

Chapter 1 : Dr. Oglesbee named AAAS Fellow | College of Veterinary Medicine

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The information provided deals with many aspects of how to conduct controlled studies in battery cages dose determination , floor pens dose confirmation , and commercial facilities field effectiveness studies , the selection of birds, housing, feeding, preparation of medicated rations, record keeping, diagnostic techniques, and methods for the preparation, maintenance and use of parasites. These guidelines are also intended to assist investigators in conducting specific studies, provide specific information for registration authorities involved in the decision-making process, assist in the approval and registration of new anticoccidial drugs, and facilitate the world-wide adoption of standard procedures. Background Principles and procedures used to evaluate anticoccidial drug efficacy were reviewed in a series of papers presented at a symposium held at the University of Georgia, USA, in May Reid, a. Included was a review by Waletzky a of the design, variables, criteria, and predictive value of laboratory anticoccidial drug evaluation trials, which contains a comprehensive account of the early literature. A significant contribution to evaluation methods for drug efficacy was the standardization of a lesion scoring system Johnson and Reid, Similar schemes had been devised by many earlier workers Horton-Smith et al. The structure and content of the present guidelines have been partly based on the report by Conway and McKenzie , but other recent sources of scientific information have also been utilized. Comprehensive guidelines are available describing laboratory procedures used in coccidiosis research with Eimeria species of poultry Davis, ; Ministry of Agriculture, Fisheries and Food, ; Eckert et al. Consideration was given to regulatory requirements for generating efficacy data for anticoccidial drugs in chickens and turkeys from national authorities including the European Union [http: Intent](http://Intent) The aim of this World Association for the Advancement of Veterinary Parasitology WAAVP guideline is to establish uniform international standards regarding the efficacy of new anticoccidial drugs. The principles discussed here are widely recognized and utilized by the scientific community and are considered to be appropriate for the collection of the necessary scientific data. Basic criteria for evaluating the efficacy of anticoccidial drugs 2. Rationale Modern production systems employed for rearing chickens and turkeys for meat production focus mainly on prophylactic coccidiosis prevention by the administration of in-feed P. If a claim for therapeutic efficacy is intended, evidence of drug efficacy in birds already suffering from clinical coccidiosis is necessary. Efficacy must be demonstrated for all Eimeria species for which a claim is to be included on the product label. Eimeria species considered to be of economic importance include: Efficacy studies should be conducted with field isolates of as recent isolation as possible. While regulatory authorities may not require data on the drug-resistance profile of isolates, this type of information may give confidence that the drug will be efficacious in the field Cuckler and Malanga, ; Chapman, ; Ryley, a; Jeffers, Under some circumstances studies designed to demonstrate the non-interference of the anticoccidial drug with other feed-additive medications used in commercial poultry production may be necessary. All studies must be conducted following recognized principles of good clinical practice GCP Raines, and all aspects of the studies must be thoroughly documented. In some countries, specific guidelines are available for the management and welfare of experimental and commercially reared poultry Anon. Studies at universities may require approval of animal care and use committees and in some countries procedures, wherever carried out, may require to be justified to local ethical committees and to be authorized by government authorities. Such requirements should be considered during the design stage of an investigation. Types of study Three study designs are generally recognized to be necessary to establish the efficacy of anticoccidial drugs. It is recognized that, in particular circumstances, alternative approaches to those listed here may be deemed more fitting, and in such cases, a reasoned argument for the alternative procedures should be prepared and discussed with appropriate regulatory authorities before initiating the work. Study conditions Several fundamental experimental

