The Big Debate: How Many New Doctors Will NZ Need if the Gene Technology Bill is Passed?

Hatchard Report

Dr. Guy Hatchard

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Currently, there are 19,350 doctors in New Zealand; that's one for every 264 people. According to Hon. Judith Collins, our Minister for Business Innovation and Enterprise (MBIE), we are all going to live longer and enjoy better health as a result of the massive deregulation contained in the Gene Technology Bill.

In this article, we are going to examine this claim very carefully. If passed, the Bill will change New Zealand irrevocably, we need a deep dive and a proper debate.

Gene technology in our healthcare system is going to require some extra highly skilled doctors, but how many and how much will it cost us? High profile billionaire biohacker Bryan Johnson, 47, boasts that he only ages 8 months every year. So that is something we could all aim for. Bryan spends just $2 million a year on his health, he has 30 doctors and recently increased his pill intake to 91 pills a day. So the aspirational ratio is about 30 doctors for every person. We could probably accept a few less than that, but we might not live quite as long as Bryan. Probably best to go trial and error. Start with a modest 10 doctors per person and see how long we can all live. A lot of farmers will need to retrain and we might need to import more food. Most people would be doctors.

Joking apart, gene technology is insatiable when it comes to doctors and costs. The astronomical salaries of experts, expensive equipment, CRISPR patent fees and the constant need for testing associated with personalised genetic therapies all add up. If you think that the $10,000 estimate your builder gave you for a veranda renovation is too high, you might baulk at the multi-million dollar costs for your individual gene renovation. But don't worry, the government is determined to foot the bill on our behalf. A clause in the bill **REQUIRES** that New Zealand automatically adopt any old gene technology as long as any other two countries have approved it. If it all works out, it is going to be like new dance moves in the 80s, everyone will be doing it. However published science shows this might just be a ridiculous dream, it is time to wake up.

Now let's get serious.

We need an open public debate ***with published evidence*** not just misleading PR hype of the type the government is currently pumping out ***without supporting evidence***. For example let's look at an article in the prestigious journal **Nature** entitled "Four Success Stories in Gene Therapy". **Nature** is absolutely in favour of genetic experimentation, so this recent article should contain the very highest level of evidence that Collins should be presenting to the public for debate.

Collins is very excited about using CAR T cell therapy to treat cancer in New Zealand. According to **Nature,** CAR T cell therapy costs about NZ$820,000 per shot. 85% of patients go into initial remission but only just over half of them are still in remission at the end of the first year. CAR T cell therapy is not without risk. It can cause severe side effects, including cytokine release syndrome (CRS), a dangerous inflammatory response that ranges from mild flu-like symptoms in less severe cases to multi-organ failure and even death. The article reports that with a combination of newer powerful adjunct drug regimes and vigilance, **a TEAM of attending doctors** can try to work out how far to push treatment without triggering CRS.

Currently there are about 30,000 new cases of cancer diagnosed in New Zealand each year. From the glowing publicity being pushed out, I suppose Collins wants us to believe that all of them will benefit from CAR T cell therapy. In which case the cost would be $25 billion, a figure that exceeds the current total cost of all healthcare in New Zealand.

So let's for a minute remember the goal here—**HEALTH** and specifically less cancer. A report published in the UK Daily Mail based on official cancer statistics is entitled "Under-50s bowel cancer epidemic exposed: Shock figures reveal the exact age group for whom rates are growing quickest". Bowel cancer rates have been on the increase for some time, but the latest UK figures published for 2022 show that the incidence of bowel cancer among men in their early 40s increased by a staggering 57% between 2019 and 2022. Women in the same 40-44 age bracket saw an increase of 50%. ***According to the article doctors are completely baffled and seemingly unable to identify a cause.***

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I know what you are going to say, but forget it. Despite the obvious temporal coincidence between the sudden dramatic rise in cancer and the pandemic, doctors have been quick to reassure us. Professor Pat Price, oncologist and chair of Radiotherapy UK, admitted the unprecedented rapid growth in bowel cancer rates among young people presented "a *serious public health challenge,"* but she added: *"It's also critical to dispel misinformation. Covid vaccines aren't causing cancer"* (no evidence offered). Phew, I was worried there for a minute. Instead the article offers this theory: *"Experts believe poor diets packed with more ultra-processed foods, obesity and a lack of exercise could be responsible for the alarming cancer trend."* Let's assume this is correct.

