

Senate Hearing: Race to 5G and Next Era Technology Innovation

U.S. Sen. Roger Wicker, R-Miss., chairman of the Committee on Commerce, Science, and Transportation, will convene the first full committee hearing of the 116th Congress titled, "Winning the Race to 5G and the Next Era of Technology Innovation in the United States."

The exact start time of the hearing is contingent on the conclusion of an earlier and separate Commerce Committee business meeting that will be open to the public in the same hearing room. This hearing will focus on key steps to maintain U.S. global leadership in next-generation communications technology, spectrum needs to accelerate deployment, and new applications and services consumers can expect with 5G deployments. The hearing will also examine current efforts to modernize infrastructure siting policies and the security of 5G networks.

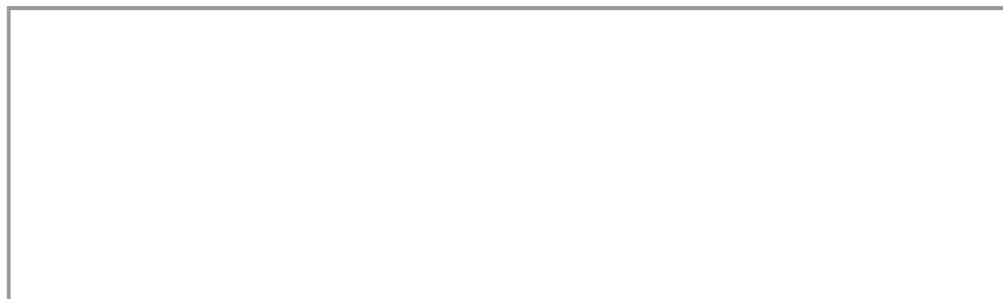
Witnesses:

1. Brad Gillen for [Meredith Atwell Baker](#), President and CEO, CTIA
2. Mr. [Steve Berry](#), President and CEO, Competitive Carriers Association
3. Mr. [Shailen Bhatt](#), President and CEO, Intelligent Transportation Society of America
4. Mr. [Michael Wessel](#), Commissioner, U.S.-China Economic & Security Review Commission
5. Ms. [Kim Zentz](#), Chief Executive Officer, Urbanova

This hearing took place in the Dirksen Senate Office Building in G50.

Listen to the testimony and Q&A of the hearing [here](#).

Feb 6, 2019, Sen. Blumenthal at Senate Commerce Committee Hearing:
"So, we are flying blind here as far as health and safety is concerned."



Sen. Blumenthal @ 2:04:35

"... 5G, as you well know, also uses higher frequency waves that don't travel as far [as 3G/4G waves] and will rely on a network of hundreds of thousands, and potentially millions of small cell sites ... And the question then is are there any health implications, any public safety implications to those additional sites that are likely to be located close to homes, schools, workplaces — and closer and closer to the ground. Correct?"

Gillen, CTIA @ 2:05:09

"Correct Senator, yes."

Sen. Blumenthal @ 2:05:12

'So, in December, 2018, I sent a letter to FCC Commissioner Carr, asking him to cite for me recent scientific studies demonstrating the safety of this [extreme density 4G and 5G] technology. What research has been done? Where has it been published and compiled? He has

essentially failed to do so — and just echoed the general statements of the FDA, which shares regulatory responsibility for cell phones [and wireless infrastructure] with the FCC.

If you go to the FDA web site, [it is] pretty unsatisfactory. There basically is a cursory and superficial citation to existing scientific data saying 'the FDA has urged the cell phone industry to take a number of steps, including support additional research on possible biological effects of radio-frequency fields [and microwave radiation] for the types of signals emitted by cell phones' [and wireless infrastructure].

I believe that Americans deserve to know what the health effects are — not to prejudge what scientific studies may show — and **they deserve also a commitment to do the research on outstanding questions.**

So, my question for you, particularly Mr. Gillen and Mr. Berry, how much money has the [Wireless] Industry committed to support additional independent research — **I stress independent research. Is that independent research on-going? Has any been completed? Where can consumers look for it?** We are talking about the research on the biological effects of this new technology.

Gillen, CTIA @ 2:07:11

"Thank you Senator . . ."

. . . followed by a lot of empty words.

Sen. Blumenthal @ 2:07:40

"So, essentially, the answer to my question — how much money? — zero."

Gillen, CTIA @ 2:07:47

Yes, zero.

Sen. Blumenthal @ 2:07:40

"Anybody else know of industry commitments to back research, fund it support it — **to ascertain, scientifically, the health effects.**"

Steve Berry, Competitive Carriers Association @ 2:08:09

"Senator, I am not aware . . . with small cells especially, you are going to have lower power levels . . ."

