VETERINARY MEDICAL REVIEW

Saying goodbye

University of Missouri-Columbia
College of Veterinary Medicine and
Cooperative Extension Service

January/February 1982, N.S., Vol. 3, No. 1

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Saying goodbye

Helping clients face the loss of a pet.

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Many veterinarians say the worst task in an otherwise enjoyable career is euthanasia. Unfortunately, it is an inescapable and routine aspect of veterinary medicine.

The art of client relations is a matter of individual style that sets the tone for any practice. There are numerous ways to conduct a business. But emotion easily spills over in a pet practice, coloring attitudes in a wash of feeling. The human-animal bond is a strong one, into which veterinarians inevitably are drawn. And some people perceive their veterinarian as the one who must end it.

Veterinarians have learned to deal with enthanasia in their own personal ways.

Euthanasia is not simply an action; it is a traumatic process. When it occurs, the veterinarian and staff find themselves thrust into a myriad of psychosocial ramifications. First and foremost is the animal and its owner. Family and neighbors also may be included. Carcass disposal involves the environment and public health officials. Excessive bereavement may even involve psychologists and sociologists. Replacing the pet brings in animal shelters, pet shops or breeders, and other economical aspects of the animal-care industry.

The veterinarian's role is central in all this, carrying the responsibility of promoting a psychologically therapeutic environment for the client and clinic personnel. The emotional climate of euthanasia becomes the burden of the practitioner.

Client support must come from *all* clinic personnel. Euthanasia often is more difficult for technicians than it is for the doctor. Staffers originally may have sought their jobs to help animals, but instead find themselves all too often assisting in their deaths. They must come to grips with their jobs, aided by a "network of support" built by the veterinarian. This support may come from[6]:

- allowing time at staff meetings for technicians and other personnel to exchange their ideas and feelings about euthanasia;
- arranging for personnel to address interested groups on their position and the necessity of euthanasia, giving the public a chance to understand the process and the technicians an opportunity to publicly express their feelings.
- permitting technicians to attend yearly meetings that focus on the human and technical aspects of euthanasia, giving them a continual support group.

The support network will help in developing a clinic policy towards euthanasia with guidelines for dealing with clients.

For the owner, the loss of a beloved pet can be psychologically disastrous. People react to disaster in five stages[7]: apathy, guilt, euphoria, angry complaints, and a return to normal living. When given catastropic news (such as one's own impending death), there are successive periods of denial, anger, bargaining, depression and finally, acceptance[8]. These all are normal feelings, unless excessively prolonged. Not all people go through each stage or in order. The expression of these feelings may be directed at the clinic staff for no personal reason. They must be met with understanding and support. The clinic may be the only place a grieving owner can get support for his feelings. Because it is not yet socially acceptable to openly grieve over the loss of an animal as one would a human, guilt feelings may crop up, further complicating the sorrow.

Neither veterinarians nor technicians can sidestep the response stages to tragedy, but they can be met in a way that minimizes the uncomfortable feelings and smooth the way toward acceptance of the inevitable. Stability and certainty can reign, despite the unpleasant circumstances. The following guidelines may help clinicians and their staff in counseling owners before euthanasia is performed.

- Advise pet owners to consider the possibility of euthanasia in conjunction with considering the possibility of obtaining a pet. The human life span is long enough to see the birth and death of many good pets. Potential owners must be prepared for the eventual inevitability of the animal's death.
- Many owners are reluctant to give up their faithful friends. Explain that a painless termination of suffering is an unselfish way to reward a good life.
- Tell them no one should feel guilty about a necessary act of love. And, above all, no one should feel guilty about crying.
- The decision is a family one, and should require the input of all involved. If the owner wants to think about it, and time will not add to the pet's suffering, make an appointment for him to return in a week with his decision.
- Some owners want to stay and watch; others prefer their last memory to be of a living pet. It may or may not help the situation. Explain that animals can detect emotions; those who elect to stay should do so to provide strong emotional support to their pet, not merely to endure suffering.
- Observation of the carcass is an opportunity for the owner to say goodbye one last time. It is not necessary for some, but may be vital for others.
- Burial helps some people express their feelings, and gives them the feeling that there is no more unfinished business. Others may prefer the veterinarian dispose of the carcass; it often depends on how involved the owner is in the euthanasia process.

When the time comes to terminate the animal's life, a few kind gestures can make the difference in the client's memory of the experience:

1) Display the euthanasia bottle and apparatus.

2) Explain the process, that it is painless and no different from pre-surgical anesthesia.

3) Ask the owner to leave the room (to pay or take care of any paperwork). This is when he can decide whether to return, or stay until it's over.

4) If the owner leaves, retrieve him to observe the carcass after the animal is dead and apparently peaceful. This can reinforce the confidence that euthanasia was the right decision.

Empathy is an all-important factor in the euthanasia process. In dealing with clients, sometimes it is better to step out of the professional's role and into the client's.

When I put a pet to sleep
I put myself in the client's shoes
I put my eyes in my client's eyes
I see my dog in place of theirs
And I can empathize
with the pet
and with the people.

Additional reading

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3. "A Description of the Responsibilities of Veterinarians as They Relate Directly to Human Health," report prepared by School of Public Health, University of Minnesota, (1976).
4. Antelyes, J. "The Petside Manner", *V.M.S.A.C.*, Vol. 62 (December 1967), pp. 1155-1159.
5. Antelyes, J. "Human Emotions and Veterinary Practice", *J.A.V.M.A.*, Vol. 155 (December 1969), pp. 2018-2025.
6. Owens, C.E., Davis, R., and Smith, B.H. "The Psychology of Euthanizing Animals: The Emotional Components", *Int. J. Stud. Anim. Prob.* 2 (1) 1981.
7. Blenden, D.C., "Incorporation of the Concept of Disaster Preparedness in the Curriculum of a School of Veterinary Medicine", *J.A.V.M.A.*, Vol. 147, No. 12, pp. 18-24.
8. Kubler-Ross, Elisabeth. *On Death and Dying*, Macmillan Publishing Co., New York (1969).

