"We [doctors] had been led to believe that the majority of medical advances had come about as the result of research carried out on animals. Now we wondered was this truth or propaganda?"-- C. Ray Greek, MD, and Jean Swingle Greek, DVM, Sacred Cows and Golden Geese: The Human Cost of Experiments on Animals, Continuum, 2000. Foreword by Dr. Jane Goodall, PhD

Stop UBC's Animal Sacrifices

Animal Defense &
Anti-Vivisection Society of BC
Box 391, Station A
Vancouver, BC
V5C 2N2
Ph. 604-564-1432
http://vivisectionresearch.ca

Uncovering UBC's Animal Experiments

http://www.stopubcanimalresearch.org

Jane Goodall, PhD

Sacred Cows and Golden Geese: The Human Cost of Experiments on Animals bears an important message. It challenges the widely held belief that the use of living animals in biomedical research is absolutely necessary for the advancement of human medical knowledge. The authors, Drs. Jean and Ray Greek, show that the use of live animals in medical research is unethical, not with relation to the suffering of the animals as more commonly held, but because faulty science underpins it. This leads, in the long run, to human as well as animal suffering.

For years I have been criticizing the ethics of using animals on the grounds of their proven sentience and sapience. For nearly forty years I have had the privilege of working with and learning from our closest living relatives, the chimpanzees. As we have gradually discovered how like us they are (or we like them), the line that was once seen as so sharp between humans and the rest of the animal kingdom has increasingly blurred. Chimpanzees have vivid personalities, a complex social life, humanlike cognitive abilities, and emotions similar to ours. They are capable of compassion, they can show true altruism, and they have a sense of humor. Not surprisingly, they are also physiologically very like humans as well. That is why these closest relatives of ours have been - and still are - used as "models" in the study of human diseases. With no regard for their human-like behavior, hundreds have been condemned to life imprisonment (up to sixty years) in five-foot by five-foot laboratory cages. And the only reason this is tolerated by anyone is because we have been told, repeatedly told, that only by testing drugs and vaccines on these human-like bodies can we find ways of alleviating human suffering.

For the same reason, we tolerate the shocking abuse of many other sentient beings. If anyone other than white-coated scientists treated monkeys, dogs, cats, rabbits, pigs, and so forth as they do behind the locked doors of the animal lab, he or she would be prosecuted for cruelty. But, say the animal experimenters, it is for the good of humans. If animal experimentation were stopped, we are told, so too would human medical progress. How else could we learn about the nature of human diseases, find new cures and vaccines, perfect new medical technologies? This is the argument that is repeated, again and again, by the animal experimenters.

In most cases, people will choose to sacrifice any animal to save or improve the quality of a human life. In other words, in a scenario of "them" or "us," humans will always prevail. And this is hardly surprising. No matter how much a woman may love dogs or chimps, she will choose to sacrifice a dog or a chimp if told that this will save her child. Evolution has programmed us to make choices that ensure our genes will be represented in future generations. We choose in favor of our own children over the children of other people or other creatures. This is why those fighting for animal rights by using ethical and philosophical arguments, although they have made progress in changing attitudes toward animals, can never hope to bring all animal experimentation to an end by using these arguments alone.

However, what if it can be shown that the use of animals, in very many instances, provides misleading results? How often are potentially healing drugs withheld from humans because they harm animals? By contrast, how often are drugs that do not harm animals used on humans with disastrous results?

We dedicate vast amounts of research energy and research dollars to inflicting human-like diseases on animals and seeking ways to treat them. Scientists use the data this generates to write papers in order to get new grants. What is less generally realized, unless one carefully follows the scientific journals, is how seldom these animal "breakthroughs" are useful in curing the "real" diseases in their human form.

And why is this? Although in many ways animals show physiological similarities to humans, they are different. Even chimpanzees, with immune systems so like ours, do not respond as humans do to a variety of diseases. Of all the hundreds of chimpanzees that have been infected with the human HIV retrovirus, for example, none have developed the typical symptoms of human AIDS. (Even in the two - yes, only two - who apparently died of AIDS, the course of the disease was very different.) Yet millions of dollars have gone into AIDS research using chimpanzees as (very inappropriate) models. Millions and millions more dollars have been used to infect animals even less like us.

Of course, thousands of people comprise the vast animal experimentation industry - the manufacturers and salesmen for cages, animal food, lab equipment paraphernalia, and specially bred genetic lines of experimental animals, the animal care staff, and all the scientists themselves. They would be out of a job if the animal research carpet were pulled from under their feet. All these people are, for obvious reasons, very anxious to preserve the status quo. This, presumably, is why those who are searching for alternatives to the use of live animals in experimentation so often get the cold shoulder from the scientific establishment. This is why there are no Nobel Prizes for alternative techniques. And this is why it is so much harder to get a new non-animal procedure approved than a new procedure involving animals.

