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

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Submission to the Inquiry into the use of primates and other animals in medical research in NSW

Thankyou for the opportunity to make a submission to this Inquiry which is much needed.

The validation of using sentient animals in medical research does need to be questioned, especially when non-human animals are being experimented on for the perceived benefit of human animals.

There are alternative models to animals being used in medical research which are more relevant to research designed to improve human quality of life. Like many Australians I am an animal lover and hate to see cruelty or harm to any animal, be it human or non-human. For this reason I personally am against all experimentation on animals. I am appalled at the numbers of non-human animals that are subjected to living their entire life in a confined state, where their life of deprivation is only interrupted by being subjected to intrusive or invasive procedures, before their life is ended without ever, ever, experiencing any quality of life or dare I say even a kind touch, or thought for their own thoughts, feelings and needs in life. I find it sad that we as humans can think it is fine to simply use other living beings purely for our own benefit, and even sadder still that in many, many instances, this never actually eventuates into any benefit to the human race due to being different species and having different anatomies.

Back in 1989 there was a Commonwealth Inquiry into animal experimentation where the committee made the following recommendations :

- 1. The Commonwealth, State and Territory Governments publish annually accurate and comprehensive information on the extent and forms of animal experimentation, conducted within their respective jurisdictions
- 2. That the Commonwealth establish a separate fund for research into the use of alternatives to animal experiments.

It is now 33 years later and these recommendations have still not been implemented which demonstrates a lack of will by not only Government but also the industry to make advances with modern technology.

Australia as a country is one of the highest users of animals in research and needs to diverge into more compassionate models of research but also ones that are more relevant to the species being researched. In the 10 years 2010 to 2019 the number of animals used in research in NSW was 29,674,633 (NSW 2019 Animal Use in Research Statistics) equating to almost 3 million animals a year. Each of these animals an individual and capable of feeling pain, sadness, isolation, and depression. Perhaps more research needs to be undertaken on the immense life suffering and death of the vast majority of these poor animals who are subjected to painful procedures. Every single one of these beings held against their will, as demonstrated by the 3 baboons that in 2020 escaped from a truck at Royal Prince Alfred Hospital enroute from a research facility in Sydney where medical experiments are conducted on animals, and at their first opportunity they escaped.

It was also highlighted at the time of the Baboons' escape that there was no transparency about the research facility's operations. I am extremely concerned about the lack of transparency in the medical research industry and the need for accountability to the public, especially when public funds are being used.

I find it barbaric that in 2022 experiments based on toxicology such as the LD50 test, in which animals are forced to ingest, inhale, be exposed to or are injected with a substance up until the stage where 50% of the animals die, that anaesthesia or pain relief is not required. Reasoning given for this is that it could affect results but if all animals are given equal pain relief the results would be consistent.

There needs to be a transition away from animal-based medical research to methods which are based on human biology and are truly fit for purpose. I encourage the committee to seriously look at how these modern day alternatives can be funded to encourage the industry to move towards the 21st century.

Answers to 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;

There are limitations to the effectiveness of animal models used in medical research. There is inherent problems with doing research on one species to benefit a completely different species. The differences in species can be demonstrated by the simple analogy of humans regularly consuming grapes and chocolate both of which are toxic to dogs. So doing toxicology tests on one species is no guarantee that it will be accurate for another.

Whilst animal research has resulted in benefits to humans the benefits are often overstated or positive results in animal research announced early only later to fail in humans. The effectiveness of research is not made at all clear to the public and when funding comes from the public purse this is of particular concern. Many news items lead with a discovery that progress has been made for a particular disease using animal research only to find much later that it is totally irrelevant when it comes to humans and cannot be applied. There has been animal research lasting decades and costing billions of dollars which have still failed to find cures for diseases in humans

With the rise of zoonotic diseases it also needs to be said that the use and abuse of animals, including placing them in environments which are totally unnatural and inappropriate to the species such as is the case in animal research laboratories and breeding facilities used for this purpose, only leads to stress induced states which can lead to the outbreak of disease. This has the potential of not only harming the animals but poses a significant risk to human health as well.

Recommendations:

There needs to be transparent and detailed reports of all animal research so that it can be accurately evaluated, including failure rates. This needs to be a condition of funding and these need to be made public. Trial failure rates should also be reported and all animal research pre- registered to prevent duplication. Applications from animal care and ethics committees should also be made public. Animal research cannot continue to operate behind closed doors and needs to be examined closely to evaluate it's effectiveness and cost/benefit. The risks associated with zoonotic diseases needs to be taken seriously and animal research undertaken only if there is no other alternative model available.

(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;

As a member of the public the lack of transparency of this industry means it is almost impossible for me to find out the details and the results of research using animals. Even if I was to offer to adopt an

animal that has been used in research and is no longer required I would be given no medical history or history of any kind of that animal. Even knowledge of the type of research is denied. If these institutions are governed by "ethics committees", then what indeed are they hiding? Animal research approvals, methods, funding and the results should all be available to the public, who as taxpayers have a vested interest.

