



## Scientific Update on 5G Small Cells and Human Health

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### Study Finds 5G Frequencies Have A Biological Effect

A newly published study "[The Modeling of the Absorbance of Sub-THz Radiation by Human Skin](#)" from distinguished Israeli physicists Yuri Feldman and Paul Ben Ishai found that the higher frequencies intended for use in 5 G, are preferentially absorbed in the sweat duct- a significant biological effect.

- The researchers advise that standards need to be developed that protect human health. Currently accepted industry standard test systems for electromagnetic radiation's effect on humans are not adequate to ensure public protection because these test systems are not sophisticated enough to measure this effect nor to quantify the risk to human health from cumulative exposure. (Watch a [lecture](#) by Paul Ben-Ishai, PhD at the [2017 IAS Conference](#)).

*" In light of our work and a growing number of publications showing the frequency of 5G can have serious biological effects, we believe that current efforts to accelerate the implementation of 5G should be delayed until additional studies are made to assess the critical impact on human health."*

-Yuri Feldman Paul Ben Ishai

### Cell Tower Radiation is Linked To Damage in Human Blood

A newly published study compared people living close and far from a cell antennas. They found a significant impact on people living closer to cellular antennas. Damage was found in their blood that predicts cancer development.

The study entitled, "[Impact of radiofrequency radiation on DNA damage and antioxidants in peripheral blood lymphocytes of humans residing in the vicinity of mobile phone base station](#)" ([Zothansiana](#) et al, 2017) was published in Electromagnetic Biology and Medicine.

### Millimeter Waves Impact Bacteria Growth.

New Research finds that millimeter waves alter bacteria growth and the combined action of these frequencies with antibiotics had even stronger effects. The study "[Millimeter waves or extremely high frequency electromagnetic fields in the environment: what are their effects on bacteria?](#)" was published in Applied Microbiology and Biotechnology.

### New Expert Recommendations To Reduce Exposure in Schools

In 2017, [the Maryland State Children's Environmental Health and Protection Advisory Council](#) issued a Report advising the Maryland Department of Education to recommend local school districts reduce classroom wireless radiation exposures by providing wired—rather than wireless—internet connections.

### Corporations Advise Their Shareholders That They Face Serious Risks From RF

*"If radio frequency emissions from wireless handsets or equipment on our wireless infrastructure are demonstrated to cause negative health effects, potential future claims could adversely affect our operations, costs or revenues..."*-Crown Castle's [2016 10-K ANNUAL REPORT](#)

Most wireless companies have issued [similar warnings](#) to their shareholders.