

**Submission
No 288**

**INQUIRY INTO USE OF PRIMATES AND OTHER ANIMALS
IN MEDICAL RESEARCH IN NEW SOUTH WALES**

Name: Ms Simone Cooper

Date Received: 29 March 2022

Dear committee,

I am making a submission in regards to *Portfolio Committee No. 2 - Health inquire into and report on the use of primates and other animals in medical research in New South Wales*. I'm strongly opposed to the use of animals in medical experiments, especially when there are humane alternatives. The animal testing industry has a lack of transparency, and tax payers money is going into a practice that is archaic, ineffective and traumatic to any animal who is used for testing. There is also a lot of secrecy around the industry, including penalties for scientists if they leak footage of information about what happens.

In the age of modern technology, and the fact humane alternatives to animal testing exist, why does Australia continue to use animals for cruel and tortuous experiments that yield no benefit for human medicine?

Examples of humane alternatives include:

- Cell Cultures
- Human Tissues
- Computer models
- Volunteer studies

For more information on this, and details of the above alternatives, please click on the link below

<https://www.crueltyfreeinternational.org/why-we-do-it/alternatives-animal-testing>

I have addressed each of the terms of reference further in my submission.

For now I'd also like to point out the below justifications the animal testing industry advocates, and the counter arguments to each and every point

“If we didn't use animals, we'd have to test new drugs on people.”

The fact is that we already *do* test new drugs on people. No matter how many tests on animals are undertaken, someone will always be the first human to be tested on. Because animal tests are so unreliable, they make those human trials all the more risky. The National Institutes of Health (NIH) in the US has noted that 95 percent of all drugs that are shown to be safe and effective in animal tests fail in human trials because they don't work or are dangerous. And of the small percentage of drugs approved for human use, half end up being relabelled because of side effects that were not identified in tests on animals.

Fortunately, a wealth of cutting-edge [non-animal research methods](#) promises a brighter future for both animal and human health. More information about the failure of experiments on animals can be found [here](#)

“We have to observe the complex interactions of cells, tissues, and organs in living animals.”

Taking *healthy* beings from a completely different species, artificially inducing a condition that they would never normally contract, keeping them in an unnatural and stressful environment, and trying to apply the results to naturally occurring diseases in human beings

is dubious at best. Physiological reactions to drugs vary enormously from species to species (and even within a species). Penicillin kills guinea pigs. Aspirin kills cats and causes birth defects in rats, mice, guinea pigs, dogs, and monkeys. And morphine, a depressant in humans, stimulates goats, cats, and horses. Further, animals in laboratories typically display behaviour indicating extreme psychological distress, and experimenters acknowledge that the use of these stressed-out animals jeopardizes the validity of the data produced.

Sophisticated human cell- and tissue-based research methods allow researchers to test the safety and effectiveness of new drugs, vaccines, and chemical compounds. The H μ REL biochip uses living human cells to detect the effects of a drug or chemical on multiple interacting organs, VaxDesign's Modular Immune *in vitro* Construct (MIMIC®) system uses human cells to create a working dime-sized human immune system for testing vaccines, and Harvard researchers have developed a human tissue-based "[lung-on-a-chip](#)" that can "breathe" and be used to estimate the effects of inhaled chemicals on the human respiratory system. Human tissue-based methods are also used to test the potential toxicity of chemicals and for research into burns, allergies, asthma, and cancer.

Clinical research on humans also gives great insights into the effects of drugs and how the human body works. A research method called microdosing can provide information on the safety of an experimental drug and how it's metabolized in the body by administering an extremely small one-time dose that's well below the threshold necessary for any potential pharmacologic effect to take place. Researchers can study the working human brain using advanced imaging techniques and can even take measurements down to a single neuron.

“Animals help in the fight against cancer.”

Through taxes, donations, and private funding, Americans have spent hundreds of billions of dollars on cancer research since 1971. However, the return on that investment has been dismal. A survey of 4,451 experimental cancer drugs developed between 2003 and 2011 found that more than 93 percent failed after entering the first phase of human clinical trials, even though all had been tested successfully on animals. The authors of this study point out that animal “models” of human cancer created through techniques such as grafting human tumours onto mice can be poor predictors of how a drug will work in humans.

