

# VETERINARY MEDICAL REVIEW

School of Veterinary Medicine  
University of Missouri-Columbia

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## School Announces Three New Faculty

Three new members have been named to the staff. Dr. Stephen K. Fisk is assistant professor of pathology and campus veterinarian. He completed an M.A. in medical microbiology at Stanford University this fall and has a B.S. and D.V.M. from Texas A & M University. He also served two years with the U.S. Army.

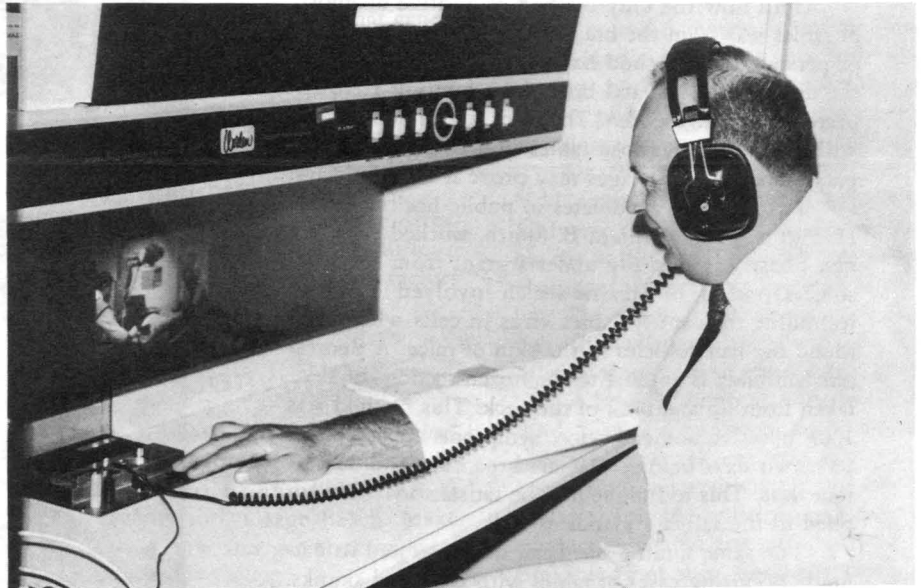
Dr. Douglas R. Patterson is a research associate in veterinary physiology and pharmacology. He also received a B.S. and D.V.M. from Texas A&M University and was in practice for a short time with the Homestead Animal Clinic and Cambridge Post Oak Veterinary Clinic in Houston.

Dr. Leon L. Henning is a research associate in veterinary pathology. After receiving a D.V.M. from Iowa State University in 1961, he was self-employed in a large animal practice in Kanawha, Iowa.

## Dr. Larks Honored By 1971 Savitar

Dr. Saul D. Larks was chosen as one of the "outstanding professors" on campus to be highlighted in the 1971 Savitar. Two pages were devoted to pictures and an explanation of his research in "such matters as the physiology of the fetus and the birth process, and more recently, also upon population control. The central objective is the improvement of the conditions of life."

Dr. Larks is professor of veterinary physiology and pharmacology.



*Dr. Warren Bohnhoff enjoys using the self-instruction learning carrel which is an integral part of the Medical Services block curriculum.*

## Dr. Bohnhoff Completes Medical Services Block

Dr. Warren Bohnhoff is the first practitioner to complete a block from the segmented curriculum at the University of Missouri-Columbia School of Veterinary Medicine. Under the Continuing Education Program for Veterinarians, he chose the Medical Services block which includes radiology with Dr. E. Allen Corley as the senior faculty member and anesthesiology under Dr. Charles E. Short.

Dr. Bohnhoff stated that he felt he met his objectives in the block and found it a stimulating learning experience to work with the faculty, students and the two residents in the program.

Dr. Bohnhoff was formerly with a general group practice in Morrison, Ill. He received a D.V.M. from Iowa State University in 1958.

