



Recent scientific publications relevant to mobile telephony

May 2010

Details

Australia: Effects of 2G and 3G mobile phones on human alpha rhythms: Resting EEG in adolescents, young adults, and the elderly, [Croft et al., Bioelectromagnetics](#), Published Online: 28 Apr 2010.

'...The results provide further support for an effect of 2G exposures on resting alpha activity in young adults, but fail to support a similar enhancement in adolescents or the elderly, or in any age group as a function of 3G exposure.'

Austria: Are people living next to mobile phone base stations more strained? Relationship of health concerns, self-estimated distance to base station, and psychological parameters, [Augner et al., Indian Journal of Occupational and Environmental Medicine](#), 13(3):141-145, September-December 2009.

'...We conclude that self-declared base station neighbors are more strained than others. EMF-related health concerns cannot explain these findings...'

Finland: Combined effects of 872 MHz radiofrequency radiation and ferrous chloride on reactive oxygen species production and DNA damage in human SH-SY5Y neuroblastoma cells, [Luukkonen et al., Bioelectromagnetics](#), Published Online: 28 Apr 2010.

'...The chemical treatments resulted in statistically significant responses, but no effects from either CW or modulated RF radiation were observed on ROS production, DNA damage or cell viability.'

Global: Brain tumour risk in relation to mobile telephone use: results of the INTERPHONE international case-control study, [The INTERPHONE Study Group, International Journal of Epidemiology](#), Published Online: May 17, 2010.

'...Overall, no increase in risk of glioma or meningioma was observed with use of mobile phones. There were suggestions of an increased risk of glioma at the highest exposure levels, but biases and error prevent a causal interpretation. The possible effects of long-term heavy use of mobile phones require further investigation.'

Greece: Principal component analysis of the P600 waveform: RF and gender effects, [Argiro et al., Neuroscience Letters](#), Available online 30 April 2010.

'...the gender-related functional architecture with regard the P600 component appears to be RF sensitive.'

Italy: Dosimetry of a Set-up for the Exposure of Newborn mice to 2.45-GHz WiFi Frequencies, [Pinto et al., Radiation Protection Dosimetry](#), -, Published online: April 23, 2010.

'...The curve evidenced an SAR pattern varying from <1 W kg to >6 W kg during the first 5 weeks of the life of mice, with a peak resonance phenomenon at a weight around 5 g...'

Netherlands: Assessment of induced SAR in children exposed to electromagnetic plane waves between 10 MHz and 5.6 GHz, [Bakker et al., Physics in Medicine and Biology](#), 55(11):3115, 7 June 2010.

'...In this study, we found that the basic restriction on the SAR wb is occasionally exceeded for children, up to a maximum of 45% in small children...'

Netherlands: Risk and Benefit Perceptions of Mobile Phone and Base Station Technology in Bangladesh, [van Ellen et al., Risk Analysis](#), Published Online: 8 Apr 2010.

'...The results demonstrate that, in general, the perceived benefits of mobile phone technology outweigh the risks...'

Russia: [Autoimmune processes after long-term low-level exposure to electromagnetic fields (the results of an experiment). Part 1. Mobile communications and changes in electromagnetic conditions for the population. Needs for additional substantiation of the existing hygienic standards], [Grigor'ev IuG, Radiatsionnaia biologiiia, radioecologiiia / Rossiiskaia akademiia nauk](#), 50(1):6-11, Jan-Feb 2010.

'...which showed changes in autoimmune status in rats after long-term low-level RF EMF exposure with an incident power density of 500 microW/cm2.'

Russia: [Autoimmune processes after long-term low-level exposure to electromagnetic fields (the results of an experiment). Part 2. General scheme and conditions of the experiment. Development of RF exposure conditions complying with experimental tasks. Animal's status during the long-term exposure], [Grigor'ev IuG, Radiatsionnaia biologiiia, radioecologiiia / Rossiiskaia akademiia nauk](#), 50(1):12-16, Jan-Feb 2010.

'...methods used in the study of immunological effects of long-term low-level (500 microW/cm2) exposure to radiofrequency (2450 MHz) electromagnetic fields...'

Russia: [Autoimmune processes after long-term low-level exposure to electromagnetic fields (the results of an experiment). Part 3. The effect of the long-term non-thermal RF EMF exposure on complement-fixation antibodies against homogenous tissue], [Ivanov AA, Radiatsionnaia biologiiia, radioecologiiia / Rossiiskaia akademiia nauk](#), 50(1):17-21, Jan-Feb 2010.

'...The increase in titres of antibodies against brain homogenates in the sham-exposed and EMF-exposed groups could be explained by the stress-reaction of the animals and autoimmunization of organism.'

Russia: [Autoimmune processes after long-term low-level exposure to electromagnetic fields (the results of an experiment). Part 4. Manifestation of oxidative intracellular stress-reaction after long-term non-thermal EMF exposure of rats], [Grigor'ev IuG, Radiatsionnaia biologiiia, radioecologiiia / Rossiiskaia akademiia nauk](#), 50(1):22-27, Jan-Feb 2010.

'...An increased amount of compounds resulting from interaction of amino acids with nitric oxide (NO) or its derivatives...fatty acids with small chains...was found in blood serum from EMF-exposed rats...'

Russia: [Autoimmune processes after long-term low-level exposure to electromagnetic fields (the results of an experiment). Part 5. Impact of the blood serum from rats exposed to low-

level electromagnetic fields on pregnancy, foetus and offspring development of intact female rats], Liaginskaia AM, [Radiatsionnaia biologiiia, radioecologiia / Rossiiskaia akademiia nauk](#), 50(1):28-36, Jan-Feb 2010.

'...It was shown that intra peritoneal injection of blood serum from IMF exposed rats (chronic 30-day RF exposure at 500 microW/cm²) to intact rats on the 10th day of pregnancy resulted in adverse effects on foetal and offspring development...'

UK: SAR calculations from 20 MHz to 6 GHz in the University of Florida newborn voxel phantom and their implications for dosimetry, [Dimbylow et al., Physics in Medicine and Biology](#), 55(5):1519-1531, 7 March 2010.

'...At 250 MHz, the whole body resonance, the ICNIRP reference level does not provide a conservative estimate of the whole-body-averaged SAR restriction. The reference level is also breached in the range 700–2450 MHz by all of the irradiation geometries considered.'

USA: Electromagnetic fields and cancer: the cost of doing nothing, [Carpenter, Reviews on Environmental Health](#), 25(1):75-80, January-March 2010.

'...These data indicate that the existing standards for radiofrequency exposure are not adequate. While there are many unanswered questions, the cost of doing nothing will result in an increasing number of people, many of them young, developing cancer.'

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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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