The NCI now uses human cancer cells, taken by biopsy during surgery, to perform first-stage testing for new anti-cancer drugs, sparing the 1 million mice the agency previously used annually and giving us all a much better shot at combating cancer.

Furthermore, according to the World Health Organization, cancer is largely preventable, yet most health organizations that focus on cancer spend a pittance on prevention programs, such as public education.

Epidemiological and clinical studies have determined that most cancers are caused by smoking and by eating high-fat foods, foods high in animal protein, and foods containing artificial colours and other harmful additives. We can beat cancer by taking these human-derived, human-relevant data into account and implementing creative methods to encourage healthier lifestyle choices. While this information relates to the US, it would be applicable to animal experimentation in Australia.

“Science has a responsibility to use animals to keep looking for cures for all the horrible diseases that people suffer from.”

Every year in the U.S., animal experimentation gobbles up billions of dollars (including 40 percent of all research funding from the National Institutes of Health), and nearly \$3 trillion is spent on health care. While funding for animal experimentation and the number of animals used in experiments continues to increase, the U.S. still ranks 42nd in the world in life expectancy and has a high infant mortality rate compared to other developed countries. A 2014 review paper co-authored by a Yale School of Medicine professor in the prestigious medical journal *The BMJ* documented the overwhelming failure of experiments on animals to improve human health. It concluded that “if research conducted on animals continues to be unable to reasonably predict what can be expected in humans, the public’s continuing endorsement and funding of preclinical animal research seems misplaced.” While this information refers to the US, the same can be said about animal experimentation in Australia. In addition:

While incidences of heart disease and strokes have recently shown slight declines—because of a change in lifestyle factors, such as diet and smoking, rather than any medical advances—cancer rates continue to rise, and alcohol- and drug-treatment centres, prenatal care programs, community mental health clinics, and trauma units continue to close because they lack sufficient funds.

More human lives could be saved and more suffering prevented by educating people about the importance of avoiding fat and cholesterol, quitting smoking, reducing alcohol and other drug consumption, exercising regularly, and cleaning up the environment than by all the animal tests in the world.

“Many experiments are not painful to animals and are therefore justified.”

The only U.S. law that governs the use of animals in laboratories, the Animal Welfare Act (AWA), allows animals to be burned, shocked, poisoned, isolated, starved, forcibly restrained, addicted to drugs, and brain-damaged. No experiment, no matter how painful or trivial, is prohibited—and painkillers are not even required. Even when alternatives to the use of animals are available, U.S. law does not require that they be used—and often they aren’t. Because the AWA specifically excludes rats, mice, birds, and cold-blooded animals, more than 95 percent of the animals used in laboratories are not even covered by the minimal protection provided by federal laws. Because they aren’t protected, experimenters don’t even have to provide them with pain relief. While this information refers to the US, the same can be said about animal experimentation in Australia. In addition:

Between 2010 and 2014, nearly half a million animals—excluding mice, rats, birds, and cold-blooded animals—were subjected to painful experiments and not provided with pain relief. A 2009 survey by researchers at Newcastle University found that mice and rats who underwent painful, invasive procedures, such as skull surgeries, burn experiments, and spinal surgeries, were provided with post-procedural pain relief only about 20 percent of the time.

In addition to the actual pain of experiments, a comprehensive view of the situation for animals in laboratories should take into account the totality of the suffering imposed on them, including the stress of capture, transportation, and handling; the extreme confinement and unnatural living conditions; the deprivation that constitutes standard husbandry procedures; and the physical and psychological stress experienced by animals used for breeding, who endure repeated pregnancies, only to have their young torn away from them, sometimes immediately after birth.

Animals in laboratories endure lives of deprivation, isolation, stress, trauma, and depression even before they are enrolled in any sort of protocol. This fact is especially apparent when one considers the specialized needs of each species. In nature, many primates, including rhesus macaques and baboons, stay for many years or their entire lives with their families and troops. They spend hours together every day, grooming each other, foraging, playing, and making nests to sleep in each night. But in laboratories, primates are often caged alone. Laboratories often do not allow social interactions, provide family groups or companions, or offer grooming possibilities, nests, or surfaces softer than metal.

Indeed, in many laboratories, animals are handled roughly—even for routine monitoring procedures that fall outside the realm of an experimental protocol—and this only heightens their fear and stress. [Video footage](#) from inside laboratories shows that many animals cower in fear every time someone walks by their cage.

