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Experts debate the need for MSU to use animals for research

By DANIEL STURM

The Ingham County Commission has decided to stop selling pound animals to dealers, but it will continue to sell them directly to Michigan's Big Three universities for research.

But is the use of animals – both pound animals and animals raised just for research – really necessary or even in the best interest of science any longer?

That may be the next question commissioners will have to face now that they agreed, 12-3, to ban the Ingham County Animal Shelter from selling animals to Class B dealers. The dealers turn around and sell pound animals to medical and veterinary schools such as those at Michigan State University, Wayne State University and the University of Michigan. In effect, the commission cut out the middle man.

The commission's decision to allow selling animals directly to the universities was a compromise. "This was the only way that we could get the vote for the Class B dealer ban," County Commissioner Lisa Dedden said. She added that banning sales to Class B dealers will improve the chances of the county to receive grants to improve the shelter.

"Foundations often find dealing with Class B dealers repelling," she said. Animal welfare advocates were pleased by the decision by the June 10 decision, as far as it went. "We are concerned that people's lost pets are still going to end up in a research laboratory, and feel the commissioners still need to address that," said Amber Sitko, a member of A Voice for Animals, the group which co-organized the anti-Class B dealer campaign. Sitko said she wonders why Michigan State University needs to continue purchasing animals from shelters when other institutions have discontinued the practice.

Last year, for instance, the University of Colorado heeded criticism and stopped buying pound animals. Instead, they purchase all of their canines from Class A dealers, who breed animals specifically for laboratory research. And in January 2003, the Colorado School of Medicine announced that it would replace dogs with computer simulations in its respiratory lab. Pleased with the outcome, researchers decided to switch to the non-animal methods entirely.

According to the Physicians Committee for Responsible Medicine in Washington, nearly 70 percent of U.S. medical schools, including most

top-ranked ones -- such as Harvard, Stanford, Yale -- have done away with animal labs, in favor of more humane, high-tech, and cost-effective alternatives.

In its 2001-'02 fiscal year, Michigan State University's Department for Animal Laboratory Resources purchased 232 dogs and cats. An additional 198 animals came through donations from other colleges, or from private industry. A total of 274 cats and dogs were used for teaching junior surgery, anatomy, and emergency medicine and 79 dogs and 77 cats for orthopedic and neurological studies, and studies of heart disease. MSU purchased 39 cats and dogs from Class B dealers, and bought 38 from Class A dealers, and 155 animals came directly from Eaton, Jackson and Ingham county pounds. In the past two years, Ingham County's shelter sold 112 stray animals to Class B dealers.

While animal welfare organizations object to selling shelter animals for research because of the suffering inflicted on the animals, some scholars oppose the practice for scientific reasons.

Robert Silva, a Lansing-area scientist with more than 30 years of experience studying the effects of viruses on animals, says that using randomly bred animals from animal shelters is "bad science." (Silva asked that his employer not be identified.) He explained that researchers in his field usually set up one experimental animal group to test a vaccine and a control group in which an already tested vaccine is used.

"If the animals in either of these groups are random-bred, the difference you'd observe between them may not be due to your test situation, but to the random nature of the animals," Silva said. "Everybody who does research with animals is extremely cognizant of this, and they only pick animals which are as similar to each other as possible."

If using pound animals is considered bad science, why do research facilities still buy animals directly from shelters or from Class B dealers?

Silva answered: "The main reason I can think of is cost. It's cheaper than buying from Class A dealers, or from any other source."

Karen Hudson, an assistant director of MSU's Laboratory Animal Resources, said that money is an important reason the university still purchases stray dogs and cats from pounds and Class B dealers. "We have a finite pool of money for research," she said, "so the more we pay for the animal model, the fewer dollars we have to devote to research."

Hudson said breeders charge an average of \$700 per animal, while shelter animals used in were \$130 for dogs and \$110 for cats.

Jean Gaymer, director of MSU's Laboratory Animal Resources, added that money is not the only factor. Older dogs and cats are required for orthopedic, cardiovascular and cancer studies. According to Gaymer, breeders don't house animals long enough to supply these.

