

New 'Brennpunkt' by Diagnose-Funk

Group of Ukrainian scientists assesses available studies on ROS

## Mobile phone radiation leads to oxidation in cells

The Ukrainian group of scientists around Igor Yakymenko at the *Institute of Experimental Pathology, Oncology and Radiobiology* in Kiev consider it to be proven that mobile phone radiation leads to harmful oxidation processes in cells through the overproduction of free radicals. In the editorial "*Low intensity radiofrequency radiation: a new oxidant for living cells*" in the scientific journal "*Oxidants and Antioxidants in Medical Science*" of 29 March 2014 the group reported that of 80 studies, they had assessed, 92,5 % (= 76 studies) confirmed that mechanism of inflicting damage. "Unexpectedly, a strong non-thermal character of biological effects" had been documented, the group of scientists wrote. Low intensity radiofrequency radiation (RFR) emitted by mobile phone end-user devices "could lead to mutagenic effects through expressive oxidative damage of DNA", because "the substantial overproduction of ROS in living cells under low intensity RFR exposure could cause a broad spectrum of health disorders and diseases, including cancer in humans".

Oxidative stress is considered to be the main cause of exhaustion, headaches, inflammatory diseases, all the way to heart attacks. The results of the scientists from Kiev explain the acutely critical nature of the hype around mobile phones, smartphones and wifi. According to latest statistics, children and young people use mobile phone end-user devices near their bodies on average for more than 8 hours a day. Therefore, they are permanently exposed to potential damage.

These findings once again strip the German and international legal limits, based on the guidelines by ICNIRP, of their legitimacy. The legal limits are based on the denial of such non-thermal effects. These research results show, how - for the sake of profit - users are exposed to this radiation unprotected. The time of denial of non-thermal effects and the relativization of the current state of research in order to protect business interests must stop. Diagnose-Funk e.V. asks all scientists to confront public authorities with these study results, and to demand a change in favour of the precautionary principle.

### Link and Download:

Fulltext Yakymenko et al. & Diagnose-Funk 'Brennpunkt': [www.mobilfunkstudien.de](http://www.mobilfunkstudien.de)

<http://www.scopemed.org/fulltextpdf.php?mno=154583>

1 Oxidative stress occurs when oxidative effects by free radicals (e.g. hydrogen peroxide) exceed the ability of antioxidant systems to neutralize them and the balance is in favor of oxidation. The damage in the cells can be oxidation of unsaturated fatty acids, proteins and DNA.

2 ROS ( Reactive Oxygen Species) : Oxygen containing molecules that are highly unstable and highly interactive with other molecules. They are formed by the incomplete one-electron reduction of oxygen. They extract electrons from other molecules becoming radicals themselves. Thus a chain reaction is initiated which can cause cellular damage by oxidative stress. These ROS include superoxides, peroxides, hydroxyl radical and hypochlorous acid.

3 "Increasing incidence of burnout due to magnetic and electromagnetic fields of cell phone networks and other wireless communication technologies", Ulrich Warnke, Peter Hensinger, *umwelt - medizin - gesellschaft* | 26 | 1/2013, Download from <http://mobilfunkstudien.de/dokumentationen/v-z/warnke-mobilfunk-foerdert-stress-und-burnout.php>

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### Diagnose-Funk

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### Diagnose-Funk

is an international environmental and consumer-rights organisation, which fights for the protection from electromagnetic fields and radiation.

It is the aim of Diagnose Funk to inform the public of the harmful effects of electromagnetic fields from its different sources on the health and the environment. In doing so, Diagnose Funk is not in any way dependent on industry or politics. These efforts are to provoke change in behaviour on the part of consumers and politicians, and the push for solutions, involving the use of technologies that are both fit for the future and in harmony with the environment.