



Testimony New Hampshire HB1644
Theodora Scarato Executive Director of Environmental Health Trust

January 18, 2022

Dear Esteemed Lawmakers,

I am honored to be sharing this information with you today. I am Executive Director of Environmental Health Trust and this year we won a [major lawsuit](#) regarding the US federal safety limits for wireless radiation.

First let me be clear that this case was not about whether cell tower radiation does or does not cause harmful effects.

The lawsuit was about doing due diligence and about following proper procedure.

Here is why we sued. In 2019, the FCC made a decision that US federal safety limits did not need to be updated. They said it was just fine to keep the 1996 FCC safety limits in place despite literally thousands of pages of scientific evidence showing harmful effects.

We took legal action, because it was clear the FCC had ignored information submitted to their official record. The judges agreed and stated in their final ruling that, the FCC's decision to keep the 1996 limits was "arbitrary and capricious". The judges stated that the FCC did not provide evidence of properly examining scientific evidence such as the impacts of long-term exposure, the unique vulnerability of children and studies showing impacts to the brain and reproductive system.

The Court found the FCC dismissed the American Academy of Pediatrics and many other experts who recommended stronger regulations to ensure children and pregnant women were protected.

Although we might assume that health agencies like the FDA, EPA or CDC are ensuring safety- our lawsuit revealed they are 100% not.

To start, the EPA, CDC and National Cancer Institute have completed zero scientific research reviews of the current science.

Although statements on the FDAs website might seem like the agency is ensuring safety, it has, in fact, NOT shown any research review of the totality of the science. No evaluation of the science finding memory damage or impacts to fertility.

More importantly, the FDA has no authority when it comes to cell tower radiation. They only deal with cell phones.

In fact, our lawsuit revealed that there is no US health agency that is actively monitoring the science on cell tower radiation and ensuring that FCC limits for cell tower radiation are safe for the public.

Here is a story.

Last month California mother wrote the FCC asking if the cell tower that was built in front of her home was safe. The FCC lawyer told her that as long as FCC limits were met, the radiation was “deemed by the FDA” not to show adverse health effects in humans.”

So, the mother wrote the FDA asking for the science showing safety. An FDA lawyer [wrote back](#) and said:

“The FDA does not regulate cell towers or cell tower radiation. Therefore, FDA has no studies or information on cell towers to provide in response to your questions.”

[Download FDA letter here](#)

If the FDA is not evaluating the science on cell tower radiation- then what health agency is?
Answer. No one.

Our lawsuit was about the reality that we have twenty-five-year-old safety limits for cell tower and wireless radiation, as well as a mounting body of science showing harm, yet no health agencies are ensuring our safety by staying up to date with the totality of the science.

What's next? The Court ordered the FCC to re-examine their record and provide a reasoned explanation for the health implications of long-term exposure and all the issues they ignored.

The FCC has no date by which it must respond- but until it does, the 1996 cell tower radiation rules are in place. Thus, the US has antiquated rules for our 21st century technology. We just submitted a [new filing](#) requesting they look at the latest science published since we filed our court case. We may very likely need to take additional legal action to ensure they respond in a timely fashion.

Yes. This case is a procedural -with very important implications. Most people assume that our federal safety limits are based on top US experts always reviewing the latest research to ensure the public is protected. The Court ruling reveals this is a false assumption. The FCC's wireless radiation limits cannot be understood as being based on a full review of the latest research.

Cell antennas are going up in neighborhoods in front of homes, yet U.S. rules on their emissions have not been properly reviewed for twenty-five years.

Sometimes the scandal in this country is not what is illegal, but what is legal.

Hundreds of scientists are clear that peer reviewed research indicates numerous harmful effects-even at very low and legally allowed levels.

- **255 scientists** who have published in bioelectromagnetics signed the [EMF Scientists Appeal](#).
- **419 scientists and doctors** have signed the [European Union Appeal 5G Appeal](#).
- **Over 3,500 medical doctors** signed onto a 2020 Consensus statement that wireless RF has been proven to damage biological systems at intensities below government limits ([See signatures here, PDF of Consensus Statement](#)).
- There have been appeals and position statements for decades. [Read a list here.](#)

This is a pivotal moment. Courage and political will are what is needed to protect the public and ensure safe and healthy communities.