"A brochure describing the program will be available soon," said Dr. William F. McCulloch, director of continuing education. "This continuing education program will be available to veterinarians for a two-month block of updating and retraining."

"All blocks will not be open immediately. Future plans include individualized learning experiences for less than a two-month period but these must await additional experience by the faculty in the new curriculum."

## Study Explores Ways to Diagnose Rabies Early

Growing evidence that rabies is not necessarily a fatal disease but that present methods of diagnosis are inadequate has led researchers to consider ways to diagnose rabies in its early stages.

A study is in progress to find a useful method of making an early diagnosis at the School of Veterinary Medicine under the direction of Dr. D. C. Blenden, associate professor of veterinary microbiology and community health and medical practice.

Until now the only method of positive diagnosis of rabies was from the brain tissue of the dead animal or person. This method has biased us to believe that the disease is 100% fatal once the symptoms have appeared, says Dr. Blenden. Therefore, a technique which will positively diagnose rabies in a living animal or person in the early stages may prove it is not always.

Two master's candidates in public health, Dr. T. H. Fuh and Dr. William B. Smith, worked with the first phase of the study under a grant from the Missouri Division of Health which involved a biopsy technique to identify rabies virus in cells which surround the hair follicles in the skin of mice. A fluorescent antibody is applied to the frozen sections of skin, taken from lip and back of the neck. This method was 100% effective one day before symptoms appeared and 83% two days before, 71% at three days and 36% at four days. This technique may be satisfactory when applied to the salivary glands as well.

The same finding has been demonstrated in naturally occurring cases of rabies with dogs and skunks.

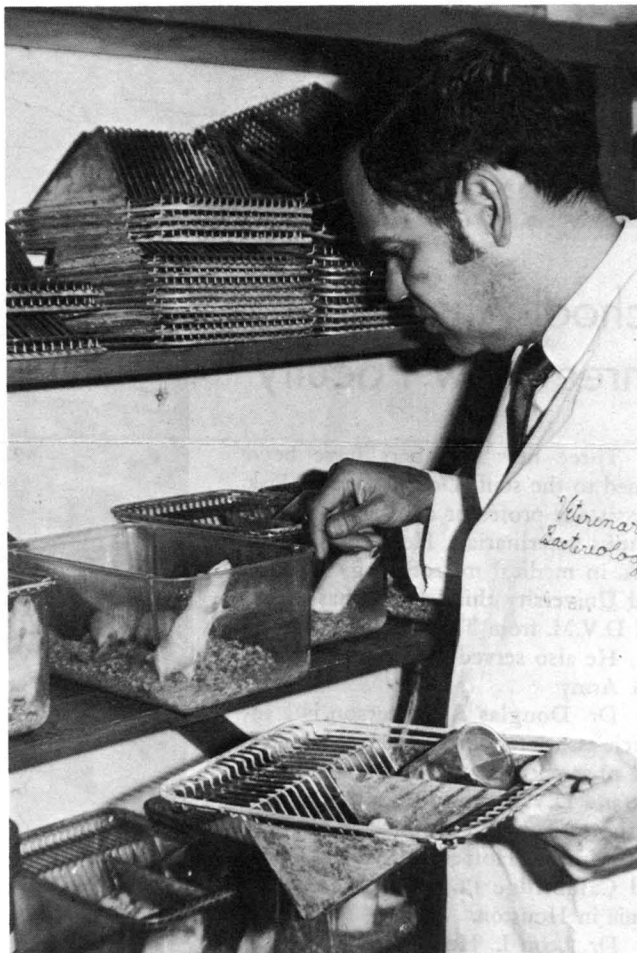
A major advantage of these techniques is the possibility of performing the biopsy at the time a human is bitten and reliably predicting whether the animal is rabid, thus, preventing the necessity of expensive anti-rabies vaccinations and the anxiety of waiting until a definite diagnosis is made at the death of the animal.

