

Submission -Inquiry in 5G in Australia

Inquiry into the deployment, adoption and application of 5G in Australia

My name is Deborah Aldridge and I reside at [REDACTED]. I am a mother; a social worker; and have a post graduate certificate in business administration. I have worked in the field of complex trauma for 25 years and am a Queensland Justice of the Peace. I am also an active member of the community advocating for the health and wellbeing of all people, animals and the environment.

1. Summary of Submission

As a member of the Australian public, I call on the Australian Government to exercise the [Precautionary Principle](#) and therefore place an immediate moratorium on the deployment of 5G.

The Australian Federal Government, has a responsibility to ensure the health, wellbeing and privacy of the Australian people is prioritised above the interests of profits and large corporations. This technology has not been safety tested for biological health affects before being deployed. It is not acceptable for the Australian population to be non-consenting, uniformed subjects of a mass scale experiment called 5G. There are thousands of independent peer reviewed scientific studies demonstrating that current level of electromagnetic radiation have considerable health effects. Deploying 5G millimetre wave technology on top of this is predicted to have serious biological health and safety on people and the environment, some of which are irreversible.

Insurance companies such as Lloyds of London do not insure against wi-fi and 5G-related illnesses and claims. If 5G and wifi radiation is not insurable, why is the Australian Government allowing 5G to be deployed in the first place and enabling a massive increase of forced wifi exposures to be unleashed on the population?

Organisations established to regulate exposure levels are conflicted and captured. Despite being appointed to ensure the safety and protection of people their independence has been compromised and influenced by the industry they have been put there to regulate. These guidelines and regulatory bodies need to be reviewed and investigated as a matter of urgency.

2. Uniformed and Unwilling participants in the adoption of an experiment that contravenes the Nuremberg Code in the adoption of 5G

No public consultation on this 5G experiment has been conducted and no public consent has been obtained in the adoption of the 5G rollout apart from input into this injury. Yet 5G cell towers are currently being installed and in operation with billions of small cells scheduled to be placed throughout residential cities, suburbs and streets. There is no opt-out and no-one will be able to avoid the unprecedented high frequencies and high pulsations of 5G that pose high safety risks to the population. The [Nuremberg Code](#) (1949) applies to all experiments on humans. 5G is an experiment being deployed on the Australian population.

5G is a violation of the [Nuremberg Code](#) because the deployment of 5G is:

1. Not voluntary! No subject in the experiment has the choice to opt out of the experiment.
2. There is overwhelming independent scientific evidence that it will not yield fruitful results for the good of society. It is unnecessary and there are alternative options that can be employed to achieve similar results that have already been established as much safer.
3. Numerous experiments on animals have established that current exposure levels are dangerous and that 5G add an unprecedented layer of risk that is likely be harmful and will have adverse biological effects on humans.
4. Numerous scientists and doctors have appealed to stop the 5G rollout because it is expected to cause unnecessary physical, mental suffering and injury.

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5. Scientific research and evidence has already indicated that death, disabling and injury is likely to occur and has already occurred within current levels of exposure. Increasing it will 5G will be catastrophic.
6. The degree of risk to be taken does exceed that determined by the humanitarian importance of the problem to be solved by the experiment.
7. There are no facilities provided to protect the experimental subjects (the mass population) against the risk of injury, disability or death.
8. The experiment is not being conducted by scientifically qualified persons. It is being conducted by the telecommunications industry.
9. The subject of the experiment (the Australian people) do not have the liberty to bring the experiment to an end during the course of the experiment if we no longer wish to participate. Most Australians are uninformed of the dangers and those of us who are aware, request that you do not commence this experiment in the first place.
10. Scientific evidence has already established that continuous millimetre wave technology of 5G has a high risk of injury, disability or death. Therefore, the experiment should not be commencing in the first place and by doing so the Australian Government is contravening the Nuremberg code.

In 2018 a [United States Senator Mr Richard Blumenthal](#) questioned the Us Federal Communications Commission (FCC) and telecommunications industry about the safety and biological effects of 5G technology. The FCC and industry conceded that no research had been carried out to ensure it was safe; there was no intention of doing any research and no money allocated to do research. The situation appears to be the same in Australia.

