PREVENT CANCER NOW

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Regarding: Canada Gazette, Part I, June, 2017
Consultation on Releasing Millimetre Wave Spectrum to Support 5G
Notice reference number SLPB- 001-17

Prevent Cancer Now is a volunteer civil society organization that works to stop cancer before it starts, with scientific research, education and advocacy.

Prevent Cancer Now submits the following comments, in support of a call for:

- A moratorium on spectrum allocations for 5G communications until the effects on health are researched and peer reviewed, and subject to public consultation; and
- A comprehensive communications strategy for Canada, with consultation to identify best practices for communications to minimize exposures to wireless radiation.

A goal of the strategy would be to identify the safest, most resilient options for communications. Research is needed in order to ensure protection of human and ecological health, and security and privacy of the individual.

The Government of Canada policy objectives to "*maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource*" (Section 3.5) omits the fundamental fact that electromagnetic radiation of most if not all frequencies is biologically active; albeit some frequencies are better understood than others.

Radiofrequency radiation as used today for wireless communications accelerates chemical reactions and causes cancer.

Radiofrequency (RF) radiation that is similar to wireless communications frequencies is used at miniscule levels commercially, to accelerate chemical reactions,[1,2] yet Health Canada insists that effects such as chemical reactions (thus potential cellular damage) will not occur with this radiation, absent substantial heating.[3]

After decades of RF radiation increasingly used for wireless communications, Canada's pre-eminent cancer epidemiologist, Dr. Anthony B. Miller, who has also worked on the World Health Organization, International Agency for Cancer Research

monograph, stated that wireless radiation now used for communications (cell phones, WiFi, etc.) definitely causes cancer in humans.[4] This is based on extensive research over decades. For instance, aggressive brain tumours are increasing in young adults in the US [5] and the largest Canadian study of brain tumours and cell phones demonstrated increased risks even at much lower levels of use than today.[6] This is all the result of permitted, supposedly non-toxic exposure levels (per Safety Code 6) of irregularly pulsed RF signals.

5G is less researched

We know less about biological effects of 5G radiation. It has not historically been a problem because extraterrestrial radiation is absorbed by the atmosphere. We have no information on long-term health effects, and "health" is not even mentioned in the consultation.

5G radiation wavelengths are similar to the thickness of skin; therefore a "standing wave" can occur within our skin. We do not know how this affects the skin in the long term, but experimental devices placed on the skin can communicate in this manner, without wires. 5G may also interact with sweat glands, that are important for toxin excretion as well as temperature control.

Health must be a central consideration

Without considering health, how can the Government of Canada achieve its goal, "*to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource*"?

It cannot.

A healthy man has a thousand wishes; a sick man has but one.

While the consultation document recognizes that spectrum is a limited resource, in fact the most fundamental limitation for the prosperity of Canadians is health – the most basic necessity. The consultation objectives reflect that the Minister of Industry and the present consultation operate under the *Department of Industry Act (1995)* and the *Radiocommunication Act R.S.C. (1985), c. R-2,* and associated regulations. Similarly, "health" is a critical omission, in these now outdated documents.

These observations lead us to make the following recommendations:

- **Recognize the right to a healthy environment**. Radiofrequency radiation is already ubiquitous, and affecting human as well as doubtless environmental health. It is time to pause.
- **Look before we leap**. Establish a moratorium on 5G frequency allocations until human and environmental health effects are well understood. This requires comprehensive health studies of particular frequency bands, with consultation and peer review (Sections 6.3 and 7.2).
- **Require up-front comprehensive assessments**, including of simultaneous exposures, with the precautionary principle to protect even the most vulnerable.

- **Specify and require safest practices** for any frequencies to be used in general society.
- **Minimize Earth-to-space and space-to-Earth systems**. These should be used only for the most essential reasons if at all, and should be placed and operated to minimize off-target exposures (Sections 6.5 and 7.4).
- **Deal with complex, combined effects of chemicals and radiation**, including endocrine disruption.
- **Be nimble**, requiring reassessments when new concerns arise.
- **Be transparent**. Make public the detailed data used in assessments and gathered from monitoring.

We thank you for this opportunity, and would welcome continuing dialogue. I co-authored a chapter on radiofrequency/microwave radiation in a medical textbook in 2017 with 119 scientific references,[7] that may be of assistance as well.

Sincerely,

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