



Recent scientific publications relevant to mobile telephony

## April 2009

### Details

**Australia:** Heat shock protein induction in fetal mouse brain as a measure of stress after whole of gestation exposure to mobile telephony radiofrequency fields, [Finnie et al., Pathology](#), 41(3):276 - 279, April 2009.

*'...Whole of gestation exposure of fetal mouse brains to mobile phone radiofrequency fields did not produce any stress response using HSPs as an immunohistochemical marker.'*

**Australia:** Cell phones and brain tumors: a review including the long-term epidemiologic data, [Khurana et al., Surgical neurology](#), Available online 27 March 2009.

*'...The authors conclude that there is adequate epidemiologic evidence to suggest a link between prolonged cell phone usage and the development of an ipsilateral brain tumor.'*

**Austria:** Association of Tinnitus and Electromagnetic Hypersensitivity: Hints for a Shared Pathophysiology?, [Landgrebe et al., PLoS ONE](#), 4(3):e5026, 2009.

*'...Our data indicate that tinnitus is associated with subjective electromagnetic hypersensitivity...Hence, therapeutic efforts should focus on treatment strategies (e.g. cognitive behavioral therapy) aiming at normalizing this dysfunctional distress network.'*

**Belgium:** In-Situ Measurement Procedures for Temporal RF Electromagnetic Field Exposure of the General Public, [Joseph, Health Physics](#), 96(5):529-542, May 2009.

*'...In this paper, the general public's exposure to FM, GSM, and UMTS over 7 day's time is investigated. The purpose of this paper is to investigate how short-period measurements can be representative for the actual maximal and average exposure during longer periods such as 1 week...'*

**Croatia:** Disturbance of cell proliferation in response to mobile phone frequency radiation., [Trosić et al., Arhiv za Higijenu Rada i Toksikologiju](#) [Archives Of Industrial Hygiene and Toxicology], 60(1):109-115, March 2009.

*'...even if exposure did not affect the number of dividing cells, it may have slowed down cell division kinetics as a consequence of microtubule impairment immediately after exposure.'*

**Finland:** Self-report of physical symptoms associated with using mobile phones and other electrical devices, [Korpinen et al., Bioelectromagnetics](#), Published Online: 27 Apr 2009.

*'...Total prevalence of self-reported physical symptoms associated with using mobile phones and other electrical devices (categories 1 and 2) was 0.7%. In the future it will be possible to obtain new knowledge of these topics by using qualitative methods.'*

**France:** Residential exposure to radiofrequency fields from mobile-phone base stations, and broadcast transmitters: a population-based survey with personal meter, [Viel et al., Occupational & Environmental Medicine](#), Published Online: 30 March 2009.

*'...Despite numerous limiting factors entailing a high variability in RF exposure assessment, but owing to a sound statistical technique, we found that exposures from GSM and DCS base stations increase with distance in the near source zone, to a maximum where the main beam intersects the ground...'*

**Germany:** Mobile phones and health: Media coverage study of German newspapers on possible adverse health effects of mobile phone use, [Elvers et al., Health, Risk & Society](#), 11(2):165 - 179, April 2009.

*'...Most newspapers highlight unspecified, potentially adverse effects and link mobile phone use to the development of cancer, which is not supported by current scientific knowledge. However, in recent years, a slight shift in the foci of reporting can be observed. As these results show, newspapers increasingly acknowledge the existence of scientific uncertainty and provide more detailed information on the topic.'*

**Germany:** Absence of genotoxic potential of 902 MHz (GSM) and 1747 MHz (DCS) wireless communication signals: In vivo two-year bioassay in B6C3F1 mice, [Ziemann et al., International Journal of Radiation Biology](#), Published online: 08 April 2009.

*'...There were no significant differences in the frequency of micronuclei between RF-exposed, sham-exposed, and cage control mice, irrespective of the staining/counting method used...In conclusion, the data did not indicate RF-induced genotoxicity in mice after two years of exposure.'*

**India:** Cell phones and tumor: Still in no man's land, [Kohli et al., Indian Journal of Cancer](#), 46(1):5-12, January 1, 2009.

*'...The evaluation of current evidence provided by various studies to suggest the possible carcinogenic potential of radiofrequency radiation is inconclusive...'*

**India:** Spatial memory performance of Wistar rats exposed to mobile phone, [Narayanan et al., Clinics](#), 64(3):231-234, June 2009.