There is an added cost of animal research with the cost of breeding, transporting, feeding and monitoring animals used in research. But there is also a cost to human health when time-consuming research has been carried out on animals leading to either no benefit or ill effect in humans.

There is a huge ethical cost to the human psyche of breeding animals purely for research purposes by placing them in significant harms way and indeed with some research torturing them and then killing them. This also applies to animals that are not bred but sourced elsewhere. I am not a religious person but I do agree that we should all abide by the biblical concept of "Do unto others as you would have them do unto you".

If only for one moment we could all walk in the shoes of these poor innocent souls, who are held against their will, in totally foreign environments, stripped of all their natural needs, exposed to fear harm and pain and then killed. I find it abhorrent that as a hard-working taxpayer my money is funding this.

Every one of these animals, if health allows, should also be given the opportunity to live a life outside of animal research, "the right to life".

Recommendations:

The cost and benefit details of publicly funded research needs to be made available to the public. Alternative methods to animal research needs to be encouraged and funded with cost/benefits also analyzed.

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;

There are more cost effective and better alternatives to animal testing based on human biology that can be used. These alternatives to animal testing include sophisticated tests using human cells and tissues (in vitro methods), advanced computer modelling techniques (in silico models), simulators using virtual reality and also studies using human volunteers.

Researchers have developed a wide range of advanced computer models that simulate human biology and the progression of developing diseases. Studies show that these models can accurately predict the ways new drugs will react in the human body and replace the use of animals in exploratory research and replace many standard drug tests. Rats, cats and monkeys have suffered horrifically with research carried out on their brains when advanced brain imaging such as MRI's can be used on human volunteers instead. There are also human-patient simulators which are miraculously lifelike and can also mimic illnesses and injuries, that can be used instead of cutting up animals for medical training purposes. There are many instances where there are readily available alternatives to harming animals in the name of science.

If we truly want to make advances in human health we need to embrace modern technology and really do species specific research. These alternate methods of research also have the ability to be much

quicker in achieving results. And with all the infrastructure needed for animal research could also be more economical in the long term. There is no doubt that from an animal welfare point of view apart from being more appropriate they are much kinder, and more ethical.

Considering there are a great number of failed research cases using animal models, it is time to truly evaluate the benefit of animal research and if it is not reliable, valid or effective then is this research just being carried out because it always has been historically and instead new, reliable and forward thinking models need to be applied. Models that can be applied to human biology and will actually benefit humans and without causing suffering to other species.

Primarily due to a lack of funding there is a very slow uptake of alternatives to animal research here in Australia compared to other countries. Medical research could benefit significantly from eliminating or at least minimising animal research and adopting the many other modern alternative methods available, which are more species specific, but efforts to increase the uptake of these need to be encouraged with funding made available.

Recommendations:

Alternative models of research that do not use animals needs to be encouraged and fully funded, by both state and federal Governments and all funding re-directed to non -animal methods of research. Australia could be a leader in this field of non-animal based research with a body formed to represent it. All applications for research should seek alternatives to animal based models and provide evidence of this. When pre-clinical trials fail, discontinue funding. University curriculums need to focus on modern day non animal research models. Set a timeline for phasing out using animals in research. Provide education for scientists in non-animal research models.

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

Australia is a nation of animal lovers and do not tolerate cruelty to animals lightly. The NSW public were alarmed and concerned when the baboons escaped at Royal Prince Alfred Hospital in 2020. When at the first opportunity an animal escapes you can only wonder why and from what were they escaping? And is it really necessary to be testing on animals for human studies when we have alternatives to animal testing that are more appropriate.

As mentioned before there is an ethical consideration made when we intentionally incarcerate and hold a sentient animal against their will, deprive them of any natural behaviours and needs, and directly cause harm to them and in many cases torture them without any pain relief and then when no longer required kill them. We as a species are surely better than that to do that to another living breathing soul who can feel pain, sorrow, fear and loneliness. There is certainly a public expectation that animal welfare would be a high priority, that there would be no unnecessary cruelty with the most minimum harm done and pain relief provided. Sadly this is not necessarily the case as the following tests will prove.

We have known for decades that smoking is harmful to human health, yet animals are still being subjected to forced inhalation research at the University of Newcastle. There was outrage when a photo taken inside a University of Newcastle laboratory of a mouse pressed up inside a plastic "smoking chamber" was uncovered from a scientific journal. The image is hard to look at with the poor mouse's whole body squashed into this small chamber with nowhere to move and forced to breathe in smoke for up to 45 minutes, twice a day for five days a week, for up to 12 weeks. If this image is

hard to look at imagine having to live it. Yet this research was approved by the University's Animal Care and Ethics Committee despite this research being unnecessary, cruel and not having a social license. There are alternatives to animal based research that could easily be used for this study and I find it archaic and shameful that any animal is subjected to this and that this is still allowed and carried out.

