

BioEM 2015 Report by Dariusz Leszczynski
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Just as last year, Professor Dariusz Leszczynski attended the annual BioEM meeting with support from the Pandora Foundation and the Competence Initiative. Leszczynski is among the researchers who have acquired international respect for scientific work on molecular biological effects of radiofrequency electromagnetic fields. But what distinguishes him the most is that he has placed ethics and morality above his career path. In his report on the BioEM2015, Leszczynski offers an insight into the current status of research. He demonstrates that a reliable judgement is still not possible on the potential risks of radiofrequency radiation on human health; he names the research approach that could achieve decisive progress, and criticizes the numerous wrong tracks that pretend to increase our knowledge of this subject.

1) Leszczynski's topics of interest:

a) Citing the IARC decision classifying radiofrequency radiation as "possibly carcinogenic", Leszczynski comes to the conclusion that measures following the precautionary principle and aiming to reduce human radiation exposure are indeed justified. Yet, he fears that these measures will not be implemented as long as they are not obligatory.

b) Leszczynski is convinced all studies performed thus far on electrohypersensitivity, which are quoted as proof against electromagnetic fields causing health disorders, are unsuitable in their approach to justify such conclusions. For him, the biggest obstacle to progress is the attitude of the scientists who obviously lack ideas for new research approaches.

c) Leszczynski also doubts the validity of epidemiological and human studies that measure mobile phone user's EMF exposure in minutes/day. Because of the very different radiation exposures that can be achieved in the same time period, this approach reduces the health risk of highly exposed persons— possibly even below the limit of detectability.

d) Despite Leszczynski's distinct criticism of a number of the presentations, attending the BioEM conferences can be beneficial. One example he cited was the excellent presentation by Raymond Neutra on the understanding of the mechanisms of EMF-effects with the title "A typology of EMF physical induction mechanisms".

2) Leszczynski feels that the BioEM conferences do not live up to their claim to be the annual top event for scientists working in the area. As he does not mention the reasons why, I would like to add:

a) In his contribution *Increasing Bias towards False Negative Replications?* in *Bioelectromagnetics* dated 18/01/2011, the former BEMS President Niels Kuster complains about the increasing culture of partisanship in science (biased scientific culture) at the BEMS. On another occasion he quite openly calls BEMS the society of negative results.

b) How right Kuster is has been demonstrated by the response of the audience at the BEMS2003 Conference in Maui, Hawaii, where the REFLEX-Consortium funded by the European Union - with Leszczynski and me as members - presented data on genotoxic effects of ELF- and RF-EMF. This presentation ended up in chaos amid great laughter by the audience, although the findings have since been replicated by other researchers.

c) As long as debates aim at avoiding defending the principles of science against industry complaisant ideas, they are without merit. That has been shown at the plenary sessions on the topics *Precautionary Principle* and *Electrohypersensitivity* at BioEM2015. They lost their meaning, as in the subsequent discussion no one tried to examine the contrary opinions in regard of their scientific value.

d) Leszczynski's justified wish that the authors of important epidemiological and animal studies present their results at the BioEM conferences for discussion and when possible, in the presence of representatives from ICNIRP, WHO, BioInitiative, etc. – although most welcome - will never come true. From the beginning it has been clear that the contrary opinions of the conference attendees on science, based on their different natures, cannot be overcome.

3) At the end, Leszczynski criticizes that at BioEM2015 a great number of bioelectromagnetic topics have been dealt with, but presentations on the biological effects of EMF directly on humans have been very few. It is his opinion, however, that it is nearly impossible without such investigations on human subjects to prove that EMF can cause physiological changes relevant for pathogenesis. Based on his professional experience, he suspects that research projects of this kind are undermined by the decision makers in policy and industry out of fear of the consequences. That his suspicion is correct may be exemplified by the following almost unbelievable incident.

After the EU-funded REFLEX Study which I coordinated ended in mid-2004, I prepared a REFLEX follow-up study together with another research consortium including Leszczynski's team, With the title "Potential health effects of mobile phone radiation in childhood and adolescence" (Acronym: MOPHORAD) it corresponds exactly with the topic, Leszczynski missed so much at BioEM2015. On February 25, 2008, I submitted the grant application to the EU. On May 28, 2008, I received the result of the evaluation. With an excellent score of 12.5 out of a possible 15 funding was recommended. However, half a year later, on December 9, 2008, I was given notice from the Commission that MOPHORAD would not be funded.

What happened in the six months between evaluation and decision? Professor Alexander Lerchl from the private Jacobs University in Bremen, who worked for years in the interest of the mobile communication industry, obviously applied the emergency brakes to MOPHORAD. He did this by inventing the story that the results of the REFLEX Study, on which the new grant application was based, were obtained by data fabrication. With this smear campaign he indeed succeeded to prevent the funding of the highly evaluated MOPHORAD-Study. In recognition of his services, Lerchl was subsequently rewarded by the Government, which appointed him a member of the German Commission for Radiological Protection. This rapid rise in his career was followed seven years later by a similarly sudden fall. In spring 2015 he was sentenced by the Hamburg District Court because of defamation in connection with the REFLEX Study. However, he has not been punished for his real crime, the prevention of the MOPHORAD-Study.