On the outside, looking in

Endoscopy is gaining popularity as an alternative to surgery. And veterinarians are flocking to UMC to learn all about it.

The proverbial light at the end of the tunnel may really shine at the end of a tube for veterinarians who don't like cutting an animal open just to look inside.

The endoscope—a tube encasing two bundles of optic fibers and lenses—eliminates the need for exploratory surgery on many animals, says Dr. Brent Jones of the College's small animal clinic. Through an endoscope veterinarians can observe the animal's esophagus, stomach, duodenum, colon, respiratory tract, and sometimes the ileum. A separate channel in the tube allows the doctor to pass through biopsy instruments for retrieving tissue samples.

The endoscope works with light and lenses. The tube is inserted into the mouth of an anesthetized animal—usually a dog or cat, although Dr. Jones sees possibilities for all species—and moved into position for observation. One bundle of optic fibers in the tube carries the light down to lens at the end of the scope; the other bundle brings the image back to the veterinarian's eye. The tube is flexible and can be moved around to survey different areas of the organ under observation. The animal suffers no discomfort, and is anesthetized only to prevent it from biting the tube.

"It's like looking at the innards from the outside," Dr. Jones says. "The instrumentation is so fine that I can go in and pick out a single dog hair from the animal's stomach.

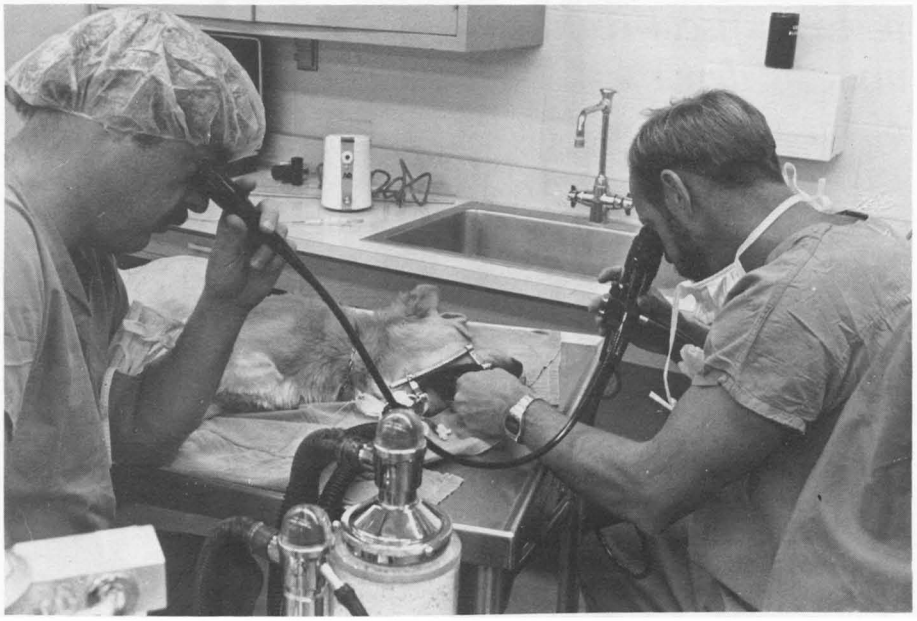
"What endoscopy has done," he explains, "is eliminate the stress and expense of surgery and some X-rays in many cases. We are giving the animals better care at a much lower cost."

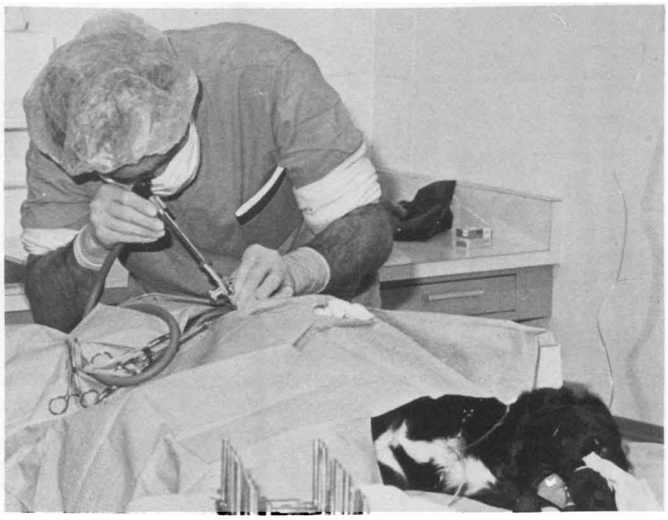
The laparoscope is the rigid counterpart to the flexible endoscope, and is used to look at an animal's abdominal cavity. It operates the same way as an endoscope, except a tiny incision in the animal's belly is required to insert it. A laparoscope is employed in tubal ligations of humans, the so-called "Band-aid surgery" for female sterilization.

Endoscopes and laparoscopes have been used extensively in human medicine for more than 15 years, Dr. Jones says. Much of the veterinary pioneering work has been done at UMC and at The Animal Medical Center in New York City, where Dr. Jones practiced before coming to UMC. He and Dr. Jerry Johnson, a veterinary gastroenterologist, began performing endoscopies at The Animal Medical Center in 1973.