I have a growing conviction that many animal data are not only obtained unethically, at huge cost in animal suffering, but are also unscientific, misleading, wasteful (in terms of dollars and

effort) and may be actually harmful to humans. I constantly read through journals on alternatives to animal experimentation in my quest for good, solid, scientific facts to substantiate this conviction. Here, at last, is a book that exhaustively examines and synthesizes the literature on this subject. The facts are set out clearly and quite without sentimentality. The arguments presented here are not those of most animal rights activists that play on emotions to generate sympathy for animals. Nor are they the arguments of moral philosophers, based on logic. Instead the authors use factual, scientific arguments to explain how, in their view, the infliction of suffering on animals in medical research is not a biomedical evil, necessary to save human lives, but a real betrayal of the scientific method. Animal experimentation is unethical and cruel. It hurts animals, it is expensive, and it is so often detrimental to the very species it professes to be helping - our own.

Jean and Ray Greek are singularly well qualified to write this book since they are well versed in the science of medicine, both from the human and the animal perspective. Their specified aim in writing Sacred Cows and Golden Geese is to bring this whole issue into the domain of the general public. And because it is so clearly written, and the issues discussed so logically, those who read it will be in a far better position to evaluate the scientific pros and cons of animal experimentation. It will, for this reason, be invaluable for animal rights activists who have not, to date, considered the scientific arguments against animal experimentation. It should be read by all students who plan a career in medicine. It should find a place in all libraries, including high school libraries. Only when the general public has a better understanding of the issues can we expect a ground-swell of opposition to animal experimentation. This will force science to direct its collectively awesome intellect into different pathways in its search to alleviate human suffering.

Jane Goodall, PhD,
2000

If we don't use animals, what will we use?

This question, often asked, falsely assumes that animal experiments have been responsible for medical advances in the past. However, the real benchmarks of medical progress have relied on the following non-animal methodologies, as will future developments:

- In vitro (test tube) research has been instrumental in many of the great discoveries - of antibiotics, for example, and the structure of DNA, as well as all the vaccines we have today, including polio and meningitis.
- Epidemiology (population research) revealed that folic acid deficiency causes birth defects, that smoking causes lung cancer and that lead damages children's brains.
- Post-mortem studies are responsible for much of our modern medical knowledge - including the repair of congenital heart defects in babies.
- Genetic research has elucidated how certain genes are responsible for some diseases. DNA chips allow doctors to prescribe the right drug for specific patients, thus reducing serious side effects of chemotherapy, for example.
- Clinical studies of patients have given us most of our current treatments and cures - including our treatments of lazy eye and the knowledge that HIV transmission from mother to baby can be prevented.
- Human tissue is vital in the study of human disease and drug testing. Animal tissues differ in crucial ways.
- Computer modelling is now very sophisticated, with virtual human organs and virtual metabolism programmes which predict drug effects in humans far more accurately than animals can.
- Advances in technology are largely responsible for the high standard of medical care we receive today, including MRI and PET scanners, ultrasound, laser surgery, cochlear implants, laparascopic surgery, artificial organs, pacemakers and even surgery to correct spina bifida in the womb.
- Human stem cells have already treated children with leukaemia and promise to deliver great benefits in the future.

Aren't the 3Rs ("Reduce, Refine and Replace") the best way to phase out animal experiments?

The 3Rs are based on the assumption that experiments on animals, though unpalatable, are scientifically valid, leading to cures and treatments for human disease.

Proponents of the 3Rs advocate reducing, refining and replacing animal experiments with 'alternatives'. The principle has merit in theory - though not in practice - from an animal welfare perspective.

However, it makes no **scientific** sense because if a practice does not work, there is little point in reducing or refining it. The 3Rs have unfortunately become a smokescreen, which allows the continuation of animal experiments to seem acceptable - as long as the 3Rs are applied. The industry could not have devised a better PR campaign.

Those who endorse the 3Rs and Alternatives promote the 'necessary evil' view of animal experiments. They maintain that each type of experiment - of which there are millions - is, regrettably, necessary until it can be replaced by an Alternative. This perpetuates both the practice and the myth that sustains it. Animal experimenters claim that each and every experiment must be assessed on a case-by-case basis for scientific validity and justification. However, science tells us otherwise:

- **Applying knowledge gained from animals to humans harms humans most of the time**
- **Intractable differences between species mean that animals cannot 'predict' how the human body will respond to a disease or a drug. Their use violates the most fundamental principle of biology: evolution. Therefore the 'animal model' paradigm should be rejected as unscientific.**

The 3Rs serve to deflect attention and debate away from the very real issue of the scientific validity of animal experimentation. While appearing to focus attention on concern for the welfare of laboratory animals, those promoting the 3Rs avoid entering into dialogue on the justification of using animals as models of human disease. The scientific literature of the last 100 years or so reveals sufficient evidence to demonstrate that using animal data in medical research is misleading and often dangerous.

Science already has a wealth of superior (not 'alternative'!) human-based methods at its disposal. They are responsible for the medical care we enjoy today and are the only way to prevent, cure and treat human illness - yet many are starved of funds while animal experimentation is highly funded. The animal experiment lobby maintains that animal experimentation is an expensive business - it is. But it is not just costing society enormous sums of money, it is costing us far more in terms of human health.

Society need not fear that abandoning animal experimentation would mean giving up medical progress. On the contrary, it would ensure greater safety for patients and volunteers in clinical trials and a higher probability of finding cures for human illness.

www.humaneseal.org