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Dear Dr. Disis:

I am writing to provide comment on a review article that was recently published in your journal entitled "Radiofrequency Radiation and Cancer: A Review" by David Grimes. I am providing my comments as a representative of a state commission that was tasked with exploring the health and environmental effects of wireless radiation, and not as a single individual. Because the findings of that commission form the basis for my comments, I will provide a brief overview of the commission below.

The commission I served on was convened through bipartisan legislation ([House Bill 522](#), 2019) that was passed by both houses of the New Hampshire legislature and signed by the Governor. The intention of the legislation was to bring together unbiased experts in fields relating to non-ionizing electromagnetic radiation in order to address citizen questions and concerns about the ever-growing number of radiofrequency radiation sources. The membership of the commission that was convened in the Fall of 2019 included people with backgrounds in physics, engineering electromagnetics, epidemiology, biostatistics, occupational health, toxicology, medicine, public health policy, business and law who were well qualified to evaluate state-of-the-art, peer-reviewed science and interpret the findings of this research. The work of the commission took place over a year's time and entailed meetings with outside experts and exploring relevant peer-reviewed literature. The [final report](#) was released in November 2019. Because of the sharp contrast between Dr. Grimes' article and the findings of the New Hampshire Commission I am writing to you now.

As documented in the final report, the strong consensus of the commission was that wireless radiation exposure poses a significant threat to human health, which includes the risk of cancer. This finding is consistent with the testimony of all the experts who presented to the commission with only one exception, and that was from the outside expert brought in by the telecommunications industry. That expert, who was the only expert paid to present, made claims similar to those made by Dr. Grimes in his article, namely that non-thermal, non-ionizing radiation does not cause adverse health effects other than heat (thermal) related; all of the other eight experts provided evidence of the harmful biological effects of

such wireless radiation. From the perspective of what was observed by the commission, Dr. Grimes' viewpoint is aligned with industry and not with most scientists who have investigated these radiation effects.

While I do not intend to address my concerns on a point-by-point basis, there are some general comments that should be aired. One is the use of pejoratives when describing views contrary to his own (e.g., "fringe" and "ludicrous"). In my opinion as a former Associate Editor (*IEEE Transactions on Antennas and Propagation*), such language is not appropriate in scientific publications. Terms like "fringe" and "cherry picking" are routinely used by industry to discredit any publication that reveals harm associated with wireless radiation, and those terms are seldom defined clearly. To get a better understanding of the word "fringe publication" I worked with our college librarian to identify what that meant. Without going into too much detail here, we determined that the best indicators of the quality of a publication were determined by the qualifications of the Editorial Board and the reviewers, rather than other indices that track with readership. There are many high-quality journals that have a small readership. What is relevant here is that the articles the commission used to reach its conclusions were all from high-quality publications, where the people running those publications were from reputable institutions; none of them could be considered fringe.

The commission also addressed the issue of "cherry picking" where only articles showing a desired effect are presented. There are peer-reviewed articles that document both harm and lack of harm from wireless radiation, where industry-funded studies are the least likely to show harm. The bottom line for the commission is that the majority of studies do show harm. Dr. Grimes' and the industry's response to the studies that show harm is to simply discount them as being "underpowered or poorly conducted" and then exclude them from consideration. Commission members found that the many studies showing harm were credible and could not be ignored.

The findings of the New Hampshire Commission are far from being an outlier. For the sake of brevity, I will not list the many scientific and medical organizations raising the alarm about wireless radiation here, but I will provide them to you if you would like to see them. Another indicator that radiation harm is real is the fact that electromagnetic hypersensitivity (EHS) is recognized by the Americans with Disability Act and Medicare; EHS has been assigned its own international medical [ICD billing codes](#) and it can have devastating effects for those who suffer from it. Harm from non-ionizing electromagnetic radiation is recognized by the insurance industry and is considered an environmental pollutant. Almost all insurance companies have this as an [exclusion in their policies](#) and will not insure against injuries associated with radiofrequency radiation.

The question about why regulatory bodies such as the Federal Communications Commission (FCC) are not protecting people against wireless radiation injury arose early in the New Hampshire Commission's deliberations. We invited representatives of the FCC and other government agencies to meet with us to answer our questions, but none of them took us up on our offer. An explanation for unwillingness of the FCC and others to carry out their duties in protecting the public is given in the [Harvard University report](#) entitled *Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates*. The title of the report goes a long way in explaining the dynamics of

the regulatory process with regards to wireless radiation, and the report itself is consistent with what our Commission found to be the case.

It is noteworthy that this past Summer, the Environmental Health Trust and Children's Health Defense won a lawsuit against the Federal Communications Commission (FCC). In that ruling, the United States Court of Appeals for the District of Columbia ruled that the FCC's recent reaffirmation of radio frequency emission safety guidelines dating back to 1996 was "arbitrary and capricious" in its failure to respond to scientific evidence submitted to the agency. My point is that there is a large and growing awareness about the danger of wireless radiation, an awareness that conflicts with the biased information presented in Dr. Grimes' article.

One of the recommendations of the New Hampshire Commission is that the public should be informed about the risks of wireless radiation exposure. There are many actions that can be taken to protect people from radiation exposure, but that will not happen until the risks are acknowledged. Unfortunately, articles like the one written by Dr. Grimes obscure those risks and provide no impetus for people to reduce their exposures. The longer that people use their wireless devices under the assumption that the radiation from them is benign, the greater will be the number of people harmed by that radiation. Facilitating the spread of information that does not accurately portray real risks seems to be a violation of the Hippocratic Oath.

Based upon the above, I believe that the only moral and ethical path forward is to retract Dr. Grimes' article. The information presented in the article is misleading and incomplete, and has the very real potential to result in harm.

Sincerely

Kent Chamberlin, PhD
Professor & Chair Emeritus