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June 27, 2016

Re: Update on HESA Safety Code 6 report and scientific evidence on the health effects of radiofrequency wireless radiation

Dear MP Rankin,

The purpose of this letter is to provide an update to you as a supporter of our "Candidates Who Care" initiative during the election campaign, but more importantly to recognize your important role in supporting and preparing the HESA 2015 report on Safety Code 6 guidelines, "**RADIOFREQUENCY ELECTROMAGNETIC RADIATION AND THE HEALTH OF CANADIANS**" which had been presented in the House of Commons in June, 2015. As you know, due to the election call, the requirement for a response was cancelled.

<http://www.parl.gc.ca/HousePublications/Publication.aspx?Language=e&Mode=1&Parl=41&Ses=2&DocId=8041315>

We were pleased to learn that on Wednesday, June 15th, 2016, MP Bill Casey, Cumberland-Colchester, as HESA Chair, presented the 2015 report on Safety Code 6 to the House of Commons. We thank MP Casey, MP John Oliver, Oakville and the other members of HESA for their decision to present the report and their support in ensuring the report was presented to the 42nd Parliament. The Government has 120 days to respond.

We also would like to bring you up-to-date with recent evidence-based, scientific research regarding the harmful effects of radiation from wireless devices by providing you with three relevant items.

The first item is a summary of published, peer-reviewed, research identifying over 60 studies from 2015 and 2016 that show harmful or potentially harmful biological effects at levels below Safety Code 6 guidelines (attached). The other two items are recent studies, one on humans and the other on animals that significantly challenge the assumptions of Health Canada's defense of the current levels of Safety Code 6 guidelines. As always, we would be pleased to answer any questions and provide experts to discuss these findings further.

The second item is a study, published in the Oxford Journalsⁱ that reports that brain tumours are now the leading form of cancer among American adolescents. In addition, incidences of cancer are rising in young adults according to the largest, most comprehensive analysis of these age groups to date. An argument often posed by those who claim cell phones cause no harm is that there would be a corresponding increase in cancer rates. Although this study does not identify a causal agent, it does show that a significant increase in brain tumours is occurring.ⁱⁱ In addition, data from ten nations show increases in specific subgroups or for specific types of tumors.ⁱⁱⁱ

Dr. Jacob Easaw, from the Tom Baker Cancer Centre in Calgary: “The astounding increases reported in this study, especially in young people; mirror what I am seeing in my clinic. Canada is in the process of establishing a comparable brain tumour registry, so these analyses will not be available here for 15 or 20 years. **I am increasingly convinced that mobile phones are a major cause, and urgent action is needed.**”^{iv} Similar statements have been made by neurosurgeons in Australia and the USA.

The third item is a major study undertaken by the US National Toxicology Program, National Institute of Environment Health Sciences (NTP-NIEHS). Partial results were released prepublication on May 27, 2016.^v Some key points from this landmark study are:

- These are the largest, most complex studies ever conducted by the NTP. The cost of the studies is \$25 million and involved over 2500 rodents.
- For the studies, rats and mice were exposed to frequencies and modulations currently used in cellular communications in the United States. The rodents were exposed for 10-minute on, 10-minute off increments, totaling over nine hours a day from before birth through two years of age.^{vi}
- Dr. Ronald Melnick, PhD, former lead scientist on the NTP study of RFR; states ^{vii} **“Based on this new information, regulatory agencies should make strong recommendations for consumers to take precautionary measures and avoid close contact with their cell phones, and especially avoid use of cell phones by children.** Also, cell phone companies need to provide newer devices with much reduced emissions.”
- Dr. Melnick continues “This study should put an end to those who doubt the capacity of non-thermal levels of wireless radiation to cause biological effects including cancer. The study results clearly show that cell phone radiation can cause adverse health effects. The counter argument has no validity.”
- NTP found a low, but statistically significant, increase in incidences of tumors in the brains and hearts of male rats, but not in female rats. It is not uncommon for gender differences to occur in environmental exposure studies by the NTP. ^{viii}
- Some of the rats developed glioma- a tumor of the glial cells in the brain—or schwannoma of the heart. Both types of cancer are relatively rare, but are usually lethal. Gliomas and swannomas have been reported in human epidemiological studies.
- The complete results from all the rat and mice studies will be available for peer review and public comment by the end of 2017.