Dr. Blenden is now beginning another phase of the study with dogs. It is supported by the American Kennel Club which granted \$8,500, the World Health Organization and Kansas City Association of Trusts and Foundations, both granting \$500.

He hopes to begin working with other species too such as cattle, fox, skunks, wild dogs, mongoose, bats and vampire bats as well as humans. At present he is working on arrangements with countries where rabies is prevalent to have skin sections from humans with the disease shipped to him for examination.

While animal rabies and post-exposure treatment of humans are serious problems in the United States, they are much more serious in developing nations. Not only is rabies a danger to man but is a substantial economic drain on continents such as South America and Asia where livestock and human deaths are prevalent due to rabies.

Dr. Blenden hopes this research will be one step toward the elimination of death and economic loss caused by rabies.



Dr. D.C. Blenden

## Dr. Doyle Appointed To Council

Dr. Richard E. Doyle, director of laboratory animal medicine, School of Medicine, is one of twelve leaders in scientific fields recently asked to serve on the National Advisory Research Council of the National Institutes of Health for the period 1971-74.

The Council reviews, advises and makes recommendations concerning laboratory animal resources, General Clinical Research Centers, and Special research resources programs. Members review applications for grants-in-aid relating to research and training in these programs and recommend to the director of NIH approval of those proposals which merit federal support.

Dr. Doyle also is an assistant professor of veterinary physiology and pharmacology and directs graduate studies in laboratory animal medicine at the University. He received both a D.V.M. and B.S. in Agriculture from the University and completed a master's degree in medical physiology at the University of Florida College of Medicine in 1968.

## Renewal Received For Alcohol Study

Alcoholic mice are the subject of a continuing study at the University of Missouri-Columbia School of Veterinary Medicine.

Dr. R. V. Brown, associate professor of veterinary pathology, has received

## Dr. McCulloch Presents Seminar

"It is important for the veterinarian to show interest and concern for the client as well as the pet," Dr. Michael J. McCulloch, M.D., Department of Psychiatry, University of Oregon Medical School, told junior and senior students of the University of Missouri-Columbia School of Veterinary Medicine.

Speaking at a seminar on "Pet Owner Relationships: Defining the Common Ground Between Veterinary Medicine and Psychiatry," he pointed out some of the human needs which pets can fulfill. The veterinarian needs to know about the emotional involvement of the client with the pet. In the case of a child, he needs to know something about child development as well. Knowing these facts will help the veterinarian decide what recommendations should be made in regard to the pet and how they might be made so it as easy as possible for the client.

He suggested a number of things to observe about the client to determine the emotional state as manifested by signs of nervousness and stress.

"If you have concern about your client's emotional state, you can call his personal physician as one professional to another and tell him of your concern," he said. "Just indicating that the client seems unusually upset and the pet was quite nervous gives him a clue to the problem.

"Animals don't tell you when they are sick and they don't drive themselves over to see you. People call you about their sick pets. You must develop a rapport with the owner as well as the pet," he said.

Dr. McCulloch's brother, Dr. William F. McCulloch, is director of Continuing Education for Veterinarians at the University of Missouri.

a renewal grant of \$14,046 from the U.S. Public Health Service for his research on "Alcoholic Studies in Mice." In its third year, the study is investigating the relationship between excess imbibing and genetic makeup.

Dr. Brown says, "Alcohol affects the body in at least two ways: a pharmacological effect on the central nervous system (intoxication) and metabolism by the organism for energy production."

Experiments have shown that genetically controlled metabolic factors determine how much alcohol animals drink.

Dr. Brown says that some individuals, metabolically speaking, may be incapable of heavy drinking while others may be potential alcoholics.

Though metabolic tolerance determines drinking capability, it has little to do with psychological or social factors involved.

## MVMA Convention

The Missouri Veterinary Medical Association 8th Annual Meeting will be held January 30, 31 and February 1 at Tan-Tar-A Resort, Osage Beach. Make plans to go now and get your registration in early.

