subsequent exposure to ionising radiation, [Cao et al., International Journal of Radiation Biology](#), Published online: 7 February 2011.

'...Pre-exposure of mice to 900 MHz radiofrequency fields has resulted in a significant reduction in hematopoietic damage caused by subsequent exposure to ionising radiation...'

Global: WHO research agenda for radiofrequency fields, [van Deventer et al., Bioelectromagnetics](#), Published online: 14 March 2011.

'The World Health Organization (WHO) has recently published a new research agenda for radiofrequency fields. The document lists high priority and other research needs for health effects research, subdivided into epidemiology, human studies, animal studies, cellular studies and mechanisms, and for social science research.'

India: Bacterial colonization of rings and cell phones carried by health-care providers: are these mobile bacterial zoos in the hospital? [Saxena et al., Tropical Doctor](#), 41(2):116-118, Published: 1 April 2011.

'...Forty-two percent of mobile phones carried by HCWs and 18% carried by the general public were found to carry one or more organisms; 82% of the rings worn by HCWs and 36% of those worn by the general public were found to be positive for the presence of at least one type of microbe.'

India: Effects of low level microwave radiation on carcinogenesis in Swiss Albino mice, [Paulraj et al., *Molecular and Cellular Biochemistry*](#), 348(1):191-197, Published: February 2011.

'...There were insignificant differences either in the mortality or cell proliferation among the control and exposed group. This results show that low level RF or MW do not alter tumor growth and development as evidenced by no observable change in tumor size.'

India: Effects of Radiofrequency Electromagnetic Wave Exposure from Cellular Phones on the Reproductive Pattern in Male Wistar Rats, [Kesari et al., *Applied Biochemistry and Biotechnology*](#), 1-14, Published online: 17 January 2011.

'...It is concluded that radiofrequency electromagnetic wave from commercially available cell phones might affect the fertilizing potential of spermatozoa.'

The Netherlands: Source of funding in experimental studies of mobile phone use on health: Update of systematic review, [van Nierop et al., *Comptes Rendus Physique*](#), Published online: 30 December 2010.

'...Interestingly, the proportion of studies indicating effects declined in 1995-2009, regardless of funding source. Source of funding and conflicts of interest are important in this field of research.'

Norway: The relationship between media use in the bedroom, sleep habits and symptoms of insomnia, [Brunborg et al., *Journal of Sleep Research*](#), Published online: 16 February 2011.

'...The sample comprised 2500 individuals aged 16-40 years drawn randomly from the Norwegian national register...This study indicates that the use of computers and mobile telephones in the bedroom are related to poor sleep habits...'

Norway: Time trends in the prevalence of headache disorders. The Nord-Trøndelag Health Studies (HUNT 2 and HUNT 3), [Linde et al., *Cephalalgia*](#), 31(5):585-596, Published: 1 April 2011.

'...Apart from a small increase of migraine, headache prevalences remained essentially stable among adults in a Norwegian county during an 11-year period.'

South Korea: Lymphoma development of simultaneously combined exposure to two radiofrequency signals in AKR/J mice, [Lee et al., *Bioelectromagnetics*](#), Published online: 23 March 2011.

'...From the results, we suggested that simultaneous exposure to CDMA and WCDMA RF-EMFs did not affect lymphoma development in AKR/J mice.'

Sweden: Non-thermal GSM RF and ELF EMF effects upon rat BBB permeability, [Nittby et al., *The Environmentalist*](#), 1-9, Published online: 28 January 2011.

'...Twenty-five percent of the RF animals had a pathological albumin leakage, while the ELF and RF + ELF groups with three and two pathological findings, respectively, were not significantly different from the control group...'

Sweden: Pooled analysis of case-control studies on malignant brain tumours and the use of mobile and cordless phones including living and deceased subjects, [Hardell et al., *International Journal of Oncology*](#), Published online: 17 February 2011.

'...an increased risk was found for glioma and use of mobile or cordless phone. The risk increased with latency time and cumulative use in hours and was highest in subjects with first use before the age of 20.'

Switzerland: Cognitive Performance Measures in Bioelectromagnetic Research - Critical Evaluation and Recommendations, [Regel et al., *Environmental Health*](#), 10(1):10, Published: 25 January 2011.

'...At present, no underlying biological mechanism has been identified which mediates the effects on brain functioning as observed in electroencephalographic (EEG) studies...'

Turkey: Analysis of the Mobile Phone Effect on the Heart Rate Variability by Using the Largest Lyapunov Exponent, [Yilmaz et al., *Journal of Medical Systems*](#), 34(6):1097-1103, Published: December 2010.

'...This change indicates that the degree of chaos in the HRV signals increased at higher EMF compared to low level EMF. Consequently, we have concluded that high level EMF changed the complexity of cardiac system behavior, significantly.'

USA: Prenatal cell phone use and developmental milestone delays among infants, [Divan et al., *Scandinavian Journal of Work, Environment & Health*](#), Published online: 14 March 2011.

'...No evidence of an association between prenatal cell phone use and motor or cognitive/language developmental delays among infants at 6 and 18 months of age was observed. Even when considering dose-response associations for cell phone, associations were null.'

USA: Walking and talking: Dual-task effects on street crossing behavior in older adults, [Neider et al., *Psychology and Aging*](#), Published online: 14Mar 2011.

'...Our data suggest that multitasking costs may be particularly dangerous for older adults even during everyday activities such as crossing the street.'

USA: Modelling millimetre wave propagation and absorption in a high resolution skin model: the effect of sweat glands, [Gal et al., *Physics in Medicine and Biology*](#), 56(5):1329, Published: 7 March 2011.

'...a significant step towards higher spatial resolution numerical modelling of the skin and shows that microstructures can play a significant role in mm-wave absorption and induced temperature distributions.'

USA: DNA is a fractal antenna in electromagnetic fields, [Blank et al., *International Journal of Radiation Biology*](#), Published online: 28 February 2011.

'...The wide frequency range of interaction with EMF is the functional characteristic of a fractal antenna, and DNA appears to possess the two structural characteristics of fractal antennas, electronic conduction and self-symmetry...'

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