The deployment of 5G technology requires the installation of small cell towers to be located every 50 to 250 metres from our homes due to their short reach range. These small cell antennas will have an array of thousands of antennas that will have an effective radiated power of up to 100,000 watts aimed at our bedrooms, living areas and children playing in the yard ([Firstenberg 2018](#)).

Fleets for 5G satellites will be launched into low and medium orbit blanketing the entire the globe increasing from the 66 satellites in space to 20 000. 5G will cover every square inch of the planet. Each satellite will have thousands of millimetre sized antennas on board that will work together to focus narrow beams of radiation at the ground all over the planet. Each beam will have an effective radiated power of up to 5 million watts ([Firstenberg 2018](#)). There is no opt out of 5G!

While the Australian government may have limited control over what the Third Generation Partnership Project (3GPP) imposes in space and allows at the global level, you do have capacity to reduce exposures on Australian soil and a responsibility to protect the health and wellbeing of the general population first and foremost. The Australian Government can do this by reducing exposures significantly on the ground; implementing the [precautionary principle](#) and declaring a moratorium on the deployment of 5G in our cities, suburbs, towns and streets until a safer alternatives have been established. The Australian government need to put the Australian People first the same way that [Italy](#) and [Brussels](#) have done so.

Public exposure to health, safety and privacy aspects of 5G have been intentionally withheld from the public. For example, many people in the Australian public have a perception that WiFi and the '**Internet of Things**' must be safe, otherwise our Australian government would not be enabling the seepage of it across the entire nation. They are largely unaware that wifi and 5G electromagnetic radiation may in fact be detrimental to their health and that of their loved ones.

Why has the Australian Government failed to provide the Australian public with sufficient warnings and information about the health risks and dangers of wifi radiation? This failure to inform the public about the health concerns means that the general public is not even in a position to question 5G and wifi radiation or challenge the government's decision to deploy 5G technology. Schools and

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families are unnecessarily exposing their children to high levels of wifi radiation because they have not been adequately informed of the safety risks.

Dr Karipidis on the [Australian Government, Australian Radiation Protection and Nuclear Safety Agency \(ARPANSA\) Website](#) states:

there is no established scientific evidence to support any adverse health effects from very low RF EME exposures to populations or individuals.....

However it is important to continue the research in order to reassure the Australian population.....

ARPANSA will continue to review the available research on 5G and other upcoming technologies in order to provide advice to the Australian people,' Dr Karipidis says

What Dr Karipidis fails to tell the Australian public is **we** are all about to be '**the research**' subjects in a dangerous experiment **called 5G**.

3. Future Public Liability Insurance and illness caused by application of electromagnetic fields

As of February 2015, [Lloyds of London](#), one of the world's premier insurance group excluded insurance cover for illnesses caused by continuous long term non-ionizing radiation exposure and classified it as a **pollutant** alongside smoke, chemicals and asbestos. It can be expected that the same trend is likely to occur in Australia once the deployment of 5G in Australia is in progress and coverage increases. Insurance companies are the ultimate arbitrators of risk and they have deemed radiation exposure from 5G wireless technology too high to insure. Yet the Australian Government has amended the [Telecommunications determination 2018 \(Low Impact facilities\)](#) and the [Telecommunications Code of Practice 2018](#) so that the telecommunications industry can erect small cell antennas throughout residential areas without the consent of the residents. Residents will be radiated and their properties contaminated with a **pollutant** as classified by Lloyds of London insurance. This is a violation and assault on the Australian people as it will no longer be possible for people to escape small cell towers outside homes, schools, shopping centres and public spaces. The health burden of this will then fall on the Australian taxpayer. Another violation of the Australian people.

4. Established health effects in the application of non-thermal highly pulsed and high frequencies of 5G

It is concerning that misleading and inaccurate information about 5G has been provided to the Australian public when there is already overwhelming scientific evidence that non-ionising radiation does cause a whole range of debilitating health affects as covered by [ORSAA](#). This is without even adding the high pulsations and frequencies of 5G.

