"They Kept Telling Us What To Do"

A Rare Look Behind the RF Curtain at WHO Review of Animal Studies Takes Center Stage

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The World Health Organization (WHO) has been trying to manipulate its long-running assessment of RF–cancer risks, according to a prominent Swiss toxicologist.

Meike Mevissen, who was commissioned by the WHO to lead a systematic review on RF and cancer in animals six years ago, is charging that her study team had to defend itself from interference.

"They tried to tell us how to do our work," she said in an interview with *Infosperber*, a Swiss online news service, published in mid-January.

"Research is very political," she told Pascal Sigg, a freelance reporter working with *Infosperber.* "We are constantly confronted with the attitude that there cannot be any health risks."

Mevissen is a professor at the University of Bern and the head of its Veterinary Pharmacology and Toxicology faculty. She has spent most of her professional career studying electromagnetic radiation and cancer in laboratory animals —at both RF and power frequencies.

Her animal-cancer systematic review is one of 12 on potential RF ill effects, commissioned by WHO's Emilie van Deventer, the head of its radiation and health unit in Geneva. Together they will be used to prepare a summary report, known as an Environmental Health Criteria (EHC) document. It's designed to be WHO's official word on where RF science stands.

The EHC is being written by a 21-member ad hoc group set up by van Deventer three years ago and chaired by Hajo Zeeb, an

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epidemiologist at the Leibniz Institute in Bremen, Germany. (Here's a brief history of the RF EHC.)

Van Deventer has run the project behind closed doors, with no public disclosure on how the review teams and the ad hoc panel were selected —or how they do their work. Everything has been kept secret.

Now, Mevissen is shining a light on some of what's been going on behind the scenes.

[Our original news story, published last year, on Mevissen's RF-animal cancer systematic review is here.]

[On July 14, 2026, Mevissen and coworkers posted a corrected version of the paper. They stressed that the revisions did not cause "any significant change in the outcomes or the conclusions of this systematic review."]

Insisting on a Meta-Analysis

All the RF systematic reviews —except one— include a meta-analysis, a quantitative technique used to integrate similar studies to reach a summary conclusion. A meta-analysis may be appropriate when the studies are sufficiently similar but is ill-advised if they have different designs or are of varying quality.

The single RF systematic review that does not have a meta-analysis is Mevissen's. It was "inappropriate due to the heterogeneity in study methods," her team explained in their published paper. The various animal studies —there were 52 in all —were too different to be combined, they stated.

But the WHO kept insisting they do a meta-analysis. Mevissen told Sigg:

> "The WHO's expert responsible for systematic reviews … wanted to take over the meta-analysis of the studies to be considered. He wanted to select for us which studies were even eligible for evaluation. But this was precisely one of our key contributions. We constantly had to defend ourselves, even though we had assembled the world's leading experts on this topic."

Mevissen's eight-member study team includes Kurt Straif, the former head of the IARC Monographs section in Lyon, and Andrew Wood of Swinburne University of Technology in Melbourne, who also serves as an ICNIRP scientific expert.

Mevissen went on to explain:

> "Essentially, the WHO wanted us to lump all the selected studies together and then look at the average. However, there are different study designs, involving different animal species and sexes —which are known to produce different results. Therefore, a methodology that doesn't take this into account shouldn't be used. A systematic approach is good, but one shouldn't forget important findings from experimental cancer research and toxicology."



Meike Mevissen

Mevissen did not name the expert applying the pressure on behalf of the WHO; she only described him as someone who had never worked on animal studies.

But, in a subsequent interview with *Microwave News,* Mevissen pointed to Jos Verbeek, a physician at the Amsterdam Medical Center and a member of Zeeb's panel.

"Verbeek coordinated work on the RF systematic reviews and wanted them all to be as homogenous as possible, regardless of the science behind it," she told me. Verbeek served as one of the editors of a special issue of *Environment International,* the journal where all the reviews are published.

I asked Verbeek why he so wanted a meta-analysis despite Mevissen's objections. He replied that his response had to be limited because WHO meetings on the systematic reviews are confidential. But he went on to offer his own opinion:

> "For any systematic review, that includes at least two sufficiently similar studies, conclusions should preferably be drawn in the form of a pooled effect size resulting from a meta-analysis. There is no reason why this would not apply to animal studies."

