

Approved Feb. 26, 1991
Date

MINUTES OF THE HOUSE COMMITTEE ON AGRICULTURE

The meeting was called to order by Representative Lee Hamm at
Chairperson

9:05 a.m. ~~p.m.~~ on Monday, February 25, 1991 in room 423-S of the Capitol.

All members were present except: Representative Correll, excused
Representative Garner, absent
Representative Heinemann, absent

Committee staff present: Raney Gilliland, Legislative Research
Jill Wolters, Revisor of Statutes Office
Pat Brunton, Committee Secretary

Conferees appearing before the committee: Dr. Michael D. Lorenz, Dean, Kansas State
University College of Veterinary Medicine

Dr. Michael D. Lorenz, Dean, KSU College of Veterinary Medicine, presented the committee with an overview of the College of Veterinary Medicine.

Dr. Lorenz informed the committee that the College of Veterinary Medicine at KSU maintains active programs in teaching, research, and service. The primary missions of the College are: (1) education of new veterinary practitioners to service the livestock and pet industries in Kansas, Nebraska, and the entire North Central Region of the U.S., (2) investigation of animal health and disease problems important to Kansas animal agriculture and the pet industry, (3) provide high quality diagnostic and therapeutic veterinary services unavailable in private practice, and (4) provide continuing education to veterinary practitioners and consultation to producers within Kansas and Nebraska. (Attachment 1).

A lengthy question and answer period followed Dr. Lorenz' presentation.

Vice Chairman Rezac adjourned the meeting at 9:40 a.m. The next meeting of the House Agriculture Committee will be Tuesday, February 26, 1991, at 9:00 a.m. in room 423-S of the State Capitol.

KANSAS STATE UNIVERSITY
VETERINARY MEDICAL CENTER

PRESENTATION TO

KANSAS STATE LEGISLATURE
AGRICULTURE COMMITTEES

Michael D. Lorenz, DVM
Dean of Veterinary Medicine
February 25, 1991

H.S. Ag.
2-25-91
ATTACHMENT 1

Introduction

The College of Veterinary Medicine at Kansas State University maintains active programs in teaching, research, and service. The primary missions of the College are: (1) education of new veterinary practitioners to service the livestock and pet industries in Kansas, Nebraska, and the entire North Central Region of the US, (2) investigation of animal health and disease problems important to Kansas animal agriculture and the pet industry, (3) provide high quality diagnostic and therapeutic veterinary services unavailable in private practice, and (4) provide continuing education to veterinary practitioners and consultation to producers within Kansas and Nebraska.

Instruction

Currently, 360 students are enrolled in the four years of the DVM curriculum. The entering class size each year is 80-90 new students. The class is composed of 45 Kansas residents, up to 30 Nebraska residents, and the remainder are from other contract states and the at-large non-resident pool. The tuition for veterinary medicine is \$3,323 per year for residents and contract students, and \$9,361 for non-residents. Nebraska currently pays a fee of \$14,120 per year for each Nebraska student enrolled in the program. The vast majority of Kansas State students enter private practice upon graduation. Approximately 50% enter mixed practice or predominately food animal practice (one of the largest percentages of any US veterinary school). Starting salaries for new graduates in private practice range from \$25,000-\$35,000 per year. Ninety-four (94) students graduated last May.

The veterinary curriculum is balanced so that all animal species are represented. A well-designed clinical program taught during year four, allows students opportunities to focus on a particular species or discipline and to gain experience in private practice. Kansas State is nationally recognized for its instructional program in beef cattle production medicine. Taught in cooperation with veterinary faculty at the Great Plains Veterinary Educational Center at Clay Center, Nebraska, this program offers veterinary students an opportunity to study all phases of production medicine including nutrition, reproduction, disease, and data management.