Health risks associated with wireless non-thermal radiation include but are not limited to: cancer, Tumours, neurological disorders and symptoms, learning and memory deficits, Infertility and reproductive difficulties, issues with DNA replication and damage to DNA leading to mutation, autism, auto immune diseases, arthritis, headaches altered brain development, depression, hormonal changes, diabetes, damage to blood brain barrier, memory problems and destruction of neurons, sleep problems and damage to eyes and skin ([Moskowitz 2019](#); [Colbeck 2018](#); [Firstenberg 2018](#); Davis 2015; Marshall, Goldberg, Mall, Davis 2018 cited in Josh De Sol 2019).

5G operates on a much higher frequency band (up to 300GHz) than the current of 4G (1.8GHz) and has to use a high-power density to get through walls and solid objects. That means that cell towers will need to be located every two to ten homes. Implicitly most people know that they don't want to be live too close to a cell tower and for good reason. They are not safe.

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Thousands of independent peer reviewed studies carried have established that 5G carries an unacceptable risk to all biological life. It's not just the power of radiation that is dangerous, it is the pulsations and frequency of 5G that makes it even more lethal. ([Davis 2015](#))

The Environmental Health Trust provides access to [numerous peer reviewed studies](#) on 5G, 4G, Small Cells, Wireless radiation and health as well as a fact sheet on what you need to know about [5G](#).

In addition there are thousands of peer reviewed papers confirming biological changes caused by non-thermal wireless transmitting devices and cell towers which can occur thousands of times below the safety guidelines can be accessed at the following sites.

<https://ehtrust.org/science/cell-towers-and-cell-antennae/compilation-of-research-studies-on-cell-tower-radiation-and-health/>

<https://bioinitiative.org/> 4000 studies

<http://www.justproveit.net/> 1168 studies

<https://www.emf-portal.org/en> 23,840 studies

<https://www.powerwatch.org.uk/>1,032 studies

[Over 700 studies showing Health Effects from Cell Phone Radio Frequency Radiation Kevin Mottus](#) from the Brain Tumour Association California.

Some specific studies worthy of particular mention are.

- The [National Toxicology Program](#) results were released in 2018 from a triple peer review study into Cell Phone Radiation (Twenty-five million dollar study) commissioned by the [FDA](#). When the results were published the FDA decided to not do a risk assessment and claimed it was not applicable to humans, presumably because they didn't like the results. See evaluation of study [here](#). The scientific panel advised that there is clear evidence for an association between rare heart and brain cancers and non-ionising radiation. Further information on this study is available [here](#). A panel of independent scientific experts recommended a reclassification of electromagnetic frequencies to reflect the seriousness of their findings to Carcinogenic. Of significance with this review is that animal tests have been standard protocol in the development drugs and to evaluate chemicals for 40 years. However, the study was dismissed as not relevant, presumably because the results did not produce the findings the FDA was hoping for (Davis 2018).
- [Effects of prenatal exposure to a 900 MHz electromagnetic field on the dentate gyrus of rats: a stereological and histopathological study](#) – finding that prenatal exposure to wireless radiation caused a substantial decrease in neurons of offspring. Neuron damage in the hippocampus cerebellum from wireless radiation (Odaci, Bas & Kaplan 2008)
- [Ramazzini Institute Study: Animal Study on Base Station/Cell Tower Radiofrequency Radiation](#). Consistent with the National Toxicity Program. This was the largest long-term study ever performed on rats into the health effects of Radiofrequency radiation, involving 2448 animals. Findings were a significant increase in rare brain and heart tumours. [Hardell and Carlberg \(2019\)](#) conclude that there is clear evidence that RF radiation is a human carcinogen, causing glioma and vestibular schwannoma (acoustic neuroma) and some evidence of an increased risk of developing thyroid cancer, and clear evidence that RF electromagnetic radiation is a multi-site carcinogen. They propose that RF radiation should be reclassified as carcinogenic to humans, Group 1.
- [Effects of GSM modulated radio-frequency electromagnetic radiation on permeability of blood-brain barrier in male & female rats](#). with findings that exposure of rats to electromagnetic fields of 900 MHz or 1800 MHz increases the permeability of the blood brain barrier with sex-specific differences. **Note:** 5G technology will be deploying anything from .3 GHz to 300 GHz.
- [Cell phone use and brain tumours linked in CERENAT case-control study](#). The study concluded possible association between heavy mobile phone use and brain tumours." Heavy cell phone users were those who used cell phone for 30 minutes a day for five years. **Note:** With the deployment of 5G small cell towers located heavily throughout residential streets, everyone will

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be exposed to high levels of radiofrequency 24 hours a day, seven days a week regardless of whether they are using a mobile phone or not.