In an editorial for the special issue of the journal, Verbeek and the other editors, including Zeeb and van Deventer, single out Mevissen's team for "deviating from the protocol." Whether their synthesis is "valid," they warned, "remains to be seen." (An excerpt of what they wrote is below.)

A similar critique is spelled out —more harshly— in a letter to the editor of the journal by a group led by Ken Karipidis, an Australian radiation official who serves as vice chair of ICNIRP. (Karipidis led the WHO review of human studies, which itself has been criticized as seriously flawed; more about that in a moment.)

Karipidis's letter, in turn, prompted a reply from Mevissen, who wrote in part:

> "Karipidis et al. seem to be under the impression that all bioassays in animals, regardless of design and toxicological target, are of equal value in determining if cancer can occur in animals for use in determining the risks of human cancers. This is simply not true."

The Stakes Are High

Mevissen's review is the only one of the dozen WHO RF systematic reviews to declare a clear cancer link. Some of the others point to uncertain risks, but her animal review stands apart. Here is Mevissen's final conclusion at the end of the 45-page paper:

> "The findings of this systematic review indicate that there is evidence that RF EMF exposure increases the incidence of cancer in experimental animals."

This runs contrary to the long-held views of ICNIRP and the WHO EMF program. They have always maintained that there are no long-term health effects of RF radiation beyond heating, and, emphatically, that there is no plausible cancer risk. Indeed, ICNIRP has specifically dismissed the two key animal studies —NTP and Ramazzini— as unconvincing.

But there is even more at stake than challenging ICNIRP's and WHO's thermal dogma. In 2019, following the release of NTP and Ramazzini results, IARC was advised to take a new look at its classification of RF radiation with an eye toward upgrading RF to a *probable* cancer risk. This recommendation was reiterated in 2024.

Elisabete Weiderpass, the director of IARC, has so far declined to schedule a new evaluation. Three years ago, she put her chips on the Japanese-Korean RF–animal project, known as NTP Lite. It appeared that she was banking on it to be negative and make the issue moot. It was a bad bet.

Earlier this month, those results were finally released —years late — and, as expected, neither supports a cancer link. But NTP Lite has a credibility problem. The project did not go according to plan, and many questions remain as to its design and what went wrong.

How To Find What You Want

"I do know one thing about animal studies," Mevissen said in her *Infosperber* interview, "You can design them in such a way that you find nothing, by creating statistical noise that obscures relevant effects," adding, "If I'm supposed to proceed like that, I wouldn't even bother starting."

Ironically, one of the other WHO RF systematic reviews offers a textbook example of what was worrying Mevissen. It's the Ken Karipidis review on human studies. His team concluded that the epidemiological studies show no cancer risk, based on a meta-analysis. But they stacked the deck by including a well-known ringer —the Danish Cohort Study, which purports to show no link to cancer. Verbeek, van Deventer and others ignore the fact that IARC —itself part of WHO— had judged the DCS to be meaningless due to its faulty design. Under their watch, Karipidis was able to wash away the brain tumor risk seen in the Interphone and Hardell studies, the same ones that had led IARC to designate RF as a possible human carcinogen in 2011 (more here.)

Support for Mevissen

February 1, 2026

Two members of the RF research community have offered support for Meike Mevissen and her team's decision not to do a meta-analysis of the animal studies.

In a letter published by *Environment International,* Igor Belyaev and Suleyman Dasdag write:

> "Accumulating experimental and mechanistic evidence indicates that meta-analysis may not be appropriate for RF-EMF exposures, particularly at non-thermal intensities and under conditions where biological responses depend on specific exposure parameters rather than absorbed energy alone."

They conclude: "[Q]uantitative pooling across highly heterogeneous RF-EMF animal cancer studies is unlikely to provide a meaningful summary measure of carcinogenic hazard."

Belyaev is the head of the Radiobiological Department at the Biomedical Research Center in Bratislava, Slovak Republic; Dasdag is with the medical faculty of Istanbul Medeniyet University in Turkey. Both are commissioners of ICBE-EMF, which was set up as a counterbalance to ICNIRP in 2022.