conditions should be recognized for all types of study, as follows cf. Kilgore, ; Raines, Use healthy, vigorous birds free from coccidial or other extraneous infections from a single breeder flock of same age and genetic background, similar weight, and fed the same basal diet. The birds may be routinely vaccinated against common viral or bacterial diseases, but must not be vaccinated against coccidiosis. Employ an equal number of birds in each treatment. Replicate treatments in order to increase statistical power of the study. Preparation of experimental diets Guidelines are available for minimum requirements for nutrients in poultry diets e. Alternatively, diets may be formulated according to local commercial practice for the species and class of poultry being fed. The ingredients used and their commercial sources should be specified and nutrient levels determined. The form of the feed pellet, crumble or mash should reflect that to be used in practice, because the milling and pelleting process may affect drug stability. Furthermore, the form of feed affects the growth rate and feed utilization of broilers Engberg et al. Standard operating procedures should be developed to describe all methods employed in the preparation of experimental feeds. This includes the method of sampling medicated feed, maintaining an appropriate drug inventory, flushing of mixers, labeling feed, etc. Detailed procedures for the preparation of diets are available e. Each batch of experimental ration containing an anticoccidial drug should be assayed to establish that the drug is present at the intended concentration. If a drug is included in the drinking water, then unmedicated as well as medicated water should be assayed. The method used to ensure that the number of birds placed in each pen or cage at the start of a study must be accurate and a detailed description of the procedure used must be provided in the protocol. Birds may be identified individually by attaching a leg, neck, or wing band. Procedures such as beak tipping of turkey poults and toe trimming of chicks are sometimes carried out at hatcheries, where acceptable to regional animal welfare authorities. The method of sexing chicks or poults should be identified, i. Birds and litter should be disposed of in an appropriate manner by incineration or composting in accordance with local regulations. Experimental facilities and laboratory techniques for working with *Eimeria* 2. Animal accommodation Separate accommodation is required for the initial brooding of chicks and their subsequent use for the propagation of parasites or to test the efficacy of drugs. Further details of procedures and techniques for working with *Eimeria* are provided by Chapman and Shirley Laboratory techniques Details on oocyst collections, propagation, counting and inocula preparation are given in Appendix A along with descriptions of McMaster chamber and the haemocytometer oocyst counting methods. Standardization of observations Lesion scoring methods may differ considerably in detail, depending upon whether mixed or single *Eimeria* species infections are being studied. Lesion scoring requires sampling of large number of birds. To allow for individual bird variation, replication of cages or pens in treatments is recommended. General method of scoring lesions Lesion scoring is a technique that was developed to provide a numerical ranking of gross lesions caused by coccidia of chickens Johnson and Reid, The four regions for scoring are: Based upon the species of *Eimeria* and severity of the lesions, a score of 0 no lesions, 1 mild lesions, 2 moderate lesions, 3 severe lesions or 4 extremely severe lesions or death due to coccidiosis is recorded for each chicken for each of the four regions. The regions as indicated above scored for the different species are for: Although lesion scores are sometimes reported from turkeys, standardized systems for lesion scoring in turkeys and other birds have not been established. Performance variables and criteria of efficacy Parte 1 de 7.

Chapter 2 : Advances in Animal and Veterinary Sciences

Veterinary technicians play a crucial role in animal care in veterinary offices. Requiring an associate's degree, veterinary technicians work with animals by providing medication and first aid.

Scholarships and Financial Aid Available for Vet Tech Students 25 Amazing Veterinarian Breakthroughs in the Last 10 Years As medicinal breakthroughs in human health are made, so too do the advances of veterinary medicine. If still in doubt, check out the below 25 amazing veterinarian breakthroughs. From items straight out of an episode from Star Trek to the latest in Eastern medicine for Western pets, there are loads of well-known and lesser-known entries. Amazing General Veterinarian Breakthroughs in the Last 10 Years From surgeries to the latest advancements in therapies, the below have it all. Stem Cell Therapy Not just a point of conversation and debate for human medicine, it is available in veterinary medicine as well. Its goal is to stimulate and activate dormant stem cells ensuring maximum uptake achieving best possible results. It is offered by many practices, including Medivet, which has loads to say about it on their site. Cancer Vaccine In this aspect, veterinary medicine seems leaps ahead of human. This vaccine is intended for melanoma, or a type of skin cancer. Since dogs spend most of their time exposed to the sun without any kind of sunscreen, they can be susceptible to melanoma. The blogger at What Would a Dog Do has more. The Anti Vaccine Movement Not just for parents, pet owners have now become more wary of vaccines and the adverse reactions they can have on pets. In order to better understand vaccines, veterinarian T. Dunn shares his decades of experience on administering hundreds of thousands of vaccines. He also includes a few true life examples of what an adverse reaction to a vaccine can be. With this veterinary breakthrough, the procedure can be done laparoscopically, as often done on humans. This involves only a small cut and the insertion of a small camera. Laser Surgery Not just for corrective eye surgery in humans anymore. Concentrated light sources can be used in spays and neuters, declaws, ear surgery, and many more. Larry includes other benefits of laser surgery. The Lewisburg Veterinary Hospital has implemented this kind of technology with impressive results. Their laser therapy can be used for pain relief, wound healing, ear infections, hot spots, arthritis, and other common conditions. Check out the video with more. Breed Test Are you in doubt of what breed your dog is? Perhaps you wonder if your pooch is a purebred or even what kind of mix they are? The American Academy of Veterinary Acupuncture says that acupuncture can treat ailments ranging from hip dysplasia to chronic degenerative joint disease. It has become ever increasing in the vet world and many are learning how to practice it themselves. Why They Die As unfortunate as it is, every pet dies from something. However, with this new study conducted at the University of Georgia, it is now possible to predict the most likely cause of death for your pet and be prepared for it. They list the most common causes of death, such as cardiovascular disease and cancer, by breed it is most common in as a cause of death. MRI In another not just for humans entry, magnetic resonance imagery has come to the veterinary medicine. Making a debut at Cornell University in , the first patient was a Persian cat. The imagery technology shows more resilient, detailed images than other similar technology. Amazing Veterinarian Medicine Breakthroughs in the Last 10 Years With a prescription for everything in humans from high cholesterol to bad mood, veterinary medicine has kept up. Pet Supplements Multi-vitamins, supplements, and such are no longer just for humans. No worries, the probiotic industry has many options for pets, and you can read more here. Palladia Did you know that over one million dogs per year are diagnosed with cancer? For some of those, treatment can come in the new form of this drug. This drug is used to treat mass cell tumors and works by blocking the activity of key receptors important in the development of blood vessels that supply tumors, as well as receptors vital for tumor survival.