"It's really become the big thing in veterinary medicine," Dr. Jones says. "Veterinarians are starting to buy the equipment and learn how to use it."

One can acquire an endoscopy setup for less than $2,500, Dr. Jones says. About $2,000 will buy laparoscopy equipment. Several optic companies are jumping into the scope market now, he adds, and as endoscopy becomes more popular, it will become more practical with lower equipment costs.





Veterinarians attending Dr. Brent Jones' short course on endoscopy get hands-on experience with endoscopes, above, and laparoscopes, at right.

Don Connor photos

But buying the equipment is easy; finding a class on how to use it is only slightly less difficult than finding a needle in a haystack—provided Columbia, Missouri, is on a world map.

UMC's annual short course on endoscopy, sponsored by the Veterinary Continuing Education & Extension Office, is the only one of its kind in the world, says Dr. Jones, who also travels around the country delivering seminars on the subject. In the past four years, Dr. Jones' three-day course has filled its 10 spots quickly, with veterinarians this year coming from as far away as West Germany, Switzerland, England and Canada.

This year's course, November 12-14, featured lectures by Drs. Jones and Johnson on endoscopy theory, plus laboratories in which veterinarians got a chance to use the scopes on laboratory dogs.

The course was just what Dr. Wilfried Kraft of Munich ordered.

"I wanted to learn some special things about endoscopy, particularly in the duodenum," says the veterinary internist who teaches small-animal and equine medicine at the University of Munich. "My endoscopy experience in Europe has been limited to human medicine and experimental research. I had to come to Columbia for some practical instruction."

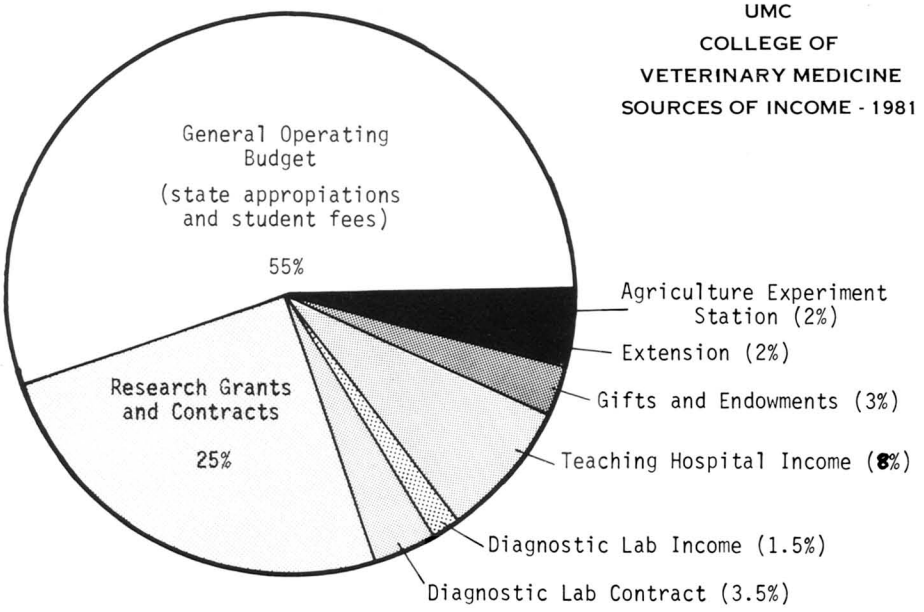
THE BUDGET CRUNCH

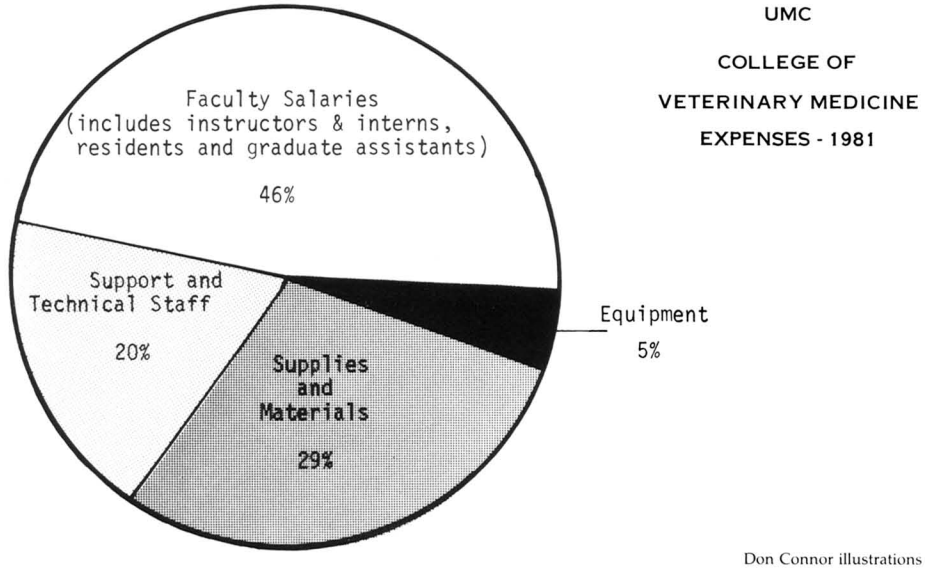
The College is caught between fiscal realities and the demands of the profession.

Summary:

During the 1970's, the College lost state money to support five faculty positions, seven residents/interns and 13 non-academic staff members, and another $263,000 in supply and equipment funds.

Effective July 1, 1982, the College must cut an additional 10 faculty positions, seven residents/interns and 10 staff members from its budget, bringing to 52 the number of positions lost since 1970. The University administration has forecast additional reductions totaling 16 percent over the next three years.





