

## **Camelid Health Research**

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Both Old and New World camelids have supplied, and still supply, food, fiber and labor for indigenous cultures for millennia. Now camelids have become an accepted livestock enterprise in many countries throughout the world. While much applied health related research has been performed for centuries, greater emphasis has been given to both basic and applied health research during the past three decades. That research is required, and must continue, in order to provide for the well-being of camelids and for their quality of life. It is important to recognize that the accumulation of information on diseases of camelid that are being dealt with on a daily basis is research, as long as that information is documented, analyzed and reported in the scientific literature. Such research has formed the foundation for basic research on all aspects of health including anatomy, physiology, epidemiology and infectious diseases and parasitism. One of the first challenges that faced North American veterinarians was that camelids were being classified with ruminants for regulatory purposes. It is known that they are not ruminants taxonomically, anatomically, behaviorally, physiologically and especially they have different susceptibility to many of the infectious disease agents of interest to regulatory agencies. For instance, research has shown that they are not as susceptible to foot and mouth disease viruses as are cattle, sheep and goats. Camelids are not a reservoir for or a carrier of any infectious disease important in ruminants.

A review of the scientific literature on camelid health research reveals that the work is being done all over the world at academic institutions, country based research institutions, government agencies and private veterinary practitioners. A good example of the tremendous output of information now available is on reproduction. Basic research on the physiology of camelid reproduction from many institutions and countries has made it possible to apply advanced reproduction technology (artificial insemination, embryo transplanting and diagnostic imaging) to camelids. In camels the work is being done in the United Arab Emirates, Saudi Arabia, India and Asia. Work on New World camelids began in South America, but is now also being done in North America, Australia and Scotland. Several researchers are devoting their entire professional careers to improving the production capacity of these animals. Specific diseases have been studied intently because of their significance to the camelids themselves, concern of regulatory agencies or of being a potential zoonosis. Such diseases include foot and mouth disease, tuberculosis, mycoplasmosis, bovine brucellosis, trypanosomiasis, coccidioidomycosis and camel pox. The latter disease has had a vaccine developed to prevent this important disease.

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One of the jewels of camelid research is the alpaca genome project conducted by a consortium of researchers from many institutions and government agencies. This will have a profound impact on many aspects of camelid health. There are still many questions concerning camelid health, but there are qualified researchers devoting efforts to answer many of them.