Thank you very much,
Theodora Scarato MSW
Executive Director of Environmental Health Trust
<https://ehtrust.org>

Court Documents

- [Final Court Decision](#) 8/13/2021
- [Link to 11,000 Pages of Evidence- - 447 exhibits in 27 Volumes-](#)
- [EHT Factsheet on EHT et al. v FCC](#)
- [2021 November 30, 2021 Filing](#)

Important Video Resources

- [Video of Oral Arguments](#)
- [Transcript of Oral Argument](#)
- [EHT Video Analysis Oral Arguments With Clips](#)
- [EHT Press Conference after Historic Court Ruling](#)

The World Health Organization (WHO)

Myth: The WHO [found that](#) that “no adverse health effects have been established as being caused by mobile phone use” and when it comes to cell towers they [conclude](#) that “from all evidence accumulated so far, no adverse short- or long-term health effects have been shown to occur from the RF signals produced by base stations.”

Fact: The WHO website statements are not based on a scientific review of the totality of the evidence.

- The WHO EMF Project website pages are outdated ([cell towers in 2006](#), [cell phones in 2014](#)) and are not official conclusions.
- In fact, the WHO EMF Project, the entity that drafted these webpages, has not reviewed the science *since 1993*.
- They are trying to launch a systematic review of the research but it has not been completed. The process was stalled for years due to serious transparency issues.
- Further, these online WHO webpages are authored by a small project at the WHO started with wireless industry funding and with staff documented to have long standing conflicts of interest.

[Read a published article about the conflicts published in the International Journal of Oncology by Dr. Lennart Hardell.](#)

Documentation of Lack of Science Base for WHO EMF Project Web Pages

- **No Science Review Since 1993:** The WHO EMF Project webpage lists the recent monographs (scientific research evaluations on health risks) and as stated on the WHO web page on [Health Risk Assessment](#) the last one on (radiofrequency wireless) was completed in 1993. [Read outdated 1993 WHO Monograph.](#) [Read WHO Webpage on 1993 as last date of research review.](#)
- **Conflicts of Interest:** The WHO EMF Project was started by a scientist who funneled money from wireless companies through a hospital to start the EMF Project at the WHO. [Hardel and Carlberg 2017](#) states “Michael Repacholi immediately set up a close collaboration between WHO and ICNIRP (being head of both organizations) inviting the electric, telecom and military industries to meetings. He also arranged for a large part of the WHO EMF project to be financed by the telecommunication industry's lobbying organizations; GSM Association and Mobile Manufacturers Forum, now called Mobile & Wireless Forum (MWF).”
- The WHO EMF Project founder Repacholi is now on several wireless company advertisements speaking about cell phone and electromagnetic safety.
 - [Watch him talk about children are safe with cell phones here](#)
 - [Watch him talk about how EMFs are safe here.](#)
- Listen to Repacholi state he wrote the online webpage factsheets at the WHO [here.](#)
- **Transparency:** The engineer who now directs the EMF Project refuses to answer questions about how the online factsheets were written or where the scientific reports are that back up the cell tower and cell phone statements. [Read letter sent to engineer Emile Van Deventer WHO EMF Project Director that remains unanswered.](#) [Dr. Lennart Hardell also describes transparency issues here.](#) The current WHO Project Director is an engineer and not a medical doctor or public health expert.

Myth: The scientific consensus of federal health and safety agencies is that wireless devices and base stations at the FCC's exposure levels are safe.

Fact: Federal health and safety agencies have not evaluated the totality of science to make any determination. If anyone believes it please ask them to find the research review or report that supports this conclusion. Such a report does not exist.

To start, the European Parliament requested a research report [“Health Impact of 5G”](#) which was released in July 2021 and concluded that commonly used wireless radiofrequency radiation (RFR) frequencies (450 to 6000 MHz) are “probably carcinogenic” for humans *and* “clearly affect” male fertility with possible adverse effects on the development of embryos, fetuses and newborns.

Website pages of federal agencies we might expect to have safety determinations provide no proof of safety.

The National Cancer Institute (NCI)

False: The NCI [says](#) that cell phone radiofrequency “energy is too low to damage DNA” and “there are no other clearly established dangerous health effects on the human body from radiofrequency radiation” so cell phone and cell tower radiation is proven safe.

Fact: The NCI has not reviewed the research on wireless radiation. There are no scientific reports by the NCI that exist regarding safety. Even if NCI scientists had an opinion, they only are focused on cancer, but do not investigate the brain damaging or the reproductive damaging effects.

1. The fact that the NCI has not reviewed the science nor does it have an official position on safety was confirmed by a letter from New Hampshire 5g Commissioner Denise Ricciardi to the NCI asking, “What is the NCI opinion on the safety of cell phones?”