A 2004 article in *Nature* magazine indicated that mice housed in standard laboratory cages suffer from “impaired brain development, abnormal repetitive behaviours (stereotypies) and an anxious behavioural profile.” This appalling level of suffering results simply from standard housing conditions—*before* any sort of procedure is implemented.

A November 2004 article in *Contemporary Topics in Laboratory Animal Science* examined 80 published papers and concluded that “*significant fear, stress, and possibly distress are predictable consequences of routine laboratory procedures*” including seemingly benign practices such as blood collection and handling.

“We don’t want to use animals, but we don’t have any other options.”

The most significant trend in modern research is the recognition that animals rarely serve as good models for the human body. Human clinical and epidemiological studies, human tissue- and cell-based research methods, cadavers, sophisticated high-fidelity human-patient simulators, and computational models have the potential to be more reliable, more precise, less expensive, and more humane [alternatives](#) to experiments on animals. Advanced microchips that use real human cells and tissues to construct fully functioning postage stamp-size organs allow researchers to study diseases and also develop and test new drugs to treat them. Progressive scientists have used human brain cells to develop a model “microbrain,” which can be used to study tumours, as well as artificial skin and bone marrow. We can now test skin irritation using reconstructed human tissues (e.g., MatTek’s [EpiDerm™](#)), produce and test vaccines using human tissues, and perform pregnancy tests using blood samples instead of killing rabbits.

Experimentation using animals persists not because it’s the best science but because of archaic habits, resistance to change, and a lack of outreach and education.

“Don’t medical students have to dissect animals?”

Not a single medical school in the U.S. uses animals to train medical students, and experience with animal dissection or experimentation on live animals isn’t required or expected of those applying to medical school. Medical students are trained with a combination of sophisticated human-patient simulators, interactive computer programs, safe human-based teaching methods, and clinical experience.

Today, one can even become a board-certified surgeon without harming any animals. Some medical professional organizations, like the American Board of Anaesthesiologists, even require physicians to complete simulation training—not animal laboratories—to become board-certified.

In the United Kingdom, it's against the law for medical (and veterinary) students to practice surgery on animals.

“Animals are here for humans to use. If we have to sacrifice 1,000 or 100,000 animals in the hope of benefiting one child, it's worth it.”

If experimenting on one intellectually disabled person could benefit 1,000 children, would we do it? Of course not! Ethics dictate that the value of each life in and of itself cannot be superseded by its potential value to anyone else. Additionally, money wasted on experiments on animals is money that could instead be helping people, through the use of modern, human-relevant non-animal tests.

Experimenters claim a “right” to inflict pain on animals based on any number of arbitrary physical and cognitive characteristics, such as animals’ supposed lack of reason. But if lack of reason truly justified animal experimentation, experimenting on human beings with “inferior” mental capabilities, such as infants and the intellectually disabled, would also be acceptable.

The argument also ignores the reasoning ability of many animals, including pigs who demonstrate measurably sophisticated approaches to solving problems and primates who not only use tools but also teach their offspring how to use them.

The experimenters’ real argument is “might makes right.” They believe it’s acceptable to harm animals because they are weaker, because they look different, and because their pain is less important than human pain. This is not only cruel but also unethical.

Some experimenters never got the memo that animal experiments are bad science—and throughout history, experimenters tortured animals in twisted ways. PETA’s interactive timeline, ["Without Consent"](#) brings to light almost 200 such stories. It will open people’s eyes to the long history of suffering inflicted on nonconsenting animals in laboratories and challenge people to rethink this exploitation. Visit ["Without Consent"](#) to learn about more harrowing animal experiments throughout history and how you can help create a better future for living, feeling beings.

Refer this link [Answers to Common Arguments for Animal Testing | PETA](#)

While this information refers to the US, the same can be said about animal experimentation in Australia.

There have been significant advances in modern technology, for example PETA International Science Consortium Provides Funding for Model of Human Lower Respiratory Tract Created by MatTek Life Sciences

Sydney – Researchers can now buy a first-of-its-kind human cell-based alveolar model to study the effects of chemicals and other substances on the deepest part of the lungs without forcing animals to inhale them.