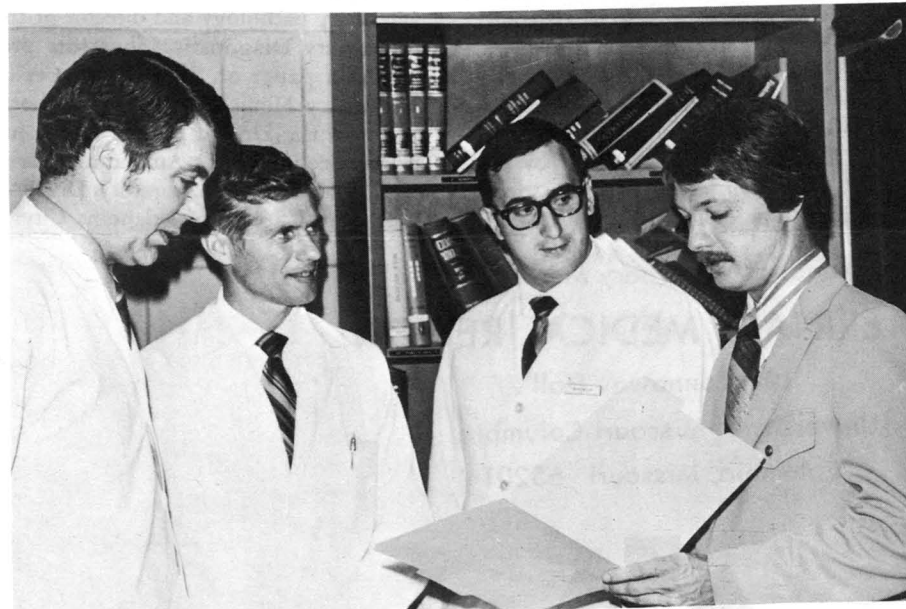
## New Text Edited By Dr. Breazile

A "Textbook of Veterinary Physiology," edited and partially authored by Dr. James E. Breazile, chairman and professor of veterinary anatomy, University of Missouri-Columbia, has been published by Lea and Febiger, Philadelphia.

Other authors are Dr. W. S. Newcomer, professor, and Dr. C. G. Beames Jr., associate professor, Department of Physiological Sciences, School of Veterinary Medicine, Oklahoma State University; and Dr. P. T. Cardielhac, associate pharmacologist, Department of Veterinary Science, University of Florida.

Dr. Breazile received a B.S. and D.V.M. from UMC and a Ph.D. from the University of Minnesota. He has been on the staff since 1967 and was named chairman of veterinary anatomy in 1969.

The 573-page text contains 35 chapters divided into eleven sections: Cellular biology; nerve and muscle physiology; blood, lymph and cerebrospinal fluid; cardiac physiology; fluid compartments, electrolytes and renal physiology; respiration; gastrointestinal physiology; metabolism; the endocrine system; reproductive system and lactation; and the physiology of skin, bone and cartilage.



Dr. Michael J. McCulloch, right, looks over a case with Dr. John D. Rhoades, left, associate professor of veterinary medicine and surgery, and two fourth-year students, George Wadley and Wayne Miller.



# — About the Faculty —

Faculty members presented several papers to the Conference of Research Workers in Animal Disease Nov. 29-30 in Chicago. Papers and those who presented them included:

"Pathogenesis of Transmissible Gastroenteritis (TGE) in Feeder Swine" by *Dr. Michael Morin*, research associate in veterinary pathology; "Isolation of *Pasteurella multocida* from Wild Raccoons" by *R. E. Bond*, research assistant in veterinary pathology; "Interferon Production in Calves Pretreated with Cortisol and Infected with Infectious Bovine Rhinotracheitis Virus" by *Dr. J. M. Cummins*, research associate in veterinary microbiology.

