one of the very special advantages that exist for those of us involved in the veterinary profession is the ability to travel and work internationally. This is especially true for veterinary students—opportunities for research and travel are everywhere, you just need to know where to look.

Every year, the Geraldine R. Dodge Foundation encourages research applications for Frontiers for Medicine Fellowships from veterinary students enrolled at a U.S. or Canadian school or college of veterinary medicine accredited by the American Veterinary Medical Association. These fellowships are special because each student is able to choose and design a research study that in some way holds promise for advancing the humane treatment of animals.

Two years ago, I read about the Animals Asia Foundation (AAF) and their work rescuing and rehabilitating Asiatic black bears (Ursus thibetanus) in China who had been held in farms to harvest bile from their gallbladders.

I visited the Foundation’s Web site (www.animalsasia.org) and learned that bear bile has been used for over 3,000 years in traditional Chinese medicine. Bear bile is a compound known as Ursodeoxycholic acid. A synthetic form exists in Western medicine known as Actigall® and Ursodiol, and it is used as an adjunctive therapy in veterinary and human medicine to manage and resolve cholesterol-containing gallstones, cholestasis, and chronic liver disease. The Chinese have rejected the synthetic analogue and continue bear-bile farming. The majority of bile farms do not employ veterinarians, nor do they have proper surgical facilities or husbandry practices, and the bears suffer from intensive confinement, dehydration, malnutrition, muscle atrophy, bacterial infections and septicemia, self-mutilation, long-term psychological trauma, and high mortality rates.

AAF is working with the government to educate the Chinese people and to close the worst farms across China. The nonprofit organization has built a China Bear Rescue and Rehabilitation Center in order to care for the bears who had been in the tiny cages and horrible conditions for many years.

As a veterinary student and human being, I felt passionately and wanted to do something to help the bears. I donated $30 to the

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Foundation, feeling that wasn’t nearly enough, but all I could afford. That same semester, I mentioned AAF to a professor at my veterinary school and he told me about the Frontiers for Veterinary Medicine Program. I contacted AAF and explained that I was a veterinary student with the motivation and dedication to help develop a research project aimed at moving the goals of AAF forward.

After a year of careful planning and hard work, I submitted a proposal to the Geraldine R. Dodge Foundation for a research project entitled, “Behavioral Indicators of Stress in Asiatic Black Bears Undergoing Rehabilitation Following Use as Bile Donors.” When I was contacted and informed that my project had been selected, I felt the award had been given to everyone at AAF and all of the bears, too. This past summer I was so fortunate to travel to the AAF Bear Rescue Center in Mainland China and to spend a month learning about and recording both stereotypic and normal behaviors of Asiatic black bears rescued from the bile farms. The bears in the study were from three different groups: (1) recently arrived animals, (2) those in dens in the process of integration, and (3) those in established groups with access to an outdoor enclosure.

Stereotypic behavior is defined as behavior that is repetitive in form and apparently useless in function; it is often used as an indicator of stress and a measure of welfare in captive animals. The bears at the AAF Rescue Center did not pace as most zoo-housed animals are known to do—instead these bears demonstrated a stationary, repetitive “head sway” which is likely a modified stereotypy resulting from a history of being housed in tiny cages. Observations of all three groups did show that this behavior decreased over time, and, in fact, during observational periods, the bears in the third group spent most of their time engaged in normal behavior: foraging, climbing, swimming, and playing or wrestling with each other. The project results are very promising and show a decrease in stressful behavior over time as the bears adjust to their new home at the AAF Bear Rescue Center.

This experience was so valuable, not just because I was able to give so much more to the bears, but because I was able to learn a great deal about the process of research, meet other veterinarians and veterinary technicians working internationally, travel and learn about another culture, and open my eyes to many more possibilities and opportunities in the field of veterinary medicine.

Preliminary Assessment of Recent Spay-Neuter Legislation in Buncombe County, North Carolina
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Solving the problem of pet overpopulation is no simple task, as it has become increasingly difficult to identify the factors contributing to pet overpopulation.1,2 In an attempt to respond to a problem with a variety of etiologies, many shelters and humane groups have employed a multimodal approach to combat overpopulation, incorporating spay-neuter programs, educational outreach programs, and stricter county ordinances.2 Of particular interest, and the subject of much debate, are laws governing the sterilization of animals. There seems to be promising evidence that spay-neuter incentive legislation is decreasing euthanasia rates in places such as King County, Washington; Denver, Colorado; and San Mateo, California.

In 2004, commissioners in Buncombe County, North Carolina, passed a strict spay-neuter law requiring that any cat or dog over the age of 6 months be spayed or neutered or the owners must purchase a one-time unaltered animal permit. In 2005, the city of Asheville implemented a similar ordinance. Initial reports and subjective assessment of the ordinance by veterinarians and the animal welfare community were favorable.

With assistance from a Geraldine R. Dodge Foundation grant, we were able to investigate further the effects of this legislation by analyzing the following: animal intake data, euthanasia rates, adoption rates, number of spays and neuters, concurrent programs promoting pet depopulation, how the county and city were enforcing the ordinance, and its economic impact on the county and city budget.

Animal intake numbers and euthanasia numbers seem to be decreasing, especially for dogs, but we will not know if this is statistically significant until we collect the last remaining data sets at the end of December. Public recognition of the overpopulation problem, accessibility of a low-cost spay-neuter program, previous advertising campaigns by the MIMI Foundation, and minimal cost of enforcement seem to be the driving factors in the apparent success of this piece of legislation. Should future analysis show continued success in reducing pet overpopulation in this area, we hope other counties will adopt similar policies, tailoring it to their county’s needs.

References

Editor’s note: AVAR is currently working on similar legislation for Sacramento County, California, which would limit breeding to those who purchase a high unaltered license fee for the animal. Sacramento County has one of the worst kill rates in California, with nearly one out of every two animals that enter the shelter never leaving alive. AVAR also has plans to work with other California counties to enact similar legislation. For a copy of the model spay/neuter ordinance, email pam@avar.org.