- [Exposure to 900 MHz electromagnetic fields activates the mcp-1/ERK pathway and causes blood-brain barrier damage and cognitive impairment in rats.](#) Spatial memory was significantly impaired after 28 days of exposure and damage to blood brain barrier.
- [Maternal mobile phone exposure alters intrinsic electrophysiological properties of CA1 pyramidal neurons in rat offspring.](#) Findings that exposure to mobile phones adversely affects the cognitive performance of both male and female offspring rats.
- [Potential Impact of Simulated Mobile Phone Radiation on Blood-Brain Barrier.](#) Findings that exposed rats demonstrated significant behavioural changes compared to unexposed rats.
- [Permeability of the blood-brain barrier induced by 915 MHz electromagnetic radiation, continuous wave and modulated at 8, 16, 50, and 200 Hz.](#) Findings were, exposed rats showed opening of blood brain barrier for continuous wave and pulse modulation.
- [Fourth court in Italy rules that cell phones cause brain tumours and is determined it as an occupational disease.](#) Airport employee exposed to radiation from use of a cell phone over 10 years required for work purposes.

[Dr Martin Pall \(2019\)](#) provides a summary of the literature demonstrating high level scientific certainty and evidence for great harm caused by non-thermal Electromagnetic Field (EMF) exposures well below the current safety guidelines as follows:

- Lowered fertility, including lowered sperm count and sperm quality, lowered female fertility and increased spontaneous abortion (25 reviews).
- Neurological/neuropsychiatric effects including sleep disturbance/insomnia; fatigue/tiredness; headache; depression/depressive symptoms; lack of concentration/attention/cognitive dysfunction; dizziness/vertigo; memory changes; restlessness/tension/anxiety/stress/agitation; irritability (29 reviews).
- Effects on cellular DNA including single strand and double strand breaks in cellular DNA and on oxidized bases in cellular DNA; also evidence for chromosomal mutations produced by double strand DNA breaks. These produce all of the important type of mutations, as described at the DNA level that have roles in cancer causation and in human whole organism mutation (24 reviews).
- Apoptosis/cell death (15 reviews).
- Oxidative stress/free radical damage (important mechanisms involved in almost all chronic diseases; direct cause of cellular DNA damage) (25 reviews).
- Endocrine, that is hormonal effects; Includes changes in non-steroid and also steroid hormones (15 reviews).
- Increased intracellular calcium levels, thought to be the cause in all other effects (16 different reviews).
- Cancer including initiation, promotion and progression, further including tumour progression, tissue invasion and metastasis (39 reviews).

In addition [Dr Pall \(2018\)](#) states that there is substantial literature and as provided above showing that electromagnetic frequencies can also cause Dementia and Alzheimer's . Due the high pulsations of millimetre wave radiation in 5G it's reasonable to expect exposures will produce a similar effect to what has been seen in rats. For example, they found that when they gave a whole series of short pulses to young rats, and then stopped exposing the rats, the rats developed behaviours equivalent to Alzheimer's disease when they reached middle age even though they weren't exposed to the pulsations as adults. They also had high levels of the amyloid beta protein and oxidative stress in the brain, which is consistent with Alzheimer's disease. Considering that the mass population is and will be exposed to even more accumulative wifi, cell phone radiation and cell phone tower radiation with the deployment 5G, Dr Paul raises concerns that these mutations will be cumulative and irreversible. If it does produce either universal or near universal early-onset

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Alzheimer's disease from 5G exposures then our collective brain function will crash. He warns that this is not something that any rational society would even consider might be an acceptable risk.

