



Hon Dr Ayesha Verrall
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10 October 2023

RE: Loss of parasitology expertise and capacity

Dear Minister,

I recently learned that “one of only two human parasitology research labs in NZ will soon close for want of funding”.¹ The article, written by two parasitology laboratory directors and a promising emerging career researcher, highlights some of the issues from the human health viewpoint. While these are concerning in themselves, I would like to emphasise, as Parliamentary Commissioner for the Environment, even wider grounds for concern given the threats parasites pose both to humans and animals in the wider environment (both domesticated and wild).²

The recent COVID-19 pandemic and our own brushes with campylobacter (Havelock North in 2016) and cryptosporidium (currently in Queenstown) highlight, in different ways, the intimate linkages between human health and what is happening in the natural environment.

I have contacted the heads of three parasitology labs in New Zealand, one at Otago University and two in Crown Research Institutes (ESR and AgResearch). I also discussed this issue and the possible implications for New Zealand with the chief scientists of the Department of Conservation and Ministry for Primary Industries. All agree that any further loss of parasitology expertise and capacity in either natural or human health will be to New Zealand’s detriment.

Parasitic infections can have devastating effects on wildlife populations, leading to further declines in species diversity and, in the worst cases, extinction. Without the ability to develop a robust understanding of these infections, and monitor them, we will be missing early warning signs of parasitic outbreaks. This could have dire consequences for ecosystems and biodiversity and for human health given the ease with which some parasitic infections can cross from wildlife to human populations.

¹ Newsroom, <https://www.newsroom.co.nz/ideasroom/time-to-tackle-hidden-menace-of-parasite-threats>, 28 September 2023.

² Campylobacter is a bacteria, but the source of this outbreak was through contamination of the environment.

I have previously expressed to you my concern that so much environmental research is being funded by the Ministry of Business, Innovation and Employment without a clear strategic compass that can ensure that scarce public resources are invested in a way that maintains critical capability over time.

Parasitology is one of those areas that a country like ours has no option but to support. Without dedicated expertise we will struggle to identify and respond to emerging parasite-borne zoonotic diseases carried and transmitted by parasites. This vulnerability could lead to outbreaks that endanger both public health and our agricultural sector, with potentially significant adverse economic consequences.

I could attempt to mount an investigation into the adequacy of our efforts but surely this is the joint responsibility of those responsible for funding public health and environmental research? I am not appealing to you to rescue particular research teams – that is neither your job nor mine. I *am* appealing to you to satisfy yourself that, given our public health and zoonotic status, we have access to the range of necessary skills funded in a joined-up way. That needs to include the development of effective treatments and prevention strategies. Previous outbreaks, either pandemics or contamination of drinking water, highlight the need to respond with a holistic “one health” approach, where environmental, animal and human health are entwined.

It appears to me that the problems facing the Otago lab are symptomatic of a failure on the part of our public research investment system to link research investments to areas of critical national vulnerability – be they human or environmental – and build enduring research capacity.

I would urge you to investigate this matter swiftly. I have placed the Vice Chancellor of Otago University on copy since he too should be aware of the wider issue that is at stake. I look forward to learning what your enquiries tell us about the adequacy of our national parasitology capability.

With kind regards



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Parliamentary Commissioner for the Environment
Te Kaitiaki Taiao a Te Whare Pāremata

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