Really Mr. Berry? Evidence at [this web page](#), proves otherwise: peak levels of Radio-frequency Electromagnetic Microwave Radiation (RF-EMR) exposures at **100 feet** from a so-called **small cell** at ground level (170,300 peak $\mu\text{W}/\text{m}^2$) **meters 53% higher** than a similar meter reading at **300 feet** from **this macro tower** (111,700 peak $\mu\text{W}/\text{m}^2$), which is creating a **public health crisis in Sebastopol, CA after nine years of RF-EMR exposures** — something the FCC Commissioners were made aware of on Sept 25, 2018.

What has been the response to date from Crown Castle, AT&T or the FCC to correct this public health crisis since Sept 25, 2018? NOTHING . . . crickets . . . Bueller?

Sen. Blumenthal @ 2:08:36

"So, there really is no research ongoing. **We are kind of flying blind, here, as far as health and safety is concerned.** Thank you, Mr. Chairman."

Sen. Wicker @ 2:18:54

"The testimony will end. Let me say this. There are a lot of interested parties that have participated in this . . . I want to add something to the record, in light of what Senator Blumenthal raised, just so we can have a complete record. [reading from a smart phone handed to him] I am told the National Cancer Institute has determined that Quote 'although many studies have examined the potential health effects of non-ionizing radiation, from radar, microwave ovens, cell phones and other sources, there is currently no consistent evidence that non-ionizing radiation increases cancer risk'

Audience Member @ 2:19:03

"What about the National Toxicology Program study? The final results, released in Nov, 2018 show clear evidence of heart cancer."

Sen. Wicker @ 2:19:11

[Looking at the audience member to the right of the dais, a knowing smile of recognition appears on Sen. Wicker's face.]

". . . The hearing record will remain open for two weeks, no later than Wed Feb 20, 2019 by the close of business. This hearing is now adjourned."

Audience Member @ 2:20:13

[Audience member approaches Sen. Wicker from the right of the dais.]

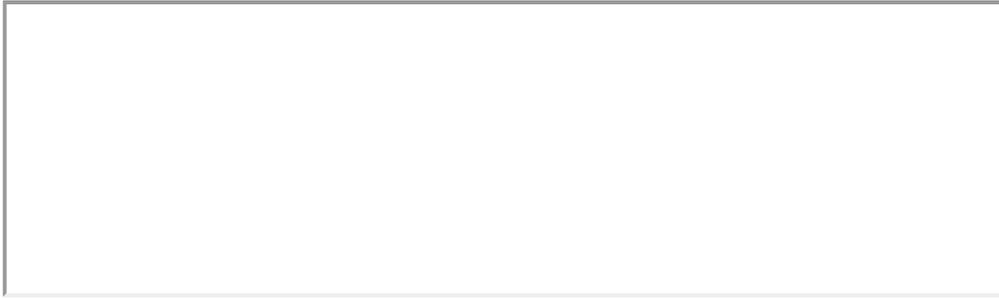
Here Are Some Answers, Senator Blumenthal . . .

I am in the field . . . Seeing the Injured

**Eric Windheim, Certified Building Biologist and Certified Electromagnetic Radiation Specialist:**

"A lot of these people [speaking tonight] are my clients. They didn't even know I was going to be here tonight. They are damaged at levels [of RF-EMR exposures] that are 100,000 times lower than FCC limits . . . right now I have six active wireless radiation shielding jobs in progress, each costing several thousand dollars, with people that hurt. When they put the shielding up and stand behind it — it's like getting out of the sun, when you've got a sunburn. You can feel it instantly. That's what they report to me . . . **I am in the field. I am seeing the people that are being injured. If these [so-called 'Small Cells'] are as safe as the FCC, AT&T and Mr. Hammett say, why are people spending thousands of dollars to shield themselves? And why do they feel better when they get that shielding up, like stepping out of the sun, when you got a sunburn?** Once you get traumatized [by RF-EMR exposures], you may never go back to the way you were."

4G and 5G Cell Phone Tower Hazards Exposed



Q: What do you do?

A: I am an Outside Plant Field Engineer. I perform a number of duties for the telecommunications industry. I install, replace, repair and test the antenna systems on top of cell towers . . . the real danger is what is coming off the antennas . . . my job is claimed to be the most dangerous job in the US . . . There are a lot of cancer episodes of the guys that have been around the industry for a while . . . we don't shut these antennas down when we work on them . . . My colleagues tell me they tasted foil in their mouth when they are working on them . . . for a lot of people out there, it just for their financial gain. It's all they are worried about.



Q: Are these cell towers endangering our lives?

A: Definitely. What's worse is when we mount these microwave transmitters on the corner of your buildings. We've got them mounted on hospitals, on apartment buildings and on banks. We've got these microwave transmitters mounted all over in these more densely populated cities. Those transmitters are on buildings. You can just about guarantee there are people working in other offices or living in apartments in direct line of these transmitters. **That's where they are creating what the industry calls cancer alleys.**

Q: Why would we have cell towers next to schools, churches and homes?