Research

More than 90% of all research in the College of Veterinary Medicine is targeted at diseases effecting food producing animals. Veterinary scientists at KSU focus primarily on the respiratory disease complex in cattle, but respiratory diseases of swine are also studied. Respiratory disease (shipping fever) of cattle is complex and involves multiple infectious agents, stress, and confinement factors. Veterinary scientists at KSU are investigating each of these components to identify better means of diagnosis and more effective and cost efficient ways to prevent the

disease or minimize economic loss. Many research projects are completed in cooperation with other animal scientists in the Agricultural Experiment Station. Margin of Excellence funds available in FY '89 and FY '90 allowed the College to fill several faculty positions with young scientists well-trained in biotechnology and its application to animal diseases. The College also maintains research efforts in respiratory physiology, exercise physiology, toxicology, rabies, neuroscience, gastrointestinal disease, and a variety of small animal and wildlife disciplines. In 1990, research expenditures in the College was 2.7 million dollars; 1.2 million was available from the AES and 1.5 million was generated through grants and contracts. Research accounted for approximately 17% of the College's total expenditure budget.

Graduate Education

The College maintains doctoral programs in physiology and veterinary pathobiology (pathology, microbiology, and parasitology). The Masters of Science degree is available in all five academic departments. The Department of Clinical Sciences offers post-DVM education and specialty training (residency) in food animal production medicine, equine medicine and surgery, small animal medicine and surgery, toxicology, and wildlife and exotic animal medicine. There are approximately 70 residents and graduate students enrolled in graduate education in the College. These students are essential for quality in our instructional and research programs. Unfortunately, secure base funding for a critical mass of graduate students is lacking in the College budget. Because of funding deficiencies, graduate student stipends have been small and not competitive with other universities. The College's Program Fulfillment request in FY '92 is for \$443,000 to support 10 graduate students and 10 clinical residents. Without this support, College faculty will remain at a competitive disadvantage for extramural funding.

Service

The Veterinary Diagnostic Laboratory offers a large array of diagnostic tests and consultation services to the producers and veterinarians in Kansas. In addition, a nationally respected rabies diagnostic laboratory is maintained under the administration of the Diagnostic Laboratory. In FY '90, the Diagnostic Laboratory responded to nearly 20,000 requests for assistance and performed thousands of diagnostic tests and procedures. Service activities are uniquely interdigitated with the fourth-year instructional program so that veterinary students have an opportunity to learn modern techniques in disease detection.

The Veterinary Medical Teaching Hospital is the largest instructional laboratory maintained by the College. Under the administration of the Department of Clinical Sciences, the VMTH provides the appropriate environment for veterinary students to investigate naturally occurring

disease, refine their problem-solving skills, and learn veterinary practice management techniques. Because the College requires that clinical faculty have in-depth specialty training and board certification in a variety of disciplines as basic credentials for teaching, in-depth medical and surgical expertise is available to the citizens of Kansas and Nebraska. Because of MOE funds, the College has largely corrected a serious shortage of board certified faculty in the VMTH. Programs and services have expanded greatly since 1985 and the quality of instruction has also greatly improved. Faculty and students in the VMTH are hindered by a deficiency in modern diagnostic equipment and secure state funding for the residency program.

Faculty throughout the College also provide consultation services and continuing education to producers and veterinarians through structured seminars and short courses and individual requests. Extension veterinary specialists offer programming to producers and support Kansas 4-H programs. There are two extension specialists in the College and their efforts are largely focused on animal agriculture.

The Kansas-Nebraska Program in Veterinary Medical Education

This program started four years ago and all components are operational. The agreement allows a total of 120 Nebraska residents to enroll in the DVM curriculum. Nebraska contributes \$14,120 per student per year and each Nebraska student pays Kansas resident tuition. Currently, 93 Nebraska students are enrolled at KSU. The University of Nebraska-Lincoln maintains a food animal teaching center at the Meat Animal Research Center, Clay Center, Nebraska. The animal herds and flocks at MARC are thus available to all students enrolled at KSU. Veterinary students take both required and elective courses at the Great Plains Veterinary Teaching Center. KSU and UN-L have joined resources for a cooperative program in beef cattle production medicine. It is nationally recognized as the premiere program in the US and is the lead program in a national consortium of veterinary colleges focused on food animal production medicine.

