

In essence, Motorola and the industry withdrew all of their presentations. Their withdrawal may have been due to the overwhelming nature of the research findings, which indicated that typical operation of portables is dangerous.

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Recall that the WTR set out some very clear guidelines for pursuing research into areas that had earlier been found to indicate hazards. Well then, let's consider the chromosome and DNA research that indicates that low-level radiation exposure causes damaging biological effects. Certainly the WTR will place a high priority on that work. Certainly those studies qualify as "new research breakthroughs" to be replicated as quickly as possible. Or maybe the proposals to replicate that research didn't "best meet [the] needs" of the WTR and the industry. Surely the WTR would rush to have a number of qualified researchers investigating this most important issue. After all, the charter of the WTR is to ensure unbiased, independent research funded through a blind trust so as to remove any suspicions of industry corruption of the results.

It's somewhat intriguing that Motorola has privately funded a follow-up study to replicate the Lai—Singh research but not with Lai and Singh as the researchers. Funding of the replication study is viewed by some in the media as nothing more than a necessary public relations move. Since the Lai—Singh research findings have become widely known the industry has been pressured to replicate the tests—quickly.

The replication studies were performed at the Washington University at St. Louis, not to be confused with the University of Washington, at Seattle. Lai and Singh are with the University of Washington at Seattle.

Certainly some questions of research independence need to be answered. This is hardly the format that the CTIA has prescribed for independent research. The replication studies are funded by Motorola, and therefore the results will be the property of Motorola. The CTIA has maintained since early 1993 that all research will be funded through a blind trust to ensure independence. Now we find that the replication studies for the most significant, and potentially damaging, research findings will be performed with funding by and at the direction of the industry's most prominent corporation. It would seem that in order to avoid any suggestions or appearances of bias or loss of independence, the work would have been funded through the very mechanism established by the cellular industry.

In its own published documents the CTIA has stated that

by trusting the research to outside scientists and subjecting their findings to independent peer review, we are determined to assure that this process is objective. In addition, a trust arrangement funds the peer review process and the outside, independent research.¹⁹¹

It all sounds very aboveboard until we see how things have really evolved.

¹⁹¹ *Industry response, Ans. #10, Procedures and Resource Manual for Public Health and Safety Issues, Cellular Telecommunications Industry Association (1994):B11.*

First of all, the government agencies that were supposed to take an active role in this research process have opted out because of the strong industry bias that they perceived was pushing the effort. Without a strong capability to govern the process or even participate in determinations, the government agencies would be nothing more than rubber stamps. The industry would just be using the names of those agencies, such as the FDA and EPA, to add prestige to any "findings" that the CTIA research produced.

Second, the research is not being funded by a blind trust. The research proposal for replication submitted to WTR by Lai and Singh was pigeonholed. It was never forwarded to the peer review board. Instead, WTR took nearly a year to publicly argue small details of the research methodology, until the original researchers became discouraged and withdrew their proposal. So much for independence and blind trust funding. At the time of this writing, it is understood that no funds have actually been placed into any blind trust for research purposes.

In spite of WTR's representations of independence and research integrity, Gandhi's lab has been funded to perform dosimetry research. That is, the same research group that provided the false data and misrepresentations of safety will be performing WTR's research for energy absorption once again. But Lai and Singh—not funded. The CTIA's own procedures and resources manual insists that the research agenda highlights the "use of Good Laboratory Practices and Good Epidemiology practices in all studies conducted under the research program"¹⁹² Clearly there seems to be something amiss in

¹⁹² *Procedures and Resource Manual for Public Health and Safety Issues, Cellular Telecommunications Industry Association, (1994):B5*

one lab that allows for research findings of radiation absorption to be reported and released worldwide only to be re-released at a later time with findings of energy absorption about ten times higher than initially reported.

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Most interesting is an epidemiological study that, WTR informs us, "is designed to investigate the possible effect of exposure to radiofrequency waves on human health."¹⁹³ But wait a minute. The CTIA, WTR, and the cellular industry have insisted for the past eight years that there is a body of research that "proves" that these portables are safe. They have repeatedly told us about the "10,000 studies and forty years of research."

Now WTR has selected millions of unwitting portable telephone users as "guinea pigs" for an epidemiological study. Certainly we can assume that when a customer approaches a salesman to make a portable cellular telephone purchase the salesman does not tell the customer, "Oh, by the way, we want you to take part in a study to see if you develop brain cancer or mental defects." The salesman tells the potential customer, if anything at all, that the telephones are "proven safe."