*'...Mobile phone exposure affected the acquisition of learned responses in Wistar rats. This in turn points to the poor spatial navigation and the object place configurations of the phone-exposed animals.'*

**Iran:** Effects of mobile phone radiofrequency on the structure and function of the normal human hemoglobin, [Mousavy et al., International Journal of Biological Macromolecules](#), 44(3):278-285, 1 April 2009.

*'...The results indicated that mobile phone EMFs altered oxygen affinity and tertiary structure of HbA. Furthermore, the decrease of oxygen affinity of HbA corresponded to the EMFs intensity and time of exposure.'*

**Norway:** Radiation from mobile phone systems: Is it perceived as a threat to people's health?, [Kristiansen et al., Bioelectromagnetics](#), Published Online: 23 Mar 2009.

*'..More than two thirds of the respondents felt that they had received inadequate public information about the 3G system. The results of the study indicate that the majority of the population has little concern about mobile phone radiation while a small minority is very concerned.'*

**Pakistan:** Derangement of chick embryo retinal differentiation caused by radiofrequency electromagnetic fields, [Zareen et al., Congenital Anomalies](#), 49(1):15-19, 2009.

*'...Growth retardation reallocated to growth enhancement on increasing EMF exposure for 15 post-incubation days, with a shift of pigmentation grade from mild to intense. We conclude that EMF emitted by a mobile phone cause derangement of chicken embryo retinal differentiation.'*

**Slovakia:** Immunohistochemical Study of Postnatal Neurogenesis After Whole-body Exposure to Electromagnetic Fields: Evaluation of Age- and Dose-Related Changes in Rats, [Orendáčová et al., Cellular and Molecular Neurobiology](#), March 21, 2009.

*'...Our results indicate that the concerns about the possible risk of EMF generated in connection with production, transmission, distribution, and the use of electrical equipment and communication sets are justified at least with regard to early postnatal neurogenesis.'*

**Spain:** The action of pulse-modulated GSM radiation increases regional changes in brain activity and c-Fos expression in cortical and subcortical areas in a rat model of picrotoxin-induced seizure proneness, [López-Martín et al., Journal of Neuroscience Research](#), 87(6):1484-1499, 2009.

*'...These results suggest a specific effect of the pulse modulation of GSM radiation on brain activity of a picrotoxin-induced seizure-proneness rat model and indicate that this mobile-phone-type radiation might induce regional changes in previous preexcitability conditions of neuronal activation.'*

**Spain:** Electromagnetic pollution from phone masts. Effects on wildlife [Balmori, Pathophysiology](#), Available online 4 March 2009.

*'...Electromagnetic radiation can exert an aversive behavioral response in rats, bats and birds such as sparrows. Therefore microwave and radiofrequency pollution constitutes a potential cause for the decline of animal populations and deterioration of health of plants living near phone masts...'*

**Sweden:** Increased blood-brain barrier permeability in mammalian brain 7 days after exposure to the radiation from a GSM-900 mobile phone, [Nittby et al., Pathophysiology](#), Available online 2 April 2009.

*'...The present findings are in agreement with our earlier studies where we have seen increased BBB permeability immediately and 14 days after exposure. We here discuss the present findings as well as the previous results of altered BBB permeability from our and other laboratories.'*

**UK:** A comparison of foetal SAR in three sets of pregnant female models, [Dimbylow et al., Physics in Medicine and Biology](#), 54(9):2755-2767, 7 May 2009.

*'...The external electric field values required to produce the ICNIRP public exposure localized restriction of 2 W kg<sup>-1</sup> when averaged over 10 g of the foetus are compared with the ICNIRP reference levels.'*

**USA:** Electromagnetic fields and DNA damage [Phillips et al., Pathophysiology](#), Available online 4 March 2009.

*'...This review describes the comet assay and its utility to qualitatively and quantitatively assess DNA damage, reviews studies that have investigated DNA strand breaks and other changes in DNA structure, and then discusses important lessons learned from our work in this area.'*

**USA:** Radiofrequency-Radiation Exposure Does Not Induce Detectable Leakage of Albumin Across the Blood-Brain Barrier, [McQuade et al., Radiation Research](#), 171(5):615-621, May 01, 2009.

*'...Chi-square analysis revealed no significant increase in albumin extravasation in any of the exposed animals compared to the sham-exposed or home cage control animals.'*

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The MMF is an international association of wireless communications manufacturers established to support scientific research in relation to mobile telephony and health [www.mmfai.info](http://www.mmfai.info)

The GSM Association (GSMA) is the global trade association that exists to promote, protect and enhance the interests of GSM mobile operators throughout the world. <http://www.gsmworld.com/health>

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