The PETA International Science Consortium Ltd. provided MatTek Life Sciences with funding to develop EpiAlveolar – a three-dimensional model composed of human cells from the lower respiratory tract (the alveolar region). On one of its sides, the tissue can be exposed to the test material in the air, and on the other, it receives nutrients from a blood-like liquid – similar to the workings of a human lung.

EpiAlveolar can be used to study the effects of inhaling different kinds of chemicals, nanomaterials, pathogens, cigarette smoke, e-cigarette smoke, and other respirable materials, instead of conducting tests in which animals are confined to small tubes and forced to inhale them for hours, even repeatedly over several months, before being killed.

Legislation to ban this outdated, unreliable and inhumane animal research is long overdue. No animal should be subjected to cruel animal experimentation - they deserve so much better than the horrors that we continue to put them through.

Click on the below link for more info on this amazing humane alternative

<https://www.peta.org.au/media/breakthrough-first-of-its-kind-non-animal-3-d-lung-alveolar-model-launched/>

And now I'd like to address the terms of reference

(a) the nature, purpose and effectiveness of medical research being conducted on animals in New South Wales, and the potential public health risks and benefits posed by this research;

Animal Experiments Are Wasteful and Unreliable

A Pew Research Centre poll found that 52 percent of U.S. adults oppose the use of animals in scientific research, and other surveys suggest that the shrinking group that does accept animal experimentation does so only because it believes it to be necessary for medical progress. The majority of animal experiments do not contribute to improving human health, and the value of the role that animal experimentation plays in most medical advances is questionable.

In an article published in *The Journal of the American Medical Association*, researchers found that medical treatments developed in animals rarely translated to humans and warned that “patients and physicians should remain cautious about extrapolating the finding of prominent animal research to the care of human disease ... poor replication of even high-quality animal studies should be expected by those who conduct clinical research.”

Diseases that are artificially induced in animals in a laboratory, whether they be mice or monkeys, are never identical to those that occur naturally in human beings. And because animal species differ from one another biologically in many significant ways, it becomes even more unlikely that animal experiments will yield results that will be correctly interpreted and applied to the human condition in a meaningful way.

For example, according to former National Cancer Institute Director Dr. Richard Klausner, “We have cured mice of cancer for decades, and it simply didn’t work in humans.”⁸ This conclusion was echoed by former National Institutes of Health (NIH) Director Dr. Elias Zerhouni, who acknowledged that experimenting on animals has been a boondoggle. “We have moved away from studying human disease in humans,” he said. “We all drank the Kool-

Aid on that one, me included. ... The problem is that it hasn't worked, and it's time we stopped dancing around the problem. ... We need to refocus and adapt new methodologies for use in humans to understand disease biology in humans."

And take Alzheimers Disease. Curing Alzheimer's requires a 21st century approach. As Allen Institute for Brain Science Senior Investigator Ed Lein stated, "We're trying to cure a disease of a complex system we fundamentally don't understand."

Bradley Hyman, a professor of neurology and Alzheimer's researcher at Harvard Medical School and Massachusetts General Hospital, expanded on this point, adding that the complexity of Alzheimer's disease makes it "very difficult to model in experimental systems." He says, "[D]irect examination of the human brain is without a doubt crucial to understanding the disease."

While this information refers to the US animal testing industry, the same issues apply here in Australia with animal testing.

The current system is broken, and the following problems must be addressed.

- Fewer than 10% of highly promising basic scientific discoveries enter routine clinical use within 20 years.
- The failure rate of new drugs developed using animals in specific disease research areas exceeds 95%. Here are a few examples.
- Alzheimer's disease: 99.6%
- Cancer: 96.6%
- HIV/AIDS vaccine: 100%
- Strokes: 100% (based on 1,000 new animal-tested agents tested in 100 clinical trials)

Consider this: 49,000 Australians experienced strokes in 2012, costing the federal government alone \$1.5 billion. Although more than 1,000 experimental treatments aimed at protecting brain cells during acute strokes have been developed using rodents, none have been effective in humans.

Animal-based approaches to the safety assessment of chemicals are also fraught with problems –some test methods date back 50 to 60 years. A pivotal report from the US National Academy of Sciences notes that the current approach to assessing the safety of chemicals – which typically involves using animals – is time-consuming and costly, resulting in an overburdened system.

