



# VETERINARY MEDICAL REVIEW

School of Veterinary Medicine  
University of Missouri-Columbia

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## Dr. Shelton Named Dean At Texas A&M

Dr. George C. Shelton, associate dean for academic affairs, University of Missouri-Columbia School of Veterinary Medicine, has been appointed Dean of the College of Veterinary Medicine at Texas A&M.

Dr. Shelton graduated from Texas A&M in 1948 with a D.V.M. and came to the University as an instructor the following year. He received an M.S. from Auburn University in 1952 and a Ph.D. from the University of Minnesota in 1965.

He was named assistant dean of the School of Veterinary Medicine in 1964 and associate dean in 1966.



Dr. Shelton was the first recipient of the Norden Teaching Award in 1963. He has served as president of the American Association of Veterinary Parasitologists and is a member of the Missouri and American Veterinary Medical Associations, Sigma Xi, Phi Zeta, Gamma Sigma Delta, and Research Workers in Animal Diseases.

Dr. Shelton was also honored last fall by the UMC Alumni Association for distinguished achievements.

## Dr. Weide Named Dean

Dr. Kenneth D. Weide has been named Dean of the School of Veterinary Medicine, University of Missouri-Columbia, to succeed Dr. Burnell Kingrey who announced last spring he was resigning to return to teaching.

Dr. Weide has been at the University of Arizona with a half-time extension veterinarian and half-time experiment station appointment since 1971.

He received a B.S. in 1956 and an M.S. and D.V.M. in 1958 from Kansas State University. He received a Ph.D. in veterinary pathology from Michigan State University in 1962.

He has also served as head of the Department of Veterinary Science and Director of the Animal Disease Research and Diagnostic Laboratory at South Dakota State University, Director of the Veterinary Diagnostic Laboratory

at Kansas State University and was on the faculty of the Ohio Agriculture Ex-



## New Building Funds Vetoed by Governor

After passing in the legislature, the \$6.4 appropriation for a new Veterinary Medicine complex was vetoed by Gov. Christopher Bond and cut to \$400,000 which is to be used for planning and design. The appropriation, which was to come from federal revenue-sharing funds, was vetoed because it could not be used to match other federal funds. Gov. Bond's intention is that it should be allocated from general revenue funds in the next session so additional money can be obtained from the federal government. A planning committee is at work on the design under the direction of Dr. Roger Brown.

periment Station. Previous to those positions he was in general practice in Platte City, Mo.

Dr. Weide graduated first in his class in Veterinary Medical School and is a member of the following honorary societies: Sigma Xi, Gamma Sigma Delta, Phi Kappa Phi, Alpha Zeta and Phi Zeta. He received the Borden Award and the Fribourg Scholarship.

He has been active in the state and American Veterinary Medical Associations and is a member of the American Society for Advancement of Science, Wildlife Disease Association, Conference of Research Workers in Animal Disease, New York Academy of Science, Western Conference of Laboratory Diagnosticians.

# Heart Disease Studied in Beagle Dogs

A unique family of beagle dogs at the University of Missouri Sinclair Research Farm may provide medical researchers with further insights into the causes and prevention of human coronary heart disease—the nation's number one killer.

Dr. P. J. Manning, assistant professor of pathology at the University of Missouri-Columbia School of Veterinary Medicine and researcher at the University's Sinclair Farm, recently received an \$11,000 grant from the Missouri Heart Association for a study designed to evaluate the physical and chemical characteristics of blood lipoproteins in beagles suffering from a condition known as hyperlipoproteinemia.

Lipids are fatty substances, such as cholesterol, which are found in blood linked with a protein. Thus, the term "lipoprotein" is used to refer to these fats present in the bloodstream. A certain amount of these lipoproteins is essential to good health. An excess of certain blood lipoproteins, however, particularly cholesterol, is known to be a contributing factor in accelerating the development of atherosclerosis, a major factor in setting the stage for heart attack and stroke.

## Atherosclerosis restricts blood flow

Generally known as "hardening of the arteries," atherosclerosis is a process by which the inner linings of arteries become thickened and roughened by deposits of fat. Later, the accumulation of fibrin (a clotting material), cellular debris, and calcium at these thick roughened areas can significantly interfere with the smooth flow of blood, and the amount of blood carried through the artery.

Like iron water pipes that rust, the inner linings of the arteries become rough and thick. The blood moves turbulently through the scarred, roughened walls, and this makes it easier for a clot to form which will block the channel, and deprive the heart, brain, or other organs, of blood.

## Blockage causes Thrombosis

When this blockage occurs in a coronary artery, the result is coronary thrombosis, one form of "heart attack." When it occurs in the brain, the result is cerebral thrombosis, one form of stroke. According to American Heart Association records, atherosclerosis, as an underlying cause, contributes directly to more than 800,000 deaths annually from heart attack and stroke.

