

# Australian Centre for Radiofrequency Bioeffects Research (ACRBR)

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# "ACRBR Position Statement on BioInitiative Report"



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## The ACRBR Perspective on The BioInitiative Report

In 2007 a group of interested individuals collated a series of views on the non-ionising radiation health debate. This was entitled the BioInitiative Report<sup>1</sup>, a web document dated August 31, 2007. The BioInitiative Report presents a series of views that argue for a change in public exposure standards, but which are largely inconsistent with current scientific consensus. The ACRBR have received numerous queries about this report from the general public, and have provided this document to answer a few questions to clarify its perspective on the report.

## Do the BioInitiative Report authors represent an authoritative international body?

Often in assessing public health issues, bodies are formed to evaluate evidence and offer recommendations about particular issues. The model that most scientific expert bodies in this area (e.g. World Health Organisation (WHO)) employ is to engage independent experts to provide a review and recommendations on an issue. Independent experts are engaged because it is meant to provide an objective evaluation of the issue. This contrasts strongly with the BioInitiative Report, which is the result of the opinions of a self-selected group of individuals who each have a strong belief that does not accord with that of current scientific consensus. An indication of this may be seen in the group's stated purpose, which is "to document the reasons why current public exposure standards for non-ionizing electromagnetic radiation are no longer good enough to protect public health" (Section 2, page 1), rather than to provide a scientific evaluation of the issue. Similarly, the standard model normally seeks a consensus view. In terms of the BioInitiative Report, the preface by Carpenter and Sage state that this is not a consensus document, but is rather a collection of individual views, where "the information and conclusions in each chapter are the responsibilities of the authors of that chapter" (Section i, page 1). Thus the 'Summary for the Public and Conclusions', released both independently and as part of the full Report, should be read as Sage's view on the matter, and there is no indication in the Report that the authors of other chapters share her views. This does not mean that what is written in the Report is invalid, but it means that we need to evaluate the content of the report itself, and cannot rely on there being a consensus from an independent authoritative body to help us judge the merits of these conclusions.

#### What is the scientific status of the BioInitiative Report?

In science we generally differentiate between peer-reviewed and non-peer-reviewed publications, where the peer-review comes from independent experts in the area. The reason for this is that peer-reviewed work is only published after independent scientific peers have reviewed the work and agreed with its scientific merit, making it easier for the reader to be confident with conclusions drawn in the publication. Conversely, without independent peer review, there is far less opportunity to correct errors and ensure that the conclusions are appropriate, and thus scientists treat peer-reviewed publications as their main scientific literature source. It should be noted that this does not mean that publications lacking independent peer review are flawed (or for that matter that peer-reviewed publications are perfect), it is more that scientists would typically withhold judgment about publications until peer review has occurred.

The BioInitiative Report has not undergone such independent peer review, and so the conclusions that it reaches would normally be viewed more as views of some of the authors, rather than strong contributions to science. In fact the Report does not identify the level of review that it has

undergone, merely mentioning that "another dozen outside reviewers have looked at and refined the Report" (Section 1, page 4). This is particularly important since many of the statements and conclusions in the Report are contrary to scientific consensus. Thus rigorous scientific evaluation would need to be performed to determine whether the inconsistencies are due to errors in the report, or errors in the scientific consensus. While such independent peer review would normally be undertaken prior to publication (to avoid misleading conclusions should problems be identified), some informal independent peer review has now occurred *in response to* publication of the BioInitiative Report. For example, the Health Council of the Netherlands (HCN) recently published a report that noted a number of inadequacies in the BioInitiative Report, inadequacies that would normally be addressed during the peer review process<sup>2</sup>.

Of particular note is that the BioInitiative Report does not appear to apply principles consistently, which biases its conclusions. For example, in arguing for a link between 50/60 Hz power lines and breast cancer, the Report does not consider some of the evidence that argues against such an association. It also provides an argument for excluding other evidence (poor exposure assessment) that is not employed for studies arguing for an association between 50/60 Hz power lines and childhood leukemia (even though they are subject to the same exposure assessment limitations; see Section 12 of the Report). Another issue is that there are statements that do not accord with the standard view of science, and the Report does not provide a reasonable account of why we should reject the standard view in favour of the views espoused in the Report.

#### Should we be convinced by the BioInitiative Report?

Overall we think that the BioInitiative Report does not progress science, and would agree with the Health Council of the Netherlands<sup>2</sup> that the BioInitiative Report is "not an objective and balanced reflection of the current state of scientific knowledge" (page 4). As it stands it merely provides a set of views that are not consistent with the consensus of science, and it does not provide an analysis that is rigorous-enough to raise doubts about the scientific consensus.

It is worth noting that the state of science in this area is continually being debated and updated by a number of expert bodies comprised of the leading experts in this field. For example, the World Health Organisation (WHO) Electromagnetic Fields (EMF) project<sup>3</sup>, the International Commission on Non-Ionizing Radiation Protection (ICNIRP)<sup>4</sup>, the UK Mobile Telecommunications and Health Research (MTHR) programme<sup>5</sup>, and here in Australia the Australian Radiation Protection and Nuclear Science Agency (ARPANSA)<sup>6</sup> have all provided authoritative analyses of the electromagnetic radiation bioeffects research. The WHO Environment Health Criteria 238 also provides a thorough analysis of the literature to date in relation to extremely low frequency (ELF, or powerline electromagnetic fields)<sup>7</sup>. We have provided some web links to these below, and would strongly urge the interested reader to consult these for a balanced perspective on this fascinating research domain.

<sup>&</sup>lt;sup>1</sup> BioInitiative Report: A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF), August 31, 2007 <a href="http://www.bioinitiative.org/report/index.htm">http://www.bioinitiative.org/report/index.htm</a>.

<sup>&</sup>lt;sup>2</sup> Health Council of the Netherlands. BioInitiative report. The Hague: Health Council of the Netherlands, 2008; publication no. 2008/17E. http://www.gr.nl/pdf.php?ID=1743&p=1

http://www.who.int/peh-emf/en/

<sup>&</sup>lt;sup>4</sup> http://www.icnirp.de/

<sup>5</sup> http://www.mthr.org.uk/documents/MTHR report 2007.pdf

<sup>&</sup>lt;sup>6</sup> http://www.arpansa.gov.au/mobilephones/index.cfm

http://www.who.int/peh-emf/publications/Complet DEC 2007.pdf