



Recent scientific publications relevant to mobile telephony

January 2009

Details

China: Effect of Superposed Electromagnetic Noise on DNA Damage of Lens Epithelial Cells Induced by Microwave Radiation, [Yao et al., Investigative Ophthalmology and Visual Science](#), 49(5):2009-2015, May 1, 2008.

'...Superposed electromagnetic noise blocks microwave radiation-induced DNA damage, ROS formation, and cell cycle arrest.'

Finland: Enhancement of Chemically Induced Reactive Oxygen Species Production and DNA Damage in Human SH-SY5Y Neuroblastoma Cells by 872 MHz Radiofrequency Radiation, [Luukkonen et al., Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis](#), Available online 24 December 2008.

'...The results of the present study suggest that 872 MHz CW RF radiation at 5 W/kg might enhance chemically induced ROS production and thus cause secondary DNA damage. However, there is no known mechanism that would explain such effects from CW RF radiation but not from GSM modulated RF radiation at identical SAR.'

France: 900 MHz modulated electromagnetic fields accelerate the clathrin-mediated endocytosis pathway, [Moisescu et al., Bioelectromagnetics](#), Published Online: 12 Dec 2008.

'...the clathrin-dependent endocytosis is stimulated by the GSM-EMF, suggesting that the cellular mechanism affected by the modulated EMF involves vesicles that detach from the cell membrane, mainly clathrin-coated vesicles.'

Germany: Mobile phone base stations and adverse health effects: phase 2 of a cross-sectional study with measured radio frequency electromagnetic fields, [Berg-Beckhoff et al., Occupational and Environmental Medicine](#), 66(2): 124-130, February 1, 2009.

'...For the five health scores used, no differences in their medians were observed for exposed versus non-exposed participants...In this large population-based study, measured RF-EMFs emitted from mobile phone base stations were not associated with adverse health effects.'

Germany: Effects of Radiofrequency Electromagnetic Fields (UMTS) on Reproduction and Development of Mice: A Multi-generation Study, [Sommer et al, Radiation Research](#), 171(1):89-95, January 2009.

'...In summary, the results of this study do not indicate harmful effects of long-term exposure of mice to UMTS over several generations.'

Germany: Mobile Phone Use and Risk of Uveal Melanoma: Results of the Risk Factors for Uveal Melanoma Case-Control Study, [Stang et al., Journal of the National Cancer Institute](#), Published online: 13 January 2009.

'...Risk of uveal melanoma was not associated with regular mobile phone use...and we observed no trend for cumulative measures of exposure...'

INTERPHONE: Quantifying the Impact of Selection Bias Caused by Nonparticipation in a Case-Control Study of Mobile Phone Use, [Vrijheid et al., Annals of Epidemiology](#), 19(1): 33-41.e31, January 2009.

'...Refusal to participate in brain tumor case-control studies seems to be related to less prevalent use of mobile phones, and this could result in a downward bias of around 10% in odds ratios for regular mobile phone use. The use of simple selection bias estimation methods in case-control studies can give important insights into the extent of any bias, even when nonparticipant information is incomplete.'

INTERPHONE: Mobile phone use and location of glioma: A case-case analysis, [Hartikka et al., Bioelectromagnetics](#), Published Online: 13 Jan 2009.

'...Our results, though limited by the small sample size, demonstrate that detailed information on tumor location allows evaluation of the risk related to the most heavily exposed part of the brain, representing direct evaluation of the possible local carcinogenic effects of the radiofrequency fields... In conclusion, the results overall do not indicate an association between mobile phone use and the risk of glioma located in the area of the brain likely to receive most of the emitted RF energy...'

Japan: Effects of exposure to a mobile phone on testicular function and structure in adult rabbit, [Salama et al., International Journal of Andrology](#), Published Online: 9 Dec 2008.

'...In conclusion, low intensity pulsed radio frequency emitted by a conventional mobile phone kept in the standby position could affect the testicular function and structure in the adult rabbit.'

Switzerland: Assessment of induced radio-frequency electromagnetic fields in various anatomical human body models, [Kühn et al., Physics in Medicine & Biology](#), 55(4):875-890, 21 February 2009.

'...Our findings suggest that the reference levels of current electromagnetic (EM) safety guidelines for demonstrating compliance as well as some of the current measurement standards are not consistent with the basic restrictions and need to be revised.'

Taiwan: Currents Induced in Human Bodies During Radiofrequency Exposure Near a Cellular Phone Base Station, [Chen et al., Electromagnetics](#), 29(1):13 - 23, January 2009.

'...it is also found that the maximum induced body current density is below the excitation threshold level of 1 mA/cm²...'

UK: Variation of the dielectric properties of tissues with age: the effect on the values of SAR in children when exposed to walkie-talkie devices, [Peyman et al., Physics in Medicine and Biology](#), 54(2):227-241, 21 January 2009.

'...calculate the SAR values in children of age 3 and 7 years when they are exposed to RF induced by walkie-talkie devices. No significant differences

between the SAR values for the children of either age or for adults were observed.'

USA: Review - Cell phones: modern man's nemesis?, [Makker et al., Reproductive BioMedicine Online](#), 18(1):January 2009.

'...The types of cell phones and cell phone technologies currently used in the world are discussed in an attempt to improve the understanding of the technical aspects, including the effect of cell phone exposure on the cardiovascular system, sleep and cognitive function, as well as localized and general adverse effects, genotoxicity potential, neurohormonal secretion and tumour induction...'

USA: Editorial - Mobiles phones and health, [Olsen, Scandinavian Journal of Public Health](#), 37(1):1-3, January 1, 2009.

'...Mobile phone use started more than 20 years ago, and few other new technologies have had a similar popular success. No documented health effects have been linked with any degree of certainty to this exposure, and the non-ionizing radiation it produces may well be completely harmless.'

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

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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