

Dear Sir/Madam,

I write to express the tremendous concern of my family and friends to the rollout of 5G in Singapore and to explain why we are not agreeable to the rollout, which would put at tremendous risk the health and safety of ourselves and the population at large.

Human exposure to EMF/RF radiation (including cellular and Wi-Fi radiation has been referred to as “an uncontrolled global experiment on the health of mankind” (Markov & Griegoriev, 2013). In 2011 the IARC (of the World Health Organization) has classified it as a possible carcinogen (cancer-causing). Dr. Anthony Miller, an adviser to the World Health Organization, has said that radiation from cellphones, cordless and sensor devices and wireless networks should be classified as a ‘*Group 1 carcinogenic to Humans.*’

"The evidence indicating wireless is carcinogenic has increased and can no longer be ignored," he said at a July 31 meeting of the Environmental Health Trust in Wyoming.

A 2011 report, the Council of Europe committee examined evidence that WiFi and EMF (electromagnetic field) technology has potentially harmful effects on humans, and concluded that immediate action was required to protect our children. The committee's report emphasized that, “***...it was crucial to avoid repeating the mistakes made when public health officials were slow to recognize the dangers of asbestos, tobacco smoking and lead in petrol.***”

The harmful biological effects of EMF-RF from cancer/tumours and permanent cellular/DNA damage to cognitive, neurological and behavioural problems have become increasingly apparent and recognized as such. In addition to experimental research on cancer, there are now several thousand peer reviewed, published papers showing other harmful effects from microwave radiation exposure including biological and neurological toxicity and behavioural damage linked to EMF radiation. These include but are not limited to leukemia, alzheimers, ADHD, various tumours and cancers, etc.). The signatories of the International EMF Scientist Appeal (May 2015) have all published papers in peer-reviewed journals on the biological or health effects of EMF and note that the overall weight-of-evidence strongly supports greater precaution or the Precautionary Principle.

It has been established that children are particularly vulnerable and there is much evidence (such as from the US President’s Cancer Panel of 2010) to show that younger children are particularly at risk owing to their smaller body mass, thinner skulls and developing bodies. *Our children are the first generation to receive a lifetime of exposure and they are being exposed to multiple sources of*

EMF-RF at home, in public places and even at school. What is worse, the effects of what has occurred thus far are cumulative and cannot be reversed. We can only seek to minimize any further radiation hazards exist, provided action is taken in a timely fashion.

We know that current exposure standards were developed in 1993 and there are totally inadequate for our protection for several reasons:

- They are outdated, having been set in 1993
- The guidelines are based solely on minimizing thermal effects, i.e. heating, when in fact, published studies show significant harmful non-thermal effects i.e. biological changes from such radiation.
- The guidelines fail to consider exposure to multiple sources (phones, wifi etc) and only consider 30 minutes of exposure from one device at a time.
- The guidelines were based on the model/body of an adult male. Specifically, they used a plastic, liquid filled, computer model based on a 220-pound mannequin. Most of the population, are NOT represented by this model. *The bone marrow in children's skulls is 10 times more absorbent than an adult's bone marrow. Children (thinner skulls, smaller heads and bodies) were never considered.*
- The guidelines consider average exposures, not peak exposures. However, the erratic nature of the signal and intense bursts of radiation that affects us at the cellular level - even if the average over time seems low.

The deployment of 5G would compound this existing problem and raise the health hazard to an unprecedented level. 5G technology has not been deployed or tested on a large scale. Base stations and antennas are a known health hazard and 5G would require a multitude of small cell site/base stations to be placed all across the city and in every neighbourhood. The higher density of such sites would subject our families to unprecedented levels of inescapable exposure wherever we go.