Dr. Devra Davis, invited expert for the Parliamentary Standing Committee on Health (HESA) 2015 hearings on Safety Code 6, states: “This research shows serious adverse effects without heating tissue. The study was carefully designed to ensure that the body temperature of the exposed rats increased less than 1°C. Therefore, it substantiates the scientific understanding that heating is NOT the only mechanism by which this radiation could harm health.”^{ix}

In a Scientific American article, Dr. Christopher Portier, a retired head of the NTP who helped launch the study and occasionally works for the federal government as a consulting scientist, states: “Based on these findings, this is not just an associated finding - but that the relationship between radiation exposure and cancer is clear. “I would call it a causative study, absolutely. They controlled everything in the study. It’s [the cancer] because of the exposure.””^x

A Consumer Reports article discusses why this study is so important. ^{xi} To paraphrase: It not only supports other studies from Sweden and France, showing links between cell phone use and cancer in humans, it was specifically designed to simulate the exposures of cell phone users and to ensure all the important parameters were tightly

controlled and carefully monitored. The study involved more than 2,500 rodents, exposed to the same type of radiation found in cell phones, at the same frequencies, for nine hours every day, for two years.

We are encouraged by Dr. Ken Foster's apparent reversal regarding the harmful effects of radiofrequency radiation (RFR) from wireless devices. Dr. Foster is a bioengineering professor at the University of Pennsylvania. He was a member of the Royal Society Panel that made very minor adjustments to Health Canada's Safety Code 6 guidelines and has been a strong advocate defending North American radiofrequency (RF) standards as being adequate to protect individuals.^{xii} Dr. Foster is interviewed in an IEEE Spectrum article: "With the NTP study results, Foster expects more governments to put out cautionary guidelines and radiation labeling for cellphones. He says he wouldn't be surprised if California adds RF radiation to its Proposition 65 list of carcinogenic chemicals, and if the IARC ups its classification rating from 2B: possibly carcinogenic to humans to 2A: probably carcinogenic to humans. *'And they wouldn't be out of line in doing that,' he says. 'This is going to change the rhetoric in the field. People can point to much more hard evidence that [cellphone RF exposure] really is a problem.'*"^{xiii}

As in most major scientific studies, opinions and counter opinions about their relevance are posited. An analysis, prepared by Joel M. Moskowitz, Ph.D., Director, Center for Family and Community Health, School of Public Health, University of California, Berkeley responds to arguments intended to dismiss this important research (attached). Dr. Melnick responded to critics with an eight-point rebuttal. [Link here](#)

We believe that this research provides further, very strong evidence that Health Canada's Safety Code 6 does not adequately protect Canadians. We have been encouraged by the support from the members of the HESA committee. Given this new information that challenges the core of Health Canada's assumptions in setting Safety Code 6 guidelines, we will be looking for nothing less than a robust and thorough response from Health Canada to the recommendations of HESA's Safety Code 6 report.

We will keep you informed of any progress and let you know if your assistance is required. We believe, as do many others in the scientific community, that this recent research represents a "sea change" in the science regarding the effects of radiofrequency wireless radiation on human health and brings more urgency for the appropriate updating to Safety Code 6 and relevant public health policies.

We welcome all feedback and questions

Sincerely,



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Keep your family safe from wireless radiation – See how at www.C4ST.org

Cc: Janis Hoffmann

ⁱ http://neuro-oncology.oxfordjournals.org/content/18/suppl_1/i1.full

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- ii Ostrom, Q.T., et al. (2016). American Brain Tumor Association Adolescent and Young Adult Primary Brain and Central Nervous System Tumors Diagnosed in the United States in 2008-2012. *Neuro-Oncology* 18.Suppl. 1. i1-50.
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- iii <https://drive.google.com/file/d/0B14R6QNkmaXuQTJwcDd3aUZMLWs/view>
- iv <http://www.preventcancer.org/brain-tumours-now-leading-form-of-cancer-in-adolescents>
- v <http://biorxiv.org/content/early/2016/05/26/055699>
- vi <http://ntp.niehs.nih.gov/results/areas/cellphones/index.html>
- vii <http://ehtrust.org/cell-phone-radiofrequency-radiation-study/>
- viii <http://www.ncbi.nlm.nih.gov/pubmed/22585941>
- ix <http://ehtrust.org/cell-phone-radiofrequency-radiation-study/>
- x <http://www.scientificamerican.com/article/major-cell-phone-radiation-study-reignites-cancer-questions/>
- xi <http://www.consumerreports.org/cell-phones/government-to-announce-results-of-study-on-cell-phones-and-cancer-today/>
- xii <https://hps.org/hpspublications/articles/wirelessnetworks.html>
- xiii <http://spectrum.ieee.org/the-human-os/biomedical/ethics/cellphone-radiation-causes-cancer-in-rats>