

# VETERINARY MEDICAL REVIEW

School of Veterinary Medicine  
University of Missouri-Columbia

October 1, 1972 No. 55

## Dr. Shelton Honored with Alumni Award

Dr. George C. Shelton, associate dean of veterinary medicine, received an Alumni Association award for distinguished achievements at the California-Missouri football game. He was one of twenty-three faculty and alumni who were honored at the game and at a dinner the preceding night. This is the fifth year the awards have been given.

Dr. Shelton received a D.V.M. from Texas A & M, an M.S. from Auburn University and a Ph.D. from the University of Minnesota. He came to the University of Missouri in 1949. In 1966 he became associate dean for academic affairs.



He is a member of the AVMA, MVMA, Sigma Xi, Phi Zeta, Gamma Sigma Delta, Research Workers in Animal Diseases and received the National Science Foundation Faculty Fellowship in 1961-62 and the Norden Distinguished Teacher Award in 1963.

## Dr. Corley Named Chairman

Dr. E. Allen Corley has been appointed chairman of the Department of Medicine and Surgery of the School of Veterinary Medicine and will begin his duties Sept. 1.

Dr. Corley came to the University of Missouri-Columbia in 1966 as an assistant professor and became professor of medicine and surgery in 1968.

He has been chosen twice to receive the Norden Distinguished Teacher Award at the School of Veterinary Medicine, in 1969 and 1972.

He received a B.S. degree in animal husbandry from Clemson College, South Carolina, in 1951 and a D.V.M. from the University of Georgia in 1957. He received a Ph.D. in radiology from Colorado State University in 1966.

From 1957 to 1963 Dr. Corley taught small animal medicine at the University of Georgia. While completing graduate work at Colorado State University from 1963 to 1966, he was a radiologist in charge of the elbow dysplasia project, a clinical radiologist and later a special fellow of the National Institutes of Health.



Among his memberships are Phi Zeta, Omega Tau Sigma, Sigma Xi, Educators in Veterinary Radiological Science, American Veterinary Medical Association, American Veterinary Radiological Society and the American College of Veterinary Radiology of which he has served as president. He is also vice president of the board of directors of the Orthopedic Foundation for Animals.

## Freshmen Arrive For Orientation

Seventy-two freshman students began their first day of veterinary medical school on August 24 with an orientation.

A quick look at those 72, seven more than were accepted in the previous class, shows that 61 are from Missouri and eleven from other states. Those states include Arkansas (1), Nebraska (3), New Jersey (3), Massachusetts (1), South Dakota (1) and Wisconsin (2).

The total number of applicants for the 1972 class was 591, which is 157 more than the previous year.

Three of the new students hold masters degrees, 32 baccalaureate degrees and the average age is 22 years.

Forty-one came from rural backgrounds and the remaining 31 from urban backgrounds. Nine are women and 63 men.

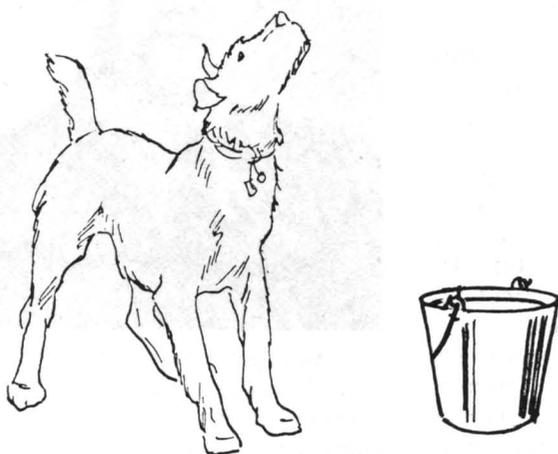
The orientation included tours of the School, the Veterinary Research Farm, Sinclair Farm and the Research Park.

# Antifreeze Poisoning Is Serious Danger to Pets

The family dog watches his master change antifreeze in the family car and licks the sweet-tasting liquid spilled on the ground. Within 24 hours the pet is seriously ill.