Chapter 3 : The newest advances in veterinary technology

Index Copernicus Value: The Journal of Veterinary Science & Technology is an academic journal providing an opportunity to researchers and scientist to explore the advanced and latest research developments in the field of veterinary sciences and related academic disciplines.

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Veterinary Medicines Veterinary medicines is the branch of medicine that deals with the causes, diagnosis and treatment of ailments, diseases and wounds of animals, particularly domestic animals. It is also concerned with the health of creatures and the treatment of diseases or sicknesses, prevention, alleviation, and cure that affect them. Veterinary medicine is widely practiced, both with and without professional supervision.

Veterinary Science Veterinary Science is the science of diagnosing, treating and curing the diverse types of diseases in birds and animals. The subject broadly covers the study of animal physiology, treatment and prevention of diseases among animals. The basic principles of this specialized branch of study are quite similar to that of human medical sciences. It involves not only taking care of animal health but also includes scientific breeding and handling of livestock.

Veterinary Parasitology Veterinary parasitology is the study of animal parasites, especially relationships between parasites and animal hosts. Parasites of domestic animals, , as well as wildlife animals are considered. Veterinary parasitologists study the genesis and development of parasitoses in animal hosts, as well as the taxonomy and systematics of parasites, including the morphology, life cycles, and living needs of parasites in the environment and in animal hosts. It consists of animal anatomical pathology and clinical pathology.

Animal Behavior Animal behavior is the study of these and other questions about why animals behave the way they do.

Veterinary Clinical Practices Veterinary clinical practices programs was established to serve those veterinarians who want advanced clinical