The millimetre wave frequencies for 5G has been used as weapons and in crowd control at 95 GHz which is within the 5G range. The frequency works by directing a concentrated beam and into a small area to focus producing a sensation of the skin being on fire. The 5G from the wireless radiation that's being proposed would have a similar beam forming component, because it has 1000 simultaneously operating antennas they can send and receive at the same time. That's what makes it able to go so much faster (Davis 2019 cited in De Sol 2019)

The Environmental Health Trust has compiled links to letters from Scientists all over the world on the health risks of Small Cells, Mini Cell Towers and Wireless Facilities that can be accessed [here](#)

WiFi is being unnecessarily implemented in preference to wired technology at the expense of health and safety to the public in homes, workplaces, schools and other public spaces. This has not been out of necessity but an industry drive to increase consumption and profits. The wide availability of Wifi devices is attached to an alarming lack of warning around the health consequences and dangers they pose. This lack of health and safety warnings has led the public to believe that these devices are safe when they are not and therefore unable to make informed decisions around limiting the use of them. Exposure is also being forced upon children/public in schools and the workplace whether they like it or not. It is particularly concerning that wifi is now blanketed throughout nearly all schools in Australia, when children are even more vulnerable to the exposures.

5. Impact on wild life and destruction of the planet

5G is likely to put our bee population in even more jeopardy than it already is. Bees are absolutely essential to life. There is a significant body of emerging science and research between our dying bee population, mobile phone use and the radio frequency radiation this produces.

The devastation of 5G will not be confined to humans. All living things are affected by electromagnetic radiation. However, [Dr Martin Pall \(2019\)](#) predicts that the impact 5G will be even greater and more catastrophic on plant life due to their larger surface exposure, relative to their volume which means that they will be more exposed to the emissions. The reproductive organs of plants and animals are also more exposed and therefore more vulnerable to being radiated.

Dr Pall also raises concerns other concerns about the Electromagnetic frequencies in plants. It makes them produce much higher levels of highly volatile and highly flammable terpenes. He predicts this could be hundred-fold increases and therefore they become highly flammable and undergo spontaneous combustion and in doing so, start their own fires.

The huge jump in frequencies from 4G (1.8GHz) to 5G (up to 300GHz) will have a devastating impact on insects such as bees, beetles and butterflies. The [Swiss Nature Preservation Organisation Pro Natura](#) states that insects start to heat up at frequencies above 10 GHz and are therefore at extreme risk with the deployment of 5G. This is a concern in light of the fact the insect population has already declined 70% from pesticide use, so its impact on our food chain is essentially unknown ([Pall 2019](#)). The 5G infrastructure will also require the removal of hundreds of thousands of trees because they interfere with the signals transforming our neighbourhoods into arid concrete jungles.

6. Breach of Privacy and Surveillance

The deployment of 5G poses a breach of privacy and the application of it will be used as means of surveillance. It is not just a neutral mobile network, nor is it about the communication between people. It is the backbone for a system of total surveillance and a violation of people's privacy. The

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only one pushing 5G is the industry who will benefit from 5G so that they can collect data and sell the data to the highest bidder like facebook does. This network represents the greatest threat to freedom in the history of humanity and is not designed for the benefit of people. It will harvest data on what people do with every second of their time; every transaction they make and every interaction they have in their daily life, seriously and intimately violating our privacy ([Bijlisma 2017](#); [De Soule 2019](#); [Colbeck 2018](#); [Mottus 2018](#); Heroux 2018 in De Sol 2019 ; [Firstenberg 2018](#)).

People have the right privacy and free will to determine their potential within the current boundaries of a democratic society and the Australian Constitution. The people of Australia also have a right to know what the real intention is of this network so that they can make an informed decision about the breach of privacy, and the unnecessary surveillance that will be carried out for the purposes of harassing people to increase their consumption of goods and services. Who really needs their mobile phone talking to their washing machine and their fridge talking to the kettle at the expense of serious health consequences? The 5G system is about increased consumerism ie people buying more gadgets and blanketing our entire environment with wifi pollution. Something that no living organism needs added to an already toxic environment.

The world of the smart grid, and the world of real time surveillance also has the capacity to become a very dangerous tool that will not only monitor what we do. It has future capacity to control and impose a new world order that is not congruent with freedoms of a democratic society such as Australia.

This is not a legacy I wish to leave for future generations. Is this a legacy the 5G committee wishes to leave for your children and grandchildren?

7. Call for urgent and independent review of safety guidelines in the deployment, adoption and application of 5G

[Dr Martin Pall](#) (2019) states that there are a total of 197 bodies of evidence each showing that non-thermal exposures well below ICNIRP, FCC or other “safety guidelines” cause important biological health-related effects. Australian Standards are on par with the United States.

