

Written Statement

of **Dariusz Leszczynski**, PhD, DSc

for the meeting of the Standing Committee on Health

of the House of Commons of Canada

on April 23, 2015

- Two doctorates: in Molecular Biology (Jagiellonian Univ., Poland) and in Biochemistry (Helsinki University, Finland)
- Currently
 - Adjunct Professor of Biochemistry, University of Helsinki, Finland
 - Chief Editor of *Frontiers in Radiation and Health*, Lausanne, Switzerland
 - Member of the Advisory Board of Cellraid, Ltd, Oulu, Finland
- Formerly
 - Research Professor and Head of Radiation Biology Laboratory at STUK – Radiation and Nuclear Safety Authority, Finland
 - Visiting Professor at Harvard, USA; Zhejiang, China; Swinburne, Australia
 - Expert in hearing before the Appropriations Committee of the US Senate in 2009
 - Member of the Expert Working Group of the International Agency for Research on Cancer that in May/June 2011 classified cell phone radiation as a possible human carcinogen (Group 2B)

BIASED MEMBERSHIP SELECTION FOR SCIENCE EVALUATING COMMITTEES LEADS TO BIASED OPINIONS

When scientific evidence is unclear, contradictory or ambivalent, careful and unbiased interpretation of it is of paramount importance. However, as it is often the case, unclear, contradictory or ambivalent scientific evidence gives a room for a diverse interpretation and often hampers, or may even prevent the development of a consensus opinion. Diverse interpretations may lead to development of contradictory expert opinions, causing confusion impairing development of rational recommendations aimed at protecting the general population.

This is the current situation in area of cell phone- and wireless communication-emitted radiation. Unclear, contradictory or ambivalent experimental evidence led to development of diverse scientific interpretations and to polarization of the scientific opinions into two extremes: “no-effect-opinion” and “harmful-effect-opinion”. This extreme polarization of opinions, and unwillingness of experts to participate in an unbiased debate, prevents reaching scientific consensus.

Currently, there is no scientific consensus in the matter of biological and health effects of exposures to radiation emitted by cell phones and wireless communication devices. In spite of

claims from some groups of scientists and from the telecom industry, recent comment by the Head of the World Health Organization's EMF Project, Dr. Emilie van Deventer, negates any consensus claims. Dr. Deventer, in a comment given '[The Daily Princetonian](#)' [1] states: *"There is no consensus, it's true. There's a big group and a little group, but it's still two groups. I can't tell you that there's one group that is completely correct."*

Statement confirming the existence of two groups with different opinions is correct. However, talk about a "big" and a "small" group is a pure speculation of Dr. Deventer, because the size of the groups was never examined. From my nearly 19 years' experience in this area of research, I know that the vast majority of the scientists do not take openly a side in the debate. However, there are two, of limited-size, vocal groups of scientists speaking for the "no-effect-opinion" or for the "harmful-effect-opinion".

There are three levels of interpretation of the scientific evidence. The first level is executed by scientists performing research and interpreting its meaning in published peer-reviewed experimental studies. The second level of interpretation is executed by scientists writing review articles, summarizing scientific evidence in a specific area of research, and providing generalized interpretation of the results obtained in numerous individual experimental studies. The third level of interpretation is executed by groups of scientists, members of various committees, attempting generalized interpretation of the scientific evidence using both, individual experimental studies and review studies.

The third-level interpreters of science – committees – are of most use for the decision makers, developing protective measures for the general population. Decision makers are not science experts and rely on committees to provide advice.

This is the reason why unbiased opinions, expressed by various science evaluation committees, are of paramount importance.

Opinions of various committees are largely defined by the expert composition of the committee. In an ideal committee, all valid scientific opinions should be sufficiently well represented and open and unbiased scientific debate should be used to develop unbiased expert opinion, ideally representing a consensus. In ideal committee, experts would not have conflict of interest issues and would be independent of any kind of lobbying. In ideal committee, only science would matter.

Nearly all the committees dealing with health effects of radiation emitted by wireless communication devices have a problem of biased expert selection, potential conflict of interest and/or potential influence by an industrial lobby, which may occur in spite of set up "firewalls".

The majority of the committees consist of scientists having the same expert opinion. Individual committees' experts commonly do not reflect all current scientific opinions. Few examples of the most influential committees are:

- ICNIRP ("no-effect-opinion") is a committee where current members of the Main Commission select new members to the Main Commission.

- ICES/SC4 (“no-effect-opinion”) is a committee where any scientist can apply to participate but the committee is clearly dominated, including chairmanship, by the industrial experts who have a strong number-advantage in any voting situation.
- SCENIHR (“no-effect-opinion”) is a committee dealing with a broad variety of risks, of which wireless communication is only a small part. Only two members of SCENIHR are experts in health effects of radiation emitted by wireless communication devices. These two SCENIHR experts select ad-hoc experts to develop reviews of science – clearly these ad-hoc experts are selected by SCENIHR experts to have the same opinion as SCENIHR experts.
- BioInitiative (“harmful-effect-opinion”) is a committee where members are selected based on similarity of expert opinions.
- ICEMS (“harmful-effect-opinion”) is a committee where members are selected based on similarity of expert opinions.

The same biased expert selection problem concerns the national expert groups that developed advisory opinions in Sweden (SSI), United Kingdom (AGNIR), Australia (ARPANSA), and for the Health Canada to update the Safety Code 6.

The composition of the Health Canada expert committee, similarly to other mentioned committees, was clearly biased towards the “no-effect-opinion” and some of the experts are known to advise/consult the telecom industry. This is a serious potential conflict of interest.

The above mentioned and currently used system of “firewalls”, to protect experts from influence of industry, does not work. Industry sponsors know who receives funding; sponsored scientists know who provides funding. Industry and lobbyists do not need to say “things” aloud and scientists understand “things” that are not said.