The CTIA's and WTR's research agenda specifically points out the epidemiological study. George Carlo, chairman of CWTR, has spoken openly about tracking the health of more than 3 million unknowing users. In the research agenda they state that "epidemiological evaluations and longitudinal [long-term] surveillance of cellular phone users, employing real-life exposure measures" will be performed.

¹⁹³ *Ibid.*, B4.

"The SAG is also seeking proposals for investigator initiated projects consistent with the goals of the SAG program."

Research proposals are usually held in confidence. In the case of the Lai and Singh proposal, however, WTR made a public issue of the proposal. In their Fall 1994 newsletter, WTR took an opportunity to publicly deprecate the Lai and Singh research, although it had not yet, been published and was confidential information.

In the same issue of the WTR newsletter, immediately below their one-sided discussion of the Lai/Singh research, the WTR states that

All scientific proposals that have been submitted to the SAG are currently undergoing review. Proposals for concept papers critically evaluating the relevance of experimental promotion studies to human health risk assessments of RF, extrapolation of animal studies to human exposure pertaining to RF, and genotoxicity studies are still being accepted. Requests for additional proposals will be issued by the SAG in the coming months.¹⁹⁴

The review of which WTR spoke was supposed to be an independent peer review coordinated by Harvard University's Center for Risk Analysis. The Lai/Singh proposal never made it that far. It was dragged through the mud and dumped in the gutter. But at the same time and as stated previously, WTR was seeking proposals from, researchers for exactly the same kind of research. Maybe the Lai/Singh team didn't provide the "proper" answer.

¹⁹⁴ "SAG Releases Research Agenda," *Science Advisory Group on Cellular Telephone Research* 2, no. 1 (Fall 1994).

The final statement of WTR, given earlier, is very troubling. Just what were the goals of the WTR program? In their documents the CTIA wrote that

A the overall goal of the program is to establish a solid scientific basis for policy decisions regarding wireless technology and health concerns.¹⁹⁵

Again, why don't they simply use the scientific basis of 10,000 studies and forty years of research?

Alarming, they have said nothing about scientific study to prove or determine the safety of their products.

The CTIA continues:

It was also important that the program include a public health intervention plan that could be activated rapidly should any evidence be uncovered that use of wireless communications poses a human health risk.

How and When does this plan become active? From the available CTIA documents it appears that the plan is already activated. Certainly the published scientific literature is now substantial in its evidence of hazards due to radiofrequency radiation exposure.

That mission statement was clearly put into effect when the Lai and Singh work became known, but put into effect in a rather bizarre manner not designed to provide timely verifications to the very significant results found by Lai and Singh. The CTIA and its Science Advisory Group recommended performing studies of the

¹⁹⁵ *Procedures and Resource Manual for Public Health and Safety Issues, (Cellular Telecommunication Industry Association, (1994) B1.*

methods and then consideration of the proposals for replication studies. That is a process that would have taken at least a year before any additional research could begin. However, Dr. Elizabeth Jacobson of the U.S. Food and Drug Administration wanted further studies to begin immediately. It is now six years since the reports of DNA damage were made known and yet there is no replication data from the CTIA's WTR. But we have had replications and additional research reported from Phillips (Loma Linda), Adey (Riverside), Roti-Roti (St. Louis), Repacholi (Australia).

As we might have anticipated, WTR did wait the year while a committee of its own experts scrutinized the methods and techniques of Lai and Singh. That further review has shown that the methods and techniques Lai and Singh used were proper. But the review bought the industry one more year.

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The CTIA's working documents include a second-track approach to the issues of portable cellular telephone safety. They refer to it as risk management.

Their plan for risk management is to answer the question: "If a health problem exists, how can it be fixed?" (see footnote 192).

Wait a minute. How is it that the industry's representatives are asking questions today about hazards and issues that were supposedly resolved years ago? The answer, of course, is that the industry doesn't like the answers, which the existing research data base provides. So it ignores the findings. On the one hand the industry claims 10,000 studies proving safety; while on the other,

the industry proclaims that it is looking to find out if health problems exist.

The CTIA even proposes some action plans to respond to future research findings. Their solutions include:

labeling changes, geared toward influencing the way people use cellular phones;. . . (see footnote 192).

The world has come to believe, because the industry has vowed it to be true, that portable cellular telephones are proven absolutely safe. Now their industry association proposes to use labels to tell people how to use the phone to minimize danger.

design changes, that would alter exposure patterns;. . . (see footnote 192).

Since the cellular manufacturers and the CTIA have never informed their customers that large amounts of radiation are being deposited within the user's brain, that should be an easy fix. Simply produce a "new improved" portable and who's to know the difference? In the meantime users of the current generation portables continue to act as radiation sponges.

usage restrictions (see footnote 192).