Today standards do not consider the real pollution of the environment with nonionizing radiation”. Hundreds of scientists have proven that many different kinds of acute and chronic illnesses and injuries are caused without heating (“non-thermal effect”) from radiation levels far below international guidelines.

The [World Health Organisation’s International Agency for Research on Cancer \(IARC\)](#) classified electromagnetic radiation as a possible carcinogenic to humans in 2011.

Since 2011 there has been enough scientific evidence that independent scientists believe can clearly argue for class one human carcinogen classification. This would mean that as a class one carcinogen, (like cigarette, smoke and lead), people would need to be warned about the harm and efforts would be taken to minimize exposure (as with smoking and lead); not maximize it, as we’re doing now (Mottus cited in De Sol 2019).

There are several papers that raise issues of concern around advisory committees responsible for setting standards of protection and safety from electromagnetic radiation. In particular agencies such as the [World Health Organisation](#) and the [EMF project](#), [INCIRP](#) and [APARNSA](#) have been quoted as being ‘captured’, ‘compromised’, Industry self-regulating and termed ‘the fox guarding the hen house’ to name a few ([Colbeck 2018](#); Mottus cited in De Sol 2019).

The papers below outline this in detail as follows:

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- [World Health Organisation Setting the Standard for a Wireless World of Harm](#) by Olga Sheean (2017).
- [World Health Organization, radiofrequency radiation and health - a hard nut to crack \(Review\)](#) by Lennart Hardell;
- [Conflict of Interest and Bias in Health Advisory Committees](#) by Don Maisch (2010);
- [Summary of Procrustean Approach](#) by Don Maisch (2014);
- [Spin in the Antipodes: A history of industry involvement in telecommunications health research in Australia](#) by Don Maisch (2017); and

All papers above discuss the significant conflict around scientist Dr Michael Rapacholi's position on the [World Health Organisation EMF project](#) and [INCIRP](#). Prior to working for the WHO, Dr Rapacholi was an expert witness for the phone industry defending their right to put cell towers in controversial locations. He also worked for the phone industry again after working for the WHO EMF Project. Dr Rapacholi was interviewed on [BBC Panorama – Wi Fi Warning Signal documentary](#) (2019) at 24 minutes into the documentary. He is introduced as the scientist responsible for the [World Health Organisation's](#) position on electromagnetic frequencies and the founder of the standard setting body INCIRP. Dr Rapacholi admits in the BBC interview that he did work for the phone industry prior to and after being directly involved with the standards and still claims that his influence and presence with the standards and project was an independent view.

[Olga Sheean](#) (2017) states:

WHO is failing to protect its global citizens from this pervasive pollutant in four key ways:

- 1. industry infiltration*
- 2. intentional ignorance*
- 3. denial of the science*
- 4. disregard for humanity (p2)*

Thanks to WHO: worldwide plausible deniability, undermining our global viability

- *Federal health agencies see no need to advise the public of the adverse effects of microwave radiation.*
- *Laws being passed to prevent citizens from refusing cell tower installations on health grounds are.*
- *State/provincial agencies provide no accommodation/recognition for those harmed by this radiation.*
- *Service-providers ignore customers' concerns, refusing to reply to their countless letters.*
- *When EHS increases after people are exposed to RF 24/7 from smart meters, provincial and local authorities deny any responsibility, deferring to federal agencies/WHO.*
- *School boards and healthcare clinics refuse to remove WiFi routers.*
- *Agencies such as Health Canada tell parents that WiFi is safe and school boards gag their teachers from talking to parents about the potentially harmful effects on their children.*
- *When parents express concerns, they're told that cell phones and WiFi are safe.*
- *When children fall ill or have difficulty learning due to EMR, schools point to government 'safety' standards and deny responsibility.*
- *Microcell transmitters are being placed mere feet from homes in parts of Canada and elsewhere.*
- *Hospitals/health clinics have cell antennas on rooftops and WiFi in rooms. There are many confirmed cancer clusters within 500m of cell transmitters, yet WHO says there's no danger.*
- *When young adults suffer/die from brain tumours, industry denies responsibility because the authorities say that the international guidelines, shaped by WHO, were followed (p33)*