training in small animal medicine and surgery. The Clinical practices are advantageous for large volume and diversity of medical and surgical cases. It also involves in the study of animal welfare and protection of the personnel. Equine and Bovine Research Equine and bovine research leads to continued progress in vaccine development breeding of disease resistant and generation of animal models for developing solutions to diseases, research provides an opportunity to gain experience and enhancing beef and Dairy industry. Research in Veterinary Science Research in veterinary science is well known as animal experimentation, animal research , and in vivo testing which involves in the use of non-human animals in experiments or research and development projects, especially for purposes of determining the safety of substances such as foods or drugs. Diseases Companion and Wild Animals Companion animals live in close contact with human population and the risk of transmitting diseases to human is therefore significant if the Animal itself was infected. Increase travel activity increases the possibility of transfer of infection between animal population and increased risk for contact with new infectious agent. Animal Reproduction and Assisted Technologies Animal reproduction and Assisted technology used for promoting reproductive efficiency and to preserve valuable Genetics ,it even includes the continued development of sex sorting technologiess advanced procedures such as sustained development of oocyte transfer and intracytoplasmic sperm injection embryo cryopreservation. Animal Viruses Animal viruses are viruses that infect animals ,these viruses infect all cellular life and although viruses infect every animal,plant and protist species each has their own specific range of viruses that often infect only that species. These viruses have their genetic material copied by a host cell after which they are released into the environment to cause disease. Animal Diseases "Animal disease" means a disease to which animals are liable and whereby the normal functions of any organ or the body of an animal is impaired or disturbed by any protozoon, bacterium, virus, fungus, parasite, other organism or agent. It is the unusual things observed in livestock behaviour. Animal Feed Animal feed is food given given to domestic animals in the course of animal husbandry. There are two basic types ,fodder and forage. Most often fodder refers to feed. A safe animal feed supply helps ensures healthy animal and people. A safe animal feed supply helps ensure healthy animals. It Involves methods of conserving and processing feeds that affect their nutritional value. Zoonotic Disease A zoonotic disease is a disease that can be passed between animals and humans. Zoonotic diseases can be caused by viruses, bacteria, parasites, and fungi through media such as air influenza or through bites and saliva Rabies. In contrast, transmission can also occur via an intermediate species referred to as a vector , which carry the disease pathogen without getting infected which may cause human sickness. Meeting livestock nutritional requirements is extremely important. Veterinary Technician Veterinary technicians also well known as Vet techs performs patient care duties in various animal care facilities such as the offices of veterinarians. In addition to basic medical knowledge acquired through Veterinary technology education programs. Veterinary technologists and technicians perform medical tests under the supervision of a licensed veterinarian to help diagnose the illnesses and injuries of animals. Veterinary Clinical Research Veterinary clinical research is a part to advance the knowledge and to improve Animals health and are undergone with clinical trials to find new drug to alleviate pain. Veterinary Clinical researchs include Clinical trials or research studies that explore whether a medical strategy, treatment, or device is safe and effective to particular animal or not. Veterinary Medical Research Veterinary medical research is the primary way to provide scientifically based information and Technology ,improves the health and well being of animals environment and public health. Its main aim is to investigate the bacterial, viral and parasitic diseases of farm animals and to conduct molecular biology research in these areas. Vaccines can prevent or ameliorate morbidity from infection. These are used to prevent and treat animals from various diseases and illness. OMICS International journals have over 10 million readers and the fame and success of the same can be attributed to the strong editorial board which contains over eminent personalities that ensure a rapid, quality and quick review process. OMICS Group Conferences make the perfect platform for global networking as it brings together renowned speakers and scientists across the globe to a most exciting and memorable scientific event filled with much enlightening interactive sessions, world class exhibitions and poster presentations.

Chapter 4 : Journal of Veterinary Science and Technology- Open Access Journals

One of four volumes of work on the advancement of veterinary science, which is the result of symposia held in to mark the bicentenary of the formation of a formal veterinary profession in the Volume 2 covers such topics as viewpoints from the UK and innovation.

Chapter 5 : Journal of Veterinary Science

Veterinary assistants enjoy working closely with animals. One opportunity for advancement would be to become a veterinary technician. Vet techs work closely with veterinarians.

Chapter 6 : New Advances in Technology for Pets - Texas A&M Veterinary Medicine & Biomedical Science

With the development of new veterinary technology comes the greater need for those with specialized training. Being a veterinary technician is a rewarding career for anyone who has a passion for animals.

Chapter 7 : 25 Amazing Veterinarian Breakthroughs in the Last 10 Years »

The student should have evidence of serving as a volunteer or of leadership activity in some or all of the following: 1) student organizations that promote veterinary medicine, 2) organized veterinary medicine, 3) community engagement, or 4) in other college or professional activities that demonstrate an ability to communicate effectively and participate in team activities.

Chapter 8 : World Association for the Advancement of Veterinary Parasitology (WAAVP)

Veterinary science topics. A veterinary physician or surgeon (often shortened to "vet") will often take responsibility for a wider range of roles than a doctor would; this means training is generally quite wide-ranging.

Chapter 9 : College of Veterinary Medicine - Giving

As medicinal breakthroughs in human health are made, so too do the advances of veterinary medicine. While we still may be a ways from the doggie brain transplant, chances are if you've heard of it being done on a human, there's a vet out there that can do the same for a pet.