

"We have learned very well how to treat cancer in mice and rats but we still can't cure people." - Professor Colin Garner, *Genetic Engineering & Biotechnology News*, Vol. 27, No. 15, 2007.

Can THE LAB RAT REALLY CURE CANCER?



Dread disease, cancer is the modern Grim Reaper, today's Black Death, a dark and terrible health threat and destroyer of lives. We hear about it, read about it, and fear it more deeply than any other present disease. Ominously, projections indicate that one in every five of us will die of cancer, and 40 percent of us will have a diagnosis of cancer sometime in life. Considering that there are more than 200 different forms of human cancer alone, the hope for a "magic bullet" that will cure all is just pie-in-the-sky.

The disease first went political in 1971, when the Nixon administration declared the "War on Cancer". We all know the war has not yet been won, even with billions poured into it every year. In fact, cancer deaths have increased steadily.

This humiliating defeat is in large part due to animal experimentation.

It is an open secret in scientific circles that animal-modeled biomedical research yields results that can't safely and reliably be applied to humans. Yet it goes on and on, despite all opposition and protest, misleading doctors and diverting research grants that should be

going to clinical (human-based) methods of curing disease.

Dr. Albert Sabin, famed developer of the polio vaccine, had this in mind when he said: "The cancer research bodies cause pain and suffering to hundreds of thousands of animals every year by inducing in the animals, through chemicals and irradiation, large cancerous growths in their bodies and in their limbs. Inflicting cancer on laboratory animals has not and will not help us to understand the disease or to treat those persons suffering from it... laboratory cancers have nothing in common with natural human cancers. Tumorous cells are not unrelated to the organism that produced them. Human cancers are greatly different from the artificial tumors caused by the experimenters in the laboratories." (Tony Page, *Vivisection Unveiled*. Jon Carpenter Pub., 1997)

Repeatedly, distinguished outspoken authorities such as Dr. Sabin - respected, vested scientists - have insisted that assuming similarities in physiological and pharmacological response in different species is unscientific and irresponsible. Nevertheless, testing chemicals for carcinogenicity in animals drunkenly persists, as governments and charities continue lavishing money on those trying out new anticancer medications on animals.

The years are filled with uncounted hope-inspiring "miracle drugs"—such as interferon, interleukin, and taxol—that worked well in animals, mostly mice. They were hyped to the public with great hullabaloo and promise, but when actually given to human patients they did not live up to expectations. Dr. LaMar McGinnis, an oncologist and medical consultant to the American Cancer Society, reminisced: "We thought interferon was 'chicken soup' in the early '80s. I remember how excited everyone was; it seemed to work miracles in animals, but it didn't work in humans." Johanna Dwyer of Tufts University agreed: "The major problems of animal studies are the validity of cross-species comparisons and relevance to the human disease." (Fundamental and Applied Toxicology, 1983)

Cancer is relentlessly increasing. Something is wrong with our approach to the problem. Commenting on a media pronouncement of yet one more "fantastic breakthrough", Dr. G. Timothy Johnson, medical editor for ABC News and WCVB-TV news in Boston, wrote in a letter to the editor of the *Boston Globe*, on May 22, 1998: "My own medical perspective is that animal cancer

research should be regarded as the scientific equivalent of gossip—with about the same chance of turning out to be true, that is, truly effective in humans. Some gossip turns out to be true, but most of it does not... and gossip can cause great anguish for those affected, in this case millions of desperate cancer patients worldwide."

Animal experimentation can't cure or prevent cancer, but personal responsibility can—people taking control of their destiny through prevention. Prevention isn't glamorous and is viewed by some as not even scientific. We are human, all too human and prefer to continue in our less healthful habits knowing that "Science" is at work on a cure for our dissipated systems. Plus, it must be said that prevention doesn't finance the charities, the universities and the institutes as animal experimentation does.

It is pointless and dangerous to continue following the old, worn-out paths, for the difference between animals and humans is so great that vivisection leads us mostly into error. The high standard of medical care we enjoy today was made possible not by animal vivisection but by clinical observation and research; asepsis and hygiene; in vitro research with human tissue; post-marketing drug surveillance; serendipity; mathematical modeling; autopsies; computers; epidemiology; pathology; specialization of medical care; technology; genetics; basic science research in fields such as chemistry, mathematics and physics; and, most importantly, prevention.

But the momentum of non-human experimentation has such thrust, such habit, and such money behind it that it will die hard. For this reason, legislation banning animal testing may be required to halt its havoc. Perhaps only outlawing of animal research will have the force to contain the experimentation contagion.

Join us!

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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, laparoscopic 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.

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The next time you are asked to donate to a cancer organization, bear in mind that your money will be used to sustain an industry which has been deemed by many eminent scientists as a qualified failure and by others, as a complete fraud. If you would like to make a difference, inform these organizations that you won't donate to them until they change their approach to one which is focussed on prevention and study of the human condition rather than that of animals. We have the power to change things by making their present approach unprofitable. It is only through our charitable donations and taxes that these institutions survive on their present unproductive path. **See: www.humaneseal.org/**