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How FDA Spins the Science on Cellphone Radiation and Human Health Risks

Despite a \$30-million “gold standard” study demonstrating clear cancer risks from cellphone radiation, the U.S. Food and Drug Administration and the telecom industry continue to spin the science and create doubt.

By Suzanne Burdick, Ph.D.

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Editor's note: *This is the first in a three-part series examining key questions in the public debate on the safety of wireless radiation. Part I addresses the question, How did the FDA arrive at its position on cellphones and cancer?*

The U.S. Food and Drug Administration (FDA) claims there's not enough scientific evidence to link cellphone use to [health problems](#) — but according to [Devra Davis, Ph.D., MPH](#), a toxicologist and epidemiologist, the FDA's claim is untrue and misleading.

Davis spoke with The Defender about the important backstory leading up to the FDA's position on cellphone radiation as it relates to human health.

To support its statement — that “the weight of [scientific evidence](#) has not linked exposure to radio frequency energy from cell phone use with any health problems” — the FDA references a 2008-2018 literature review it conducted on [radiofrequency \(RF\) radiation and cancer](#).

After completing the review, the [FDA stated](#): “To date, there is no consistent or credible scientific evidence of health problems caused by the exposure to radio frequency energy emitted by cell phones.”

However, Davis said the FDA's review was never signed. In other words, the names of the individuals who authored the report were never publicly released.

Davis has authored more than 200 peer-reviewed publications in books and journals, ranging from the Lancet to the Journal of the American Medical Association. She is the founding director of the Board on Environmental Studies and Toxicology of the U.S. National Research Council at the [National Academy of Sciences](#) and the founder and president of [Environmental Health Trust](#).

Davis, who worked as a scientific adviser under multiple presidential administrations said, “Normally, when you have a review at that high level it's quite consequential and it's always signed.”

“The reason it was unsigned, I believe,” Davis told [The Defender](#), “is because no one in the FDA was willing to put their name behind such a piece of junk. It was absolute nonsense,” she said. “It ignored many publications and only relied on an incredibly skewed interpretation of the literature — and I'm being generous when I say it like that.”

Davis pointed out that the FDA issued the review shortly after the [National Toxicology Program](#) (NTP) completed its multi-year \$30 million study on cellphone radiation.

In that study, NTP researchers concluded there was “clear evidence” that [male rats exposed to high levels of RF](#) like that used in 2G and 3G cellphones developed cancerous heart tumors, and “some evidence” of tumors in the brain and adrenal gland of exposed male rats.

The NTP for decades has been the premier governmental testing program for [pharmaceuticals](#), [chemicals](#) and radiation, said Davis, who served on the board of scientific counselors for the NTP when it was first started in the 1980s.

‘Gold Standard’ NTP study findings suppressed

Davis told The Defender that the government had access to a “gold standard program testing with positive results” that were consistent with and corroborated [dozens of other studies](#). “It wasn’t like it [the NTP study] was a one-off study,” she said.

Once the word got out that the findings of the NTP study were positive — meaning the government researchers had found an association between cellphone radiation and the growth of cancerous tumors — the telecommunication industry “started its tactics” to suppress the findings, Davis said.

Davis has been researching such tactics for more than a decade. This fall she plans to release a new edition of her 2010 book, “[Disconnect](#): The Truth About Cell Phone Radiation, What the Industry Is Doing to Hide It, and How to Protect Your Family.”

Instead of the NTP study report being released in 2016 when it was first ready, she said, the [telecom industry](#) exerted pressure to subject the study’s conclusions to an unprecedented level of scrutiny.

“When the first drafts began to circulate internally, it was elevated for a peer review unlike any that has ever been conducted in the history of the entire program — and I can say that with great certainty. No other compound or substance [studied by the NTP] has ever been subject to this level of peer review,” Davis said.

A [panel of external scientific experts](#) convened for a three-day [review of the study](#) and its conclusions in March 2018.

However, rather than downplaying the study’s conclusions, the experts concluded that the scientific evidence in the study was so strong that they recommended the NTP reclassify some of its conclusions from “some evidence” to “clear evidence” of carcinogenic activity.

Davis — who attended the three-day review — said, “The reviewers that had been picked were people who were top-of-the-game toxicologists from Proctor and Gamble, from [Nokia] Bell Labs. [They were] industry toxicologists, but they were straight-up people.”