"Maturation of Corticospinal Tract in the Dog" by *Dr. G. R. Kirk*, assistant professor of veterinary anatomy; "Histological Changes in the Canine Eye Associated with Aging" by *Dr. H. E. Jensen*, associate professor of veterinary medicine and surgery; "Anatomical Arrangement of the Auditory Tube of the Turkey" by *Dr. L. D. Olson*, associate professor of veterinary pathology;

"A Diagnostic Approach to Anatomical Instruction" by *Dr. V. S. Cox*, assistant professor of veterinary anatomy; "Protein Undernutrition of 5, 21 and 35 Day Old Sinclair (S-1) Miniature Swine" by *T. M. Badger*, research assistant, veterinary physiology and pharmacology; "Serum Insulin and Glucose Interrelationships in Sinclair (S-1) Miniature Swine Ad Libitum Fed Diets Containing Different Levels of Protein" by *Dr. D. P. Hutcheson*, assistant professor of veterinary physiology and pharmacology.

"Phagocytosis and Destruction of Group E Streptococci (GES) by Swine Polymorphonuclear Neutrophils (PMN's) and Macrophages" by *Dr. C. F. Cargill*, research associate in veterinary pathology; "'In vivo' Uterine Lumen pH Measurement and Values in the Bovine" by *Dr. L. C. Mather*, assistant professor of veterinary medicine and surgery; and "In Vitro Cytotoxic Lymphoid Cells in Experimental Allergic Encephalomyelitis (EAE)" by *Dr. A. R. Allbritton*, research associate in veterinary microbiology.

*Dr. James E. Breazile*, chairman and professor of veterinary anatomy, was elected to the executive council of Research Workers in Animal Diseases at the meeting.

*Dr. W. F. McCulloch*, director of veterinary continuing education and professor of veterinary microbiology, gave a talk on "Environmental Health, Ecology and the Veterinarian" at Colorado State University College of Veterinary Medicine, Fort Collins, in October. He also presented a paper, "Public Health Implications of Recent Studies on Transmission and Life Cycle of *Toxoplasma gondii*" at the American Public Health Association meeting in Minneapolis, Minn.

*Dr. L. G. Morehouse*, professor of veterinary pathology and director of the Veterinary Diagnostic Laboratory presented a paper on "Fee Structures in Veterinary Medical Diagnostic Laboratories in the United States" to the national meeting of the American Association of Veterinary Laboratory Diagnosticians in October in Oklahoma City.

*Dr. R. F. Sprouse*, associate professor of veterinary microbiology, presented a paper on "Laboratory Aspects of Canine Histoplasmosis" at the Public Health Service Association meeting Oct. 13 in Minneapolis, Minn. *Dr. C. R. Dorn*, associate professor of veterinary microbiology, also presented a paper, "Public Health Aspects of Cancer in Pet Dogs and Cats."

*Dr. C. E. Short*, associate professor of veterinary medicine and surgery, gave a paper on "Anesthetic Management of the High Risk Patient" to the Omaha Veterinary Medical Association in November in Omaha, Neb. He also presented a program on "Fundamentals and Applied Techniques of Anesthesia" to the Southern Illinois Veterinary Medical Association in Belleville, Ill.

*Dr. E. A. Corley*, professor of veterinary medicine and surgery, presented a paper on "Non-Surgical Respiratory Diseases" at the Regional American Animal Hospital Association meeting in November in Rock Island, Ill. He also presented papers on "The Dysplasias" at the State Veterinary Medical Association meeting in Phoenix, Ariz. He gave a seminar on "Canine Hip Dysplasia" in Albuquerque, N. Mex.

*Dr. C. R. Short*, associate professor of veterinary physiology and pharmacology, presented two papers at the 13th annual meeting of the East German Pharmacology Society between Nov. 9-15 in Jena, East Germany. The papers were "Developmental Aspects of Protein-Drug Binding in Porcine and Human Plasma" and "Perinatal Development of Microsomal Drug Metabolizing Enzyme Systems in Non-Hepatic Tissues of Swine."

School of Veterinary Medicine

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