The article also reports that New Zealand has the second fastest growth rate of bowel cancer in the world, just behind Iceland.

If that is the case, shouldn't our government be prioritising an education programme on lifestyle, exercise, healthy diets, fresh foods, etc.? Why would we want to pass a Gene Technology Bill, which allows even more tinkering with traditional foods without any labelling, traceability, safety testing, or liability for inevitable mistakes? It's a real puzzle.

Studies show education about lifestyle changes would be a very cost effective approach whose effect sizes simply dwarf the meager and inconsistent results of biotechnology reported so far. Multiple studies show lifestyle changes including diet and exercise have a beneficial effect of reduced cancer incidence. Cancer is the number two cause of death after heart disease. A meta-analysis of nine studies entitled Association of Vegetarian and Vegan Diets with Cardiovascular Health: An Umbrella Review of Meta-Analysis of Observational Studies and Randomized Trials found very large effect sizes including a 29% risk reduction for cardiovascular disease (CVD). It reported a 14% reduction in CVD mortality and a 32% reduction in Ischaemic heart disease (IHD) mortality. One of the studies evaluated showed a significant 39% risk reduction for stroke incidence. It doesn't stop there, we have reported extensively on the effects of meditation not just on cancer (one insurance study showed a 55% reduction in cancer incidence among practitioners of Transcendental Meditation), but also across the board of disease categories. None of this will require more doctors and very little expense. It could put our national health back on track. It should be a no brainer, instead we have the Gene Technology Bill.

So what else is the Gene Technology Bill promising us?

The Bill commits New Zealand to use all of the gene therapies of the future. CRISPR gene editing is another of Collins' favourites that she is promising will revolutionise public health. There are ten thousand single gene mutation heritable illnesses so far identified by science. The so-called promise of CRISPR theory is that all of these should eventually be reversible via a single gene deletion or replacement. So what does the **Nature** article say about the best and most exciting results from the use of CRISPR so far?

Two of these diseases are sickle cell disease and beta thalassemia. At a recent conference, Vertex Pharmaceuticals and CRISPR Therapeutics announced the results of a clinical trial of beta thalassemia and sickle cell patients treated with CTX001, a CRISPR-Cas9-based therapy. In all, 22 patients have received the treatment over a number of years at a cost of **NZ$5 million per patient** all of whom initially experienced increased levels of haemoglobin and reduced pain. ***After one year, only five of the patients had any residual beneficial effects.*** Vertex paid an additional NZ$85 million in patent fees for the licence to use CRISPR gene editing techniques involved in the treatments.

In summary: improvements are patchy at best, the costs are astronomical, the side effects are very serious and any benefits mostly don't last very long.

Clearly these results are not going to bring about a revolution in New Zealand healthcare outcomes nor are they conceivably affordable for any but the mega-rich or a small number of beneficiaries of multi-million dollar New Zealand government grants presumably selected through a bruising lottery process. They are more likely to bankrupt our healthcare system and distract from viable proven paths that really could improve public health outcomes.

So what is the extent of the problems with CRISPR gene editing?

Is gene technology a healthcare revolution that has become affordable and actually works as Collins hypes? Or is it permanently just around the corner out of reach as it has been for the last 70 years? Or just perhaps, has something else gone terribly wrong as we know happened with biotech during the pandemic to everyone's cost?

