Interview: Dr. John Strandberg

Research on animals helps man *and* animals

Dr. John Strandberg, Ph.D., is a veterinarian and a veterinary pathologist at Johns Hopkins Medical Center where he directs the division of comparative medicine, which is responsible for the laboratory animal program. He is on the School of Medicine's faculty in the Departments of Pathology and Comparative Medicine. He first came to Johns Hopkins in 1967. He received his training in veterinary medicine and pathology at Cornell Veterinary School, and is participating in several research projects which involve animals. He spoke with EIR*'s Katherine Notley on Jan. 9.*

EIR: You give lectures countering the animal rights arguments against using animals for medical research, especially to high school students.

Dr. Strandberg: I can give another side to the issue, I guess. I'm probably doing less than I'd like to, or less than I think is necessary. It's an important thing to do, because, certainly the anti-vivisectionists have been very active in getting their materials out to both the primary and secondary school levels, and we see it in what's going on, as far as kids' behavior and attitudes, when things come up on television, or at science fairs. . . .

EIR: You mentioned that you are involved in medical research using animals. Can you discuss the benefits of this research? What you're looking for?

Dr. Strandberg: Yes. One of the biggest ones that's been going on for a long time involves BPH, which is benign prostatic hyperplasia, and we're looking at this disease in dogs—which is a naturally occurring disease in dogs. It's very common; it occurs in almost all old, male dogs, and it occurs also in almost all old, male humans, and causes a fairly significant degree of discomfort and clinical disease. A lot of older men have a variety of types of surgery because of this condition, because it obstructs the urinary flow.

The dog is the only animal that naturally develops this disease. We've been studying both the naturally occurring disease in dogs and induced conditions in dogs, in trying to better understand how this disease develops; and once we know how that takes place, then we can know better how to come up with appropriate treatments—both in people and in dogs.

Another major group that I've been working with is a group in interventional radiology. These are the people who go around using x-rays: Through the use of x-rays, they are able to insert catheters and different sorts of devices into the vascular system, and thus, to obstruct vessels that are leading to tumors, for instance, and cut off a blood flow to a tumor to make it operable, so it doesn't bleed when the surgeon tries to take it out. Or to fill in some of the areas where you may have a cerebral hemorrhage or an aneurysm, where a vessel abnormally dilates; and to put something into this to stop the bleeding, or to stop this dilated vessel which can be in inoperable sites, such as in the brain.

They can also cut off the blood supply to certain portions of organs, so that, if there's an abnormal process going on in there, that part of the tissue will have its blood supply cut off, and thus, will die. And they can either leave it there and it can be resorbed, or they can take it out with much less clinical problem. So it's using non-surgical techniques to do things that, before, could only be done surgically—or couldn't be done at all.

And that's being done using a variety of types of animals—most of them have been pigs, actually—and then very shortly thereafter, those same techniques are often employed in people, and there have been some really resounding clinical successes from that.

EIR: In the college programs where you're discussing why animal research is necessary: First of all, what kind of response do you get before you go in; and secondly, how do you turn a situation around, to the extent you do find hostility toward animal research?

Dr. Strandberg: It's extremely variable. Most of the people that we encounter, are people in science courses. People in science courses, for the most part, tend to be somewhat knowledgeable about scientific method and are fairly receptive to the idea that animals play a vital role in biomedical research. I think we don't run into so much problem in the classroom, because the students who aren't there are the people who study humanities and have little idea how the scientific process operates, and react on a much more emotional basis to the thought that somebody might be using a pet, which they envision as being their own dog or cat, because that's what the anti-vivisectionists tend to portray when they talk about animals in research.

So I think just explaining to people several things: one is, what types of animals are used in research—the fact that it's mostly rodents; and second, what sorts of controls there are, and what sorts of guidelines govern the conduct of biomedical research. Just education is very important in overcoming the concerns that people have. A lot of people have no idea that there are institutional review committees, and both laws and regulations which very strictly govern the use of animals in research. And once they are aware that these things are there, and that they're really quite rigid and strenuous, their objections tend to get much more restricted. They often will still say, "Of course, I wouldn't want my pet used in research." And in fact, most people don't want their pets used in research. They view their pets as members of the family. It's a great distortion of the truth to say that pets are used in animal research.