Across the globe doctors and scientists who are in the know are raising the alarm about the hazardous effects of EMF-RF radiation. *More recently the 5G Appeal to the European Union was prepared in 2017 by over 180 scientists and doctors from 36 countries warning of the dangers of 5G and urgently calling for the EU to halt 5G rollout due to serious potential health effects from this new technology:*

“We, the undersigned scientists, recommend a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry. 5G will substantially increase exposure to radiofrequency

electromagnetic fields (RF-EMF) on top of the 2G, 3G, 4G, WiFi etc. for telecommunications already in place. RF-EMF has been proven to be harmful for humans and the environment.”

This concern over 5G (which takes the radiation to a new and unprecedented level) is growing globally and has resulted in halts/delays/bans on 5G such as in Belgium, Italy, Netherlands, Russia, parts of the USA, etc. (<https://ehtrust.org/international-actions-to-halt-and-delay-5g/>)

*“I cannot welcome such technology if the radiation standards, which must protect the citizen, are not respected, 5G or not...**The people of Brussels are not guinea pigs whose health I can sell at a profit.** We cannot leave anything to doubt,”* stated the Environmental Minister of Brussels, Celine Fremault.

We genuinely hope that you take the time to refer to the mounting independently-funded (vs industry-funded) research available in this field. The significant health risks explain why countries like France, Israel, Cyprus have banned WiFi in schools for young children, why there have been calls to ban/halt 5G rollout and why so many scientists and doctors have appealed for limitations on human exposure to microwave and wireless radiation.

Ultimately we hope you will *not* make a decision that involves treating as guinea pigs ourselves and our children (who are, after all, meant to be our future) and putting at greater risk the health and longevity of us all when there are safer and more reliable (wired) telecommunications alternatives available.

Thank you.

Regards,

Dr. A. Skinner, family & friends.

Encl: More Information:

A sample list of the health effects that have been reported in such studies are:

Cancers & Tumours:

- Brain cancer
- Acoustic neuromas
- Leukemia
- Lymphoma

- Lung cancer
- Breast cancer
- Testicular cancer
- Uterine cancer
- Melanoma/skin cancer

Immune disorders and dysfunctions including asthma and allergies

Behavioural and neurological damage

- ADHD
- Hyperactivity
- Epilepsy
- Depression, lethargy
- Autism

Research has shown the following effects of EMF-RF radiation and it is now thought that these may account the potential for substantial biological damage and disease:

- [Breaches of the blood-brain barrier, allowing toxins into the brain](#)
- [Reduction](#) in free-radical scavengers including melatonin and disrupted circadian rhythms
- Genotoxicity and single and double-strand DNA breaks
- [Synthesis of stress proteins owing to the fractal RF-antenna like nature of DNA](#)
- Loss of cellular and DNA adaptation and repair capacity

<https://maximumwellbeing.weebly.com/invisible-health-hazard.html>

<https://bioinitiative.org/conclusions/>

<https://mdsafetech.org/cell-tower-health-effects/>

<https://www.sciencedirect.com/science/article/pii/S0013935118300355>

https://www.emfscientist.org/images/docs/EMF_Scientist_Press_Release_5-1-2015.pdf

<https://ehtrust.org/wp-content/uploads/Scientist-5G-appeal-2017.pdf>

<https://ehtrust.org/wp-content/uploads/5G-Small-Cell-Letters-Science-Policy-67-page-pdf-.pdf>

<https://ehtrust.org/wp-content/uploads/5g-emf-hazards-dr-martin-l.-pall-eu-emf2018-6-11us3.pdf>

<https://www.sciencedirect.com/science/article/pii/S0013935118300355>

https://www.researchgate.net/publication/298533689_International_Appeal_Scientists_call_for_protection_from_non-ionizing_electromagnetic_field_exposure

<https://ehtrust.org/international-actions-to-halt-and-delay-5g/>

<https://www.brusselstimes.com/all-news/brussels-all-news/55052/radiation-concerns-halt-brussels-5g-for-now/>

Bay Area city blocks 5G deployments over cancer concerns – TechCrunch