Don Connor illustrations

This report is to advise the alumni and friends of the College of Veterinary Medicine on the status of this College during the current economic situation.

From 1970 through 1980, the College was required by the University to take the budget cuts under the broad heading of "internal reallocation".

These reductions resulted in a permanent loss to the College of five faculty members, seven resident/intern/graduate student positions, 13 non-academic staff positions and more than $260,000 in supply and equipment funds. The reduction totaled $457,960.

At the same time, the College received $794,824 in new funds for a variety of projects. They were allocated for:

1971	Increased enrollment	$ 36,000
1974	Salary adjustments for the most underpaid faculty	40,000
	Reporting requirements	15,000
1975	Animal care compliance to meet new federal regulations	30,000
1976	Move into new building	100,000
1978	Residency program	165,000
	Capitation replacement	200,000
1980	Research improvement	103,930
	Capitation replacement	104,894
	TOTAL	$794,824

On the surface, this represents a net gain of $336,864 but, with the exception of capitation replacement, the new dollars were given specifically to start new programs and not to strengthen existing weaknesses in the core program.

During the 1970s, the College made progress in some areas: completion of the new building, full accreditation for the first time in its history, consistently high-quality graduates despite budget cuts. The obvious minuses were the loss of 25 people and nearly $263,000 in supply and equipment funds.

Because of its severe financial problems, the only way this College currently compares favorably with other veterinary colleges in the nation is in the quality of its graduates.

Each state veterinary board responsible for the licensing of veterinarians sets that state's passing score for the national board examination. The Missouri licensing board considers a −1.0 standard deviation of the raw score of *all* individuals taking the examination as the passing grade.

In 1981, 1,940 individuals nationwide took the examination. If each state used the same standard deviation as Missouri, 32.5 percent of the candidates nationwide would have had a failing grade. By comparison, only 9.3 percent Missouri graduates (4 students) failed to make the −1.0 standard deviation on the 1981 national board.

This excellent performance can be attributed to the quality and dedication of the College's faculty and staff. The future outlook is uncertain; this quality cannot be maintained if the College continues to lose

Continued on next page

College of Veterinary Medicine
Faculty Directory
1982

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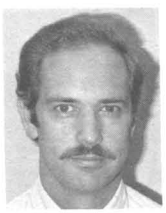
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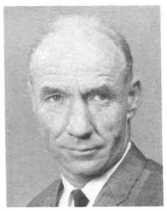
A. W. Dobson


R. G. Elmore


W. H. Eyestone


W. H. Fales


S. A. Fleming


C. W. Foley


V. K. Ganjam


H. E. Garner


B. A. Gilroy


T. E. Goetz


T. J. Green


A. H. Groth


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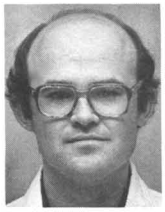
D. K. Hardin


R. D. Heald


W. R. Hewitt


B. S. Hook


B. H. Janke


H. E. Jensen


G. S. Johnson


B. D. Jones


S. Kanchanapangka


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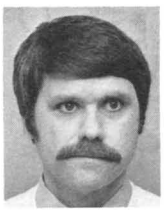
J. C. Lattimer


J. L. Lenz


T. N. Leuthans


D. L. McCaw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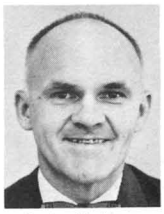
S. L. Nelson


K. H. Niemeyer


L. D. Olson


N. E. Olson


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Ben Riley, Instructor, Veterinary Medicine & Surgery, and Assistant to the Dean: B.S., Missouri.

John J. Robertson, Resident Veterinarian, Veterinary Medicine & Surgery: B.S., D.V.M., UC-Davis.

Donald E. Rodabaugh, Professor Emeritus, Veterinary Pathology: D.V.M., Kansas State; M.S., Missouri.

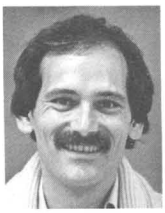
Bruce D. Rosenquist, Professor, Veterinary Microbiology: D.V.M., Iowa State; M.S., Ph.D., Missouri.


G. E. Rottinghaus


V. V. St. Omer


D. A. Schmidt


R. F. Solorzano


A. Stern


H. F. Stills


S. L. Stockham


D. G. Thawley


L. P. Thornburg


J. G. Thorne


J. L. Tomlinson


D. W. Trampel


L. G. Tritschler


M. E. Tumbleson


J. E. Wagner


A. M. Walker


K. D. Weide


B. G. Wright


R. S. Youngquist


G. M. Zinn

George E. Rottinghaus, Assistant Professor, Veterinary Anatomy-Physiology: B.A., Blackburn College; Ph.D., Iowa State.

Vincent V.E. St. Omer, Associate Professor, Veterinary Anatomy-Physiology, and Assistant Professor, Department of Pharmacology, School of Medicine: D.V.M., Ontario; M.S., Manitoba; Ph.D., Ontario.

Donald A. Schmidt, Professor, Veterinary Pathology: B.S., Wisconsin; M.S., Minnesota; D.V.M., Ph.D., Michigan State.

Robert F. Solorzano, Professor, Veterinary Microbiology: B.S., Georgetown; M.S., Ph.D., Pennsylvania.

Alexander Stern, Resident Veterinarian, Veterinary Medicine & Surgery: B.S., UM-Kansas City; D.V.M., Zurich.

Harold F. Stills, Assistant Professor, Veterinary Pathology, and Assistant Research Professor, Sinclair Research Farm: B.S., Baldwin-Wallace; D.V.M., Ohio State.

