



Recent scientific publications relevant to mobile telephony

## November 2015

### Details

**Australia:** Characterizing the Human Body as a Monopole Antenna, [Kibret et al., IEEE Transactions on Antennas and Propagation](#), 63(10):4384-4392, October 2015

*'...the human body resonates between 40 and 60 MHz depending on the posture of the body...A minimum reflection coefficient of -12 dB is measured which demonstrates that the human body can be potentially used as an antenna. Theoretically, it is predicted that the human body can be an efficient antenna with a maximum radiation efficiency reaching up to 70%....'*

**China:** Exposure to 3G mobile phone signals does not affect the biological features of brain tumor cells, [Liu et al., BMC Public Health](#), 15(1):764, Published: 8 August 2015.

*'...Our findings implied that exposing brain tumor cells in vitro for up to 48h to 1950-MHz continuous TD-SCDMA electromagnetic fields did not elicit a general cell stress response...*

**Germany:** Miniaturized Transmission-Line Sensor for Broadband Dielectric Characterization of Biological Liquids and Cell Suspensions, [Meyne et al., IEEE Transaction on Microwave Theory and Techniques](#), 63(10):3026-3033, October 2015.

*'...sensor is used between 850 MHz and 40 GHz to detect the broadband permittivity of liquid samples such as aqueous salt and protein solutions. The experimentally detected contrast between living and dead Chinese hamster ovary cells in suspension is significant...'*

**Iran:** The effect of superposition of 900 MHz and incoherent noise electromagnetic fields on the induction of reactive oxygen species in SP2/0 cell line, [Kazemi et al., International Journal of Radiation Research](#), 13(3):275-280, July 2015.

*'...Altogether our results cannot support the neutralizing effect of noise theory but may confirm the concept that just the coherent fields can be bioeffective while the incoherent noise fields cannot cause any biological effects.'*

**Malaysia:** Evaluating the performance of electromagnetic fields (EMF) research work (2003–2013), [Abdullah et al., Scientometrics](#), 105(1):261-278, October 2015.

*'...Most of the cited articles focused mainly on radiation risk and biological effects of EMF. The fields of Engineering & Physics produced the highest number of articles while Epidemiology journals showed the most outstanding performance across all fields...Only 20 % (341) of the publications involved international collaboration, the majority of these among European-European and Europe-North American countries/regions...'*

**Nigeria:** Exposure to mobile phone electromagnetic field radiation, ringtone and vibration affects anxiety-like behaviour and oxidative stress biomarkers in albino wistar rats, [Shehu et al., Metabolic Brain Disease](#), (1-8), November 2015.

*'... the present study indicates that 4 weeks exposure to electromagnetic radiation, vibration, ringtone or both produced a significant effect on anxiety-like behavior and oxidative stress in young wistar rats.'*

**Spain:** A Source-based Measurement Database for Occupational Exposure Assessment of Electromagnetic Fields in the INTEROCC Study: A Literature Review Approach, [Vila et al., \*Annals of Occupational Hygiene\*](#), Published online: October 21, 2015.

*'...constructed a database with measurements and complementary information for the most common sources of exposure to EMF in the workplace, based on the responses to the INTERPHONE-INTEROCC study questionnaire. This database covers the entire EMF frequency range and represents the most comprehensive resource of information on occupational EMF exposure...'*

**Switzerland:** Symptoms and Cognitive Functions in Adolescents in Relation to Mobile Phone Use during Night, [Schoeni et al., \*PLoS ONE\*](#), 10(7):e0133528, Published: July 29, 2015.

*'...being awakened during night by mobile phone was associated with an increase in health symptom reports such as tiredness, rapid exhaustibility, headache and physical ill-being, but not with memory and concentration capacity. Prevention strategies should focus on helping adolescents set limits for their accessibility by mobile phone, especially during night.'*

**The Netherlands:** Validity of at home model predictions as a proxy for personal exposure to radiofrequency electromagnetic fields from mobile phone base stations, [Martens et al., \*Environmental Research\*](#), 142(221-226), October 2015.

*'...the correlation between model predictions and 24 h personal RF-EMF measurements is lower than with at home measurements. However, the use of at home RF-EMF field predictions from mobile phone base stations in epidemiological studies leads to significant exposure misclassification that will result in a loss of statistical power to detect health effects.'*

**The Netherlands:** Environmental Radiofrequency Electromagnetic Fields Exposure at Home, Mobile and Cordless Phone Use, and Sleep Problems in 7-Year-Old Children, [Huss et al., \*PLoS ONE\*](#), 10(10):e0139869, Published: October 28, 2015.

*'...Given the different results across the evaluated RF-EMF exposure sources and the observed association between mobile phone use and the negative control sleep scale, our study does not support the hypothesis that it is the exposure to RF-EMF that is detrimental to sleep quality in 7-year old children, but potentially other factors that are related to mobile phone usage.'*

**UK:** Cohort profile: UK COSMOS—a UK cohort for study of environment and health, [Toledano et al., \*International Journal of Epidemiology\*](#), November 3, 2015.

*'The United Kingdom COhort Study of MObile phone uSe and health (UK COSMOS) is a prospective cohort study established to investigate the possible health effects associated with long-term use of mobile phones and other wireless technologies, to inform public health policy in the UK and beyond. UK COSMOS is part of the international COSMOS cohort study consortium (the UK, Sweden, The Netherlands, Finland, Denmark and France) on mobile phones and health, which has over 300 000 study participants across the six partner countries...'*

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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. [www.gsma.com/mobile-and-health](http://www.gsma.com/mobile-and-health)

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