On July 30, 2020, the National Cancer Institute wrote back that, “the FDA and FCC are the responsible federal agencies with authority to issue opinions on the safety of these exposures. As a Federal research agency, the NCI is not involved in the regulation of radiofrequency telecommunications infrastructure and devices, nor do we make recommendations for policies related to this technology...Our sister agencies, the FDA as well as the FCC, retain responsibility for reviewing guidance on safety concerns and informing the public if those circumstances change.” [Read the Exchange From New Hampshire 5G Commission Report.](#)

1. The NCI did not provide any opinion to the FCC during the 7 year inquiry opened re FCC’s safety limits for wireless radiation. Instead they sent a two paragraph letter to the FCC without mention of any opinion on the state of science. [NCI Letter to FCC](#)
2. The NCI wrote to EHT’s Executive Director Theodora Scarato, stating of the NCI that, “Neither the literature reviews, nor the fact sheets, make safety determinations.” ([Letter from NCI to Scarato, PDF of Communications](#))

The Centers for Disease Control and Prevention (CDC)

Myth: The CDC has [concluded](#) that “we do not have the science to link health problems to cell phone use” at this time and thus cell phones and towers are safe.

Fact: CDC experts have not reviewed the latest research on wireless radiation and the website pages do not reflect an opinion on safety.

1. First, there are no scientific reports by the CDC on wireless safety, nor does the agency have staff with expertise monitoring the science and evaluating risk.

2. Several CDC webpages were drafted with an industry financed consultant. These pages omit scientific research that has found effects and downplays health risk. [Read the expose on the CDC by EHT here.](#)
3. CDC cautionary statements were removed a few years ago. They recommended people reduce cell phone radiation exposure. [Read the New York Times article](#) as well as the [Microwave News article on influence to CDC webpage with wireless industry consultants.](#)
4. Former CDC experts now state that the research shows cell phone radiation likely causes cancer. Chris Portier PhD, retired CDC Director of the National Center for Environmental Health and former Director of the Agency for Toxic Substances and Disease Registry submitted [scientific research review](#) in a major cell phone/brain cancer lawsuit where he concludes that “the evidence on an association between cellular phone use and the risk of glioma in adults is quite strong.”

The American Cancer Society (ACS)

Myth: The ACS has [concluded](#) that “there’s no strong evidence that exposure to RF waves from cell phone towers causes any noticeable health effects so cell towers are scientifically safe.

Fact: The ACS has not reviewed the science on cell towers or cell phones and their webpages do not provide science backed safety assurances.

- In fact, the ACS website [states](#) very clearly that ACS does “not have any official position or statement on whether or not radiofrequency radiation from cell phones, cell phones towers, or other sources is a cause of cancer.”
- Furthermore the ACS [says](#) they “look to other expert organizations to determine if something causes cancer “ and the ACS then lists the International Agency for Research on Cancer (IARC) and the US National Toxicology Program (NTP) both of which document *science showing links to cancer*. See [IARC](#) and [NTP](#).
- When the NTP [found](#) “clear evidence” of cancer from wireless RFR radiation, the ACS referred to the study in their [press release](#) as paradigm shifting “good science.”

Furthermore the [ACS press release](#) on the NTP study: “The NTP report linking radiofrequency radiation (RFR) to two types of cancer marks a paradigm shift in our understanding of radiation and cancer risk. The findings are unexpected; we wouldn’t reasonably expect non-ionizing radiation to cause these tumors.”

The Food And Drug Administration (FDA)

Myth: The FDA’s [website](#) clearly shows that the FDA has reviewed the totality of scientific evidence and found cell phones, 5G and cell towers are safe. After all, the FDA [concluded](#) in February of 2020 that “there is no consistent or credible scientific evidence of health problems caused by the exposure to radio frequency energy emitted by cell phones.

Fact: The FDA has no authority when it comes to cell towers or cell tower radiation. The agency has not reviewed the full body of research on cell phone radiation. They never concluded any opinion on cell tower radiation and only released a now outdated literature review (only on selected studies to 2018) focused only on cell phones and cancer- omitting studies on damage to DNA, the brain and reproduction. The review is not a systematic review nor a risk analysis.

The Pittsburgh Law Review published [an article](#) concluding, “The FCC and FDA have failed in their obligation to prescribe safe RFR guidelines produced from wireless communication devices to protect the public health and safety.”

Documentation

- On January 11, 2022, Ellen Flannery of the Director of the Office of Policy Center for Devices and Radiological Health of the FDA wrote that the FDA doesn't regulate cell towers. She said, “We have reviewed the questions that you listed below. The Food and Drug Administration (FDA) does not regulate cell towers or cell tower radiation. Therefore, the FDA has no studies or information on cell towers to provide in response to your questions.” [Link to Letter](#).
- The Government Accountability Report on 5G ([GAO 2020](#)) clarified that the FDA and other organizations “only reviewed a subset of the relevant research” and stated in the FDA Literature Review that “The assessment focused on cancer-related animal and human studies of frequencies below 6 GHz.”
- Not only did the FDA do a limited literature review looking *only at cancer*, but it omitted impacts to the brain, oxidative stress, and reproduction. Most importantly it discounted the results of the National Toxicology Program which is why [numerous scientists - including](#) several now retired US government scientists - are calling for the FDA to retract the review as it offers unsubstantiated assurance of safety ([EHT 2020](#)).

