

August 4, 2007

Dr. Rick Jostes and Dr. Frank Barnes
c/o The National Academy of Sciences
500 Fifth Street, NW
Washington, DC 20001

Re: National Academy of Sciences Project: NRSB-O-06-02-A

Dear Dr. Jostes and Dr. Barnes,

I am a medical/science journalist, author, and former New York Times writer who often covers environmental energy issues particular to nonionizing radiation. I attended some of the NAS panel hearings on PAVE PAWS, which you oversaw and which Dr. Barnes chaired.

I am very concerned about the composition of the new panel formed for project NRSB-O-06-02-A, Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communications Devices, and would like to urge the National Academy of Sciences to revise this committee's membership. The current committee seems way out of balance and several members have obvious conflicts of interest, having done work for the industries whose products they propose to review. These conflicts may make an unbiased analysis of the actual health risks from use of these devices unlikely.

The two most problematic appointees are Dr. Leeka I. Kheifets and Dr. Bernard Veyret. Dr. Kheifets has a long financial relationship with the Electric Power Research Institute in the U.S. and Dr. Veyret with both the electric power industry and mobile phone providers in France. Their inclusion cannot be consistent with NAS policy and more importantly will undermine the credibility of any report this committee publishes. Accusations of the intentional stacking of this committee may find fertile ground. Unless you add more balance to the committee, it will look as if people with a particular mindset were assigned in order to find a specific outcome. The public's trust cannot be gained under these circumstances.

Although the purpose of this particular panel is to explore research needs regarding cell phones, there are many allied concerns in the wings with equal significance that may intersect with this panel's report. It has been widely known for several years that the subcommittee of the IEEE SCC28 (SC-4) that is updating the recommendations for RF exposure standards intends to recommend that US standards "harmonize" with the more lenient ICNIRP standards. In key frequencies utilized by most wireless products today, that harmonization will mean exposures to the civilian population orders of magnitude higher than what currently exist. This recommendation for more lenient exposure flies in the face of most research conducted on low-level effects since 1990. Yet strident calls from many quarters for stricter standards fall on deaf ears within ICNIRP.

Several members on this panel are from ICNIRP. How likely are they to reach a conclusion other than the one they now hold?

It is also well known in bioelectromagnetics circles that current standards are dose-metry based, not biologically based – a fact pointed out by the RF Inter-Agency Work Group (RFIAWG) report in 1999, which raised key concerns that have yet to be addressed. Yet, here is an important committee under the aegis of the National Academies of Science that is comprised of ICNIRP members. How can this lead to a conclusion other than the fact that SC-4 and allied industry interests want the seeming imprimatur of the NAS in order to justify the relaxation of US standards? This is happening at a time when the FCC is licensing more bandwidth to accommodate increasing use of wireless devices. More lenient standards would assist that build out. There is a segment within the bioelectromagnetics community that has long held a narrow view convenient to the industries that fund their research on RF's biological effects and they have thus far ruled the day. But the general public would like to think the NAS is above such manipulation. It is of utmost importance that NAS's committee be seen as independent and unbiased. This current committee configuration indicates the opposite.

It is my understanding that this new committee was requested by the Food and Drug Administration under a 1999 Cooperative Research and Development Agreement (CRADA) with the Cellular Telecommunications Industry Association (CTIA). The purpose was to identify further research needs into potential adverse health effects from cell phone use after the CTIA's experience with Dr. George Carlo and the unsatisfactory WTR project. With over 300 million cell phone users in the US and the numbers growing each day, that we do not already have an active, unbiased, government-sponsored, research effort free of industry influence is appalling. There has been a proliferation of research in recent years coming primarily from European and Asian countries, some of which shows significant adverse effects from these popular products. Why has the US allowed itself to fall behind on such a significant public health issue?

This is not the first time that an overview of research efforts on cell phones has been requested. In 1994, the General Accounting Office (GAO) issued a report on mobile phones and updated the information in 2001 at the request of U.S. Senator Joseph Lieberman and U.S. Representative Edward Markey. The 2001 GAO Report to Congress is entitled "Telecommunications, Research and Regulatory Efforts on Mobile Phone Health Issues (GAO-01-545). Among their findings:

"According to FDA and others, the research to date does not show that mobile phone radiofrequency emissions have adverse health effects but there is not enough information at this point to conclude that these products are without risk... the results of some studies have raised questions that require further research." The GAO further noted that the US contribution to research "...represents only a small portion of the total worldwide research effort..."

In fact, most independent bioelectromagnetics research labs in the U.S., including the EPA's facility, have closed within the last decade due to an absence of independent funding.

The GAO report also noted:

“A number of factors makes it difficult to draw definitive conclusions from existing research about the potential health effects of mobile phones. A relatively large body of research exists on the health effects of radiofrequency energy in general, but most of this research has focused on short-term exposure of the whole body, not on the longer-term exposure of the head that is characteristic of mobile phone use. In addition, much of the research to date has investigated the health effects of emissions at frequencies different from those used by mobile phones; it is not clear how possible health effects found at one frequency on the radiofrequency spectrum apply to other frequencies on the spectrum. Furthermore, much of the research focusing on mobile phones has tested the emissions of analog phones rather than of digital phones, which are rapidly becoming the standard technology. A few researchers have hypothesized that digital phones, which transmit messages as discontinuous pulses, could have different biological effects from analog phones, which transmit messages using a continuously varying radio wave...”