A: I don't know why they would want these towers anywhere near a school, church or home.

Q: You said it is a ground weapon defense system. Can you elaborate on that?

A: Definitely. A lot of the towers out there have antennas and transmitters up there that are doing a lot more than carrying your cell phone signals. They radiate harmful radiation at passive citizens — let alone towers that are designed to control crowds via the non-lethal defense system. This has been extensive since about 2005. It is all up and down the East coast, particularly around DC, Richmond, the hot spots around Virginia . . . They can render a body completely incapacitated through these frequency transmissions. They will turn them on and people will become completely disoriented, experience vertigo, become nauseous, lose control of all their bodily functions. You collapse to the ground and you remain there until the signal is shut off.

Q: Is the stuff you are working on on these towers all cell phone related?

A: No. There is plenty of equipment up there that is not cell related. On many towers there are LAN transmitters. They call it the Ground Wave Emergency Network. There's a lot that people are not aware of — how these towers are manipulating the Electromagnetic Field surrounding the earth. They have a range of duties that they will perform from these tower sites: controlling the weather, mood control and other things."

Q: Do you feel these towers are safe for the American people?

A: They definitely are not safe. They are physical hazards; the towers are falling down. They are structurally not designed to be carrying the amount of weight that we are eventually putting up there. A lot of these are older towers and they were not designed to have the this weight on them . . . A lot of these things are older towers. Just age and corrosion is bringing some of them down . . . there is probably at least one every day catching on fire. So, no, they are not safe — and that is not even mentioning the radiation that is being transmitted from these towers . . . many of these transmitters . . . are pointed toward areas where they are not supposed to be generating their signals.

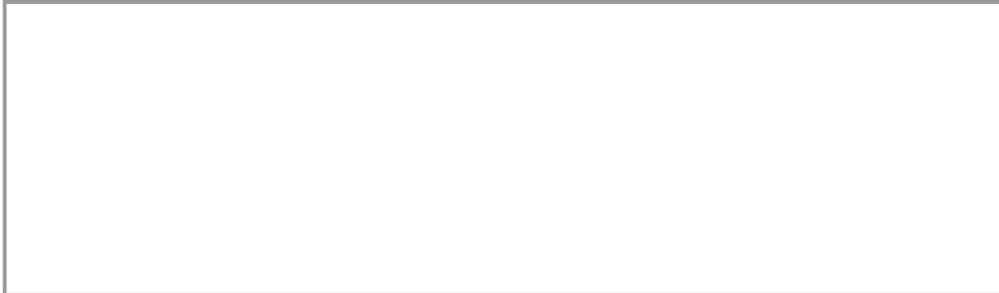
Studies Showing Harm from Radio-frequency Electromagnetic Microwave Radiation (RF-EMR) Exposures

- [Categorized list](#) of peer-reviewed scientific studies (not funded by the Wireless industry) that prove adverse biological effects from Radio-frequency Electromagnetic Microwave Radiation (RF-EMR) emissions and exposures
- [Electromagnetic sensitivity](#) (EMS) is a disabling characteristic, recognized the Federal Access board ; EMS Americans are protected under the Americans with Disabilities Act
- [Dr. Martin Pall](#) — 4G and 5G Densification Posed Great Harms to Public Health
- [Dr. Cindy Russell](#) — 4G and 5G Wireless Telecommunications Expansion: Public Health and Environmental Implications
- [Dr. Neil Cherry](#) — Hazards of EMFs and Radio-frequency Electromagnetic Microwave Radiation (RF-EMR) emissions and exposures
- [Dr. Beatrice Golomb](#) Opposes California Small Cell Deployment Bill, SB.649
- [Dr. Beatrice Golomb](#) Links US Diplomats' Illnesses to RF Microwave Radiation Exposures
- [Dr. Martin Pall](#) Opposes California Small Cell Deployment Bill, SB.649

Dr. Sharon Goldberg Testifies on Oct 4, 2018 at Michigan State Capitol



Dr. Paul Héroux on Oct 4, 2018 at Michigan State Capitol



Dr. Paul Héroux PhD is Professor of Toxicology and Health Effects of Electromagnetism, McGill University. He is also the Director of the Occupational Health Program within the Department of Epidemiology, Biostatistics and Occupational Health.

Chairman Gary Glenn:

Our next witness is going to be Paul Héroux from McGill University. Again, you have 5 minutes, sir.

Dr. Paul Héroux:

I want to tackle the subject of insurance.

You know that neither Lloyd's of London, nor Swiss Re will underwrite liability policies for electromagnetic radiation because they think the health risk is too great. In other words, they believe that when the lawyers get involved, and I know many of them, the companies who deliver this radiation to the public could be wiped-out.

