U.S. NTP Quits RF

Promised Studies on Mechanisms Never Done

February 2, 2024
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The U.S. National Toxicology Program (NTP) has closed down its RF radiation research program. Indeed, it appears that work effectively stopped some time ago.

In September 2019, the NTP announced a new project designed to explain how RF radiation causes cancer. It was a year after the NTP made international headlines with its $30 million study showing "clear evidence" that RF caused malignant tumors in rats.

The NTP ordered and received new, smaller exposure chambers, which, like the original ones, were designed to irradiate animals with 2G and 3G signals. Work was believed to be under way. We're "optimistic" that we can detect changes in gene expression and identify biomarkers of RF effects, Michael Wyde, the lead NTP investigator, told *Microwave News* at the time.

Now, close to four-and-a-half years later, it turns out that none of those experiments to explore mechanisms of cancer causation were ever carried out.

For the first time in more than 50 years, U.S. civilian agencies have no ongoing research on the health effects of non-ionizing electromagnetic radiation.

"No Additional RFR Studies Are Planned"

Word of NTP's change of plans has dribbled out slowly.

A few weeks ago, the NTP quietly posted an updated Fact Sheet on cell phone radiation revealing that it would stop all RF research. The agency explained that, in the course of testing the feasibility of the new exposure systems, NTP had found the work to be "technically challenging" and "resource-intensive."

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Here's the key part of the January 2024 update:

> **Is the NTP work on cellphone RFR completed?**
>
> Yes. NIEHS scientists conducted follow-up research to better understand some of the findings seen in the earlier RFR rodent studies.[7,8]
>
> A novel small-scale RFR exposure system was developed. The researchers tested the new exposure system using in vivo rodent studies.
>
> The research was technically challenging and more resource-intensive than expected. No additional RFR studies are planned.

When *Microwave News* attempted to follow up with some questions, NTP's Office of Communications and Public Liaison went silent for close to two weeks. Then, Robin Mackar in the press office responded with an email stating that the project had never progressed beyond the feasibility studies with the small exposure chambers —which had been delivered to North Carolina close to five years ago.

"Anything that will get published will be from the 'feasibility studies'," Mackar wrote.

This stands in contrast to what the NTP said last year. Here's what the February 2023 RF Fact Sheet stated:

> **What are the future plans for studying cellphone RFR?**
>
> NIEHS scientists in the Division of Translational Toxicology, which supports the NTP, are working to better understand findings reported in its earlier RFR studies.[7,8]
>
> The researchers have overcome several technical issues while developing a new RFR exposure system for the planned rodent studies and are now making progress in accomplishing the following research goals:
>
> - **Determine the impact of RFR exposure on behavior and stress, including the real-time assessment of activity and response to system-generated noise and RFR signals.**
> - **Conduct physiological monitoring, including evaluation of heart rate.**
> - **Investigate whether RFR induces heating.**
> - **Further evaluate whether RFR exposure causes DNA damage.**

It is not clear what the NTP meant by "making progress" in achieving its research goals. The January 2024 Fact Sheet is the first update since then.

Here is the full statement on NTP's future plans, which was posted on its website a few days ago:

What are the future plans for studying cell phone RFR?

NIEHS scientists in the Division of Translational Toxicology, which supports the National Toxicology Program, undertook research to better understand some of the findings seen in the earlier Radio Frequency Radiation (RFR) rodent studies reported in NTP Technical reports TR-595 and TR-596.

The goals of this new research were to determine the impact of RFR exposure on behavior and stress, conduct real-time physiological monitoring, including evaluation of heart rate, investigate whether RFR exposure induces heating, and evaluate further whether RFR exposure causes DNA damage.

To accomplish these goals:

- Researchers designed and developed a novel custom small-scale RFR exposure system, which included building, testing, and validating the exposure system. This new exposure system was based on the system used in the published NTP rodent studies.
- Researchers then conducted a series of in vivo rodent studies to assess the suitability of the new exposure system. These short-term studies were designed to allow a comparison between the new exposure system and the original exposure system.

