



Recent scientific publications relevant to mobile telephony

## September 2009

### Details

**Croatia:** Evaluation of basal DNA damage and oxidative stress in Wistar rat leukocytes after exposure to microwave radiation, [Garaj-Vrhovac et al., Toxicology](#), 259(3):107-112, 17 May 2009.

*'...The significant increase in Fpg-detected DNA damage in the exposed rats suggests that oxidative stress is likely to be responsible. DNA damage detected by the standard comet assay indicates that some other mechanisms may also be involved...'*

**Croatia:** Radioprotective effects of honeybee venom (*Apis mellifera*) against 915-MHz microwave radiation-induced DNA damage in wistar rat lymphocytes: in vitro study, [Gajski G., International Journal of Toxicology](#), 28(2):88-98, March/April 2009.

*'...Bee venom is demonstrated to have a radioprotective effect against basal and oxidative DNA damage. Furthermore, bee venom is not genotoxic and does not produce oxidative damage in the low concentrations used in this study.'*

**France:** Occupational exposure to ambient electromagnetic fields of technical operational personnel working for a mobile telephone operator, [Chauvin, et al., Radiation Protection Dosimetry](#), 136(3):185-195, September 1, 2009.

*'...This exploratory investigation has shown that the cluster analysis does not reveal a sufficiently reliable emergence of the two groups, even though certain exposure indicators were significantly different for the two groups...'*

**France:** Effects of Head-Only Exposure of Rats to GSM-900 on Blood-Brain Barrier Permeability and Neuronal Degeneration, [de Gannes et al., Radiation Research](#), 172(3):359-367, September 2009.

*'...No statistically significant albumin leakage was observed...No apoptotic neurons were detected. The findings of our study did not confirm the previous results of Salford et al.'*

**France:** A Confirmation Study of Russian and Ukrainian Data on Effects of 2450 MHz Microwave Exposure on Immunological Processes and Teratology in Rats, [de Gannes, F. P. et al, Radiation Research](#), Published Online: September 1, 2009.

*'...we conclude that, under these exposure conditions (2450 MHz, CW, 7 h/day, 30 days, 0.16 W/kg whole-body SAR), RF-radiation exposure had no influence on several immune and degenerative parameters or on prenatal development.'*

**France:** Radiofrequency exposure in the French general population: Band, time, location and activity variability, [Viel et al., Environment International](#), Available online 4 August 2009.

*'...Most of the time, recorded field strengths were not detectable with the exposure meter. Total field, cordless phones, WiFi-microwave, and FM transmitters stood apart with a proportion above the detection threshold of 46.6%, 17.2%, 14.1%, and 11.0%, respectively...'*

**Global:** COMAR Technical Information Statement: Expert Reviews on Potential Health Effects of Radiofrequency Electromagnetic Fields and Comments on the BioInitiative Report, [COMAR, Health Physics](#), 97(4):348-356, October 2009.

*'...COMAR concludes that the weight of scientific evidence in the RF bioeffects literature does not support the safety limits recommended by the BioInitiative group. For this reason, COMAR recommends that public health officials continue to base their policies on RF safety limits recommended by established and sanctioned international organizations such as the Institute of Electrical and Electronics Engineers International Committee on Electromagnetic Safety and the International Commission on Non-Ionizing Radiation Protection, which is formally related to the World Health Organization.'*

**India:** Mobile phone radiation inhibits *Vigna radiata* (mung bean) root growth by inducing oxidative stress, [Sharma et al., Science of The Total Environment](#), Available online 13 August 2009.

*'...The study concluded that cell phone EMF<sub>r</sub> inhibit root growth of mung bean by inducing ROS-generated oxidative stress despite increased activities of antioxidant enzymes.'*

**Italy:** Mobile phones exposure induces changes of contingent negative variation in humans, [de Tommaso et al., Neuroscience Letters](#), Available online 21 August 2009.

*'...This evidence, limited by the low number of subjects investigated, could be explained in terms of an effect induced by both the GSM signal and the extremely low frequency magnetic field produced by battery and internal circuits.'*

**Japan:** The estimation of 3D SAR distributions in the human head from mobile phone compliance testing data for epidemiological studies, [Wake, K., et al.](#), *Physics in Medicine & Biology*, 54(Number):5695-5706, 1 September 2009.

*'...the proposed method provided good estimation of 3D SAR distribution in the head, especially in the brain, which is the tissue of major interest in epidemiological studies....'*

**South Korea:** Lack of Teratogenicity after Combined Exposure of Pregnant Mice to CDMA and WCDMA Radiofrequency Electromagnetic Fields, [Lee et al., Radiation Research](#), Published Online: September 1, 2009.

*'...we report for the first time that simultaneous experimental exposure to CDMA and WCDMA RF EMFs did not cause any observable adverse effects on mouse fetuses.'*

**Switzerland:** Laypeople's Health Concerns and Health Beliefs in Regard to Risk Perception of Mobile Communication, [Cousin et al., Human and Ecological Risk Assessment: An International Journal](#), 14(6):1235 - 1249, November 2008.

*'...Results indicate that it is important for policy-makers to develop a clear understanding of the possible effects of health beliefs on health concerns and risk perception...'*

**Switzerland:** Assessment of the radio-frequency electromagnetic fields induced in the human body from mobile phones used with hands-free kits, [Kühn, et al., Physics in Medicine & Biology](#), 54(18):5493-5508, 21 September 2009.

*'...a wired HFK considerably reduces the exposure of the entire head region compared to mobile phones operated at the head, even under unlikely worst-case coupling scenarios.'*

**Turkey:** Chronic prenatal exposure to the 900 megahertz electromagnetic field induces pyramidal cell loss in the hippocampus of newborn rats, [Bas et al., Toxicology and Industrial Health](#), 25(6):377-384, July 1, 2009.

*'...although its exact mechanism is not clear, it is suggested that pyramidal cell loss in the cornu ammonis could be due to the 900 megahertz electromagnetic field exposure in the prenatal period.'*

**UK:** Idiopathic environmental intolerance attributed to electromagnetic fields (formerly 'sensitive person syndrome'): An updated systematic review of provocation studies, [Rubin et al., Bioelectromagnetics](#), Published Online: 13 Aug 2009.

*'...Despite the conviction of IEI-EMF sufferers that their symptoms are triggered by exposure to electromagnetic fields, repeated experiments have been unable to replicate this phenomenon under controlled conditions. A narrow focus by clinicians or policy makers on bioelectromagnetic mechanisms is therefore, unlikely to help IEI-EMF patients in the long-term.'*

**USA:** The Effects of Mobile-Phone Electromagnetic Fields on Brain Electrical Activity: A Critical Analysis of the Literature, [Marino, et al., Electromagnetic Biology and Medicine](#), 28(3):250 - 274, September 2009.

*'...The positive reports did not adequately consider the family-wise error rate, the presence of spike artifacts in the EEG, or the confounding role of the two different EMFs. The negative reports contained neither positive controls nor power analyses...'*

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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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