By combining 5G and self-driving cars equipped with radar, you would create an exceptional opportunity for a class-action lawsuit against both telcos and the car industry.

I don't know how you can support the deployment of 5G – a new cellular system that will seriously enhance human exposure to electromagnetic radiation – when you know what Dr.[Sharon] Goldberg just told you. And you know that the modulation that is introduced by 5G is a new threat on biological systems.

We used to have frequency domain multiple access, time domain multiple access, code domain multiple access, and now we have 5G beam-forming – all data compaction strategy that maximize the biological impact of this radiation. In other words, it's going to get a lot worse with this deployment.

You know that all human cancers (and I use cancer as the, so to speak, the example here, although there's many health effects from this radiation, because it's the most closely documented, because we have a long history, bad history, with cancer) all human cancers – leukemia, colon, breast cancer, lung cancer – respond to electromagnetic radiation levels 100s of times below the FCC recommendations.

By the way, the FCC have zero medical and biological expertise. They take their marching orders from the Institute of Electrical [and] Electronics Engineers. And while this institution was setting the standards, I was present, and I know how lightheartedly they suppress any information that would impair the development of their applications. They just didn't want to hear about it. So, it was never

considered.

How can you allow this when the International Agency for Research on Cancer, the foremost authority on human cancers, warned you twice in 2002 and in 2012, about the link between electromagnetic radiation and cancer in humans?

The environment has to be cleaned up of electromagnetic radiation progressively, not augmented in radiation.

Electromagnetic radiation has repeatedly been linked with cancer in animals.

Chou in 1992 reported with 200 rats a multiplication by 4 of primary malignancies in animals exposed.

Repacholi in 1997 reported with 200 rats enhancement of lymphomas by a factor of 2.4 in mice exposed to EMR.

[Errata: Should be "Repacholi in 1997 reported enhancement of lymphomas by a factor of 2.4 in mice exposed to EMR."]

This year, the National Toxicology Program is reporting strong evidence of similar results with 1,440 rats and 1,680 mice. Finally, also this year, the Ramazzini Institute in Italy is confirming the NTP results using 2,448 male and female rats.

So I urge you, don't listen to me. Listen to the advice of 4,288 rats and 1,680 mice that were put in a carefully controlled situation and are telling you that cancer, for only one disease, is enhanced by this radiation.

Diabetes is 25% of your health budget. If electromagnetic radiation enhances this even a little bit, look at the costs that this entails.

These rats were not biased. They couldn't be. They developed tumors as a result of the radiation to the best that science can determine. And there is a group of people that are hypersensitive to these fields, confirming that the effect is real. And these people have genetic variations that we understand cause or, you know, are linked to the electromagnetic radiation.

What America needed a long time ago was a chicken in every pot. Now what America needs is a fiber, an optical fiber, in every home. The data has to come through, but wireless radiation is, unfortunately, a bad idea.

Chairman Glenn:

Thank you, Mr. Héroux, and if you would briefly, what are your credentials with McGill University?

Dr. Héroux:

I am [on] the faculty of medicine. I am the Director of the Occupational Health program within the Department of Epidemiology, Biostatistics and Occupational Health.

Chairman Glenn:

All right. Thank you. Rep Dianda, do you have a question of this testifier? Okay. Representative Elder.

Rep. Brian Elder:

Thank you, Mr. Chairman. Good morning, and thank you for your testimony today. Just to let you know, some of us are Truman Democrats; we still think there should be a chicken in every pot.

At the beginning of your testimony, you indicated concern that implementation of this technology will

cause liability to the auto industry.

Dr. Héroux:

Yes

Rep. Elder:

Are you aware that both the General Motors Corporation and the Ford Motor Company are in support of this bill, because they feel it's necessary for their autonomous vehicle future?

Dr. Héroux:

Look, historically this industry does not have a good record of making good choices.

GM's original view on car crash safety was that "cars don't cause accidents; drivers do."

American industry had to follow the lead of Volvo in Sweden before it included collapsible steering columns that reduced the death rate by 12%, airbags that reduced the death rate by 25%, and safety bags that reduced the death rate by 42%, crumple zones and other devices in cars.

Remember these heavy cars with big bumpers that were full of chrome everywhere, you know, that were killing machines rather than meant to be used by humans?

And another example is that as a result of GM's policy of supporting the inclusion of tetraethyl lead in gasoline instead of ethanol, many decades ago, 15 million U.S. children lost 10 IQ points and had permanent problems with hyperactivity, behavior, and learning.

So don't tell me that we have to follow the recommendations of the captains of industry, because I worked in industry for more than a decade. And I love these people, but their focus is so great on what they're doing. They want to serve, but their focus is incredibly directed to their task.

They have no knowledge of health effects of their works, and this creates a schism within society that we have to bridge. And unfortunately, this may fall upon you.

Chairman Glenn:

Thank you, Mr. Héroux.