Well first of all, CRISPR gene editing is not as precise as Collins' and MBIE PR claim. A paper in Nature published in October 2024 is entitled "Gene editing of NCF1 loci is associated with homologous recombination and chromosomal rearrangements" The paper describes attempts by scientists using CRISPR gene therapy to treat *deficient chronic granulomatous disease*, which is a rare inherited genetic disorder that prevents white blood cells from killing fungi and bacteria. It causes a primary immune deficiency associated with functional defects in neutrophils and macrophages. Mutations in any one of five different genes can cause this condition.

The study's results reveal a central problem with CRISPR techniques. Most of us imagine that genes are somehow as solid and understandable as the world around us, made up of specific distinct identifiable objects which can be swapped if one becomes defective. Rather like changing a tyre when you have a puncture. Many genetic models or theories, and certainly all popular explanations pretend this is the case. In fact as you reach the very very small time and distance scales of DNA, you have reached an area completely foreign to the waking world of experience. The study revealed that many genes appear almost indistinguishable from one another or homologous. We can imagine that the situation is similar to repeated use of identical sub routines in a complex computer programme, but scaled up by a factor of one trillion. As a result, the CRISPR gene scissors begin to cut up, rearrange or delete other genetic chromosomal structures which were not the intended target, causing unintended consequences and health problems.

This is not because CRISPR has been incorrectly or inaccurately programmed or targeted, but rather the inevitable result of a fundamental property of matter at small time and distance scales—increased similarity in structure and function. The law of least action is in play. At this scale of matter, universal fields, quantum properties and unification play a greater role. Everything begins to look and behave in a confusingly similar fashion. CRISPR gene editing tools are based on the destructive properties of bacteria and when faced with an array of similar targets the derived CRISPR tools revert to type and embark on some random destructive cutting and pasting.

Because genes control all the functions of our physiology from the most fundamental level, the capacity for serious adverse effects is enhanced. This is one important reason for the mind boggling costs and high doctor to patient ratios of gene technology. A lot can go wrong and often does.

As we have reported extensively at GLOBE, in the microscopic physical world, consciousness plays a vital role. The observer enters into physical theory in multiple ways. In fact it plays an essential and leading role in triggering the outcomes of events at the atomic scale. DNA has holistic functions which are closely connected to its ability to support awareness or consciousness, including, in humans, self-reflective states of mind. No one in biotechnology understands how this delicate miracle of life happens, but like a bull in a china shop they are apparently determined to wreak havoc and see what eventuates.

The self-belief in the biotech community and the capacity for exotic experimentation are only matched by the determination to avoid any kind reasonable requirement for labelling, safety testing, containment or difficult ethical questions. Another requirement of the nascent biotech industry is freedom from any sort of liability and the permission to patent genes and genetic processes.

Judith Collins' Gene Technology Bill concedes all of this to the bioscientists clamouring for the freedom to experiment on us.

According to Collins, New Zealand will become a world leader in biotechnology experimentation. Certainly we will end up to our detriment as guinea pigs subject to the most permissive regulatory regime in the world, where a government appointee will decide everything for us from what goes into our breakfast cereal to what goes into our pills, without any requirement to inform us on the labels, not even in the small print. Collins is repeating *safe and effective* and wants to push the Bill through with little or no public debate, but where is her evidence? According to current scientific assessments it is *not safe or effective.* Biotechnologies are dogged by poor results, serious risks and unaffordable massive costs. So is it Hey Ho and off we go with the Coalition into the brave new world of unrestrained gene editing, or do we, as we do in our personal lives, exercise some common sense. We just have one parting question for Minister Collins. Did she do her homework or did the dog eat it?

In this article we have covered just a few points. There are a lot of concerning provisions in the Bill. Find out more by viewing our YouTube video The Gene Technology Bill. What Kiwis Need To Know and then make a submission to the Health Select Committee by February 17th.

There are many reasons to reject the Gene Technology Bill. We have published suggestions for a submission template. Write to your MP. They need to be quizzed on this egregious Bill. They are trying to get this fast tracked during the holidays.

We do not live in a country where people are willing to let others take away their food choices, their rights, their beliefs and increase exposure to serious long term environmental and health risks.

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