

## **Inquiry into 5G in Australia**

Dear Committee Members

Scientists and physicians around the globe are expressing huge concerns over the many biological and environmental impacts of 5G, both short and long term.

**There are no studies proving that 5G is safe.**

We are deeply concerned that 5G will produce harmful effects, like those we already see produced by the lower frequency EMFs, but with far more severe effects (please see attached 'exhibits').

This is why **we do not give our consent to being exposed to 5G and are against 5G deployment.**

**The current safety guidelines for EMF exposure are based on *thermal* effects only, not on *non-thermal* effects, using average EMF intensities averaged over either 6 minutes or 30 minutes only, therefore they are fraudulent.** (please see attached 'exhibits').

**As long as there are scientifically justified doubts about the safety of 5G (we have included many in the hyperlinks attached as 'exhibits' in this submission), the deployment of this technology should be halted, and reversed, immediately.**

Please see the hyperlink from National Institute for Science, Law & Public Policy, Washington, DC, regarding the safer and more efficient alternatives to 5G *wireless*. (please see attached 'exhibits' on final page).

**We do not agree to, nor consent to, being exposed to 5G radiation. (or 2G, 3G or 4G, for that matter)**

**We do not agree to, nor consent to, being experimented upon with 5G radiation.** (Because there are no studies showing the safety of 5G, if 5G goes ahead, then we will effectively be unwilling participants in a huge 5G experiment – see Nuremberg Code).

Children absorb more microwave radiation than adults, because their skulls are thinner, their brain tissues more absorbent, as well as their larger-surface-area-to-smaller-mass -ratio. Children have more active stem cells, which are shown to be more impacted by microwave radiation. Current government safety standards do not adequately account for these differences. (please see attached 'exhibits').

They also have cradle to grave exposure, constantly.

The scientific literature shows health and environmental impacts, such as, but not limited to:

- Adverse neurological and neuropsychiatric effects
- Single strand and double strand breaks in cellular DNA
- Adverse endocrine system effects
- Oxidative stress and free radical damage
- Adverse fertility impacts
- Excessive intracellular calcium ions and excessive calcium signalling.
- Life threatening cardiac effects
- Adverse impacts on pollinating insects, birds and wildlife

We are also deeply concerned about the deployment of tens of thousands of 5G satellites, which will be rapidly pulsating 5G non-ionising radiation down upon every corner of our planet, from within the Earth's ionosphere; nobody actually knows what the disrupting consequences, to our ionosphere, could ensue from this onslaught. Nor what the consequences will be to fauna or flora, for that matter.

It is absolute madness to proceed so blindly.

The known and unknown risks should not be thrust upon us against our will.

We would like to submit the following, as exhibits, supporting our opposition to 5G deployment:

- 5G Risk: The Scientific Perspective (Professor Emeritus Martin Pall) PDF hyperlink
- Safety Guidelines Fraud PDF hyperlink
- Prof Emeritus Martin Pall's Summary of ARPANSA Letter PDF hyperlink
- 5G19 Dr Devra Davis transcript PDF hyperlink
- EMF Appeal List PDF hyperlink
- Scientific Research on 5G, 4G Small Cells, Wireless Radiation and Health hyperlink
- Physicians For Safe Technology 5G Telecommunications Science hyperlink
- 5G What You Need To Know (factsheet with hyperlinks to scientific studies) hyperlink
- Scientific studies/papers, various hyperlinks
- Re-Inventing Wires, National Institute for Science, Law & Public Policy hyperlink

We trust that you will be thorough and ethical in your Inquiry. By reading through all 'exhibits' that we have included, you will come to understand why so many, including scientists and physicians, are opposed to 5G deployment. You will undoubtedly realise concern for yourselves and your own loved ones. You will also see how ARPANSA are failing us abysmally.

<https://www.ncbi.nlm.nih.gov/pubmed/29655646>

**5 G wireless telecommunications expansion: Public health and environmental implications.**

*"The popularity, widespread use and increasing dependency on wireless technologies has spawned a telecommunications industrial revolution with increasing public exposure to broader and higher frequencies of the electromagnetic spectrum to transmit data through a variety of devices and infrastructure. On the horizon, a new generation of even shorter high frequency 5G wavelengths is being proposed to power the Internet of Things (IoT). The IoT promises us convenient and easy lifestyles with a massive 5G interconnected telecommunications network, however, **the expansion of broadband with shorter wavelength radiofrequency radiation highlights the concern that health and safety issues remain unknown. Controversy continues with regards to harm from current 2G, 3G and 4G wireless technologies. 5G technologies are far less studied for human or environmental effects. It is argued that the addition of this added high frequency 5G radiation to an already complex mix of lower frequencies, will contribute to a negative public health outcome both from both physical and mental health perspectives. Radiofrequency radiation (RF) is increasingly being recognized as a new form of environmental pollution. Like other common toxic exposures, the effects of radiofrequency electromagnetic radiation (RF EMR) will be problematic if not impossible to sort out epidemiologically as there no longer remains an unexposed control group. This is especially important considering these effects are likely magnified by synergistic toxic exposures and other common health risk behaviors. Effects can also be non-linear. Because this is the first generation to have cradle-to-grave lifespan exposure to this level of man-made microwave (RF EMR) radiofrequencies, it will be years or decades before the true health consequences are known. Precaution in the roll out of this new technology is strongly indicated.** This article will review relevant electromagnetic frequencies, exposure standards and current scientific literature on the health implications of 2G, 3G, 4G exposure, including some of the available literature on 5G frequencies. The question of what constitutes a public health issue will be raised, as well as the need for a precautionary approach in advancing new wireless technologies.*