The Forced Swim Test is another extremely cruel animal test often using mice or rats who are forced to swim in a cylinder of water, until they are so physically exhausted their bodies give up and they stop struggling and start to float. The dubious claim by researchers studying mental health is that when animals spend more time floating, they are deemed to be "depressed" rather than conserving life-saving energy. How can anyone with ethics stand by and watch an animal in extreme distress trying to avoid drowning, to time how long it takes the mice to stop struggling, and on top of that think this is valid research and beneficial to human health. Many of the word's top pharmaceutical companies have abandoned the procedure in recent years, in part due to concerns about the accuracy of the Forced Swim Test. Again there are other models available including in-vitro, computer modelling and human testing which would be more accurate and specific to humans, and certainly more ethical.

All animals used in research no matter what that research may be are still forced to suffer unnatural and confined living spaces, and are not provided with any quality of life worth living, which all contributes to poor animal welfare. Social species such as Primates, dogs and cats, in particular are deprived of any social interactions. Primates who we are related to and genetically similar, are known as sensitive and intelligent beings yet are crammed into tiny cages with a life devoid of enrichment, where loneliness, boredom and insanity are common and then they are subjected to painful and traumatic procedures. Common procedures such as gavage tubes which are forced up animals nostrils or down their throat, and having to witness other animals being subjected to procedures is a daily horror that these poor animals are subjected to.

Australians are also a dog loving nation and can more readily empathise with dogs in research facilities and the social deprivation and cruelty they are subjected to. We know that Beagles are widely used in medical research because they are so docile. Greyhounds are also often used as they are considered waste from an unscrupulous and uncaring gambling industry. Neither of these reasons make it okay to subject these animals to tests such as ingesting toxic compounds until they die or testing dental implants and then being killed. None of this has a social license and particularly so when there is dubious accuracy when applied to other species and there are kind and more appropriate alternatives available.

Recommendations

Ban the use of Forced inhalation research and also the Forced Swim Test. Make a commitment to phasing out research using primates, dogs and cats. All animals used in research where health allows should be given the opportunity to be homed, this is currently voluntary but rarely happens and needs to be mandated with legislation. There should also be a mandatory age for retirement for dogs and cats. The results of all research including the fate of the animals used should be available to the public.

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

There must be greater transparency and accountability in the industry and all animal research establishments must be clearly visible.

Recommendations

All establishments authorised to conduct animal research must be made available to the public. Animal research facilities must make reports of their research including funding, methods and results of the research and fate of the animals used in the research publicly available. Research facilities must be inspected regularly. There needs to be much greater transparency regarding the welfare of animals and the Animal Care and Ethics Committees. Alternative models to animal research must be sought out and encouraged and to that end some members on The Animal Care and Ethics Committees should have experience and/ or sound knowledge of these alternatives. There also needs to be increased powers of investigation and appropriate penalties for breaching the Code of Practice in what is essentially a self-regulated industry. There needs to be accountability for the numbers of animals bred for medical research and accurate reports detailing numbers of animals bred but not used and subsequently killed. There should be a national body to review animal ethics. It should be mandatory for research facilities to make their annual reports and any inspection reports or incident reports publicly available. There must also be CCTV in all research facilities.

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

Unlike in Australia many other countries are making a commitment to replace animal research with more appropriate alternative research models. They are also putting significant funding into non-animal methods of research and further developing those models of research.

The European Parliament recently passed a resolution calling for an action plan to end the use of animal experimentation. Passed with a resounding vote of 667 to 4, the resolution calls for the European Commission to establish an EU-wide action-plan with ambitious yet achievable targets and milestones to accelerate progress in phasing out the use of animal methods in scientific research and education. The plan should prioritise funding towards the development of non-animal science and technologies. Developed over a year, with collective support from the scientific community and campaigning by animal protection organisations within the EU, this historical resolution is a welcome indication of changing times

https://www.humaneresearch.org.au/proposed-eu-phase-out-of-animalexperimentation-is-a-wake-up-call-for-australia/

Recommendation

Australia to do as the EU has done and make a commitment and have an action plan with achievable targets to end animal experimentation.

(g) any other related matter

Just because something has always been done a certain way does not necessarily make it right. Serious questions need to be asked about the validity of animal research and it's relevance to human medical research. All stakeholders need to question the validity of animal research and utilize and fund alternate models that are species specific and using the latest technology to facilitate the most accurate outcomes.

I have a family member with Alzheimer's Disease so I have a particular interest in finding a cure for this disease. But despite extensive research there are only 2 drugs approved for Alzheimer's Disease

and neither give much relief. In animals, however, every other treatment tested has been successful. Most of this testing has been on mice and there has been hundreds of successful therapies for Alzheimer's Disease in mice but none that have been successful in humans. Research for Alzheimer's Disease not involving animals includes test-tube and cell culture experiments, clinical trials, psychosocial research and epidemiological surveys.

Given the high failure rates of medical research using animals it is clear we need to forego the traditional methods of research and instead use human relevant research and utilize the latest in technology. A bonus to this will highlight that we as a species have developed more compassion for others.

Susie Hearder