Ron Melnick's Letter To The New York Times On Aaron Carroll's Article "Why It's Not Time To Panic About Cellphones And Cancer"

I am compelled to write this letter because of the numerous incorrect and misleading statements made by Aaron Carroll, a pediatric professor at Indiana University School of Medicine (Upshot, New York Times, May 31, 2016) in his critique of the cell phone study conducted by the National Toxicology Program (NTP).

1) The statement that the NTP report had been "shopped for review, but had not been accepted by any editors" is blatantly wrong and makes one wonder where Carroll obtained such false information or did he simply decide to make up his own facts.

2) While Carroll notes that this was a study in rats, he neglects to note that every known human carcinogen induced tumors in animals when adequately tested. Animals are used as models in toxicity and carcinogenicity studies because it is unethical to intentionally expose humans to agents that might cause an adverse health effect such as cancer that has a long latency period between exposure and manifestation of disease.

3) The finding of significant increases of cancer in male rats but not in female rats is presented as contempt of the data; however, Carroll neglects to note that such findings are common in animal studies especially at sites that have higher background rates in male rats than females. This gender difference might be a consequence of low statistical power, an issue that I comment on below.

4) Carroll claims that control rats "dying early could be responsible for all the significant results of the study." This statement is wrong for at least two reasons: First, there was no statistical difference in survival between control male rats and those exposed to CDMA at 6 W/Kg (the group with the highest rate of gliomas and heart schwannomas); at week 94, survival of rats in these two groups were the same. Second, no glial cell hyperplasias (potential pre-cancerous lesions) or heart schwannomas were observed in any control rat,

even though glial cell hyperplasia was detected in a CDMA-exposed rat as early at week 58 and heart schwannomas were detected as early as week 70 in exposed rats.

5) Carroll seems to endorse the incorrect view that because the study had low statistical power, it is likely to have "an increased risk of being a false positive." However, having low statistical power means that there is a greater chance for a false negative rather than a false positive result. That is, there is a high probability of accepting the no-effect hypothesis even when a true effect exists.

6) Carroll warns against accepting results from the NTP study, which he refers to as an "imperfect rat study." He is probably unaware that the design of this study was presented at an annual meeting of the Bioelectromagnetics Society prior to the start of these studies. The overwhelming opinion expressed by the meeting participants was that this would be the largest and most comprehensive study in animals exposed to cell phone radiation, and that the results from this study would trump all other animal carcinogenicity studies of this agent.

7) Carroll criticizes the usefulness of human case-control studies while praising cohort studies. Actually both types of studies are important, though each has its own limitations. Carroll neglects to note that cohort cancer studies are reliable if they adequately capture the long latency period for cancer development as well as the actual characteristic of cell phone use by individuals in these studies (e.g., use of speakers, head sets, frequency and duration of calls, type of phone, etc.). Exposure misclassifications in cohort studies tend to increase the chances of a negative result.

8) While Carroll argues against a relationship between brain cancer and cell phone use because the incidence of brain cancers have not increased in the United States since the late 1980s, he neglects to note that unfortunately the incidence of highly lethal glioblastomas has increased during that same time period.

In my view, a pediatrician would be acting irresponsibly if he or she knew and understood the implications of the human and animal cancer data on cell phone radiation and did not offer precautionary advice to the parents of his or her patients.

—Ronald L Melnick, PhD

Ronald L Melnick, PhD, led the design of the NTP/NIEHS Rodent Study. Melnick was a Senior Toxicologist and Director of Special Programs in the Environmental Toxicology

Program at the National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health, and is now retired.

Reply From The New York Times

On Jun 8, 2016, at 11:24 PM, Darlin, Damon <darlin@nytimes.com> wrote:

Mr. Melnick,

Aaron Carroll forwarded your letter to me. I was one of the editors who worked on the piece with Aaron.

Thank you for taking the time to write to us about it. We read through your concerns carefully and discussed each point with Aaron. We do not see anything in the article that needs to be corrected.

I see you have also submitted this to our letters editor. We at The Upshot have no role in their decisions to print the letter or not.

All the best,

Damon Darlin

Editor, The Upshot

The New York Times

202-862-0301

From: Ron Melnick

Date: Thu, Jun 9, 2016 at 11:27 AM

Subject: Re: The Upshot article on the cellphone rat study

To: “Darlin, Damon” <darlin@nytimes.com>

Mr. Darlin

I find it appalling that the NY Times printed the op-Ed by Aaron Carroll on health effects of cell phone radiation that had numerous inaccurate and misleading assertions, while denying my submission that attempted to correct many of the incorrect statements in that article. The fact that you allowed the author of that op-Ed (who obviously has no background in toxicology) to reject my comments because you and he did not see anything in his article that needed to be corrected is not only absurd, but is also a disservice to the readers of the NY Times.

Sincerely,

Ronald Melnick, PhD,

Retired Senior Scientist,

National Toxicology Program,

National Institute of Environmental Health Sciences,

National Institutes of Health