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Frank Clegg- Former Head of Microsoft Canada, points out the current safety standard only protects people from thermal damage that can occur through overheating, but scientists have demonstrated that radiation emitting devices can cause DNA damage without heating tissue. These are non-thermal effects. In the [ABC Catalyst Wi Fried](#), Mr Clegg states:

Unfortunately the safety standards in North America and in Australia are based on this theory that's many decades old, that if tissue doesn't get heated, that it can't cause harm. and that's just out of date.. what the biologists tell us and have shown in many, many experiments and again in peer reviewed published papers- is that there is damage done at the DNA level and from a biological standpoint. Non thermal radiation can cause and does cause harm to humans.....We know that China, Italy, Switzerland, Russia have standards 100 times safer than Canada standards and that is the same as Australia's standards.

Dr Ken Karipidis states that [ARPANSA](#) updated the standards in 2002 but carried out a review in 2014 and they believe them to still be relevant.

Frank Clegg in [ABC Catalyst Wi Fried](#) argues that:

any government agency who has done a review in the last two or three years and hasn't made a significant change to the safety standards has not done a proper thorough review of the science. Over the last decade the cell phone was launched and wi fi was not available 12 years ago. Any government agency that claims that standards a decade old are current is out of date.

ARPANSA outlines the [Maximum exposure levels to Radio Frequency Fields 3kHz to 300GHz](#).

Nicole Bijisma 2019 in her documentary on [5G & Electro magnetic Fields](#) points out that ARPANSA's safety standards are derived from the International Commission for Non-Ionising Radiation Protection (ICNIRP) as discussed above. She also echoes the same concern as Frank Clegg that exposure standards in Australia are extremely high and at least 100 times higher than Bulgaria, China, Italy, India, Israel, France, Poland, Russia, Switzerland, Luxembourg and Austria.

ARPANSA claim that they are an independent organisation. However, this is not accurate. They received [financial support](#) from the [Mobile Carriers Forum](#) (MCF), a division of the Australian Mobile Telecommunications Association (AMTA) which the peak industry body for the telecommunications to carry out a 2007 - 2013 survey of mobile phone base station EME levels.

In 2000 the [Australian government completed Committee Inquiry 1999-02](#) documented details about the World Health Organization Electromagnetic Field Project as follows:

3.102 *The World Health Organization (WHO) is coordinating an international response to the various electromagnetic fields issues through its International Electromagnetic Fields (EMF) Project. This project, established in 1996, involves over 45 countries and eight international organisations. It provides a research coordination role with an emphasis on determining research needs. **The second part of the Australian Radiofrequency Electromagnetic Energy Program is an annual contribution of \$US50,000 to the WHO project.***

In 2000 the [Australian government completed Committee Inquiry 1999-02](#) documented the following comments from Mr Doull as follows:

4.42 *Mr Doull suggested that since 1985, the Australian Standard has come under sustained industry pressure to revert to much higher levels of exposure to radiofrequency*

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radiation; to completely delete any references to fundamental principles of radiation safety; to minimise any explicit references to harmful effects; and to delete the previous acknowledgment of the existence of non-thermal effects on living organisms. He believes that the changes in the official Standard that the industry has wanted would probably have the effect of protecting the industry from future litigation. Mr Doull referred to a precedent setting case of fatal microwave disease in New York which had been the first jurisdiction to recognise asbestos diseases in exposed workers.

ARPANSA has ignored the large body of evidence that EMF has harmful biological/health effects occurring at exposures well below the ARPANSA standard. Therefore, ARPANSA's claim that there is "no substantiated evidence that RF exposure at levels below the limits is simply not true. Australians need to urgently be informed of the risks so that they can make informed decisions when it comes to the use of wireless technology, particularly with regards to more vulnerable groups such as children.

The current standards have failed to assess current scientific research that RF EMFs including Biological Effects (changes in the human body) impact on development and health. ARPANSA failed to use a large number of papers (1354) provided by ORSAA in [Review of Radiofrequency Health Effects Research – Scientific Literature 2000 – 2012](#) as documented by ORSAA in the following [blog](#)

Due to their relationships with telecommunications or electric companies the WHO, INCIRP and **ARPANSA** are not impartial and should not govern the regulation of Public Exposure Standards for non-ionizing radiation. The current safety guidelines protect industry and not the health of people. This needs to be reviewed independent of the telecommunications industry as a matter of urgency with the inclusion of independent scientists with competence in medicine, especially oncology.

