

Editorial

Laboratory Animal Health Technology

Robert O. Jacoby, DVM, PhD

Previous editorials have raised concerns about an unfavorable imbalance between the demand for and supply of laboratory animal medicine veterinarians. This perception will be revisited in an upcoming editorial, but I mention it here to introduce a related priority where growing demand can be met effectively by collective action. Health care for laboratory animals cannot be sustained without veterinary specialists in laboratory animal medicine and pathology, but the weight and diversity of their obligations requires teamwork with technologists who leverage and extend veterinary expertise. These staffers are best titled, in my view, laboratory animal health technologists (LAHTn's); health care providers in the front lines of contemporary animal experimentation. They are in the thick of detection, diagnosis, treatment and prevention of disease and deliver important research support services such sample collection, immunization, breeding colony management, surgical assistance and post-operative care.

And there are not nearly enough of them because the development of this emerging field is being left largely to chance. Some LAHTn's enter the vivarium environment after training in general veterinary technology, which emphasizes care for domestic and companion animals. Others may be veterans of on-the-job training and experience at veterinary practices. Still others, with high potential but modest knowledge about laboratory animal health, may transfer from animal technology or laboratory positions. No matter the source, once they gain appropriate experience, they are as vital to the workings of an animal health program as nurses are to medical centers. Nevertheless, the skills of current practitioners are not formally developed or recognized. It is time to correct this omission by placing laboratory animal health technology on a par with internationally recognized AALAS programs which train and certify laboratory animal technologists. This step would draw much-needed new talent to the field, while providing proper esteem and opportunity for those already on board.

Although a portion of established AALAS training covers health care for laboratory animals, it does not and should not provide the depth and diversity of expertise essential to state-of-the-art laboratory animal health technology. New and distinct pathways are required to produce adequate numbers of technical specialists. Training should provide comprehensive working knowledge of important animal health concepts and technologies including, but not limited to: infection and epide-

miology, immunology, neurobehavior, genetics and phenotyping, reproduction, pharmacology and therapeutics, surgery, radiology, physical diagnosis, post-operative care, and prosection.

Qualifications for training should be formulated by thoughtful experts in laboratory animal medicine and pathology. However, a background in laboratory animal technology such certification as an AALAS laboratory animal technician would be a desirable base on which to build in-depth knowledge about animal health. Alternatively, and perhaps preferably, completion of a 2 or 4 year course leading to an associate's or baccalaureate degree in veterinary or laboratory animal technology should be sought. These scenarios imply that "tracking" is a desirable way to recruit LAHTn trainees. Tracking is used successfully in veterinary and other health profession curricula to encourage focus on sub-disciplines once basic knowledge of biology and disease has been attained. For example, an AALAS-certified laboratory animal technician could continue on the "traditional track" through certification in technology and management or shift to a "health provider track" leading to equivalent achievement and recognition in animal health technology. Highly energetic individuals could attain certification in both tracks.

Training and certification in LAHTn could be a shared enterprise between AALAS and the American College of Laboratory Animal Medicine, both of which have extensive experience with these processes. They could, for example, establish a joint steering committee to develop a syllabus, text, certification requirements and a certifying examination. Ongoing administration of these functions could be vested in a committee of laboratory animal veterinarians and LAHTn's.

If personal experience has any predictive value, a significant proportion of LAHTn's will make career-long commitments to animal health technology, providing excellent and direct return on training investments. Some may, however, move to research laboratories or to veterinary training. While such outcomes are unavoidable, they are not necessarily lamentable. LAHTn's who pursue veterinary training could be encouraged to return to laboratory animal medicine, or careers in comparative medical research, through externships and fellowships available during veterinary training. Those who opt for positions in research laboratories can improve cooperation and efficiency between laboratories and the animal care programs, links that can further enhance animal experimentation and care, and regulatory compliance.