Myth: An [Australian study](#) published in March of 2021 reviewed 138 studies of radio frequency fields consistent with 5G networks. It found “no confirmed evidence that low-level RF fields above 6 GHz such as those used by the 5 G network are hazardous to human health” so 5G is safe.

Fact: This study does not show proof of safety. In fact, it proves that no long term research even exists to assess health risks stating “there are no epidemiological studies investigating 5 G directly as yet.”

Most importantly, this review was only on high band frequencies and not on the low and mid band frequencies that 5G networks will use, in addition to high band frequencies. This review did not look at these frequencies or which there is copious research indicating effects. Be aware that 5G uses 4G as its backbone.

This study (not a systematic review) was authored by individuals associated with a group called ICNIRP- a small private group known to have conflicts of interest and to reject research showing harm. In fact, one of the authors disclosed that the lab equipment is from the wireless industry who also has its staff working with him in the lab.

- [The Journal of Cancer Science and Clinical Therapeutics published an article on ICNIRP here.](#)
- [Read an European Parliament Members Report on ICNIRP conflicts here.](#)

If you want to read about research on the low and mid band frequency radiation from 5G “small cells” and cell tower radiation. Take a look at the following peer reviewed published reviews.

- A review on real world exposure to 5G published in *Toxicology Letters* found that 5 G will have systemic effects as well as adverse effects to the skin and eyes ([Kostoff et al., 2020](#)).
- Two systematic reviews find harm to sperm ([Sungjoon et al, 2021](#), [Yu et al., 2021](#)).
- A systematic review on the effects of RFR to male reproductive hormones found that wireless can decrease testosterone ([Maluin et al, 2021](#)).
- A review on the genetic effects of non-ionizing electromagnetic fields found DNA strand breaks, micronucleus formation, and chromosomal structural changes ([Lai 2021](#)).
- A systematic review published in the Annals of the New York Academy of Sciences found that neuronal ion channels are particularly affected ([Bertagna et al 2021](#)).
- A review in the International Journal of Oncology describes how EMFs lead to dysfunction of ion channels which lead to reactive oxygen species/free radical overproduction providing “ a complete picture” of how exposure may indeed lead to DNA damage and related pathologies, including cancer,” ([Panagopoulos et al. 2021](#)).
- A systematic review and meta-analysis of case-control studies found evidence that linked cellular phone use to increased tumor risk ([Choi et al., 2020](#)).
- The Switzerland Institute of the Environment expert published review found increased oxidative stress in the majority of animal studies and cell studies with exposures within regulatory limits ([Schuermann et al., 2021](#)).
- European Parliament requested a research report “[Health Impact of 5G](#)” released in July 2021 concluding that commonly used RFR frequencies (450 to 6000 MHz) are probably carcinogenic for humans *and* clearly affect male fertility with possible adverse effects on the development of embryos, fetuses and newborns.

If you want to read some research about studies done on cell tower radiation, please consider these studies.

- A [2017 study](#) evaluated effects in the blood of individuals living near mobile phone base stations and found higher exposures linked to changes in the blood that are considered biomarkers predictive of cancer.
- A [2018 study](#) found school-aged adolescents exposed to higher levels of RFR exposure had delayed fine and gross motor skills, spatial working memory, and attention in comparison to those exposed to lower RFR levels.
- A [2015 study](#) of elementary students found higher Type 2 Diabetes Mellitus in students exposed to higher levels of RFR.
- A [2011 review](#) found a year of operation of a powerful cell base station resulted in a dramatic increase in cancer incidence among the population living nearby.
- [Falcioni 2018](#) published in Environmental Research exposed rats to RF comparable to cell tower RF levels and found increased cancers.
- A [2020 study](#) considering liability issues for wireless companies recommends that “although direct causation of negative human health effects from RFR from cellular phone base stations has not been finalized, there is already enough medical and scientific evidence to warrant long-term liability concerns for companies deploying cellular phone towers. In order to protect cell phone tower firms from the ramifications of the failed paths of other industries that have caused unintended human harm (e.g. tobacco)” the author recommends, “voluntarily restrictions can be made on the placement of cellular phone base stations within 500 m of schools and hospitals.”

- A [2021 study](#) published in the International Journal of Environmental Research and Public Health Found higher RFR cell tower radiation exposures linked to increased mortality for all cancers including breast, cervix, lung, and esophagus cancers.