<https://www.peta.org.au/news/biomedical-research-regulatory-testing-deal/>

We need a better way – and scientists from PETA's affiliates have come up with it: The [Research Modernisation Deal](#)

PETA's Research Modernisation Deal outlines a roadmap for replacing the use of animals in experiments with human-relevant methods.

It includes the following steps:

- 1) Eliminating the use of animals immediately in areas in which they have already been shown to be poor surrogates for humans
- 2) Critically reviewing additional areas of research to determine where animal use can be ended
- 3) Implementing a robust ethical evaluation system as part of policies governing the use of animals, thereby increasing the transparency, accountability, and effectiveness of the regulatory process
- 4) Promoting the international harmonisation and acceptance of non-animal testing methods among national and international agencies and research bodies
- 5) Redirecting funds from animal experiments to the development of non-animal methods

You can download a copy here [PETA-Research-Modernisation-Deal-UK-EU-V1.3.pdf](#)

(b) the costs associated with animal research, and the extent to which the New South Wales and Federal Government is commissioning and funding the importing, breeding and use of animals in medical research in New South Wales;

Funding and Accountability

Through their taxes, charitable donations, and purchases of lottery tickets and consumer products, members of the public are ultimately the ones who—knowingly or unknowingly—fund animal experimentation. One of the largest sources of funding comes from publicly funded government granting agencies such as NIH. Approximately 47 percent of NIH-funded research involves experimentation on animals, and in 2020, NIH budgeted nearly \$42 billion for research and development. In addition, many charities—including the March of Dimes, the American Cancer Society, and countless others—use donations to fund experiments on animals. One-third of the projects funded by the National Multiple Sclerosis Society involve animal experimentation.

Despite the vast amount of public funds being used to underwrite animal experimentation, it is nearly impossible for the public to obtain current and complete information regarding the animal experiments that are being carried out in their communities or funded with their tax dollars. State open-records laws and the U.S. Freedom of Information Act can be used to obtain documents and information from state institutions, government agencies, and other federally funded facilities, but private companies, contract labs, and animal breeders are exempt. In many cases, institutions that are subject to open-records laws fight vigorously to withhold information about animal experimentation from the public.

<https://www.peta.org/issues/animals-used-for-experimentation/animals-used-experimentation-factsheets/animal-experiments-overview/>

While the above information relates to the US, the same can be said about animal testing in Australia

Relating to Australia: What is most shocking is that despite the secretive nature of animal experimentation and the lack of public information available on the practice, much of this research is funded by taxpayers through the National Health and Medical Research Council. Even though many consider this to be a huge waste of public resources, our government continues to support and endorse these experiments going ahead.

<https://nsw.animaljusticeparty.org/animal-experimentation-in-australia/>

(c) the availability, effectiveness and funding for alternative approaches to animal research methods and technologies, and the ability of researchers to meet the 3 R's of Replacement, Reduction and Refinement;

In 1959, William Russell and Rex Burch published "The Principles of Humane Experimental Technique". They proposed that if animals were to be used in experiments, every effort should be made to Replace them with non-sentient alternatives, to Reduce to a minimum the number of animals used, and to Refine experiments which used animals so that they caused the minimum pain and distress.

There seems to be something fundamentally wrong with this "Principles of Humane Experimental Technique". The fact that there are humane alternatives available, like Cell Cultures, Human Tissues, Computer models and Volunteer studies, why are more than 10 Million Animals Used in Australia for animal research?

The latest available figures show that in 2018, 2,253,943 animals were used in Victoria, 2,253,943 were used in New South Wales, 255,015 in Tasmania, and 740,458 in Western Australia.

In Queensland, 4,545,288 animals were used during the state's reporting period (which is the 2018–19 fiscal year).

[Latest Figures: Animals Used in Laboratory Research and Teaching in Australia - News - PETA Australia](#)

And as already mentioned, PETA Global has come up with the The Research Modernisation Deal which is the strategy for ending the animal torment in laboratories and investing in human relevant research. In fact after reviewing the ground breaking proposal, the European Parliament voted to develop a plan to phase out all experimentations on animals – and in the US, a bipartisan FDA Modernisation Act has been introduced in congress to end the mandate, so why are animals still being tested on in Australia?