That is, the industry may impose restrictions or else recommend that the owners impose their own restrictions on use of their products. We might envision the restriction as something of a warning that owners who exceed a certain usage for a day or month are at greater risk of developing brain cancer.

The CTIA's resource manual continues:

Should a need become apparent, these options could be implemented singly or in combination to mitigate risk. Recommendations on all of these considerations have been devised and are ready to-be put into place if need be. . . (see footnote 192).

The truth of the matter is that all of the recommendations have already been "put into place." The industry's manufacturers now include warnings within the literature accompanying their portable phones. Design changes are already well under way. For example, in a conversation with Gandhi he offered that he is under contract with Motorola to redesign antennas and portable telephone packages to reduce the amount of radiofrequency radiation that is absorbed into a user's head. Kuster has indicated that he is also involved in antenna and package redesign for one of the largest phone manufacturers.

The FDA and EPA have already advised operators of the portables to limit the use to emergency situations if possible; to minimize use at other times; and to use regular telephones whenever they are available.

Does this not appear to be exactly the "risk management" that the CTIA has indicated within its Resource Manual? How then can the consumers be expected to continue to believe claims of "safety," since all of the steps of the CTIA risk management plan are in operation?

The most recent four or five research reports documenting the chromosomal and DNA damage are too much for the industry to tolerate without a broad public relations response. That response program is now in motion. The CTIA plans to outflank its critics with a structured program to convince the majority of the population

by using public relations statements and benign-sounding phrasology and generally acting as the likable "good old boy."

The CTIA's formal plan is to meet with local church groups, fire and emergency services departments, law enforcement agencies, and any other local groups within communities. One of their primary purposes is to convince small groups of people by using public relations rather than more broadly by using research results.

In small groups it is not so likely that someone in the audience will have the technical skills of an electromagnetics or bioeffects researcher. And when that rare occasion occurs it will be only one disaster out of hundreds of other successful meetings. Dividing, separating, and brainwashing through slick public relations is a strategy that will work if there is no opposing viewpoint. Unless there is an opportunity to present the much stronger "other side" of the issue, the industry interests will become the accepted belief. Hut belief is not necessarily the same as truth or fact.

It seems to be increasingly clear that the industry is now faced with knowledge that both thermal and nonthermal radiofrequency radiation can cause brain tissue damage. Also, there are the memory deficits and motor skill deficits that have been confirmed repeatedly. Add to these the effects that portable cellular telephones have on pacemakers, wheelchairs, and electronic medical equipment (commonly referred to as EMI).

The industry response has been to organize a meticulously defined battle plan to blunt the inquiries made by the media and attorneys for injured consumers. That battle plan is extremely clear in view of the CTIA document "Procedures and Resource Manual for Public Health and Safety Issues." The CTIA has gone to some

effort to convince everyone that their Science Advisory Group is completely independent. The CTIA wants us all to believe that the research activity run through WTR is not influenced by the CTIA or any cellular industry members.

In reviewing the CTIA "Procedures and Resource Manual for Public Health and Safety Issues" the first statement we see is a foreword written by none other than George Carlo, chairman of WTR. In that statement Carlo wrote:

*[They] have developed a high-quality scientific program that is funded by the industry, but independent of its influence.*¹⁹⁶

He also wrote:

If we identify any danger or potential hazard during our evaluation, the program will move immediately into a risk-management mode.

He hasn't specified whose risk is of concern. Judging from the cellular industry's activities to date it certainly is not the risk to the public; it must be the risk to the industry. Consider the WTR response to Lai and Singh, Sarkar, Maes, Cleary, and Verschaeve. All of those researchers independently found chromosomal and DNA damage as a result of their experiments. How did WTR respond? They either assaulted the research directly or redefined their mission statement to narrow the area of interest in a way that excludes the reported research.

¹⁹⁶ *Procedures and Resource Manual for Public Health and Safety Issues, Cellular Telecommunications Industry Association, (1994) foreword.*

Compare truly independent research to the structure of the WTR—funded work. For one example, a prominent university researcher, Dr. Ken Foster, has been funded, as part of the WTR \$25 million research effort, to perform radiation absorption studies. However, as part of the study he would be collaborating with WTR and with Dr. Gandhi. Where is the independent research?

Foster was supposed to be determining SARs based on measurements taken within the familiar “biomass soup” representing a human. One would expect that by now even the WTR wouldn’t try to use that antiquated practice to measure SARs. Certainly, with the open checkbook and \$25 million, they can build some representative structures such as a simulated human brain that could be placed Within a simulated human skull—or real human skull—having believable interior features.

