



Recent scientific publications relevant to mobile telephony

## September 2007

### Details

**Australia:** Potential GPRS 900/180-MHz and WCDMA 1900-MHz Interference to Medical Devices, [Iskra et al, IEEE Transactions on Biomedical Engineering](#), 54(10):1858-1866, October 2007.

*'... Our conclusion from this and a related study on consumer devices is that WCDMA handsets are unlikely to be a significant interference threat to medical electronics at typical separation distances.'*

**Australia:** The effect of mobile phone electromagnetic fields on the alpha rhythm of human electroencephalogram, [Croft et al, Bioelectromagnetics](#), Published Online: 4 September 2007.

*'...Employing a strong methodology, the current findings support previous research that has reported an effect of MP exposure on EEG alpha power.'*

**Austria:** The dielectric properties of human pineal gland tissue and RF absorption due to wireless communication devices in the frequency range 400–1850 MHz, [Schmid et al, Physics in Medicine and Biology](#), 52(7):5457-5468, 7 September 2007.

*'... These results indicate that temperature-related biologically relevant effects on the pineal gland induced by the RF emissions of typical handheld mobile communication devices are unlikely.'*

**Belgium:** Adolescent Use of Mobile Phones for Calling and for Sending Text Messages After Lights Out: Results from a Prospective Cohort Study with a One-Year Follow-Up, [Van den Bulck, Sleep](#), 30(9):1220-1223, 1 September 2007.

*'...Mobile phone use after lights out is very prevalent among adolescents. Its use is related to increased levels of tiredness. There is no safe dose and no safe time for using the mobile phone for text messaging or for calling after lights out.'*

**France:** Cell Phones and Risk of brain and acoustic nerve tumours: the French INTERPHONE case-control study, [Hours et al, La Revue d'épidémiologie et de santé](#), Published On-line: 10 September 2007.

*'...No significant increased risk for glioma, meningioma or neuroma was observed among cell phone users participating in Interphone. The statistical power of the study is limited, however. Our results, suggesting the possibility of an increased risk among the heaviest users, therefore need to be verified in the international INTERPHONE analyses.'*

**France:** Effect of GSM-900 and -1800 signals on the skin of hairless rats. III: Expression of heat shock proteins, [Sanchez et al, International Journal of Radiation Biology](#), Published online: 08 September 2007.

*'...Under our experimental conditions (local SAR <5 W/kg), there was no evidence that GSM signals alter HSP expression in rat skin.'*

**Italy:** Radiofrequency radiation (900 MHz) induces Egr-1 gene expression and affects cell-cycle control in human neuroblastoma cells, [Buttiglione et al, Journal of Cellular Physiology](#), Published Online: 8 June 2007.

*'...Our results provide evidence that exposure to a 900 MHz-modulated RF radiation affect both Egr-1 gene expression and cell regulatory functions, involving apoptosis inhibitors like Bcl-2 and survivin, thus providing important insights into a potentially broad mechanism for controlling in vitro cell viability.'*

**Japan:** Mobile phone base station radiation does not affect neoplastic transformation in BALB/3T3 cells, [Hirose et al, Bioelectromagnetics](#), Published Online: 10 Aug 2007.

*'...Our studies found no evidence to support the hypothesis that [3G] RF fields may affect malignant transformation. Our results suggest that exposure to low-level RF radiation of up to 800 mW/kg does not induce cell transformation, which causes tumor formation.'*

**Netherlands:** Interference by new generations mobile phones on critical care medical equipment, [van Lieshout et al, Critical Care](#), 11(5):R98, Published Online: 6 September 2007.

*'...Critical care equipment is vulnerable to EMI by new-generation wireless telecommunication technologies with median distances of about 3 cm. The policy to keep mobile phones '1 meter' from the critical care bedside in combination with easily accessed areas of unrestricted use still seems warranted.'*

**Netherlands:** Electroencephalographic, Personality, And Executive Function Measures Associated With Frequent Mobile Phone Use, [Arns et al, International Journal of Neuroscience](#), 117(9):1341-1360, September 2007.

*'...The findings suggest a subtle slowing of brain activity related to mobile phone use that is not explained by differences in personality. These changes are still within normal physiological ranges. Better executive function in mobile phone users may reflect more focused attention, possibly associated with a cognitive training effect (i.e., frequently making phone calls in distracting places), rather than a direct effect of mobile phone use on cognition.'*

**Turkey:** Effects of 900-MHz electromagnetic field emitted from cellular phone on brain oxidative stress and some vitamin levels of guinea pigs, [Meral et al, Brain Research](#), 1169:120-124, 12 September 2007.

*'...It was concluded that electromagnetic field emitted from cellular phone might produce oxidative stress in brain tissue of guinea pigs. However, more studies are needed to demonstrate whether these effects are harmful or/and affect the neural functions.'*

**Switzerland:** Assessment Methods for Demonstrating Compliance With Safety Limits of Wireless Devices Used in Home and Office Environments, [Kuhn et al, IEEE Transactions on Electromagnetic Compatibility](#), 49(3):519-525, August 2007.

*'...Since operation in the near-field of these devices cannot be excluded, dosimetric evaluation is the most straightforward technique for testing compliance when low-power exclusions are not applicable. The suitability of*

*the suggested methods is demonstrated through the examination of five classes of short-range transmitters.'*

**USA:** Effects of low-level radio-frequency (3 kHz to 300 GHz) energy on human cardiovascular, reproductive, immune, and other systems: A review of the recent literature, [Jauchem, International Journal of Hygiene and Environmental Health](#), Published Online: 9 August 2007.

*'...On the basis of previous reviews of older literature and the current review of recent literature, there is only weak evidence for a relationship between RFE and any endpoint studied (related to the topics above), thus providing at present no sufficient foundation for establishing RFE [radio-frequency energy] as a health hazard.'*

**USA:** Outlook - Cell phones and male infertility: dissecting the relationship, [Deepinder et al, Reproductive BioMedicine Online](#), 15(3):266-270, September 2007.

*'...Evidence of detrimental effect of mobile phones on male fertility is still equivocal as studies have revealed a wide spectrum of possible effects ranging from insignificant effects to variable degrees of testicular damage...Studies performed on human males are scarce and therefore further studies with a careful design are needed to determine the effect of cell phone use on male-fertilizing potential.'*

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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. [www.gsmworld.com](http://www.gsmworld.com)

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