Steven L. Stockham, Assistant Professor, Veterinary Pathology: D.V.M., Kansas State; M.S., Michigan State.

David G. Thawley, Associate Professor, Veterinary Microbiology: B.V.Sc., Massey; Ph.D., Ontario.

Larry P. Thornburg, Associate Professor, Veterinary Pathology: B.S., D.V.M., Texas A&M; Ph.D., North Carolina.

James G. Thorne, Associate Professor, Veterinary Medicine & Surgery: B.S., D.V.M., M.S., Missouri; Ph.D., Georgia.

James L. Tomlinson, Assistant Professor, Veterinary Medicine & Surgery: B.S., D.V.M., Minnesota; M.A., Saskatchewan.

Darrell W. Trampel, Assistant Professor, Veterinary Microbiology: D.V.M., Iowa State; Ph.D., Georgia.

Louis G. Tritschler, Professor, Veterinary Medicine & Surgery: B.S., D.V.M., M.S., Missouri.

Mike E. Tumbleson, Professor, Veterinary Anatomy-Physiology, and Research Associate, Sinclair Research Farm: B.S., M.S., Ph.D., Minnesota.

Joseph E. Wagner, Professor, Veterinary Pathology: D.V.M., Iowa State; M.P.H., Tulane; Ph.D., Illinois.

Alex M. Walker, Resident Veterinarian, Veterinary Medicine & Surgery: B.V.Sc., Massey.

Kenneth D. Weide, Professor, Veterinary Pathology: B.S., D.V.M., M.S., Kansas State; Ph.D., Michigan State.

Benita G. Wright, Resident Veterinarian, Veterinary Medicine & Surgery: B.S., D.V.M., Tuskegee.

Robert S. Youngquist, Associate Professor, Veterinary Medicine & Surgery: D.V.M., Iowa State.

Gene M. Zinn, Assistant Professor, Veterinary Medicine & Surgery: D.V.M., Iowa State; Ph.D., Missouri.

Not Pictured

Margaret J. Dillender, Research Associate, Veterinary Microbiology: D.V.M., Missouri.

Jean M. d'Offay, Research Associate, Veterinary Microbiology: B.V.Sc., Onderstepoort.

Susan V. Gibson, Research Associate, Veterinary Pathology: B.S., D.V.M., Georgia.

Raymond L. Hodges, Professor, Forensic Medicine and Forensic Veterinary Medicine, and Associate Professor, School of Law and School of Health-Related Professions: B.S., Maryland; LL.B., LL.M., George Washington University.

Richard L. Jacobs, Associate Professor, Veterinary Microbiology: B.S., Tennessee Polytechnic; M.S., Ph.D., Texas A&M.

Douglas D. Mann, Research Associate, Veterinary Microbiology: B.S., D.V.M., Michigan State; M.S., Missouri.

Sergio D. Rodriguez, Research Associate, Veterinary Microbiology: D.V.M., Mexico.

Karla S. Rugh, Resident Veterinarian, Veterinary Medicine & Surgery: B.S., D.V.M., Kansas State.

Carlos A. Vega, Research Associate, Veterinary Microbiology: D.V.M., Mexico; M.Sc., Illinois.

Kimberly S. Waggie, Research Associate, Veterinary Pathology: D.V.M., Iowa State.

From Page 4

Budget

faculty to other schools.

Other comparisons as outlined in the 1980-81 Comparative Data Report of the American Association of Veterinary Medical Colleges are as follows:

In state support per veterinary student, Missouri ranks 16th out of the 20 long-established veterinary colleges.

In student-faculty ratio, Missouri ranks 16th out of 20.

In faculty-staff ratio, Missouri again is 16th out of 20.

In faculty salaries:

Professor	22nd of 26
Associate Professor	19th of 26
Assistant Professor	9th of 26
Staff salaries (estimate)	24th of 26

These comparisons were made *before* the following reductions for the 1981-82 fiscal year:

Budget reductions now known for the 1981-82 fiscal year from state-funded activities will be $497,450, an amount greater than the combined cuts of the past 11 years. In addition, the College has lost 10 percent of its Extension budget, Agriculture Experiment Station budget and the Missouri Department of Agriculture contract with the Veterinary Medical Diagnostic Laboratory. These cuts total another $54,485. The University administration has told the College to expect additional cuts over the next three years totaling 16 percent of the current budget.

The $497,450 reduction in the College's state-funded budget will force the loss of 10 faculty positions, seven resident positions and 10 staff positions. Fortunately, several open positions at this time have reduced the actual number of people to be fired.

The work currently performed by those individuals to be fired and/or those who will not be hired to fill the open positions, must either be absorbed by colleagues or be eliminated. Some of those unfilled positions include the senior position at the Equine Center (Dr. Coffman), the senior anesthesiology position (Dr. Trim), the senior orthopedic surgery position (Dr. Stoll), two assistant professor positions in small animal medicine, and others.

The following quote from the most recent Accreditation Evaluation Report of the American Veterinary Medical Association's Council on Education sums up the College's faculty crisis: "Faculty numbers are small and in several areas back-up strength should be provided".

The ratio has not improved since that 1977 report. The College may not maintain its current full accreditation when it is re-evaluated in 1984 because of these reductions. At the same time, we are anticipating additional cuts for the next three years.

As a land-grant institution, the College is committed to teaching, research, and service. Teaching is the number one responsibility with the main product being the practicing veterinarian. To maintain the quality of that product, the College has considered several options: reducing the class size to correspond with the remaining faculty; or reducing the number of Missouri residents in each class and contracting with other states for additional students; or returning to a more traditional and less-costly curriculum; and a variety of other even less-appealing alternatives.