NIEHS has completed the feasibility testing of this small-scale RFR exposure system, and the results will be made publicly available and posted on this webpage when internal reviews are finished.

The research using this small-scale RFR exposure system was technically challenging and more resource intensive than expected. In addition, this exposure system was designed to study the frequencies and modulations used in 2G and 3G devices, but is not representative of newer technologies such as 4G/4G-LTE, or 5G (which is still not fully defined). Taking these factors into consideration, no further work with this RFR exposure system will be conducted and NIEHS has no further plans to conduct additional RFR exposure studies at this time.

Both the original exposure chambers and the smaller ones were designed and built by the IT'IS Foundation in Zurich. In an email exchange, Niels Kuster, the director of IT'IS, said that upgrading the small chambers for exposures to 4G and 5G radiation would be "very cheap."

Much of the NTP's work is administered by the NIEHS staff at the agency's campus in Research Triangle Park, NC.

Devra Davis, the president of the Environmental Health Trust, decries what she calls NTP's "sudden and inexplicable turnaround" in a commentary, "Why Did NIH Abruptly Halt Research on the Harms of Cell Phone Radiation?" published by *The Hill, a* DC newspaper.

June 20, 2024

In his regular "Health Matters" column in the *IEEE Microwave Magazine*, James Lin, professor emeritus at the University of Illinois Chicago, asks what he calls the "obvious question":

> "Should we all forget about NTP's findings of clear scientific evidence that lifelong exposure to low-level RF radiation causes cancer?"

New Report on Small Animal RF Exposure System

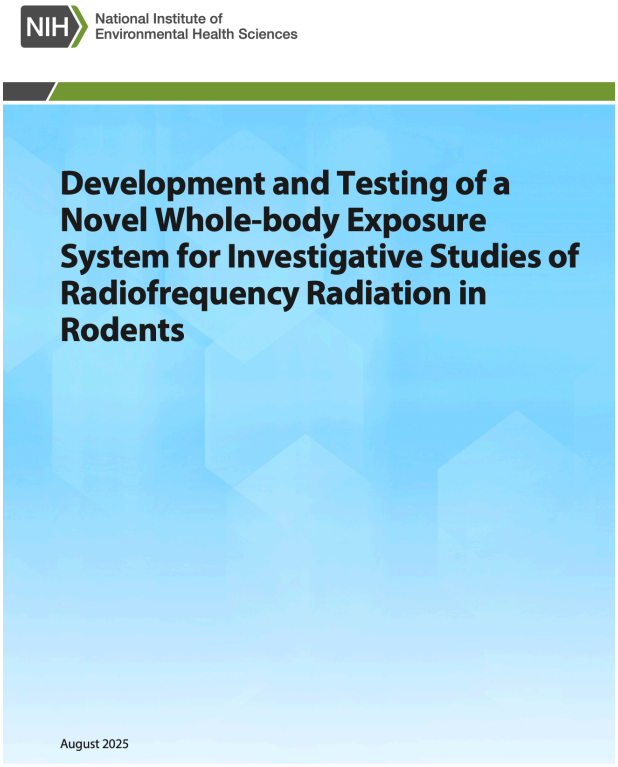
August 8, 2025

NIEHS/NTP have issuesd a new 200--page report, "Development and Testing of a Novel Whole-Body Exposure System for Investigative Studies of RF Radiation in Rodents."

They describe a prototype for a small-scale RF exposure system to investigate toxicological effects. Studies are needed, they advise,

given widespread human exposure to RF radiation from cell phones.

Open access.



For some background on NIEHS/NTP see "Will NIEHS Ever 'Get' EMFs?" from *MWN,* January 2010.

NTP, NIEHS, Michael Wyde, IT'IS, Niels Kuster, RF animal studies, gene expression, Devra Davis, James Lin,

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