Ethylene glycol, a major component of antifreeze, is a toxic agent which produces renal or kidney failure in small animals. Dog and cat owners should beware of the animal's presence when changing radiator antifreeze and take precautions to avoid the animal's contact with the liquid.

Dr. Larry M. Cornelius, assistant professor of medicine and surgery at the University of Missouri-Columbia School of Veterinary Medicine, explains why antifreeze is poisonous. After ethylene glycol enters the body, an enzyme in the liver, alcohol dehydrogenase, changes the compound into a potent acid called oxalic acid. This acid combines with calcium, producing calcium oxalate crystals which damage kidneys and ultimately cause death through renal failure.



## Symptoms of Antifreeze Poisoning

Signs of ethylene glycol poisoning appear within one to two hours. Early signs are wobbliness or ataxia, depression, intense thirst, and frequent urination. Within four to five hours the animal begins vomiting, and the initial symptoms worsen.

Symptoms will not appear as suddenly in an animal who laps up a small amount of antifreeze and returns for more. The dog or cat will initially appear depressed and dehydrated and then display the signs which accompany a poisonous dose.

A large dose of antifreeze can kill an animal within 24 hours. Dr. Cornelius says that fatal dosage is determined by the amount of ethylene glycol in the antifreeze. "Three ounces of pure ethylene glycol will kill an average-size dog."

## Quick Treatment is Essential

Successful treatment of antifreeze poisoning is more likely if initiated within 12 hours following ingestion. Diagnosis for

this type of poisoning is difficult. The best diagnosis is when the small-animal owner sees his pet consume antifreeze or if the owner suspects this. The veterinarian can also microscopically test the animal's urine for oxalate crystals, but this method is slow and not completely accurate.

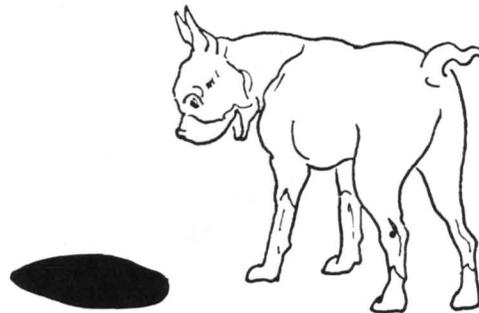
Antifreeze poisoning is treated by inducing vomiting and administering sodium bicarbonate and ethyl alcohol. Sodium bicarbonate is an alkalizing agent which neutralizes the potent acid. Ethyl alcohol is given intravenously or intraperitoneally (through the abdomen). Alcohol dehydrogenase, the enzyme in the liver which changes ethylene glycol into a strong acid, is the same enzyme which metabolizes alcohol. If this enzyme is saturated with ethyl alcohol, it will not act on the ethylene glycol and the compound will pass through the animal's body.

Pet owners who do not have access to a veterinarian should not attempt to treat the poisoning with alcohol because an overdose might occur. They can, however, induce vomiting by giving their pet a few drops of hydrogen peroxide or a tablespoon of salt.

## Research looks at Blood Chemistry Changes

Dr. Cornelius has conducted research in antifreeze poisoning of small animals by studying blood chemistry changes. He measured blood "pH" or acid/alkaline content and electrolyte or salt levels after ethylene glycol had entered animal systems. The research was an attempt to define the severity of body changes during antifreeze poisoning in order to support methods of treatment.

Dr. Cornelius received his appointment to the UMC Veterinary Medical School in 1968. He received his D.V.M. degree in 1967 from Purdue University and Ph.D. degree in pathology from the University of Missouri in 1971. Dr. Cornelius served an internship in small animal medicine and surgery at Angell Memorial Animal Hospital in Boston, Mass., in 1967. He is a member of Phi Zeta honor society.



*Note: this article is reprinted from a news release sent to newspapers to warn pet owners of the dangers of antifreeze. Practitioners may want to make this available to their local newspapers or display it in their office for clients to read.*

# Conference Set for Oct.

The 48th Annual Conference for Veterinarians is scheduled for October 15-16 at the University of Missouri-Columbia.