The University has encouraged the College to cut programs, but the professional curriculum requires all disciplines currently taught. The only significant program that could be cut without eliminating the College would be the Veterinary Medical Diagnostic Laboratory. That action seems irrational in a state that derives about one-half of its total income from agriculture.

Currently, all divisions on the Columbia campus are conducting internal evaluations to determine where reductions can be made. If those reductions are from program changes at the campus level with reallocations back to the College, it can again prosper, and return to its rightful place among the nation's better veterinary colleges. But if further reductions are required of this College, the future is very uncertain.

Datebook

March 3. Continuing Education course: Current Issues in Rural Health, at Columbia's Campus Inn. For further information on any Continuing Education offerings, call (314) 882-7854.

March 4. Visiting Lecturer: "Current Thoughts on Rabies" by Dr. Victor Cabasso, formerly of Cutter Laboratories, Berkeley, California. The lecture begins at 8 p.m. in the College's Teaching Hospital Auditorium.

March 17. Continuing Education course: Turkey Disease Update, at UMC's Memorial Union.

March 27. Continuing Education course: Food Animal Anesthesia, at the College.

March 29-30. The second Veterinary Respiratory Symposium, at the University of Illinois in Urbana. Call (217)333-2907 for further information.

April 7. Visiting Lecturer: Dr. Franklin Loew, Chief of Laboratory Medicine at Johns Hopkins University School of Medicine on "Animals in Research: The Issues and Politics" at 8 p.m. in the College's Teaching Hospital Auditorium.

April 18. Continuing Education course: Microcomputers in Veterinary Medicine, at the College.

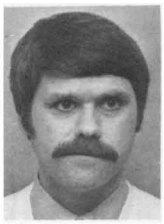
April 21-22. Continuing Education course: Clinical Pharmacology, at the College.

May 7-9. AVMA Colloquium on Clinical Immunology, Hamilton Hotel, Itasca, Illinois. Pre-registration deadline is April 1. For further information, contact the AVMA Division of Scientific Activities, 930 Meacham Road, Schaumberg, Illinois 60196.

Faculty update

Dr. Dudley McCaw

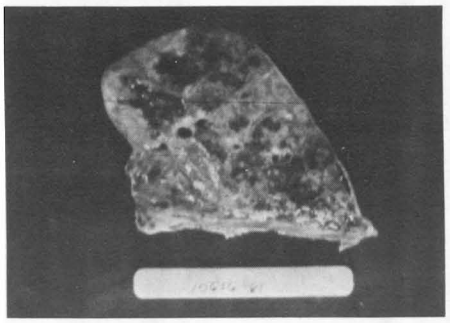
Dr. Dudley L. McCaw has joined the College's Department of Medicine & Surgery as an assistant professor in the small animal medicine area.



Dr. McCaw, 34, comes to the College from a private practice in Eldorado, Illinois. He earned his B.S. and D.V.M. degrees in 1970 and 1972 from the University of Illinois. After a three-year residency in small animal medicine at Michigan State University, he became a Diplomate of the American College of Veterinary Internal Medicine in 1979.

Before beginning his residency at MSU, Dr. McCaw worked at animal hospitals in Lynbrook, New York, and Manhasset, New York. He also spent two years with an emergency pet clinic in San Leandro, California.

He is a member of Phi Zeta, Omega Tau Sigma, the American Veterinary Medical Association, and the Southern Illinois Veterinary Medical Association.



Figures 1A and 1B: the affected portions of the lung are red and firm due to a fibrinohemorrhagic inflammation. The pneumonic areas are covered with a fibrinous pleuritis. The lesions are randomly distributed, which differentiates Haemophilus pleuropneumoniae *lesions from lesions induced by* Mycoplasma *or* Pasteurella.

If you suspect *Haemophilus pleuropneumoniae*

William H. Fales, Ph.D.
Lawrence G. Morehouse, D.V.M., Ph.D.
Loren D. Kintner, D.V.M., M.S.
Stuart L. Nelson, D.V.M., Ph.D.
Veterinary Medical Diagnostic Laboratory

Data from the University of Missouri Veterinary Medical Diagnostic Laboratory records, information from the Missouri swine industry, and practicing veterinarians suggest that clinical disease caused by *Haemophilus pleuropneumoniae* is relatively uncommon in Missouri when compared with the incidence of disease in Mexico, Europe, Ontario, Canada, and adjacent northern states.[1-7]

Since it is in the best interests of the Missouri swine industry to keep the incidence of the disease low and keep it out of breeding herds, swine producers and local veterinarians are urged to seek laboratory assistance on every suspicious *Haemophilus pleuropneumoniae* case. A firm diagnosis of this disease will prevent its spread and provide data on its true incidence in Missouri. This is a good time of the year to detect the disease, as the incidence may peak during the cold weather months.[8]

To encourage disease surveillance, necropsy and laboratory fees in cases of suspected *Haemophilus pleuropneumoniae* will be waived by the Diagnostic Laboratory and supported in part by a grant from the Missouri Pork Producers Association.