Researchers at the Sinclair Farm, a comparative medicine research facility at the University of Missouri, direct their research primarily toward the study of chronic diseases and aging. The beagles to be used in this study were acquired from a commercial firm that was using the dogs to test the nutritional value of pet foods. In the course of their testing, however, the firm discovered an

unnaturally high level of a lipid—cholesterol—in the dogs' blood and brought this to the attention of Dr. C. C. Middleton, director of the Sinclair Farm.

Later, when one of the beagles was killed in an automobile accident, an autopsy revealed severe cardiovascular lesions corresponding to those found in humans suffering from atherosclerosis. Dr. Manning notes that, in general, hyperlipoproteinemia and atherosclerosis are unusual as naturally occurring phenomena in animals, and have been virtually non-existent among dogs except in cases of extensive experimental manipulation.



## Lipoproteinemia Passed Genetically

Further significance lies in the observation that hyperlipoproteinemia is a familial condition among the Sinclair beagles, and may be passed genetically from one generation of the dogs to the next. For researchers, this colony of beagles is a unique animal model with naturally occurring cardiovascular disease similar to atherosclerosis in man.

Their grant to the Sinclair Research Farm is a part of the Missouri Heart Association's efforts to combat heart and blood vessel diseases. Besides research funding, the Association also maintains programs of public and professional education and community service.

Dr. Manning and his co-workers will use the Heart Association grant funds to conduct detailed studies of (Continued on page 4)

## Grant Will Study Diagnostic Labs

A grant to study Animal Resources Diagnostic Laboratories has been awarded by the National Institute of Health to two UMC faculty members. The \$52,581 grant is under the direction of Dr. William F. Glueck, professor of management and principle investigator, and Dr. Joseph E. Wagner, professor of veterinary pathology and co-principle investigator. Dr. Wagner is principle investigator of the UMC Research Animal Diagnostic Laboratory which is one of the 16 laboratories funded by the Animal Resources Branch of NIH.

Drs. Glueck and Wagner will head a team of five that will develop methods to quantitatively and qualitatively determine the extent to which the Research Animal Diagnostic Laboratories reach their goals in advancing human and animal medicine.

Among those on the team will be Walter Newson, a former administrator at Ithaca College and a doctoral candidate in management and J. Hal Reneau, a doctoral candidate in Accountancy.

Serving as advisors are Dr. L.G. Morehouse, director of the UMC Diagnostic Laboratory, Dr. R.E. Doyle, director, laboratory animal resources, UMC, School of Medicine and Dr. K.L. Kraner, U-Wide Director of Animal Resources.

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## Faculty Participate In AVMA Convention

Several faculty members from the School of Veterinary Medicine presented papers and programs at the AVMA convention in Philadelphia, July 16-19.

Among the autotutorial exhibits were: "Epidemiology and Control of Gastrointestinal Nematodes of Cattle" and "Biology, Identification and Importance of Fleas," exhibited by Dr. E.R. Ames, associate professor of veterinary microbiology; "Neurology of the Equine Limb," shown by Drs. Harold E. Garner, Robert C. McClure, Lewis G. Tritschler and James R. Coffman, Department of medicine-surgery; and



*Dr. D. E. Rodabaugh, left, and Dr. LeRoy Olson check on the swine in their swine dysentery project.*

## Swine Dysentery Studied

Swine dysentery is fast becoming the number one disease problem of the swine producer. The number of outbreaks diagnosed at the Veterinary Medical Diagnostic Laboratory at the University of Missouri-Columbia doubled in 1972 over the figures for 1971. So far in 1973, the number is double that reported in the same time period for 1972.

Producers feel the problem most acutely in loss of profits. Swine dysentery cost the U.S. swine producer an estimated 34 million dollars in 1972 according to a survey by the Livestock Conservation Inc., a fact-finding organization for the various livestock industries.

Dr. LeRoy Olson, associate professor of veterinary pathology, and Dr. D.E. Rodabaugh, professor of veterinary pathology, received \$32,000 this past year from three pharmaceutical companies (Merck and Co., Smith, Kline and French, and the UpJohn Co.) for

"Animal Welfare Legislation," exhibited by Dr. John B. Mulder, assistant professor of veterinary medicine-surgery.

In conjunction with the programs for allied groups, Dr. Charles E. Short presented a paper entitled "Ancillary (Continued on page 4)

the evaluation of various drugs for the treatment and prevention of this disease.

They feel much of the increased problem is due to the development of resistance to drugs that have been used and the increased transportation of swine where feeder swine are produced in one area (Missouri) and fed for market in another area (Illinois and Iowa) where there is sufficient corn.

In the three years Dr. Olson has been working on this disease he has found that (1) swine do develop an immunity to this disease, (2) that a carrier state in swine definitely exists, (3) that if the disease is resistant to a drug, the drug can make the disease worse than if no treatment had been given.