Below is a hyperlink from Physicians for Safe Technology regarding 5G Telecommunications Science

<https://mdsafetech.org/5g-telecommunications-science/>

Below is a hyperlink to Scientific Research on 5G, 4G Small Cells, Wireless Radiation and Health:

<https://ehtrust.org/scientific-research-on-5g-and-health/>



5G-Risk-The-Scientific-Perspectives.pdf



SafetyGuidelineFraud2.pdf



prof\_martin\_pall\_summary\_of\_arpanasa\_



5G19\_Devra\_Davis.pdf



EMF-appealList.pdf

Please see hyperlinked review article below, by Mary Redmayne, Population Health Research on Electromagnetic Energy (PRESEE), Monash University:

***International policy and advisory response regarding children's exposure to radio frequency electromagnetic fields (RF-EMF)***

<http://nebula.wsimg.com/fbed8bb8a26c6f14262cff2e8fd4dcb7?AccessKeyId=045114F8E0676B9465FB&disposition=0&alloworigin=1>

Below is a factsheet PDF hyperlinked to scientific resources and key facts about 5G:

[https://ehtrust.org/wp-content/uploads/5G\\_What-You-Need-to-Know\\_BW.pdf](https://ehtrust.org/wp-content/uploads/5G_What-You-Need-to-Know_BW.pdf)

<https://www.sciencedirect.com/science/article/pii/S2213879X14000583>

***(Why children absorb more microwave radiation than adults: The consequences)***

***"Children absorb more MWR than adults because their brain tissues are more absorbent, their skulls are thinner and their relative size is smaller.***

***MWR from wireless devices has been declared a possible human carcinogen.***

***Children are at greater risk than adults when exposed to any carcinogen.***

***Because the average latency time between first exposure and diagnosis of a tumor can be decades, tumors induced in children may not be diagnosed until well into adulthood.***

***The fetus is particularly vulnerable to MWR.***

***MWR exposure can result in degeneration of the protective myelin sheath that surrounds brain neurons."***

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

***(Wi-Fi is an important threat to human health)***

***"Repeated Wi-Fi studies show that Wi-Fi causes oxidative stress, sperm/testicular damage, neuropsychiatric effects including EEG changes, apoptosis, cellular DNA damage, endocrine changes, and calcium overload"***

***"EMF effects are often cumulative; and EMFs may impact young people more than adults"***

***"Telecommunications industry-linked individuals and groups have claimed that there are no and cannot possibly be any health impacts of Wi-Fi"***

***"However with Wi-Fi exposures becoming more and more common and with many of our exposures being without our consent, there is much concern about possible Wi-Fi health effects.***

***This paper is not focused on anecdotal reports but rather on 23 controlled, scientific studies of such health-related effects in animals, cells including human cells in culture and in human beings"***

***"EMF effects are often cumulative and irreversible"***

Lots more research here (please open hyperlink and look through):

<https://ehtrust.org/science/research-on-wireless-health-effects/>

More science (please open hyperlink and look through):

<https://ehtrust.org/science/>

<https://www.ncbi.nlm.nih.gov/pubmed/26300312>

**(Microwave frequency electromagnetic fields (EMFs) produce widespread neuropsychiatric effects including depression.)**

*"18 more recent epidemiological studies, provide substantial evidence that microwave EMFs from cell/mobile phone base stations, excessive cell/mobile phone usage and from wireless smart meters can each produce similar patterns of neuropsychiatric effects, with several of these studies showing clear dose-response relationships."*

*"Among the more commonly reported changes are sleep disturbance/insomnia, headache, depression/depressive symptoms, fatigue/tiredness, dysesthesia, concentration/attention dysfunction, memory changes, dizziness, irritability, loss of appetite/body weight, restlessness/anxiety, nausea, skin burning/tingling/dermographism and EEG changes."*

*In summary, then, the mechanism of action of microwave EMFs, the role of the VGCCs in the brain, the impact of non-thermal EMFs on the brain, extensive epidemiological studies performed over the past 50 years, and five criteria testing for causality, all collectively show that various non-thermal microwave EMF exposures produce diverse neuropsychiatric effects."*

<https://www.ncbi.nlm.nih.gov/pubmed/27454111>

**(EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses.)**

*New wireless technologies and applications have been introduced without any certainty about their health effects, raising new challenges for medicine and society.*