Pigs suspected of having *Haemophilus pleuropneumoniae* should be referred to the Diagnostic Laboratory for necropsy and bacteriological analysis. This will allow the pathologist to make first-hand observations and facilitate cultural methods under optimum conditions. The best samples, of course, would be obtained from pigs that are acutely affected and not treated with antimicrobial agents. Recovery of *Haemophilus pleuropneumoniae* in culture will provide a confirmation of the diagnosis and guide antimicrobial therapy based on *in vitro* susceptibility tests. This is an important aspect since *H. pleuropneumoniae* is becoming resistant to penicillin and tetracycline.[2]

Acutely affected pigs should be dispatched to the Diagnostic Laboratory. However, if this is not feasible, the pig can be necropsied by a local veterinarian and part of the affected lung put in a 50-50 mixture of glycerol and water and placed in a "Whirl Pak" plastic bag[8] for transport. An additional sample of lung should be placed in 10 percent buffered formalin and submitted for histopathological analysis.

Samples with postmortem autolysis are discouraged. In like manner, tissue should not be frozen nor should samples be submitted on swabs. *Haemophilus pleuropneumoniae* is a highly fastidious microorganism, and special care is required to preserve it in transit.

A shipping container can be prepared by cutting styrofoam or foam rubber to fit in a small cardboard box. The samples should be adequately packed, identified, and the temperature maintained with a "Cold Pak".

The sample, with an enclosed submission form, should be sent to the Diagnostic Laboratory by the most expeditious route possible. The laboratory has a pick-up service from the Columbia bus depot. Samples should not be sent to arrive on weekends or holidays.

For questions or further information regarding *Haemophilus pleuropneumoniae* in swine, please contact the Diagnostic Laboratory at (314) 882-6695. Send samples to: Veterinary Medical Diagnostic Laboratory, College of Veterinary Medicine, University of Missouri, Columbia, Missouri 65211.

Additional reading

1. Bedoya-Stabenow, M., Ferando Aguirre-Bravo, and Ernesto Calderon Mena. 1980. Hemorrhagic necrotizing pneumonia in fattening pigs in Mexico. 2nd International Symposium of Veterinary Laboratory Diagnosticians, Vol. 1:108-111.
2. Schultz, R. A. 1980. *Haemophilus pleuropneumoniae* becoming a major swine disease. Norden News 55:35-36.
3. Byrnes, J. 1979. It is the next pseudorabies. Hog Farm Management 16:4.
4. Little, T. W. A. 1970. *Haemophilus* infection in pigs. Vet. Rec. 87:399-402.
5. Nicolet, J., H. Konig, and E. Scholl. 1969. *Haemophilus pleuropneumoniae* in pigs - a contagious disease of economic importance. Schweizer Arch. Tierheilk. 111, 166-174.
6. Nielsen, R. 1970. *Haemophilus pleuropneumoniae* in swine. Nord. Vet. Med. 22:240-245.
7. Nielsen, R. 1974. Serological and immunological studies of pleuropneumonia of swine caused by *Haemophilus parahemolyticus*. ACTA Vet. Scand. 15:80-89.
8. Hoffman, L. J., S. A. Karli, and B. S. Klinefelter. 1981. Bacteriologic findings from recent outbreaks of *Haemophilus pleuropneumoniae* infection in Iowa swine. Proceedings of Amer. Assoc. Vet. Lab. Diag. 24th Annual Meeting, St. Louis, Mo., pp. 359-372 (1981).

Curators OK Equine Center expansion

The University of Missouri Board of Curators has approved a College proposal for improvements at its Equine Center, seven miles south of Columbia. The $248,000 project marks the first time state funds will be spent on the 8-year-old Equine Center.

The expenditure will fund renovation of the center's treatment areas for improved patient care, and construction of two new buildings: a two-room isolation unit to house horses with contagious diseases, and a new eight-stall holding area to serve as a ward for hospitalized patients.

The Equine Center, located on the 288-acre Middlebush Farm, opened in the fall of 1973. Equine specialists from the College faculty work with advanced veterinary students in treating nearly 1,200 patients a year, most of which are referral cases from veterinarians throughout Missouri. The center also houses a research facility for the study of horse diseases and some human illnesses using the horse as a model.

The physical facilities and equipment at the center have been provided through gifts and donations since the late 1960s.

Nominations requested for service award

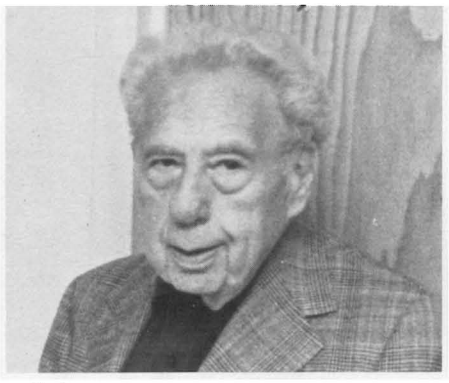
The College is accepting nominations for the 1982 Distinguished Service Award in Veterinary Medicine. The honor is bestowed annually on someone who has contributed to the success of the College of Veterinary Medicine—alumni, faculty, students, friends in agriculture and medicine and related industries, and pet owners.

The award, established in 1974, is presented in the fall during the Annual Conference for Missouri Veterinarians at the College. Previous honorees include: Columbia packer T.W. Digges; Dr. Burnell Kingrey, former dean; Dr. George Shelton, former associate dean; Dr. Aaron Groth Sr., the College's first dean; John Olin of St. Louis, chairman of the Olin Corporation; Dr. Arthur Case, professor emeritus; and Dr. Joseph McGinity, professor of veterinary medicine & surgery.

Letters of nomination and supporting biographical information may be sent by March 15 to the Distinguished Service Award Committee, % Dr. Kenneth Niemeyer, W203 Veterinary Medicine Building, College of Veterinary Medicine, University of Missouri, Columbia, MO 65211.