In 1990, the Kansas-Nebraska program was thoroughly reviewed and veterinarians, producers and administrators in both states are extremely pleased with the agreement. The current contract is under discussion and will be renewed later this year.

Departmental Research Activities

Anatomy & Physiology, Dr. Jon Dunn, Head

Faculty in the Department of Anatomy & Physiology are engaged in a variety of research activities directed at both basic and applied questions. In one manner or another these research activities are directed at some aspect of animal wellness or disease. A large, active group is studying the physiology of exercise and, of fitness in racing animals with particular emphasis on horses and greyhounds. Both of these groups have attracted both national attention and extramural funding of their activities. A well-funded and active program in immunophysiology, particularly of farm animals, works in cooperation with scientists in the Department of Animal Sciences and Industry. Several other research groups are active including one carrying out broad investigation on the anatomy and pathology of the early stages of respiratory diseases in both cattle and swine, and another on the study of growth factors on animal tissues and in control both in reproduction and in aging in domestic animals. Finally, there is a strong and growing interest in understanding and describing neural mechanisms that underline the physiological aspects of the studies being carried out. These research programs are interactive in the department and compliment the expertise and interests of the departmental faculty.

Diseases such as respiratory disease and mastitis continue to cost livestock producers millions of dollars each year. Methods of enhancing the animals immune system during critical periods of the production cycle, such as shipping, parturition, etc., should increase disease resistance in livestock and thus decrease the economic impact of disease. Dr. Frank Blecha has been conducting studies using recombinantly produced cytokines, protein regulators of the immune system, to increase resistance to viral and bacterial pathogens in cattle and pigs. He has found that animals that received interleukin-1 or interleukin-2 in conjunction with vaccination, developed increased immunity to the vaccine pathogens (bovine herpesvirus-1 and Pasteurella haemolytica in cattle and Actinobacillus pleuropneumoniae in pigs). When the animals were experimentally challenged with the virulent pathogens, they displayed an enhanced ability to resist the pathogen challenge. These studies suggest that modulating the immune response of food animals with cytokines may be an important and practical means of augmenting immune function in livestock in an attempt to reduce the impact of disease.

Department of Clinical Sciences, Dr. Jerry Gillespie, Head

Faculty in the **Food Animal Production Medicine Group** in the Department of Clinical Sciences (KSU) have formed an alliance with faculty at the University of Nebraska (UN-L), Michigan State University (MSU), University of Illinois (UI), University of California-Davis

(UCD) and University of Florida (UF) to develop new methods to provide management and preventative health services to livestock producers. While veterinary students and faculty from each Consortium University will be involved in the research and teaching at all the other institutions, each university will emphasize their areas of strength; KSU and UN-L - Beef Cattle; MSU and UI - Swine; UCD and UF - Dairy and KSU, UN-L and UCD - Small Ruminants (sheep/goats). In addition to bringing together faculty from several colleges of veterinary medicine, this national consortium has increased the cooperation and interaction with faculty in colleges of agriculture, business, economics and others on several campuses. This joint effort has attracted fiscal support from the Jones Trust, the PEW Foundation and segments of the livestock industry. Overall it has had a very positive affect upon our academic programs in the College of Veterinary Medicine. Perhaps one of the most important is that it has substantially improved our ability to attract highly- qualified food animal veterinary faculty to KSU.

The Department of Clinical Sciences has faculty in small animal and large animal medicine who have joined forces with the pet food and feedlot industries of Kansas to study the diseases of the gastrointestinal system. In particular, this group is studying those diseases associated with poor or inadequate nutrition. Nutritional diseases are extremely important to the livestock producers and pet owners. With the large number of feedlots in Kansas (and Nebraska) and the very significant pet food industry in this State, it makes good sense to have a center of excellence in Veterinary Nutrition at KSU.

Within the past two years, one of the Nations busiest and most productive Wildlife Medicine and Exotic Medicine Sections has been developed in the Department of Clinical Sciences. In addition to conducting disease research on the wildlife (wild birds and mammals) of Kansas, this unit is providing consultation and health care services to the Topeka, Manhattan, Lincoln and Omaha Zoos. The Section is working cooperatively in research efforts with the Kansas Wildlife and Parks Department.