Even Dr. Foster admitted that the results he expects to obtain, using the “human soup,” will be of questionable value.

However, even the most up—to-date analytic and laboratory models cannot take the place of a live-functioning human head and brain. A live human head and brain has the advantages of actual biological tissue, not the laboratory mixtures that simulate tissue. The live head and brain has contours, folds, protrusions, voids, different tissue interfaces, and shapes. The problem—it is unethical to use live humans for these kinds of laboratory “guinea pig” tests.

But the cellular telephone industry doesn’t think it’s unethical to use millions of portable cellular owners as “guinea pigs.” Their epidemiological study is meant to track the health of 3 million owners. By matching owners

with phone bill information and medical information, the CTIA's Science Advisory Group (WTR) tells us, they will have an epidemiological study that concludes how great the effects of portable cellular telephone use are. What it appears they are really doing is spying on 3 million customers for a number of years to see how their product affects the users' health. That work was supposed to be done in advance of sales instead of spying on people to learn which users die, become mentally deficient, become disabled, or are involved in traffic accidents.

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Many of the problems of the industry could have been avoided had the influences of the scientific researchers superseded those of the product marketers. But the industry chose to ignore researchers who were providing unfavorable answers. The industry instead organized a broad and comprehensive public relations campaign to persuade users of portable cellular telephones that the operation was safe. The cellular telephone industry engaged in the business of preaching a "belief system."

Never mind that the most current research findings report DNA damage to brain tissue as a result of exposure to radiofrequency radiation.

Never mind that recent conferences, sponsored by the cellular telephone industry manufacturers and service providers, were dominated by reports of research findings that show that most of the energy radiating from the portable cell phones is absorbed in a small region of the user's brain.

The CTIA representatives tell industry insiders that a scientist is very dangerous and if the scientific process

is used the scientists would come back with more questions than answers, which is very risky. This information comes as part of a series of CTIA seminars held to teach cellular industry people how to wage the public relations battle for the minds of the public. This is termed research by press release or research by public relations instead of good old-fashioned scientific research. Of course, research by press release is more predictable than the laboratory research, which could provide embarrassing evidence of biological hazards.

However, owners of portable cellular telephones are now warned that if they are concerned about the radiation then they should limit their use to the shortest time possible and completely avoid use except for emergency situations. Is it possible that by now even the manufacturers of these "high-tech" wonder devices and their association spokesmen are prepared to admit that they may have unleashed the next unseen plague on humanity? Probably not—there are still too many executives and managers looking for their next promotion and continuing their long careers.

The cellular telephone industry is the observer, or spectator, at a game. The game includes about 200 million participants. It is nothing less than cellular telephone Russian roulette. The only difference is that with regular Russian roulette the results are immediate. You know immediately if you're a loser or not. With the cellular telephone Russian roulette you may not know for years if you are the loser. You may not know of a brain tumor until five or ten years after the day you "lost" at the game.

You pick up the phone, once, twice, ten times a day—or only a few times a month. But each and every

time you're gambling that "this time" won't be the occasion when the radiation causes irreparable damage to your brain. It only takes a seemingly small trauma at a very small location to result in tissue damage, DNA damage, or chromosome mutations.

This nonscientific industry experiment using the general population is unique in the history of humanity. Never before has such a large "guinea pig" experiment been performed. Even the government experiments with nuclear radiation only exposed a few thousand uninformed people. This bold experiment may expose virtually the entire segment of the population that can afford to operate the high-tech portables.

It is cellular telephone Russian roulette. Go ahead and make the call. Do you feel lucky today?

\$12.95

They are everywhere, but should they be? While most consumers assume that cellular phones have been thoroughly tested and proven safe, that is not the case. Since the 1950s studies have evidenced possible brain damage through radiation emitted by the phones.

However, the industry battle to sell this product has been successful in circumventing, to a large extent, the type of regulation that affects such industries as cars and drugs. The author suggests that "Rather than the benign technology the industry claims, the evidence continues to paint a malignant picture of the effects to be expected due to human exposure to radiofrequency radiation." Sound unbelievable? *Cellular Telephone Russian Roulette*, by Robert C. Kane, reviews and analyzes the research base extensively, and the news is not good.

An eye-opening report, this volume should receive widespread attention.

"[T]issue destruction in one's brain may be occurring without the slightest indication that anything is happening. And the damage may be repeated, over and over again, each time the energy exposure takes place."

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