

WIRELESS TECHNOLOGY RESEARCH LLC

7 October 1999

Mr. C. Michael Armstrong
Chairman and Chief Executive Officer
AT&T Corporation
32 Avenue of the Americas
New York, New York 10013-2412

Dear Mr. Armstrong:

After much thought, I am writing this letter to you, personally, to ask your assistance in solving what I believe is an emerging and serious problem concerning wireless phones. I write this letter in the interest of the more than 80 million wireless phone users in the United States and the more than 200 million worldwide. But I also write this letter in the interest of your industry, a critical part of our social and economic infrastructure.

Since 1993, I have headed the WTR surveillance and research program funded by the wireless industry. The goal of WTR has always been to identify and solve any problems concerning consumers' health that could arise from the use of these phones. This past February, at the annual convention of the CTIA, I met with the full board of that organization to brief them on some surprising findings from our work. I do not recall if you were there personally, but my understanding is that all segments of the industry were represented.

At that briefing, I explained that the well-conducted scientific studies that WTR was reviewing indicated that the question of wireless phone safety had become confused.

Specifically, I reported to you that:

- The rate of death from brain cancer among handheld phone users was higher than the rate of brain cancer death among those who used non-handheld phones that were away from their head;
- The risk of acoustic neuroma, a benign tumor of the auditory nerve that is well in range of the radiation coming from a phone's antenna, was fifty percent higher in people who reported using cell phones for six years or more; moreover, that relationship between the amount of cell phone use and this tumor appeared to follow a dose-response curve;
- The risk of rare neuro-epithelial tumors on the outside of the brain was more than doubled, a statistically significant risk increase, in cell phone users as compared to people who did not use cell phones.

- there appeared to be some correlation between brain tumors occurring on the right side of the head and use of the phone on the right side of the head;
- laboratory studies looking at the ability of radiation from a phone's antenna to cause functional genetic damage were definitively positive, and were following a dose-response relationship.

I also indicated that while our overall study of brain cancer occurrence did not show a correlation with cell phone use, the vast majority of the tumors that were studied, were well out of range of the radiation that one would expect from a cell phone's antenna. Because of that distance, the finding of no effect was questionable. Such mis-classification of radiation exposure would tend to dilute any real effect that may have been present. In addition, I reported to you that the genetic damage studies we conducted to look at the ability of radiation from the phones to break DNA were negative, but that the positive finding of functional DNA damage could be more important, perhaps indicating a problem that is not dependent on DNA breakage, and that these inconsistencies needed to be clarified. I reported that while none of these findings alone were evidence of a definitive health hazard from wireless phones, the pattern of potential health effects evidenced by different types of studies, from different laboratories, and by different investigators raised serious questions.

Following my presentation, I heard by voice vote of those present, a pledge to "do the right thing in following up these findings" and a commitment of the necessary funds.

When I took on the responsibility of doing this work for you, I pledged five years. I was asked to continue on through the end of a sixth year, and agreed. My tenure is now completed. My presentation to you and the CTIA board in February was not an effort to lengthen my tenure at WTR, nor to lengthen the tenure of WTR itself. I was simply doing my job of letting you know what we found and what needed to be done following from our findings. I made this expressly clear during my presentation to you and in many subsequent conversations with members of your industry and the media.

Today, I sit here extremely frustrated and concerned that appropriate steps have not been taken by the wireless industry to protect consumers during this time of uncertainty about safety. The steps I am referring to specifically followed from the WTR program and have been recommended repeatedly in public and private fora by me and other experts from around the world. As I prepare to move away from the wireless phone issue and into a different public health direction, I am concerned that the wireless industry is missing a valuable opportunity by dealing with these public health concerns through politics, creating illusions that more research over the next several years helps consumers today, and false claims that regulatory compliance means safety. The better choice by the wireless industry would be to implement measured steps aimed at true consumer protection.

Alarming, indications are that some segments of the industry have ignored the scientific findings suggesting potential health effects, have repeatedly and falsely claimed that wireless phones are safe for all consumers including children, and have created an illusion of responsible follow up by calling for and supporting more research. The most important measures of consumer protection are missing: complete and honest factual information to allow informed judgement by consumers about assumption of risk; the direct tracking and monitoring of what happens to consumers who use wireless phones; and, the monitoring of changes in the technology that could impact health.

I am especially concerned about what appear to be actions by a segment of the industry to conscript the FCC, the FDA and The World Health Organization with them in following a non-effective course that will likely result in a regulatory and consumer backlash.

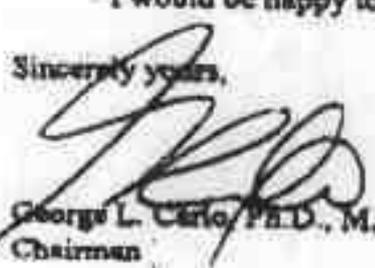
As an industry, you will have to deal with the fallout from all of your choices, good and bad, in the long term. But short term, I would like your help in effectuating an important public health intervention today.

The question of wireless phone safety is unclear. Therefore, from a public health perspective, it is critical for consumers to have the information they need to make an informed judgement about how much of this unknown risk they wish to assume in their use of wireless phones. Informing consumers openly and honestly about what is known and not-known about health risks is not liability laden - It is evidence that your industry is being responsible, and doing all it can to assure safe use of its products. The current popular backlash we are witnessing in the United States today against the tobacco industry is derived in large part from perceived dishonesty on the part of that industry in not being forthright about health effects. I urge you to help your industry not repeat that mistake.

As we close out the business of the WTR, I would like to openly ask for your help in distributing the summary findings we have compiled of our work. This last action is what always has been anticipated and forecast in the WTR's research agenda. I have asked another organization with which I am affiliated, The Health Risk Management Group (HRMG), to help us with this public health intervention step, and to put together a consumer information package for widespread distribution. Because neither WTR nor HRMG have the means to effectuate this intervention, I am asking you to help us do the right thing.

I would be happy to talk to you personally about this.

Sincerely yours,



George L. Carlo, Ph.D., M.S., J.D.
Chairman