"Ingham County's vote is going to make everything difficult for research," said Gaymer, a clinical veterinarian. If MSU no longer purchases from shelters or Class B dealers, she is concerned that "there's going to be far less learned, and far fewer medical breakthroughs are going to occur. We've heard of instances where people have not been able to get the Class

A dog they need, because the dealer wasn't able to provide enough dogs." The Michigan Society for Medical Research in Ann Arbor said that banning pound animal use would jeopardize the quality of research. If researchers were no longer allowed to use shelter animals, they say, they'd need to breed and rear an additional 10,000 dogs and cats in Michigan each year for research purposes. The resulting cost increase "could retard or halt the progress of research in vital health areas such as heart disease, simply by pricing it beyond the reach of many research institutions," states the society on its Web site. Members of the organization include MSU, the University of Michigan, and Wayne State University, as well as Dow Chemical U.S.A., Dow Corning Corporation, Pfizer Global Research & Development, Pharmacia Co. and the Van Andel Research Institute. But Neal D. Barnard, president of the Physicians Committee for Responsible Medicine, argues that the use of pound animals is neither economically wise nor scientifically needed. "While these animals are inexpensive in their initial purchase price, they require quarantine and veterinary treatment to rid them of the infections and parasites they have acquired on the streets," he said. Caging space, personnel costs, feeding, veterinary care, and the replacement of animals that die from infection during the typical 30-day quarantine are uncounted variables that also escalate costs.

For many years, Tufts University School of Veterinary Medicine utilized only Class A animals for their anatomy laboratories. Massachusetts state law prohibits the use of shelter animals for this purpose. But three years ago, Tufts even stopped using live animals in surgery training, as the school's spokesperson, Barbara Donato, explains: "The surgery faculty felt that the value of the learning experience provided by the course did not justify the sacrifice of healthy dogs. In recent years, the number of students choosing to take the live animal component of the elective laboratory has decreased substantially, indicating that our students as well as our faculty were progressively perceiving the course to be of limited value."

In "The Use of Animals in Higher Education: Problems, Alternatives, and Recommendations," biologist Jonathan Balcombe estimates that the combined use of Virtual Reality software, anatomy models, and dissection videos could save a department an estimated \$3,126 and \$6,461, over the purchase of 135 cats for anatomy dissection exercises.

Balcombe draws inspiration from the example of Kerstin Lindahl-Kiessling, a Swedish researcher at Uppsala University who designed his physiology course without animal experiments, maintaining that there are many other ways to demonstrate physiological principles. The Virtual Physiology Series (five CD-ROMs) produced at the University of Marburg, Germany, covers the entire field of nerve-muscle physiology and simulates all of the classic experiments conducted by medical, dental, veterinary, biology, and chemistry students. "These programs are in use in both Europe and North America, and faculty response has been enthusiastic," writes Balcombe.

When asked why the Junior Surgery Center at MSU Veterinarian School and

the School of Medicine still use shelter animals for training and terminal experiments (204 dogs in 2002), Gaymer commented: "You can't learn how to handle live-tissue properly unless you have someone to teach it properly. You cannot do this on a dead animal, or from looking at a computer."

The sale of animals for medical research is a dying business in the United States, due in large to the success of animal rights public awareness campaigns. The nation's medical schools increasingly use bloodless instructional methods in classroom training. And, according to a recent study in "Academic Medicine," the journal of the Association of American Medical Colleges, only 32 percent of medical schools reported using live animals in laboratory training during 2001, down from 62 percent in 1994, and 73 percent in 1985.

Lansing scientist Silva confirms that there is "clearly a trend" to eliminate non-survival experiments and terminal surgeries. He favors of statewide ban on "pound seizure" (the release of shelter animals to research), a practice which is now illegal in 14 states and some localities. "It's progressing now county by county," said Silva, adding that a state law would stop county commissioners from following "their own personal agenda."

State Sen. Valde Garcia, R-Howell, said last month that he is drafting legislation that would ban the sale of animals for research statewide. Silva adds: "It is an utter fallacy that research in Michigan would in any way be adversely affected by banning the use of shelter dogs and cats in research. Not only will research not suffer from banning pound seizure, but the quality of research may actually improve."

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