*For instance, the issue of so-called non-thermal effects and potential long-term effects of low-dose exposure were scarcely investigated prior to the introduction of these technologies.*

*Common electromagnetic field or EMF sources:*

*Radio-frequency radiation (RF) (3 MHz to 300 GHz) is emitted from radio and TV broadcast antennas, Wi-Fi access points, routers, and clients (e.g. smartphones, tablets), cordless and mobile phones including their base stations, and Bluetooth devices.*

*Extremely low frequency electric (ELF EF) and magnetic fields (ELF MF) (3 Hz to 3 kHz) are emitted from electrical wiring, lamps, and appliances.*

*Very low frequency electric (VLF EF) and magnetic fields (VLF MF) (3 kHz to 3 MHz) are emitted, due to harmonic voltage and current distortions, from electrical wiring, lamps (e.g. compact fluorescent lamps), and electronic devices.*

*On the one hand, there is strong evidence that long-term exposure to certain EMFs is a risk factor for diseases such as certain cancers, Alzheimer's disease, and male infertility.*

*On the other hand, the emerging electromagnetic hypersensitivity (EHS) is more and more recognized by health authorities, disability administrators and case workers, politicians, as well as courts of law.*

*We recommend treating EHS clinically as part of the group of chronic multisystem illnesses (CMI), but still recognizing that the underlying cause remains the environment.*

*In the beginning, EHS symptoms occur only occasionally, but over time they may increase in frequency and severity.*

*Common EHS symptoms include headaches, concentration difficulties, sleep problems, depression, a lack of energy, fatigue, and flu-like symptoms.*

<http://www.collinge.org/DavisReviewWHOProbableCarcinogen.pdf>

**(Swedish review strengthens grounds for concluding that radiation from cellular and cordless phones is a probable human carcinogen)**

*“Inconsistent results have been published on potential risks of brain tumors tied with mobile phone use as a result of important methodological differences in study design and statistical power. Some studies have examined mobile phone users for periods of time that are too short to detect an increased risk of brain cancer, while others have misclassified exposures by placing those with exposures to microwave radiation from cordless phones in the control group, or failing to attribute such exposures in the cases. **In 2011, the World Health Organization, International Agency for Research on Cancer (IARC) advised that electromagnetic radiation from mobile phone and other wireless devices constitutes a “possible human carcinogen,”** 2B. Recent analyses not considered in the IARC review that take into account these methodological shortcomings from a number of authors find that brain tumor risk is significantly elevated for those who have used mobile phones for at least a decade. Studies carried out in Sweden indicate that those who begin using either cordless or mobile phones regularly before age 20 have greater than a fourfold increased risk of ipsilateral glioma.”*

Below is a hyperlink from National Institute for Science, Law & Public Policy, Washington, DC, regarding the alternatives to wireless

<http://electromagnetichealth.org/wp-content/uploads/2018/02/ReInventing-Wires-1-25-18.pdf>

*“The paper you are about to read provides a beacon of light, a reasonable voice for our turbulent world. It analyzes the current state of modern communications and **clearly explains the benefits and accessibility of national wireline systems that can guarantee for everyone a superior foundation of Internet access, unequalled connectivity speed, safety, privacy, security, resiliency, energy efficiency and long-term sustainability.***

*This paper sets the record straight and fills our current information vacuum, **offering consumers, business leaders and policy makers the critical facts they need to rethink a more intelligent and secure future with reliable, secure, wired communications more resilient to storm, flood and fire, and reducing the enormous carbon foot print from the present wireless approach. It also demonstrates why the mistaken upcoming 5G frenzy, with its millions of small cell antennas, destined to clutter all neighborhoods and public right-of-ways, is dangerous, wasteful and unnecessary.** At a time when we are fortunate, thanks to the internet, to have ready access to international medical and scientific reports demonstrating the carcinogenicity and neurotoxicity of ubiquitous microwave radiation emitted by wireless technologies, Re-Inventing Wires: The Future of Landlines and Networks explores a wide path of opportunity for establishing far safer and exceptionally reliable Internet connectivity that we all want and need. Buried across North America are large networks of copper wire and state-of-the-art optical fiber that provide the bedrock for a health-safe national communication system of the future. **For too long we have been misled, turned astray by corporate propaganda, by compromised politicians and by our own technical ignorance into accepting inferior, problem-ridden and expensive wireless systems. Importantly, wireless systems also have negative economies for speed, such that adding speed becomes progressively more expensive, which then requires more spectrum and cell sites.**”*

We have come across many who seemingly have a wireless and technology addiction, who do not wish to acknowledge the dangers, much like the denial of an alcoholic being shown the health effects of alcohol. We do not wish to be harmed by the addictions of others. Just like with passive smoking, we want the choice of being able to remove ourselves from the vicinity of wifi and 5G health risks. Our children are the most vulnerable.

Thank you, in advance, for your time.

Yours sincerely,  
Dean and Angela Kelly