Using of animals for research is outdated, inhumane and unnecessary. Cruelty-free scientific methods that produce far more accurate outcomes are increasingly endorsed by the medical field, including the use of:

- Computer-based methods
- Clinical trials with human volunteers
- Simulators: based on virtual reality or physical models
- In-vitro testing: test tube experiments performed with micro-organisms, tissues, whole cells or parts of cells

One of the most successful new technologies now available is the development of organoids – miniature and simplified versions of a (human) organ. Organoids are grown in-vitro in three dimensions from a biopsy of an individual patient, and allow researchers to study disease and treatments in the laboratory using an ethical, human model.

The failure to use alternatives such as organoids is often caused by a lack of funding or a laboratory's reluctance to change its established methodology. With increasing public awareness of the cruel experiments that occur behind closed doors, facilities are now feeling the pressure to eliminate the use of animals in research and teaching. As they should. But this doesn't go far enough. There is no transparency of the industry

<https://nsw.animaljusticeparty.org/animal-experimentation-in-australia/>

(d) the ethical and animal welfare issues surrounding the importing, breeding and use of animals in medical research;

Right now, millions of [mice](#), [rats](#), [rabbits](#), [primates](#), [cats](#), [dogs](#), and other animals are locked inside barren cages in laboratories across the country. They languish in pain, suffer from extreme frustration, ache with loneliness, and long to be free.

Instead, all they can do is sit and wait in fear of the next [terrifying and painful procedure](#) that will be performed on them. The complete lack of environmental enrichment and the stress of their living situation cause some animals to develop neurotic types of behavior such as incessantly spinning in circles, rocking back and forth, pulling out their own fur, and even biting themselves. After enduring a life of pain, loneliness, and terror, almost all of them will be killed.

Millions of animals including primates, cats, dogs, pigs, sheep, mice, guinea pigs, rabbits, hamsters, ferrets, birds, fish, reptiles and native animals are still being bred and used for cruel research and experimentation in Australia. There is no welfare of animals used for experiments. There are examples of animal tests include forcing mice and rats to inhale toxic fumes, force-feeding dogs pesticides, and dripping corrosive chemicals into rabbits' sensitive eyes.

<https://nsw.animaljusticeparty.org/animal-experimentation-in-australia/>

(e) the adequacy of the current regulatory regime regarding the use of animals in medical research, particularly in relation to transparency and accountability;

The NSW Government states that the Act, along with the Animal Research Regulations, incorporate a system of "enforced self-regulation". Due to the inclusion of self-regulation these mechanisms fail to prevent suffering and cruelty to animals because there is no independent assessment, little transparency, and very little accountability within the industry. There is no transparency. Disturbingly, our Federal Government maintains no national data on the use of animals in medical experiments, and even at state and territory level reporting on animal experimentation is extremely inconsistent, with some states and territories not collecting data at all. This makes it incredibly difficult for both the public and organisations working to end animal testing to know the truth about what is really going on behind closed doors.

What is most shocking is that despite the secretive nature of animal experimentation and the lack of public information available on the practice, much of this research is funded by taxpayers through the National Health and Medical Research Council. Even though many consider this to be a huge waste of public resources, our government continues to support and endorse these experiments going ahead.

Animal experimentation remains a multi-billion-dollar global industry, yet it is hidden behind a veil of secrecy in an effort of avoid public scrutiny. And while scientists who use animals are

increasingly recognising that animal testing is costly, time-consuming and not very effective, here in Australia we use millions of animals for teaching and experimentation every year.

<https://nsw.animaljusticeparty.org/animal-experimentation-in-australia/>

(f) overseas developments regarding the regulation and use of animals in medical research

With advancements in modern technologies as humane alternatives to animal testing, Computer-based methods, like clinical trials with human volunteers, simulators: based on virtual reality or physical models, In-vitro testing: test tube experiments performed with micro-organisms, tissues, whole cells or parts of cells, why is taxpayer's money continuing to be wasted on ineffective and cruel animal torture practices?

Animal testing in Australia must stop.

On behalf of the majority of people in NSW and Australia who are against animal testing, I'm urgently calling on the government to fund humane alternatives to animal experimentation, actively assist the research industry in the transition, and commit to ending the use of animals for cruel research experiments.

Legislation to ban this outdated, unreliable and inhumane animal research is long overdue. No animal should be subjected to cruel animal experimentation - they deserve so much better than the horrors that we continue to put them through.

Thank you.

Simone Cooper