

23 March 2020

Michael Vaughan

By email: fyi-request-11761-e47efba5@requests.fyi.org.nz  
Ref: H202001261

Dear Mr Vaughan

### **Response to your request for official information**

Thank you for your follow up request under the Official Information Act 1982 (the Act) to the Ministry of Health (the Ministry) on 7 March 2020 regarding 5G. A copy of your full request is attached as Appendix 1 to this letter.

In response to your request for specific information about studies considered by the Ministry and the Interagency Committee on the Health Effects of Non-ionising Fields (the Committee) to fulfil the criteria for robust scientific research, the function of the Committee is noted in the 2018 Report to Ministers: "A key function of the Committee is to review recent research findings, especially recent research reviews published by national and international health and scientific bodies to determine whether it should recommend any changes to current processes."

While the Committee does discuss individual papers that are of interest and /or that could show a significant advance in our understanding of research, the Committee does not attempt to carry out its own systematic review of the research. The work has already been undertaken by qualified individuals. However, the Committee does pay careful attention of how those reviews were carried out to ensure that the findings stand up to scrutiny.

You state that the Committee disregards studies showing biological effects of existing frequencies at levels below the New Zealand safety standards. The way in which the Ministry assesses research evidence is outlined in the preamble to the Swedish reports which are publicly available on the Ministry website: <https://www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/research-non-ionising-radiation>.

The importance of a critical review is well illustrated by the American National Toxicology Programme study which, at face value, appears to suggest that animals exposed to high levels of radiofrequency fields live longer than rats that are not exposed. You can find more detailed critical reviews at the following links:

- In a recent US Food and Drug Administration publication:  
(<https://www.fda.gov/media/135043/download>);
- The International Commission on Non-ionising Radiation Protection:  
(<https://www.icnirp.org/cms/upload/publications/ICNIRPnote2019.pdf>).

You also state that the Ministry and the Committee form conclusions on the safety of millimetre wave frequencies based on small group studies which are small-scale and have not been replicated. A recent review of in-vivo and in-vitro research at frequencies between 5 and 100GHz found that there was no clear evidence of health effects at exposure levels below those allowed by the current limits. For your reference, this study can be found at the following link: <https://pubmed.ncbi.nlm.nih.gov/31540320/>.

The 2019 edition of the "IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz" developed by the IEEE International Committee on Electromagnetic Safety, includes an appendix that briefly reviews millimetre wave research and cites approximately the same number of studies. This includes research on eye damage and concludes that there is no evidence of ocular disorder due to radiofrequency exposure below the present international guidelines. This standard can be found at the following link: <https://ieeexplore.ieee.org/browse/standards/get-program/page>.

You can find references to these studies in the IEEE Standard. No novel interaction mechanisms have been identified that would invalidate current thinking on health effects.

I trust this information fulfils your request. Under section 28 of the Act, you may ask the Ombudsman to review any decisions made under this request.

Please note that this response, with your personal details removed, may be published on the Ministry website.

Yours sincerely



Deborah Woodley  
**Deputy Director-General**  
**Population Health and Prevention**