Dr. Olson and a graduate student, Dr. Cheng Lee of the Chinese Nationalist Republic, have developed a fluorescent antibody test for measuring the amount of serum antibody in swine that have recovered from the disease.

Swine dysentery is a disease of the colon of feeder swine and is thought to be caused by a spirochete similar to the organism which causes syphilis in man. The spirochete lives in the glands of the colon and causes hemorrhage in the colon. Swine die from the loss of blood and body fluids.

# Faculty Notes

Dr. Charles E. Short, professor of veterinary medicine-surgery, presented two papers entitled "Small Animal Anesthesia" and "Large Animal Anesthesia" at the Wyoming state meeting in Douglas, June 17, 18 and 19.

Dr. E.C. Mather, assistant professor of veterinary medicine-surgery, was in Kimberling City on May 15-16. He presented a paper, "Research and Breeding in Equine," to the Mid-America Extension Specialists annual meeting. Dr. Mather also attended the vasectomy workshop in Washington, D.C. May 21-22 where he presented a paper on reversible vasectomy.

Dr. George G. Doering, associate professor of veterinary medicine-surgery, conducted an all-day course on "Dermatology and Feline Respiration" at the Mississippi VMA state meeting in Biloxi, June 24-28.

Dr. J.R. Coffman, associate professor of veterinary medicine-surgery, spoke on May 16 in Springfield to area extension specialists from six states.

Dr. Norman Ackerman, resident in veterinary medicine-surgery, traveled to St. Louis June 21 to speak to the English Sheep Dog Club on "Canine Hip Dysplasia."

Dr. R.F. Solorzano, associate professor of veterinary microbiology, was at Michigan State University in East Lansing June 11-13. He presented a paper at the North Central Association of Veterinary Laboratory Diagnosticians' meeting. His subject was "An Indirect Fluorescent Antibody Test for

School of Veterinary Medicine

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### Dr. Dellmann Goes to Europe

Dr. H.-D. Dellmann, professor in veterinary anatomy, is on a three-month leave to continue research in Strasbourg which was begun during a sabbatical there two years ago. He will also present papers in Budapest and London on "A Comparative Study of the Ultrastructure of Regenerating Neurosecretory Axons and Reactive-Regenerating Herring Bodies and "A Comparative Ultrastructure Study of Degenerative and Involuntary Changes in Neurosecretory Peptidergic Axons of the Mammalian Neural Lobe." Dr. Dellmann received a grant from the University Research Council for the trip.

### Heart Disease Con't

the blood lipoproteins of hyperlipoproteinemic dogs, comparing his results with lipoprotein analyses of normal dogs and man. The experimental techniques to be utilized include the separation of lipoproteins by preparative ultracentrifugation on the basis of their density gradient characteristics, and quantitative and qualitative evaluation of the lipid portions of lipoproteins by column chromatography and gas liquid chromatography.

Further studies will include analyses of lipoprotein metabolism with the use of radioactive isotopes.

the Detection of Antibodies to *Nosema Cuniculi* (Encephalitozoan) in the Rabbit." At the same meeting Dwight R. Owens, research assistant in the Diagnostic Lab, presented a paper entitled, "The Use of Dermatophyte Test Media as an Aid to Diagnosing Ringworm."

### AVMA Con't

Equipment in Anesthesia" before the American Society of Veterinary Anesthesiology. Dr. E.R. Ames presided over the Sunday meeting of the American Association of Veterinary Parasitologists.

Scientific programs presented in the section on large animal medicine included: "Toxicity of Various Chemical Agents to Sheep," by Dr. Arthur A. Case, professor of veterinary medicine and surgery and extension veterinarian; "Medication Programs for Controlling Experimental Swine Dysentery," by Drs. LeRoy D. Olson and Donald E. Rodabaugh, Department of Veterinary Pathology; and "The Practicing Veterinarian's Role in Swine Fertility," by Dr. Charles C. Martin, associate professor of veterinary medicine and surgery.

Drs. George G. Doering and Louis A. Corwin, assistant professors of veterinary medicine and surgery, presented "Clinical Hypothyroidism Correlated with T<sub>3</sub> and T<sub>4</sub> Tests" in the section on small animals.

In the section on laboratory animal medicine, Drs. D. Reid Patterson, Dwight R. Owens, Joseph E. Wagner and Craig S. Frisk, Department of Pathology, presented "Candida albicans Infections in Spider Monkeys Following Antibiotic and Corticosteroid Therapy."

Dr. Ronald Sprouse, associate professor of veterinary microbiology, presented a seminar at the School of Medicine, University of Minnesota, entitled, "Immunochemical Studies of Mycotic Skin Test Antigens," on May 15-19.

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