This is especially worrisome development when the influential committee, like ICNIRP, is in part funded by the industry through “firewall” of the Royal Adelaide Hospital in Australia. ICNIRP experts know very well that if the opinions of ICNIRP will be unfavorable for the telecom industry, the sponsorship may end. The “firewall” is only a gimmick.

Currently, WHO EMF Project is preparing evaluation of the scientific evidence concerning health effects of radiation emitted by the wireless communication devices – the so-called ‘Environmental Health Criteria for RF-EMF’ (EHC). The problem with the draft document of EHC, which will be used as a basis for the development of the final EHC, is the lack of balanced presentation of the scientific evidence. [The process of writing the EHC draft was clearly dominated by ICNIRP scientists](#) [2] and those with “no-effect-opinion”; such as M. Feychting, G. Oftedal, E. van Rongen and M.R. Scarfi. The reason behind this situation is caused by the fact that the Head of the WHO EMF Project, Dr. Emilie van Deventer, is an engineer and has no expertise whatsoever in evaluation bio-medical research. She has to fully rely, and trust, in opinions of others.

EHC document that will be in due time prepared under the auspices of WHO EMF Project will have a global impact on billions of users of wireless technology and on the multitrillion dollar business. This is why it is very disturbing that preparation of such a document is solely reflecting

opinions of ICNIRP, an organization with firm, single-sided, “no-effect-opinion”. This is a very disturbing situation where one group of experts is given preferential treatment only because of their “close link” with the WHO and where other relevant expert opinions are deliberately and arbitrarily excluded without any scientific debate.

Recommendations for decision makers, developed by committees where memberships are consistently biased towards either “no-effect-opinion” or “harmful-effect-opinion” (ICNIRP, ICES/SC4, SCENIHR, BioInitiative, ICEMS, SSI, AGNIR, ARPANSA, Health Canada, etc), are not representative of the whole currently available scientific evidence and should be dismissed until the proper, unbiased evaluation takes place.

To my knowledge, there was only one scientific committee, IARC Working Experts group in 2011, where the full scope of diverse scientific opinions was represented. The scientists, in an open and unbiased debate, developed an opinion that radiation emitted by wireless communication devices is a possible human carcinogen (Group 2B of IARC scale). IARC classification completely disagreed with the one-sided opinions of ICNIRP, ICES/SC4, SCENIHR, BioInitiative, ICEMS, SSI, AGNIR, ARPANSA and Health Canada.

An attempt in 2012 to develop [‘The Round-Table Initiative’](#) [3] where experts representing different scientific opinions would, through unbiased debate, develop a broad consensus opinion, has failed, because e.g. [ICNIRP](#) [4], [BioInitiative](#) [5] and [MMF](#) [6] refused to participate.

Until an unbiased scientific debate takes place, where all scientific opinions will be duly represented and evaluated, the opinions developed by committees such as e.g. ICNIRP, ICES/SC4, SCENIHR, BioInitiative, ICEMS, SSI, AGNIR, ARPANSA and Health Canada, based on biased expert selections, should be dismissed by decision makers as insufficient.

According to the document of the European Union on Precautionary Principle, there are three criteria that need to be fulfilled in order to implement Precautionary Principle, and all of them are currently fulfilled:

- Criterion #1 – Scientific information is insufficient, inconclusive, or uncertain – IARC classification of cell phone radiation as possible carcinogen (Group 2B)
- Criterion #2 – There are indications that the possible effects on human health may be potentially dangerous – three replicates of epidemiological case control studies (European Interphone, Swedish Hardell and French CERENAT) show an increased risk of brain cancer in long-term avid users
- Criterion #3 – Effects are inconsistent with the chosen level of protection – epidemiological studies, showing increased risk in long-term avid users, were generated in populations using regular cell phones, meeting all current safety standards; this means that the current safety standards are insufficient to protect users because risk of developing cancer increases in long-term avid users.

Opponents of the Precautionary Principle need to understand that precaution does not equal prevention of use of wireless technology. Requirements to develop more efficient, less-radiation-emitting, technology and further biomedical research on radiation effects will create new

knowledge through research and will create new jobs in research and technology. Implementation of the Precautionary Principle will not prevent technological developments. Claims by some that the implementation of the Precautionary Principle will cause “economic stagnation” are unfounded.

In the current situation, of inadequate review of scientific evidence by groups of scientists with biased selection of members, and until the round-table, unbiased review is performed; decision makers should implement the Precautionary Principle. The reason is not because the harm was proven beyond doubt but because the harm is possible and evidence is uncertain, and suggesting that harmful health effects are possible.

The Precautionary Principle was developed just for such a kind of situations where scientific uncertainty with concomitant indications of possible harm requires society to wait for more scientific evidence and for better evaluation of the scientific evidence. Saying, “better to be safe than sorry” applies here.

Links mentioned in the statement:

[1] <http://dailyprincetonian.com/news/2015/03/u-office-removes-statement-about-safety-of-wi-fi-radiation-following-activist-pressure/>

[2] <https://betweenrockandhardplace.wordpress.com/2014/12/22/challenge-for-dr-van-deventer-of-the-who-emf-project/>

[3] <https://roundtableinitiativeoncellphones.wordpress.com/>

[4] <https://roundtableinitiativeoncellphones.wordpress.com/2013/02/11/formal-response-from-icnirp/>

[5] <https://roundtableinitiativeoncellphones.wordpress.com/2013/02/10/response-from-the-bioinitiative-2/>

[6] <https://roundtableinitiativeoncellphones.wordpress.com/2013/02/18/response-from-michael-milligan-secretary-general-of-the-mmhf/>