The Department of Clinical Sciences operates the KSU-Veterinary Medical Teaching Hospital (KSU-VMTH) in the College of Veterinary Medicine. The major mission of the KSU-VMTH is the teaching of clinical medicine to veterinary students. In the course of carrying out this mission, it is essential that this Hospital provide state-of-the-science health care service to animals belonging to citizens of Kansas or referred to the Hospital by practicing veterinarians. Without the cases brought to the KSU- VMTH by the public and referred by veterinarians, this unit would be unable to carry out its mission to teach veterinary students. With the rapidly changing technology in the health sciences, it is a major challenge to sustain the needed numbers of clinical specialists, provide the needed sophisticated equipment and employ the needed support staff to properly sustain the case load necessary to conduct our teaching in the KSU-VMTH.

Laboratory Medicine, Dr. William Moore, Head

Research in the Department of Laboratory Medicine is both basic and applied, mainly aimed at characterizing virulence factors of important bacterial, viral, and parasitic organisms and/or the nature and effectiveness of host response or resistance to these organisms. Many of these studies are collaborative among faculty of two or more departments of the College of Veterinary Medicine and several studies are collaborative with faculty from Animal Science, or Biology. In addition to the published advances in the science of animal diseases, these projects also serve as a portion of the training for US and International graduate students who are essential to future research in Kansas and other parts of the world. During 1991, two new research faculty joined the department and immediately began productive collaborative studies with other faculty while seeking other funds; an additional new faculty member will soon bring complementary research interests and expertise to further strengthen our program.

Among departmental projects of vital importance to Kansas animal agriculture interest are several involving bovine respiratory disease. A long standing Regional Research Project in combination with other grant funds has discovered new information relative to animal response to clinical combinations of stress and viral infection, mixed viral infections and combined viral and bacterial infections. KSU has developed several high quality monoclonal antiviral antibodies currently used by many state and international diagnostic laboratories to confirm the presence of the virus in clinical samples and by research laboratories to identify and characterize bovine respiratory viruses. Projects in progress include promising studies to use mutant bacterial organisms to develop a more effective vaccine against pneumonic Pasteurellosis (shipping fever) in cattle and against Streptococcus suis infection in swine; both of these products are in trial stage at the present time. Studies of the effects of various recently available leukocyte hormones on host response to infection in cattle and one relating the effects of dietary fatty acids on leukocyte function in pigs are in progress. Another Regional Research Project supported by AES and other funds has recently proven that liver fluke infection of cattle can be transmitted on Kansas pastures by native Kansas snails, and has focused on development of an accurate monoclonal based early detection test to allow producers to make decisions based on the effectiveness and economics of early therapy. Several departmental faculty are involved in studies recently funded by the Kansas Racing Commission to identify, quantitate, and perhaps alleviate current disease problems among racing greyhounds; these studies may benefit other dog owners as well. One faculty member is part of collaborative studies with Purdue University on the role of cat fleas as significant urban pest and potential human disease vector.

Pathology, Dr. Joe Smith, Head

Research in the Department of Pathology is primarily focused in two areas: congenital defects and infectious diseases.

The Center for Congenital Defects is a sentinel for inherited diseases in domestic animals, particularly cattle. Dr. Horst Leipold, who heads the Center, investigates congenital defects for inheritance patterns and provides expertise for the major cattle breeds and the major artificial insemination centers. In an era when bulls can have thousands of offspring through artificial insemination and cows can have dozens of offspring through embryo transfer, it is important to monitor the occurrence of inherited problems.

Infectious diseases such as shipping fever and pleuropneumonia continue to decrease the productive potential of food producing animals. Investigators in the department are concentrating their efforts on understanding bacteria-host relationships and preventing disease. One of the key questions is "What does the bacteria produce during disease that can be used to protect animals without producing disease?"