The authors further pointed out discrepancies in studies done to date, noting such flaws as short term test designs that would not pick up statistically important data for cancers with long latency periods, among other observations.

Six years later, none of the gaps in research observed by the GAO have been closed. Nor have any of the problems delineated in the RFIAWG been addressed in the US. The GAO report made it clear that inappropriate research was being used to reach inappropriate conclusions regarding RF safety.

Suggestions:

. Broaden the panel to include more scientists with fewer conflicts of interest and who have backgrounds in medicine and biology. Virtually all of the problems on the table today are about biological effects. The physics/engineering problems have been solved.

. Along with Henry Lai who is an important addition to the panel, please consider including: Sam Milham, MD., David O. Carpenter, MD., Olle Johannson, MD., Richard Albanese, MD., Martin Blank, Ph.D., Carl Blackman, Ph.D., and Jerry Phillips, Ph.D. As you are aware, not many medical doctors are knowledgeable about biophysics. Why not take advantage of the few who are, since the issues are biological in nature? The others suggested above have solid research backgrounds in biology. Dr. Carpenter's expertise in epidemiology may be of particular significance to ambient exposures near cell towers and city-wide wi-fi systems. Dr. Carpenter has established a unique method for gathering field data in the state of New York, which has a detailed database for hospital admissions. His method, with additional fine-tuning, is to match such admissions with zip codes when

looking for disease patterns. Such a field study could be conducted for cell towers and broadcast facilities since the state has a record of those too. Funding should also be secured for Dr. Carpenter to investigate the neurological symptoms experienced by firefighters with cell towers positioned on fire stations as documented by neurologist Gunnar Heuser in California.

Funding:

Please emphasize the importance of re-instituting an independent, unbiased government research effort such as the one that existed at EPA. There should be a permanent endowment at EPA or NIEHS for basic research into both wireless products and ambient exposures. This should not be in a CRADA with industry.

Unfinished Areas of Research to Address:

- . DNA damage at long-term, low-intensity exposures.
- . Increases in stress proteins.
- . Mast cell skin alterations.
- . Blood brain barrier permeability
- . Immune system alterations
- . “Dirty” electricity’s effects on serum glucose levels
- . Carcinogenic effects
- . Effects of modulation on exposure parameters
- . Multi-frequency exposures
- . Different signaling characteristics such as phased array exposure
- . Ambient exposures v. indoor exposures
- . Brainwave entrainment and changes in EEG’s that could lead to seizures/mood alterations.

. People are reporting adverse effects in record numbers from low-level wireless exposures that are well under current FCC and international standards. As an author on this subject, I am contacted daily by people with cancers and unexplained health problems due to nearby cell towers, wi-fi systems or cell phone use. Similar reports of sudden onset of sleeplessness, fatigue, rashes, concentration problems, dizziness, disorientation, headaches, etc. come from all over the world. It isn’t likely that so many are suffering the same mass hallucination. We must quantify what is happening in this segment of the population beyond presumptions of psychological dysfunction.

. We need appropriations for environmental study at U.S. Fish & Wildlife Service and at the USDA for research on ambient effects to birds, other wildlife, and pollinating insects. There is disturbing research from Europe that points to adverse effects in other species. With the songbird population of the US plummeting, this one area deserves immediate attention. The work of Robert Beason and Peter Semm indicates that something other than mere collisions with towers is adversely affecting birds. There are potential neuronal couplings with RF in avian physiology.

. We need a post-surveillance follow-up of people using cell phones housed at a federal regulatory agency like FDA. A small surcharge of \$1.00 per year added to cell phone bills would create a multi-million dollar program to track people for potential adverse health problems. Neither industry nor private “entrepreneurs” should be conducting this type of surveillance.

. Professionals in allied RF industries are also developing electromagnetic hypersensitivity – biophysicists, doctors, computer engineers and airline pilots are high on the list of people who contact me, seeking information. The presumption is that professional exposures are informed consent. This may not be true. Quantifying/limiting professional exposures should be re-examined in light of total exposures to that population.

. With the increased build out of next generation wireless services, ambient exposures will radically increase in close proximity to the population from both new and old infrastructure facilities. Safer infrastructure issues need to be addressed like satellite over fiber optic cable.

. From the start, most of the presumptions re: RF safety have been based on short-term test designs. We critically need to fill in the gaps in research for long-term, low-level exposures – the kind most experienced today. Current presumptions of safety should not be made without further research. Exposures will only worsen as time goes on.

. We must reverse key sections of Section 704 of the Telecommunications Act that would allow some communities to create RF-free ones for citizens who prefer that option.

I understand that some of these recommendations are far afield of this panel’s mandate but the issues are interrelated. There is no congressional office that hasn’t heard from concerned constituents on this subject today. If this panel recommends a new government research effort, support can likely be gathered quickly. Language already exists in several congressional offices that would facilitate just such a program.

Thank you for the opportunity to address the panel.

Sincerely,

B. Blake Levitt, Author, Electromagnetic Fields, A Consumer’s Guide To The Issues And How To Protect Ourselves (Harcourt Brace, 1995); Editor, Cell Towers, Wireless Convenience? Or Environmental Hazard? (Safe Goods/New Century, 2001)

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