NOTES

1. Mevissen has past experience with the ever-present political dimension of electromagnetic health research. In the 1990s while still a graduate student in Wolfgang Löscher's lab at the University of Veterinary Medicine in Hanover, Germany, Mevissen ran a series of animal studies which showed that power-frequency EMFs play a role in the development of breast cancer. This finding, which ran counter to prevailing dogma —as it does today— was dismissed by a senior official at NIEHS, who was running a multi-million, Congressionally-mandated research program on power line EMFs. That official, Gary Boorman, waged a dirty tricks campaign to discredit the work. In the end, NIEHS issued Löscher and Mevissen a formal apology. (More here.) Mevissen was a member of the IARC expert panels which evaluated the cancer risks of both EMFs and on RF —in 2001 and 2011, respectively.

2. In their editorial for the collection of systematic reviews in *Environment International,* Verbeek, together with Zeeb and van Deventer, among others, distanced themselves from the Mevissen finding:

> "Despite [many] obstacles, the teams remained committed to and largely succeeded in delivering comprehensive, high-quality systematic reviews. One notable exception was the systematic review on the effects of RF EMF on cancer in experimental animals, which stood out due to its use of a different synthesis method. The authors concluded that there was an effect of RF EMF if two studies showed statistically significant results, disregarding null findings from other studies. This approach deviated from the protocol, which had indicated the use of relative risk as the primary synthesis method.

> Despite extensive discussions with editors and peer reviewers, they concluded that there was high-certainty evidence of an effect on cancer. Whether this method proves valid –and whether alternative synthesis approaches would yield the same conclusion—remains to be seen."

3. Last year, the German Federal Office for Radiation Protection (BfS) rejected the conclusions of the Mevissen systematic review. More here. The BfS is the single largest sponsor of ICNIRP, which has played an outsized role in the preparation of the WHO RF reviews. In her interview with *Infosperber,* Mevissen singled out the BfS for criticism, offering it as an example of a group that "constantly dismisses everything." She said: "The Federal Office wants science to state that there are no effects."

4. Two years ago, two Norwegian researchers showed how meta-analysis was misused to mask data pointing to RF hazards in one of the first WHO systematic reviews, which was published back in 2023. It's the one on experimental studies of pregnancy and birth outcomes in non-human mammals. Else Nordhagen and Einar Flydal presented their detailed examination in *Reviews of Environmental Health,* a peer-reviewed journal. They concluded that the work's "conclusions are without scientific value," and that the paper should be retracted. Among the 15 authors of the pregnancy review are Canada's James McNamee and Australia's Andrew Wood, both of whom are also members of the Mevissen team that prepared the animal-cancer review. Another author is Jos Verbeek.

5. In his March 2026 "Health Matters" column —a regular feature of the *IEEE Microwave Magazine*— James Lin, a former ICNIRP commissioner, criticizes the set of WHO RF systematic reviews. He writes that they "displayed unequivocal but misguided bias for the ICNIRP RF exposure guidelines for human safety, with faulty scientific analysis and justification." Lin takes special aim at the use of meta-analyses, stressing that, "Simply put, MAs are inappropriate for the WHO SRs." He closes by agreeing with *Microwave News* that the "WHO Gets an 'F' on RF."

6. A number of the WHO RF reviews have been met with withering criticism. *Microwave News* has been tracking the project for years; here are some links:

- Corrected Version of the Systematic Review (2026)
- WHO Gets an 'F' on RF (2025)
- Will WHO Kick Its ICNIRP Habit? (2019—2025)
- WHO Review Finds Cancer Risk in RF-Exposed Animals (2025)
- ICBE-EMF Sees "Major Flaws" in WHO RF–Cancer Review (2025)
- Old Wine in New Bottles: Decoding the ICNIRP-WHO Cancer Review (2024-2025)
- ICNIRP Revamp: Closer Ties to WHO EMF Project (2023)
- New Challenge to ICNIRP, Dissident Scientists Seek Tighter Health Limits (2022-2023)
- Aussies Claim No Tumor Link; Skepticism Abounds (2019)

Meike Mevissen, WHO, IARC, ICNIRP, systematic reviews, RF animal studies, cancer, Kurt Straif, Andrew Wood, Emilie van Deventer, Hajo Zeeb, Jos Verbeek, Ken Karipidis, Elisabete Weiderpass, Danish cohort study, NTP, NTP Lite, BfS, Igor Belyaev, Suleyman Dasdag, ICBE-EMF, Else Nordhagen, Einar Flydal, James Lin,

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