Swine pleuropneumonia is economically important to Kansas swine producers because it not alone causes high mortality in some herds, it may also cause marked reduction in weight gain. This disease may be spread by carrier animals into closed (clean) herds. Detection of carrier or asymptomatic infected animals is extremely important to swine producers with large confinement operations and those that supply breeding stock to the industry. Dr. Brad Fenwick is investigating several tests to document those that give reliable results. Several nonpathogenic bacteria are known to cause false positive test reactions.

Veterinary Diagnosis, Dr. Mahlon Vorhies, Head

The Department of Veterinary Diagnosis research activities are fundamentally related to infectious disease diagnosis and disease control. Activities include:

1. Characterization of swine abortogenic strain of chlamydia. Our goal is to determine its economic importance in swine infertility and abortion and the role in swine reproductive efficiency.
2. Development of more rapid and specific diagnostic procedures to identify bovine respiratory viral agents and better characterize the respiratory disease in grazing and feedlot calves. Our goal is to develop monoclonal antibodies to specific viral agents which can be used to identify specific early infections.
3. Production of TGE monoclonal anti-idiotypic antibody to be used as an antigen to create an improved vaccine to protect piglets from neonatal infections.
4. Conduct rabies epidemiological surveillance in Kansas wildlife and domestic animals.

Research is also underway to determine the duration of immunity in humans innoculated with approved rabies vaccines.

The Kansas Veterinary Diagnostic Laboratory also provides laboratory assistance to veterinarians and animal owners to determine disease causes and incidence levels. During the past year, the laboratory received a submission request for assistance involving:

1. 8,337 bovine, 8,394 porcine, 5,483 canine, 2,114 feline, 2034 equine, 474 avian, 464 ovine, and 776 wildlife specimens.
2. During the past year, the routine disease surveillance identified 176 positive salmonella cases.
3. Determined the major incidence of bovine feedlot respiratory deaths to be caused by Pasteurella haemolytica.
4. Processed 1,467 rabies submissions with the identification of the skunk and cat as the major positive species.
5. Assisted with disease surveillance involving 96,288 swine pseudorabies and 37,512 swine TGE serum samples.

Summary

The College of Veterinary Medicine is proud of its heritage in supporting the needs of livestock producers and the citizens of Kansas. As society becomes more concerned regarding the safety of its water, the wholesomeness of its meat, and the welfare of animals, the need for interdisciplinary research will be increasing important to the economic well-being of Kansas producers. Faculty of the Veterinary Medical Center are dedicated to helping Kansan's solve these very complex problems.

Attached is a description of the FY '91 research projects underway at the Veterinary Medical Center. We invite you to visit our College and experience first hand the progress that is being made in veterinary medical education and animal disease research.