The program format will include rotating seminars on a variety of subjects, small group discussions and auto-tutorial programs.

Speakers include: Dr. W. O. Brinker, Michigan; Mr. E. P. Coleman, Missouri; Dr. W. G. Crago, Ohio; Dr. J. R. Dinsmore, Illinois; Mr. H. D. Hurd, Missouri; Dr. J. A. Mulnix, Colorado; Dr. D. S. Postle, New York; Mr. John Robinson, Missouri; Dr. L. C. Self, Oklahoma; Dr. J. E. Spaulding, Washington D.C.; and Dr. R. Zemjanis, Minnesota.

Faculty from the School of Veterinary Medicine include: Dr. J. R. Coffman, Dr. D. W. DeYoung, Dr. H. E. Garner, Mr. C. E. Jett, Dr. B. W. Kingrey, and Dr. C. E. Martin.

In response to requests from last year, the conference is scheduled for a non-football weekend. The Ramada Inn will be the headquarters for the conference and most of the program will be held there.

The conference is sponsored by the University School of Veterinary Medicine and Extension Division in cooperation



*Dr. Robert Ausberman, left, and Dr. Karl Grady confer with VM-4 Ron Cott on a case in the Clinic treatment area.*

with the Veterinary Medical Alumni Association. The program is approved by the Missouri Academy of Veterinary Medicine for 12 hours (1.2 CEU) of prescribed credit.

## Student AVMA Brings Visitors to School

Dr. Karl Grady of the Grady Veterinary Clinic, Cincinnati, Ohio, talked to the AVMA Student Chapter on small animal practice management at their regular meeting on Sept. 14. He used slides to illustrate how his hospital is organized and to explain the procedures used, how charges and credit are handled, duties of the employees and other management aspects of the practice which have five veterinarians.

He also talked to the Nutrition, Toxicology and Biophysical Aspects of Practice block during a morning seminar and to the Small Animal Surgery and Small Animal Medicine blocks in the afternoon. He discussed various aspects of setting up a practice and the management of the practice in both seminars, using slides to illustrate.

Visiting the School with him was Dr. Robert J. Ausherman, Southland Del Tor Veterinary Clinic, Lexington, Ky., who also talked to the Small Animal blocks on diagnosis and treatment of histoplasmosis which is one of his special interests.



*Annual Conference gives veterinarians an opportunity to keep up-to-date on new information and to visit with old friends as Dr. A. A. Case, UMC faculty, right, and a participant did last year.*

## Faculty notes

*Dr. J. B. Mulder*, director of laboratory animal resources and assistant professor of veterinary medicine and surgery, presented a paper on "Shigellosis in Non-human Primates" at the Fourth International Congress of Primatology Aug. 14-18 in Portland, Ore.

*Dr. C. E. Short*, associate professor of veterinary medicine and surgery, conducted two days of continuing education workshops on anesthesia for graduate veterinarians Aug. 26-27 in Tampa and Ocala, Fla.

*Dr. G. C. Burton*, research associate in veterinary microbiology, presented a paper on "The Effect of Antibiotics on the Fecal Flora of Swine" at the Antimicrobial and Chemotherapy Meeting Sept. 26-29 in Atlantic City, N.J.

*Dr. W. F. McCulloch*, director of veterinary continuing education and professor of veterinary microbiology, served as a consultant to the Pan American Health Organization at a seminar on veterinary medical education Aug. 21-Sept. 1 in Belo Horizonte, Brazil. He presented a

paper on "Learning and Teaching—Learning Methods."

*Dr. C. J. Bierschwal*, professor of medicine and surgery, recently attended the Puerto Rico Veterinary Medical Association annual meeting Sept. 1, 2, 3 and presented a paper on "Bovine Reproduction." The week preceding the meeting was Veterinary Week and during that time he gave papers on "Equine Reproduction" to the Equine Breeders and on "Reproduction in Dairy Cattle" to the Dairy Farmers.

School of Veterinary Medicine

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