Cell Phone Radiation Boosts Cancer Rates in Animals; $25 Million NTP Study Finds Brain Tumors

U.S. Government Expected To Advise Public of Health Risk

May 25, 2016

The cell phone cancer controversy will never be the same again.

The U.S. National Toxicology Program (NTP) is expected to issue a public announcement that cell phone radiation presents a cancer risk for humans. The move comes soon after its recently completed study showed statistically significant increases in cancer among rats that had been exposed to GSM or CDMA signals for two-years.

Discussions are currently underway among federal agencies on how to inform the public about the new findings. NTP senior managers believe that these results should be released as soon as possible because just about everyone is exposed to wireless radiation all the time and therefore everyone is potentially at risk.

The new results contradict the conventional wisdom, advanced by doctors, biologists, physicists, epidemiologists, engineers, journalists and government officials, among other pundits, that such effects are impossible. This view is based, in part, on the lack of an established mechanism for RF radiation from cell phones to induce cancer. For instance, earlier this week (May 22), a medical doctor in Michigan wrote an opinion piece for the *Wall Street Journal* stating that, “There is no known mechanism by which mobile phones might cause brain tumors.” He went on to argue that there is no need to warn the public about health risks.

The NTP findings show that as the intensity of the radiation increased, so did the incidence of cancer among the rats. “There was a significant dose-response relationship,” a reliable source, who has been briefed on the results, told *Microwave News*. No effect was seen among mice. The source asked that his/her name

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not be used since the NTP has not yet made a formal announcement. The rats were exposed to three different exposure levels (1.5, 3 and 6 W/Kg, whole body exposures) and two different types of cell phone radiation, GSM and CDMA.

An Amazing Coincidence?

Importantly, the exposed rats were found to have higher rates of two types of cancers: glioma, a tumor of the glial cells in the brain, and malignant schwannoma of the heart, a very rare tumor. None of the unexposed control rats developed either type of tumor.

A number of epidemiological studies have linked cell phones to both gliomas and to Schwann cell tumors. The Interphone study, for instance, found an association between the use of cell phones and gliomas.

The sheath that wraps around cranial nerves —such as the one that connects the inner ear to the brain— is made of Schwann cells. Tumors of those cells are called acoustic neuromas. That is, an acoustic neuroma is a type of schwannoma. At least four different epidemiological studies have found an association between the use of cell phones and acoustic neuromas.

Ron Melnick, who led the team that designed the NTP study and who is now retired, confirmed the general outline of the results detailed by the confidential source. “The NTP tested the hypothesis that cell phone radiation could not cause health effects and that hypothesis has now been disproved,” he said in a telephone interview. “The experiment has been done and, after extensive reviews, the consensus is that there was a carcinogenic effect.”

“These data redefine the cell phone radiation controversy,” Melnick said. The safety of cell phones has been debated for more than 20 years, especially after the International Agency for Research on Cancer (IARC) classified RF radiation as a possible human carcinogen in 2011.

“This is a major public health concern because the cells which became cancerous in the rats were the same types of cells as those that have been reported to develop into tumors in cell phone epidemiological studies,” Melnick added. “For this to be a chance coincidence would be truly amazing.”

The NTP radiation project, which has been underway for more than a decade, is the most expensive ever undertaken by the toxicology program. More than $25 million has been spent so far.

Another interesting coincidence is that the Ramazzini study of rats in Bologna exposed to extremely low frequency (50 Hz) EMFs also developed a significant increase in malignant schwannoma of the heart.

NTP Stands By the Study Results

Because of the importance of these results to public health, the NTP alerted the highest levels of the National Institutes of Health

(NIH), where resistance prompted further reviews. No serious flaws in the data or the conduct of the studies were identified.

Senior managers including Linda Birnbaum, the director of the National Institute of Environmental Health Sciences (NIEHS) who also serves as the director of the NTP, and John Bucher, the associate director of the NTP, who is in charge of the cell phone study, are standing by the study findings. They see the need to release the results as a public health imperative, according to the source.

Chris Portier, who once held Bucher's job, agrees that the NTP is doing the right thing. "I would be adamant that we should share the data with the public as soon as possible," he said in an interview. The cell phone study was initiated while Portier was serving as the associate director of the NTP. He is now retired, though he continues to work as a consultant.