20-Feb-91

KSU COLLEGE OF VETERINARY MEDICINE
GRANT STATUS REPORT: CURRENT FUNDED
FOR FISCAL YEAR 1991

DEPARTMENT\TITLE	AES BGR	SPONSOR	PRINCIPLE INVESTIGATOR	Co- INVESTIGATOR	BEGINNING DATE	ENDING DATE	SPONSORS	SPONSORS	SPONSORS	FY 91	FUTURE YEARS	ACC NUMBER
							DIRECT COST	OVERHEAD AMOUNT	TOTAL GRANT	AMOUNT AVAILABLE (Direct+OH)		
Dean of Veterinary Medicine Beginning Grants:												
1. Avian-Exotic Bird	BGR	KSU Foundation	Carpenter	None	6-18-88	6-17-91	16,000.00	0	16,000.00	99.81	N/A	5-38800
Laboratory Medicine Beginning Grants:												
1. Anti-idiotyper of Bovine	AES	USDA	Minocha	Morill\Blecha	8-15-87	8-31-91	64,562.00	24,856.00	89,418.00	51,628.57	N/A	5-28250
2. Netobimin Efficacy-Dose	AES	Schering-Plough	Ridley	None	3-1-90	2-28-91	5,120.00	0.00	5,120.00	240.00	N/A	5-28251
3. Comparison of Panacuar	AES	Hoechst-Roussel	Ridley	None	3-1-90	2-28-91	6,000.00	0.00	6,000.00	3,781.86	N/A	5-28252
Total Beginning Grants							75,682.00	24,856.00	100,538.00	55,650.43		
Additions:												
4. Induced S. suis in Swine	AES	SmithCline Beecham	Chengappa	None	11-26-90	11-25-91	16,980.00	7,132.00	24,112.00	24,112.00	N/A	5-28253
5. Salmoella in plant meat	AES	Am. Greyhound	Chengappa	Gabbert\Troyer	9-1-90	8-31-91	9,898.00	0.00	9,898.00	9,898.00	N/A	5-28253
6. Salmonella C Jejune & E. coli	AES	Ks. Racing Comm.	Chengappa	Gabbert\Troyer	1-1-91	13-31-91	55,338.00	0.00	55,338.00	55,338.00	N/A	
7. Efficacy of Doramectin	BGR	Pfizer	Dryden	None	11-1-90	10-31-91	10,575.50	4,034.31	14,609.81	14,609.81	N/A	5-30261
8. Helminth egg of greyhound run	BGR	Ks. Racing Comm.	Dryden	Gabbert	12-1-90	11-30-91	17,518.00	0.00	17,518.00	17,518.00	N/A	
9. Flea membrane antigen	BGR	Paravax	Dryden	None	1-1-91	12-31-91	14,079.00	3,519.00	17,598.00	17,598.00	N/A	5-30264
Total Additions							124,388.50	14,685.31	139,073.81	139,073.81		
Total Laboratory Medicine							200,070.50	39,541.31	239,611.81	194,724.24		

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KSU COLLEGE OF VETERINARY MEDICINE
GRANT STATUS REPORT: CURRENT FUNDED
FOR FISCAL YEAR 1991

DEPARTMENT\TITLE	AES BGR	SPONSOR	PRINCIPLE INVESTIGATOR	Co- INVESTIGATOR	BEGINNING DATE	ENDING DATE	SPONSORS		SPONSORS TOTAL GRANT	FY 91	FUTURE YEARS	ACC NUMBER
							DIRECT COST	OVERHEAD AMOUNT		AMOUNT AVAILABLE (Direct+OH)		
Pathology												
Beginning Grants:												
1. Defense Mechanism Dolphins	BGR	Navy	Fenwick	None	3-1-87	8-31-91	164,136.00	63,192.00	227,328.00	552.32	N/A	5-28350
2. Porcine Pleuropneumonia	BGR	USDA\CSRS	Fenwick	None	6-1-90	5-31-92	110,000.00	0.00	110,000.00	55,000.00	55,000.00	5-28354
3. Congenital Defect Cattle	AES	Am Polled Hereford	Leipold	None	7-1-87	6-30-91	167,398.41	0.00	167,398.41	37,967.75	N/A	5-20321
4. Bovine Respiratory Virus	AES	AVMA	Oberst	None	1-1-89	12-31-90	14,200.00	0.00	14,200.00	2,110.84	N/A	5-28353
5. Transfusion Medicine	BGR	HHS	Smith, J.	None	9-1-89	8-31-90	70,025.00	5,602.00	75,627.00	20,561.35	N/A	5-38904
6. Disorder in Cats	BGR	AVMA	Smith, J.	None	1-1-86	12-31-90	14,816.00	0.00	14,816.00	3,084.94	N/A	5-20361
Total Beginning Grants							540,575.41	68,794.00	609,369.41	119,277.20		
Additions:												
7. Infect Dependent Antigens	AES	USDA	Fenwick	J. Iandolo	8-1-90	7-31-92	94,714.00	23,679.00	118,393.00	59,197.00	59,197.00	5-28356
8. Staphylococcal Toxins Yr 10	AES	HHS	Iandolo	None	12-1-89	11-30-90	121,718.00	49,021.00	170,739.00	170,739.00	N/A	5-29070
9. Staphylococcal Toxins Yr 11	AES	HHS	Iandolo	None	12-1-90	11-30-91	87,911.00	37,279.00	125,190.00	125,190.00	N/A	5-29
10. Anti-idiotypic Probes	AES	Army	Iandolo	S. Chapes	9-15-89	10-14-93	403,671.00	165,344.00	569,015.00	138,553.00	430,462.00	5-26570
11. Defects in Llamas	AES	Morris Animal Fnd.	Leipold	None	10-1-90	9-30-91	10,000.00	0.00	10,000.00	10,000.00	N/A	5-28357
12. Vaccine for Bovine	AES	Okla State Univ.	Mosier	None	7-1-90	8-31-91	14,620.00	6,140.00	20,760.00	20,760.00	N/A	5-28355
13. Diseases in Ks. Greyhounds	AES	Ks. Racing Comm.	Schoning	Cowan	1-1-91	12-31-91	49,500.00	0.00	49,500.00	49,500.00	N/A	
14. Transfusion Medicine	BGR	HHS	Smith, J.	None	9-1-90	8-31-91	71,550.00	5,724.00	77,274.00	77,274.00	N/A	5-38905
Total Additions							853,684.00	287,187.00	1,140,871.00	651,213.00		
Total Pathology							1,394,259.41	355,981.00	1,750,240.41	770,490.20		