Dog clubs contribute to clinic

Dr. M.J. Bojrab, center, accepts $5,000 checks from Emil Klinckhardt, left, of the St. Louis Dog Breeders Association, and Haworth Hoch, right, of the Mississippi Valley Kennel Club. Other contributors to the clinic improvement project are Louise De Shon, below left, and David Lewis, below right, representing the St. Joseph Kennel Club, and Melvin Schlesinger, bottom photo, representing the Heart of America Kennel Club.



Donations from four Missouri dog clubs have made it possible for the College to improve its Teaching Hospital receiving area.

The donor clubs, each contributing $5,000, are the St. Joseph Kennel Club, the Heart of America Kennel Club in Kansas City, the Mississippi Valley Kennel Club in St. Louis and the St. Louis Dog Breeder's Association.

The $20,000 represents almost two-thirds of the $33,000 needed for the improvements. The remaining funds have been supplied by the University. The money will fund construction of three new examining rooms in the small animal clinic and two other rooms there to house diagnostic equipment.

The additional rooms will help improve patient care at the clinic, says Dr. M.J. Bojrab, coordinator of the small animal clinic. The Teaching Hospital staff sees nearly 30,000 patients a year, with almost 11,000 of those cases in the small animal clinic.

The College has enjoyed the support of America's dog clubs throughout the years, with the American Kennel Club donating $63,000 in the past four years for research. Another $20,000 has come from clubs and individuals for the College's proposed Canine Research Center.

The clubs raise their money through various projects and dog shows.

Professionally speaking . .

Dr. Richard Ott, above, journeyed to Columbia from Pullman, Washington, in January to discuss his work with feline infectious peritonitis. FIP, Dr. Ott said, is the most over-diagnosed malady of cats in veterinary medicine. "Although many cats, particularly those in a cattery, may be infected with FIP, few come down with the disease," he said. Increased or rising FIP titers are of little diagnostic value, he added. Unfortunately, current treatment is of little use, Dr. Ott said. Even interferon has made little headway against FIP virus.

In November, National Zoo Chief Veterinarian Mitchell Bush visited the College to lecture on zoo animal medicine. There are no specialists in zoological medicine, Dr. Bush asserted. "We are generalists, in the true sense."

Post office issues rules on shipment of specimens

The shipment of improperly packaged articles to the Veterinary Medical Diagnostic Laboratory has raised the concern of Columbia Postmaster John C. Goodman. The packages have damaged other customer's mail in the Columbia Post Office, Goodman says, and may have endangered postal employees and other customers through contact with some pathogens.

Goodman instructs all clients of the College to follow these instructions when mailing samples:

Disease Germs and Biological Products

Disease germs and scabs, such as contained in etiologic agents, diagnostic specimens and biological products that may cause disease, are non-mailable, except when such items are properly prepared for mailing and conform to federal requirements applicable to interstate transportation of such matter. To be accepted, such matter must be packaged in waterproof inner containers that are not permeable by the contents. When other than dry items are mailed, the inner container(s) must then be packaged in sufficient absorbent cushioning material to completely absorb the contents in case of leakage of inner container. The cushioning and inner container(s) of liquid or semi-liquid must then be enclosed in a sealed nonpermeable outer container, which may also serve as the shipping container.

Perishable Biological Material Not of a Pathogenic (Disease-Producing) Nature

1. Must be packed in a nonporous container surrounded by sufficient absorbent material to take up all the liquid.
2. Must be placed in an outer protective container where it should fit tightly to avoid any shifting.

Perishable Biological Material of a Pathogenic Nature

1. Must be packed in a tightly closed nonpermeable container in absorbent material, sufficient in quantity to absorb all the liquid.
2. Must then be placed in a strong, well-closed metal container constructed to prevent any contamination outside of it.
3. The secondary container must be wrapped in cushioning material and placed in an outer protective box where it must fit tightly to avoid shifting. The outer protective box must consist of wood, metal or other equally strong material with a tight lid so fitted that it cannot open during transportation.

If you have any further questions, please contact your local post office or the Diagnostic Laboratory.

The Liver Registry: A progress report

The Liver Registry opened in January 1980 for the study of spontaneous liver diseases in domestic animals. In the first two years of the Liver Registry, more than 300 cases of liver disease in dogs, cats and horses have been placed on file. Many significant publications have resulted (see bibliography). And many important observations are yet to be published.

I want to offer a special "thank-you" to all veterinarians who have taken valuable time to answer my letters of inquiry and send me laboratory data on cases. Over the past two years, 150 letters have been sent regarding additional information on cases of liver disease. Almost without exception, answers were returned. I appreciate the cooperation and I am sincerely looking forward to working with all of you through the Liver Registry in 1982.

Larry P. Thornburg, D.V.M., Ph.D.
Department of Veterinary Pathology
(314) 882-7038

1. Chronic active hepatitis - what is it and does it occur in dogs. J Am Anim Hosp Assoc. Jan/Feb 1982.
2. Hepatic amyloidosis in a dog. J Am Anim Hosp Assoc, *17:* 721-723, 1981.
3. Fatty liver syndrome in cats. Accepted for publication. J Am Anim Hosp Assoc, 1982.
4. Prednisolone as a treatment for chronic active hepatitis, VM/SAC, *76:* 1435-1436, 1981.
5. An unusual case of chronic hepatitis in a Kerry blue terrier. VM/SAC, *76:* 363-364, 1981.
6. Cholangiohepatitis in a horse. VM/SAC 75: 1895, 1980.

Veterinary Medical Review
College of Veterinary Medicine
and Cooperative Extension Service

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W-203 Veterinary Medicine Building
College of Veterinary Medicine
University of Missouri-Columbia
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