



# Laboratory animal medicine: An overview

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## DESCRIPTION

The utilization of animals as experimental mockup will continue to be a key tool in the immediate future, permitting innovative and increasingly molecular discoveries of fundamental science to be translated into advancements in health care for humans and animals as well. The laboratory animal veterinarian has a critical role on behalf of society and the research community by manage and help to safeguard the use of animals in research. In terms of societal presumption, the laboratory animal veterinarian works to aid animal welfare by ensuring that experimental protocols expand animal well-being and minimize pain and distress. On behalf of the research community, laboratory animal veterinarians must clinch that healthy animals are procured and maintained to produce reliable research results. The veterinarian also assists the research team in developing suitable models for study and to seek refinement, reduction, and replacement alternatives for animal use.

Laboratory animal medicine is an exciting discipline that encompasses many fields that relate to the utilization of animals in research, teaching, and testing, including ethology, welfare, biology, biosafety, genetics, physiology, regulatory affairs, toxicology, animal model development, pathology, diagnostics, husbandry, experimental design, education and training, anesthesia, medicine, and surgery. Laboratory animal medicine is the 3<sup>rd</sup> oldest veterinary specialty in North America, receiving specialty board status recognition from the American Board of Veterinary Specialties' in 1958.

Veterinarians with appropriate research training and knowledge in laboratory animal medicine make important contributions to comparative medicine and life science in Canada et al. In 2007, both the American Medical Association and the American Veterinary Medical Association resolved to enhance collaboration between human and veterinary scientists to fully realize the potential of comparative medicine to benefit human and animal health. Some laboratory animal veterinarians fill roles as program directors of animal research facilities while others working in this field have particular expertise in areas such as regulatory oversight of research, comparative medicine and pathology, applied research, teaching, administration and facility design, experimental surgery and therapeutics, animal ethology and welfare, and animal physiology. These examples serve to emphasize the wide spectrum of expertise and roles of veterinarians working in laboratory animal medicine. Because laboratory animal veterinarians have a wealth of experience in handling welfare-based approaches concerning animal use, they also tend to lend their expertise to other fields of veterinary practice, such as serving on provincial association animal welfare committees, developing codes of practice for various animal sectors, assisting with development of animal euthanasia guidelines, and working with humane societies in delivery of humane care to stray animals.

Laboratory animal medicine constitute a relatively small sector of experts working either part-time or full-time within the Canadian veterinary profession, with approximately 1% of Canada's veterinarians working in this field. Concern for a scant supply of trained professionals in laboratory animal medicine has existed for many years in North America.

In 1997 a study suggested an enough supply of laboratory animal veterinarians through the year 2005; actual experience has shown an increasing shortage of trained professionals within the field. This scathing shortage has been recognized by the

National Academies in the United States, as well as the American Association of Veterinary Medical Colleges, with both organizations decide to increase awareness and training opportunities for veterinarians in this field.