Recent scientific publications relevant to mobile telephony

February 2014

Details

China: Dosimetric study on eye's exposure to wide band radio frequency electromagnetic fields: Variability by the ocular axial length, Li et al., *Bioelectromagnetics*, Published online: 10 February 2014.

> *'...changing the OAL does not increase EMF absorption in the eyes or the eye tissues. No additional induced temperature rise was produced by the changes of OAL...'*

Finland: Radiation Proteomics: A Brief Overview, Leszczynski, *PROTEOMICS*, Published online: 23 December 2013.

> *'...Proteomics, supplemented with other "omics" techniques, might be the best way forward to find out the target molecules of radiation, the biomarkers of radiation exposure and the physiological and health significance of the acute and delayed biological effects caused by the exposures to high and low-dose radiation...'*

Jordan: Evaluation of selected biochemical parameters in the saliva of young males using mobile phones, Abu Khadra et al., *Electromagnetic Biology and Medicine*, Posted online on February 5, 2014.

> *'...exposure to electromagnetic radiation may exert an oxidative stress on human cells as evidenced by the increase in the concentration of the superoxide radical anion released in the saliva of cell phone users.'*

The Netherlands: What input data are needed to accurately model electromagnetic fields from mobile phone base stations?, Beekhuizen et al., *Journal of Exposure Science and Environmental Epidemiology*, Online publication: 29 January 2014.

> *'...3D radio wave propagation modelling is a feasible approach to predict outdoor RF-EMF levels for ranking exposure levels in epidemiological studies, when 3D building data and information on the antenna height, frequency, location and direction are available.'*

Russia: The in vivo effects of low-intensity radiofrequency fields on the motor activity of protozoa, Sarapultseva et al., *International Journal of Radiation Biology*, Posted online on February 6, 2014.

> *'...low-dose exposure to RF-EMF can significantly affect the motility of irradiated ciliates and their non-exposed offspring...'*

South Korea: Risk perception and public concerns of electromagnetic waves from cellular phones in Korea, Kim et al., *Bioelectromagnetics*, Published online: 5 February 2014.

> *'...where the group with high risk perception of electromagnetic waves and the group with low risk perception were used as dependent variables, indicated that the risk perception of electromagnetic waves in women was 1.815 times statistically significantly higher than the risk perception of men...'*

Spain: Analysis of estimation of electromagnetic dosimetric values from non-ionizing radiofrequency fields in conventional road vehicle environments, Aguirre et al., *Electromagnetic Biology and Medicine*, Posted online on January 24, 2014.

'...a dosimetric evaluation inside a conventional car is performed, with the aid of an in-house 3D Ray Launching computational code, which has been compared with measurement results of wireless sensor networks located inside the vehicle...'

Sweden: Radio frequency electromagnetic field compliance assessment of multi-band and MIMO equipped radio base stations, Thors et al., *Bioelectromagnetics*, Published online: 13 February 2014.

'...field combining methods generally considered as conservative could be used to efficiently assess compliance boundary dimensions of single- and dual-polarized multicolumn base station antennas with only minor increases in compliance distances.'

Switzerland: Exposure to Radio-Frequency Electromagnetic Fields From Broadcast Transmitters and Risk of Childhood Cancer: A Census-based Cohort Study, Hauri et al., *American Journal of Epidemiology*, Published online: February 19, 2014.

'...This large census-based cohort study did not suggest an association between predicted RF-EMF exposure from broadcasting and childhood leukemia. Results for CNS tumors were less consistent, but the most comprehensive analysis did not suggest an association.'

Switzerland: Modeling of EEG electrode artifacts and thermal ripples in human radiofrequency exposure studies, Murbach et al., *Bioelectromagnetics*, Published online: 13 February 2014.

'...the mechanism of interaction between RF and changes in the EEG power spectrum remains unknown.'

Switzerland: Use of mobile phones and brain cancer risk in children? Chapter in *Tumors of the Central Nervous System*, 13:293-300, 2014.

'...Overall these data do not suggest an increased brain tumor risk from using mobile phones. However, some uncertainties remain...further monitoring of childhood brain tumor incidence rate time trends is warranted given the dramatic public health consequences of even a small individual risk increase.'

Turkey: Effect of long-term exposure of 2.4GHz radiofrequency radiation emitted from Wi-Fi equipment on testes functions, Dasdag et al., *Electromagnetic Biology and Medicine*, Posted online on January 24, 2014.

'...long-term exposure of 2.4GHz RF emitted from Wi-Fi (2420μW/kg, 1g average) affects some of the reproductive parameters of male rats...'

Turkey: The effects of long-term exposure to a 2450MHz electromagnetic field on growth and pubertal development in female Wistar rats, Sangun et al., *Electromagnetic Biology and Medicine,* Posted online on January 24, 2014.

'...Exposure to 2450MHz EMF, particularly in the prenatal period, resulted in postnatal growth restriction and delayed puberty in female Wistar rats...'

UK: UK case control study of Brain Tumours in Children, Teenagers and Young Adults: a Pilot study, Feltbower et al., *BMC Research Notes*, 7(1):14, Published: 8 January 2014.

'...Half of cases and almost two-thirds of controls reported using a mobile phone with the majority starting between 10-14 years of age...'