8. Worldwide Opposition to the Deployment of 5G

Across the globe, a ground swell is beginning and people are beginning to question the increasing evidence of health, safety, privacy and planetary impacts associated with the deployment of 5G. [Brussels](#), [Switzerland](#), [Italy](#), leading the way towards implementing the precautionary principle in the interests of people. In the Netherlands, the [National Union Against Public Affairs](#) has launched a multi-billion dollar liability action against 5G telecom companies. In Denmark, [LANDS INDSAMLINGEN](#) is suing the Danish Government for the forced deployment of 5G throughout Denmark without first establishing long term health and safety of the radiation exposures on the people. [EM Radiation Research Trust](#) has put the UK government on notice regarding 5G amidst profound world-wide health concerns calling for 5G technology to be banned because it is inappropriate to test 5G radiation on the UK public. See letter [here](#). [Two hundred and fifty three doctors and scientists](#) from 41 countries have launched an International [5G appeal](#) calling for a moratorium on the roll out of 5G because the increase in RF EMF has been proven to be harmful to humans and the environment. Another [International Appeal from Doctors and Scientists \(seven of them Australian\)](#) collectively calling on the UN, WHO and UNEP to implement greater protection from the current inadequate non-ionizing electromagnetic frequency guidelines and ensure that:

- children and pregnant women be protected;
- guidelines and regulatory standards be strengthened;
- manufacturers be encouraged to develop safer technology;
- utilities responsible for the generation, transmission, distribution, and monitoring of electricity maintain adequate power quality and ensure proper electrical wiring to minimize harmful ground current;
- the public be fully informed about the potential health risks from electromagnetic energy and taught harm reduction strategies;
- medical professionals be educated about the biological effects of electromagnetic energy and be provided training on treatment of patients with electromagnetic sensitivity;

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- governments fund training and research on electromagnetic fields and health that is independent of industry and mandate industry cooperation with researchers;
- media disclose experts' financial relationships with industry when citing their opinions regarding health and safety aspects of EMF-emitting technologies; and
- white-zones (radiation-free areas) be established.

9. Outcomes Requested and Conclusion

The Australian government has the responsibility to protect the health and safety of people and particularly those who are most vulnerable, our children. This means that the current telecommunications industry proposed intention to place 5G devices in any public right of way as close as 20 to 50 feet from someone's home and in schools needs to be stopped as a matter of urgency. Any devices that have already been installed need to be removed. People have the right to opt out of directed 5G beams of radiation coming through their window and therefore not be radiated by it. The science has been settled on this and the Australian Government has a responsibility to inform the public of the carcinogenic affects associated with mobile phone towers and cell phone usage. Honouring responsibility as representative of the people and health is the Australian government's highest priority. [The telecommunications \(Low-impact Facilities\) Determination 2018](#) needs to be amended to reflect this.

As an Australian Citizen who is deeply concerned about the effects of 5G millimetre wave on humans, animals and the environment, I call on the Australian Government to take the following action:

- immediately place a moratorium on the deployment of 5G until or unless together with 2G, 3G, 4G, and WiFi it can be established through independent science as somehow not harmful for the Australian people.
- As it has already been established as unsafe, implement safer alternatives by prioritising wired digital telecommunication over wireless transmission where possible and actively reduce the presence and marketing of wireless devices where the same activity can be carried out just as effectively as wifi devices.
- request that ARPANSA be required to inform the public, and especially teachers and physicians, about health risks from electromagnetic radiation, and how to avoid or reduce wireless communication in homes, schools, workplace and other public spaces.
- Implement another Senate Inquiry be initiated to uncover industry corruption; to review ARPANSA; their affiliation with Industry.
- Appoint an a new independent task force with independent scientists to review the current safety standards.
- To ensure that the telecommunications industry does not have any involvement in the review or implementation of the new safety standards.

IN closing, if there was ever a time to implement the precautionary principle, it is now and I call on the Australian government to protect the Australian people first and foremost.

Yours sincerely



Deborah Aldridge

Reference without a link

De Sol (2019), 5G Crisis Awareness and Accountability Summit. [Health Talks online](#).