After extended discussions, the two federal agencies responsible for regulating exposures to cell phone radiation, the Food and Drug Administration (FDA) and the Federal Communications Commission (FCC), were briefed on the results last week. It is not clear how these regulatory agencies plan to respond.

All the various agencies are now in the process of planning the release of the NTP findings. Neither Birnbaum nor Bucher responded to a request for comment on how this will be done.

Unexpected Findings

Few outsiders are yet aware of the NTP results. When *Microwave News* told some of those who have been tracking the study for years what had been found, all expressed surprise.

Indeed, in an interview published years ago, NTP's Bucher said that he expected the results to show no association between RF radiation and cancer.

"Everyone expected this study to be negative," said a senior government radiation official, who asked that his name not be used. "Assuming that the exposures were carried out in a way that heating effects can be ruled out, then those who say that such effects found are impossible are wrong," the official said. (The study was designed to ensure that the body temperature of the exposed rats increased less than 1ºC.)

"This is a game changer, there is no question," said David Carpenter, the director of the Institute for Health and the Environment at the University of Albany. "It confirms what we have been seeing for many years —though now we have evidence in animals as well as in humans." Carpenter went on to add, "The NTP has the credibility of the federal government. It will be very difficult for the naysayers to deny the association any longer." Carpenter's institute is a collaborating center of the World Health Organization (WHO).

John Boice, the president of the National Council on Radiation Protection and Measurements (NCRP), is one of the leading

skeptics. “For most of us, the issue of brain cancer and cell phones is resolved. There is no risk. There is no biological mechanism and no animal study or cellular study that finds reproducible evidence of an effect,” Boice told a reporter for Medscape Medical News earlier this month.

This view is so deeply held that in the summer of 2014, the NCRP pressured the Centers for Disease Control (CDC) to delete precautionary advice from a fact sheet on cell phones.

Boice was discounting last year’s report from Germany by Alex Lerchl confirming an earlier animal study showing that cell phone radiation can promote tumors in mice that were induced by toxic chemicals. The NTP experiments did not use any agent to initiate cancer cells in the animals.

With respect to mechanisms, just a couple of months ago, Frank Barnes and Ben Greenebaum, two senior members of the RF research community, announced that they could explain how low levels of RF radiation could alter the growth rates of cancer cells.

Later…
See also our follow-up articles:

— NTP: RF Breaks DNA

— Setting the Record Straight on NTP Cell Phone Cancer Study

— News Media Nix NTP Phone Cancer Study; “Don’t Believe the Hype”
Are More People Getting Brain Tumors?
GBMs, the Most Virulent Type, Are Rising

— Brain Tumors More Likely in Male than Female Rats
Historical Controls Show the Difference

NTP RF Animal Project: Timeline

1999 FDA nominates RF from wireless devices for testing by NTP

2001 NTP decides to sponsor RF–cancer studies

2003 NTP solicits proposals for RF–cancer experiments

2004 NTP issues second request for proposals

2005 NTP signs contract with IITRI in Chicago to carry out exposures

2007 Exposure systems made by IT’IS installed at IITRI

2009 The lead investigator Ron Melnick retires, Michael Wyde takes over

2014-15 Exposures of two-year studies completed

2016 Results in hand

Further reading:

— Institute of Environmental Health Secrets: NIEHS Mum on $25 million RF Animal Project

— NCRP Pressured CDC To Remove Cell Phone Safety Advice

— RF Cancer Promotion: Animal Study Makes Waves

— CDC Calls for Caution on Cell Phones, Then Gets Cold Feet

— Something Is Rotten in Denmark: Danish Cancer Society Plays Games with Tumor Rates

— It May Not Be Impossible After All

— Power-Frequency EMFs Promote Cancer in Massive Animal Study

— Will NIEHS Ever “Get” EMFs?

RF animal studies, NTP, NIEHS, NIH, John Bucher, Linda Birnbaum, Ron Melnick, Christopher Portier, John Boice, Alexander Lerchl, Frank Barnes, Ben Greenebaum, cancer, glioma, acoustic neuroma, schwannoma, brain cell phones,

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