Davis said many of the experts spoke with her privately. “The woman from Proctor and Gamble was concerned about her kids. She said, ‘This [[cellphone radiation](#)] is not appropriate.’ I said, ‘Yes, that’s what we’ve been trying to say for some time.’”

More than 250 scientists — who together have published over [2,000 papers and letters](#) on the biologic and health effects of non-ionizing electromagnetic fields (EMFs) produced by wireless devices, including cellphones — signed the [International EMF Scientist Appeal](#), which calls for health warnings and stronger exposure limits.

FDA rejects study it solicited, ‘spins’ it as faulty

When the experts' review of the NTP study was released, the FDA — which in 1999 requested the study and reviewed all its protocols, interim reports and final reports — the agency in November 2018, [repudiated the study](#) and in February 2020, released the [unsigned literature review](#) that criticized the study.

"They [the FDA] suddenly said, 'Well, the exposure chambers [used in the study] are not relevant to humans. The [radiation] levels were too high,'" Davis said. "They were not."

Davis was not alone in disagreeing with the FDA's rejection of the NTP study. More than 20 scientists, including Davis, wrote a [letter calling on the FDA](#) to retract the literature review. Many scientists [individually wrote](#) to the FDA as well.

Moreover, the Environmental Health Trust wrote a 188-page [report on the FDA's inaccuracies](#) in its research review and safety determinations about cellphone radiation.

[Joel Moskowitz, Ph.D.](#), director of the Center for Family and Community Health at the University of California, Berkeley, who has [researched cellphone radiation](#) for over a decade, identified nine "[biased statements](#)" made about the NTP study that "tend to create doubt about data quality and implications."

In "[SPIN vs FACT: National Toxicology Program report on cancer risk from cellphone radiation](#)," Moskowitz lists and counters each statement. For example, Moskowitz noted that the claim the study's conclusions were faulty was rebutted by the [study report](#) itself.

Moskowitz also pointed out that [Christopher Portier, Ph.D.](#), a retired head of the NTP who helped launch the study and still sometimes works for the federal government as a consultant scientist, [told Scientific American](#), "This is by far — far and away — the most carefully done cell phone bioassay, a biological assessment."

How telecom industry war-gamed study's results to manufacture doubt

According to Davis, the telecom industry has for decades influenced governmental agencies such as the FDA to "manufacture doubt" about scientific studies — such as the NTP study — that do not benefit it.

She pointed out that in the early 1990s, Motorola launched a "[disinformation campaign](#) to confuse the public." According to the Environmental Health Trust:

"When first reports that cell phone radiation could damage DNA emerged from the laboratory of [Henry Lai](#) and [N.P. Singh](#) [both researchers at the University of Washington, Seattle] in the 90's, a memo written by Motorola to their media advisors in 1994 announced the clear strategy that remains alive and well: war-game the science."

The "wargame" memo — first [released by Microwave News](#) (see page 13) — showed that Norman Sandler of Motorola's corporate communications department on Dec. 13, 1994, wrote to Michael Kehs of the Burson-Marsteller public relations firm in Washington to plan how Motorola would respond to Lai and Singh's findings.

Sandler and Kehs had a three-point plan to impede further scientific research on how cellphone radiation might cause DNA damage and to create public doubt in such studies. The plan involved:

1. Delaying — or halting — Lai and Singh from continuing their DNA research.

2. Preventing other scientists from replicating the study, or carefully selecting scientists who would.
3. Convincing the press and the public using industry-selected scientists that the Lai-Singh DNA study results were of marginal importance and with questionable relevance in regard to the question of whether cellphones are safe for humans.

"I think we have sufficiently war-gamed the Lai-Singh issue, assuming SAG [the Scientific Advisory Group] and CTIA [the Cellular Telecommunications Industry Association] have done their homework," Sandler said.

Sandler said Motorola's executive vice president was "adamant" that the industry come up with a "forceful one- or two-sentence portion of our standby statement that puts a damper on speculation arising from this research."

Sandler proposed the industry say:

"While this work raises some interesting questions about possible biological effects, it is our understanding that there are too many uncertainties — related to the methodology employed, the findings that have been reported and the science that underlies them — to draw any conclusions about its significance at this time."

"That exact message," Davis said, "keeps getting repeated and is well-funded to create doubts."

She added:

"The [telecom] industry has been very effective in their war games against science and scientists. We have to do a better job of clarifying the [science](#) and countering misleading and selective data from industry."

Next in this series: [What's behind the 5G rollout?](#)

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views of Children's Health Defense.

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