

Porto Alegre, 6th August 2019

Mrs. Andrea Dudley-Owen,
Vice President of Health & Social Security,
The States of Guernsey,
Frossard House, Sir Charles Frossard House,
La Charroterie, GY1 1FH, Guernsey.

Dear Mrs Dudley-Owen,

Dangers of 5g rollout

My name is Alvaro Augusto de Salles and I am a professor at the Electrical Engineering Department, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil.

I received my B.Sc. degree from the Escola de Engenharia, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil, in 1968, an M.Sc. degree from the Pontificia Universidade Católica do Rio de Janeiro (PUC/RJ), Rio de Janeiro, in 1970, and a Ph.D. degree from the University of London, London, in 1982, all in electrical engineering. I was an Associate Professor with PUC/RJ from 1970 to 1991. Since 1991, I have been a Professor at UFRGS.

I have authored over 80 papers in international conferences and magazines.

My research interests include the biological effects of non-ionizing EMF radiation (NIR or RFEMF). I have studied this for around forty years and some of our works include modeling the EMF absorption in different regions of the human body. Our group from this university has published several papers on international scientific and technical periodicals on these and related subjects.

We are very concerned with the NIR (Non Ionizing Radiation) health effects, especially due to non-ionizing long-term EMF exposure ("chronic exposure"). With users around the world including children using their devices often for 6-12 hours each day, the health risks are increasing exponentially. I sincerely believe that the number of deaths will regrettably be greater than that caused by the many health disasters in history like tobacco or asbestos, where governments ignored independent scientific advice, as we are all exposed. Regrettably most key decision makers are ignorant of the facts due to placidly putting trust in NGOs, other governments or industry advisers who give no guarantees at all.

ICNIRP and other bodies which guide governments, sadly so far choose to ignore demands that they reduce their unrealistic high levels of thermal radiation set 20 years ago, due to the many scientific studies proving that low level radiation is already damaging our health. Brain tumors and brain cancer are increasing due to mobile phone use and these cancers are doubling in under 20s.

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Fertility rates, DNA, electro-hypersensitivity and a huge list of other adverse health effects have already been proven. Countries like Russia, China, Italy and others have set far lower radiation levels and some countries like France, Belgium and Austria have rules ranging from banning the sale of phones to children and young adults and some countries and cities have banned the use of WIFI use in offices and schools.

Many peer reviewed research results have demonstrated relevant health hazards at exposure levels well below the available guidelines (e. g., ICNIRP, IEEE/ANSI, FCC, etc.), which consider only short-term effects (or “acute”, or “thermal effects”). I have been involved in studies which show that existing guidelines incorrectly ignore non thermal ionizing pulsed radiation and do not highlight the huge health risks to babies and children. Some of the studies I have been involved in which are attached with the links and I hope will be of significant interest to your Director of Health are:

- 1) Exposure Limits: The underestimation of absorbed cell phone radiation especially in children;
- 2) Electromagnetic Absorption in the Head of Adults and Children Due to Mobile Phone Operation Close to the Head;
- 3) Dosimetric Simulations of Brain Absorption of Mobile Phone Radiation;
- 4) Absorption of wireless radiation in the child versus adult brain and eye from cell phone conversation or virtual reality.

The rapid increase on the use of wireless technologies and installations of the associated infrastructure, including high frequencies (such as those for the 5G systems) will result in a dramatic EMF exposure increase for the population, many hours a day, seven days a week, all over the coming years which will significantly impact the public health and the cost in treatment to governments like yourselves who run their own health service.

Since 2011, the WHO has classified RFEMF as “possibly carcinogenic to humans” (Group 2B). I and many others based on thousands of scientific independently studies believe that WHO should now upgrade wireless radiation as carcinogenic to humans. There is a very good reason that court cases against the telecoms industry are taking place and why insurers around the world are excluding cover for EMF claims. Absolute proof of harm regarding wireless radiation is already there but it is highly inconvenient as many governments are given huge financial incentives by the telecoms industry. 5g with its proliferation of masts and increase in frequencies will rapidly further deteriorate the health of the public. As with asbestos and tobacco the full negative impact will take some time to show itself fully, but as you no doubt know court actions are starting to go against the telecoms industry with an Italian Court finding against a telecoms company in favor of an executive who used his mobile phone extensively while electro-hypersensitivity cases brought by employees are also beginning to find traction.

History teaches us but do we really listen and learn from history? Scandal after scandal with the recent \$2 billion Roundup case being a prime example where governments and industry hand picked scientists assured us again and again that we were safe even up to 2 years ago. Some sensible countries listened before the others who now follow. You may not know but early tests in 1981 by

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industry scientists where glyphosate was shown to cause cancer were ignored. Whether it be the pharma industry, the tobacco industry, the finance industry, the vehicle industry, we all receive assurances which are later proved to be untrue. All have the same theme. Proper due diligence was not carried out or good advice was ignored.

Tens of thousands of peer studies regarding RFRs and EMFs do not lie and since the 14 year FDA funded National Toxicology Program and the Ramazzini study, this evidence merely confirms what expert scientists in this field already know-that the wellbeing and health of citizens is being ignored due to powerful lobbying and financial incentives to governments.

I am told that Guernsey has publicly stated that all future policies must consider the health and happiness of its citizens. I applaud you and your esteemed colleagues for promising your citizens this bold objective which I am sure you will do your best to make a reality. As you are reading evidence from myself and other independent scientists and doctors, can you still put your hand on your heart and tell the public that they are safe with 5g ?

I encourage Guernsey to join the few caring jurisdictions such as Brussels and Rome and sincerely believe that you and your decision makers in Guernsey, as an independent country really care for the public and will do the right thing by applying the "Precautionary Principle" to 5g. Instead, Guernsey could really look at how to reduce dangerous exposures for example by going 'fiber optic' for the whole island and halt 5g indefinitely. Strict regulations should be introduced warning the public of existing risks of WIFI, living and working near cell towers and safe use of mobile phones.

Public health is vital to the long-term future of all of us and your beautiful island should continue to be proudly protected. Apart from the negative human health impact, studies have also shown the devastating effect wireless radiation has on bees, insects and the environment. I hope that your economic policies also consider the environment.

In summary, you and your esteemed colleagues will need to ask yourselves if Guernsey can afford to take a risk with the public health with the knowledge that is now in front of you.

Please let me know if you require any further information.

Sincerely,



Alvaro Augusto de Salles, Ph. D., (University College London, UK, 1982).

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Cc: CICRA, Nicola Brink, Director of Health, Deputies of Guernsey, David Green.