



Recent scientific publications relevant to mobile telephony

## August 2010

### Details

**Greece:** Comparison of biological effects between continuous and intermittent exposure to GSM-900-MHz mobile phone radiation: Detection of apoptotic cell-death features, [Chavdoula et al., Mutation Research/Genetic Toxicology and Environmental Mutagenesis](#), 700(1-2):51-61, 19 July 2010.

*'...In the present experiments we show that intermittent exposure also decreases the reproductive capacity and alters the actin-cytoskeleton network of the egg chambers, another known aspect of cell death that was not investigated in previous experiments, and that the effect is also due to DNA fragmentation...'*

**Japan:** Two-Dimensional Electrophoretic Analysis of Radio Frequency Radiation-Exposed MCF7 Breast Cancer Cells, [Kim et al., Journal of Radiation Research](#), 51(2):205-213, 25 March 2010.

*'...As we were unable to observe any significant and reproducible changes in the protein expression profiles of the RF radiation-exposed MCF7 cells using high throughput and non-high throughput techniques, it seems unlikely that RF exposure modulates the protein expression profile.'*

**Japan:** Parameter variation effects on temperature elevation in a steady-state, one-dimensional thermal model for millimeter wave exposure of one- and three-layer human tissue, [Akio et al., Physics in Medicine and Biology](#), 55(16):4647, 21 August 2010.

*'...By considering the variation range of thermal and tissue thickness parameters which causes the maximum and minimum temperature elevations, the dominant parameter influencing the surface temperature elevation was found to be the heat transfer coefficient between the body surface and air.'*

**Netherlands:** Electromagnetic fields and the blood-brain barrier, [Stam, Brain Research Reviews](#), Available online 13 June 2010.

*'...The balance of experimental evidence does not support an effect of 'non-thermal' radiofrequency fields with microwave and mobile phone frequencies on BBB permeability...'*

**South Africa:** Mobile Phone Radiation Does Not Induce Pro-apoptosis Effects in Human Spermatozoa, [Falzone et al., Radiation Research](#), 174(2):169-176, August 2010.

*'...Mobile phone radiation had no statistically significant effect on any of the parameters studied. This suggests that the impairment of fertility reported in some studies was not caused by the induction of apoptosis in spermatozoa.'*

**Spain:** Mobile Phone Mast Effects on Common Frog (*Rana temporaria*) Tadpoles: The City Turned into a Laboratory, [Balmori, Electromagnetic Biology and Medicine](#), 29(1–2):31-35, June 2010.

*'...These results indicate that radiation emitted by phone masts in a real situation may affect the development and may cause an increase in mortality of exposed tadpoles...'*

**Turkey:** Effect of mobile phone station on micronucleus frequency and chromosomal aberrations in human blood cells, [Yildirim et al., Genetic Counselling](#), 21(2):243-251, 2010.

*'...Our results show that there was not a significant difference of MN frequency and chromosomal aberrations between the two study groups. The results claim that cellular phones and their base stations do not produce important carcinogenic changes.'*

**UK:** Cole–Cole parameters for the dielectric properties of porcine tissues as a function of age at microwave frequencies, [Peyman et al., Physics in Medicine and Biology](#), 55(15):N413-N419, 7 August 2010.

*'...The data underpinning the model relate to pig tissue as a function of age. Altogether, we provide the Cole–Cole parameters for 14 tissue types at three developmental stages.'*

**UK:** SAR in a child voxel phantom from exposure to wireless computer networks (Wi-Fi), [Findlay et al., Physics in Medicine and Biology](#), 55(15): N405-N411, 7 August 2010.

*'...Both plane-wave exposure of the model and irradiation from antennas in the near field were investigated for a variety of exposure conditions. In all situations studied, the SAR values calculated were considerably below basic restrictions...'*

**UK:** Exposure to GSM RF Fields Does Not Affect Calcium Homeostasis in Human Endothelial Cells, Rat Pheochromocytoma Cells or Rat Hippocampal Neurons, [O'Connor et al., PLoS ONE](#), 5(7):e11828, Published: July 27, 2010.

*'...We conclude that under the conditions employed in our experiments, and using a highly-sensitive assay, we could not detect any consequence of RF exposure.'*

**Ukraine:** Risks of carcinogenesis from electromagnetic radiation of mobile telephony devices, [Yakymenko et al., Experimental Oncology](#), 32(2):54–60, July 2010.

*'...The lack of generally accepted mechanism of biological effects of low-intensive non-ionizing radiation doesn't permit to disregard the obvious epidemiological and experimental data of its biological activity...'*

**USA:** Adverse Influence of Radio Frequency Background on Trembling Aspen Seedlings: Preliminary Observations, [Haggerty, International Journal of Forestry Research](#), 2010(Article ID 836278):7, 2010.

*'...This study suggests that the RF background may have strong adverse effects on growth rate and fall anthocyanin production in aspen, and may be an underlying factor in aspen decline.'*

**USA:** Brain cancer incidence trends in relation to cellular telephone use in the United States, [Inskip et al., Neuro-Oncology](#), Published Online: July 16, 2010.

*'...No increases were apparent for temporal or parietal lobe cancers, or cancers of the cerebellum, which involve the parts of the brain that would be more highly exposed to radiofrequency radiation from cellular phones...Overall, these incidence data do not provide support to the view that cellular phone use causes brain cancer.'*

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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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