EIR: Can you discuss what benefits or research are now ongoing with respect to AIDS, in which animal research has played a part?

Dr. Strandberg: Of course, the AIDS virus does not cause disease in any animal other than man. Chimpanzees can be infected with the virus, but they don't apparently get the disease; and researchers have introduced the specific AIDS virus into mice, through transgenic techniques. But there are other types of very closely related viruses that occur in animals: There are the simian viruses, which are very much like AIDS but are not the same virus. There are some viruses of sheep and goats which have been studied, and in fact, are being studied here—have been for a long time. There are also similar diseases in cats and in horses. These diseases are of interest in that the cells that seem to be attacked by the virus, seem to be similar—certainly in the sheep and goat diseases—as they are in people. These are the macrophages, a specific category of white blood cells. What is interesting, and what people are trying to understand better, I think, is, first of all, how these viruses replicate; and many of the ways to recognize these viruses were developed using some of these earlier animal agents, so they were able to build on the basic virology that was already there for the sheep and goat viruses. I think that allowed them a leg up on the whole situation. They could learn, from those advances, the different culture techniques that were useful.

Insofar as vaccine development goes, there has not been a good vaccine for most of these animal diseases, but I think some of the experiences there may be helpful too. I would say, probably the most that has helped, we could say right now, were the basic virology advances that were made, using these animal agents first. Vaccine testing is probably going to be the next step where animal use will be playing an important role.

EIR: Would you like to say anything else to the general public?

Dr. Strandberg: The general public, I think, doesn't really appreciate how important animal research is, not only for human diseases, but for animal diseases. The people who are concerned about their pets are dependent in very, very many ways on animal-based research for development of vaccines, development of antibiotics, determination of proper nutrition, all these things that people rely on to keep their pets and their farm animals healthy. There's very little money to support work for diseases on animals—especially pet animals—so it is, sort of, parasitic on the work that is done for people. I think the folks that are out there campaigning, don't realize that they're hurting some of the same animals they're trying to help.

Documentation

Who will die from animal rights crusade?

Frederick K. Goodwin, M.D., administrator of the U.S. Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) since July 1988, has become an outspoken proponent of the importance of animals in biomedical research. In an interview published by the Federation of American Societies for Experimental Biology (FASEB) in its monthly journal Public Affairs *(November and December 1989), he argued that the time has come for a more aggressive approach by scientists, to combat the irrational animal rights movement. Here is an excerpt from his interview:*

Our genuine concern for animal welfare has prompted the scientific community to take a reactive posture at times. We offer concessions and emphasize a willingness to go beyond what we as scientists feel we should go (that is, regarding regulations or alternatives to animals) to show good faith. This may seem to make short-term tactical sense, but it's a loser in the long run. We shouldn't confuse appropriate tactical concessions or adjustments with the fact that we are pitted against people who do not want any animals used in research, period, regardless of the importance of the research to human life and health.

We've made as much progress as I think can be made in placating so-called moderates: people who are concerned with animal welfare. Unless we recognize the fundamental orientation of the "stop research" component of what is essentially an anti-intellectual, anti-scientific movement, we are deceiving ourselves and confusing the public.

Benefits of animal research

Dr. Goodwin points out that animal rights activists have targeted the research that comes under the rubric of the ADAMHA more than general health research; in doing so, they are cynically exploiting the stigmatization of people who are mentally ill or suffering addictive disorders.

In a fact sheet which we excerpt here, the ADAMHA documents the indispensable rôle of animals in its research to save human lives and alleviate suffering.

. . . ADAMHA staff and grantee scientists undertake research using animals on health problems that are not yet fully understood, such as schizophrenia, severe depression, Alzheimer's disease, alcohol and drug addiction.

Significant contributions from animal research can be seen in the progress made against many of these disorders. . . .

- **Depression:** Almost everything known about the neu-