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KSU COLLEGE OF VETERINARY MEDICINE
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DEPARTMENT\TITLE	AES BGR	SPONSOR	PRINCIPLE INVESTIGATOR	Co- INVESTIGATOR	BEGINNING DATE	ENDING DATE	SPONSORS	SPONSORS	SPONSORS	FY 91	FUTURE YEARS	ACC. NUMBER
							DIRECT COST	OVERHEAD AMOUNT	TOTAL GRANT	AMOUNT AVAILABLE (Direct+OH)		
Anatomy & Physiology												
Beginning Grants:												
1. Role of Cyclosporin in T-cell	AES	Am. Heart Assn.	Atluru, D.	None	7-1-89	6-30-90	20,000.00	1,200.00	21,200.00	9,421.83	N/A	5-28555
2. Immunosuppression	AES	USDA	Atluru, R.	None	8-1-88	7-30-91	144,405.00	55,595.00	200,000.00	72,725.36	N/A	5-28554
3. Endogenous Leukotriene	AES	HHS	Atluru, R.	None	7-1-89	5-31-90	63,419.00	25,563.00	88,982.00	73,550.30	N/A	5-29133
4. Interleukin-1A,2 in Cattle	AES	Am. Cyanid Co.	Blecha	Reddy\Minocha	9-15-89	3-14-91	100,240.00	23,200.00	123,440.00	82,127.40	N/A	5-28560
5. Bovine recomb interleukin2	AES	Am. Cyanid Co.	Blecha	None	5-15-90	9-14-90	8,400.00	3,528.00	11,928.00	11,928.00	N/A	5-28563
6. Bovine Respiratory Disease	AES	USDA	Blecha	Minocha\Reddy	7-1-88	6-30-91	110,291.00	39,690.00	149,981.00	28,113.77	N/A	5-28553
7. Bovine Lymphocytes	AES	USDA	Blecha	H. Minocha	7-1-87	6-30-90	172,924.00	66,576.00	239,500.00	2,039.29	N/A	5-28551
8. Exercise Induced Hemorrha	AES	Am. Quarter Horse	Erickson	None	10-1-89	9-30-91	24,260.00	0.00	24,260.00	16,165.48	N/A	5-28559
9. Rhabdomyolysis in Greyhound	AES	Mark Morris Assoc.	Fedde	None	1-15-90	6-30-91	26,798.00	0.00	26,798.00	8,852.93	N/A	5-28562
10. Aging in Rats	AES	HHS	Quadri	None	8-1-89	7-31-91	46,863.00	19,682.00	66,545.00	33,801.46	N/A	5-29173
11. Bovine Respiratory Disease	AES	USDA	Reddy	Blecha\Minocha	9-1-89	8-31-91	56,481.00	21,959.00	78,440.00	53,817.85	N/A	5-28557
12. Sprint performance in greyhou	AES	Mark Morris Assoc.	Toll	None	1-15-90	1-14-91	55,385.00	0.00	55,385.00	16,848.70	N/A	5-28561
13. Electron Microscopy	AES	HHS	Westfall	None	7-1-89	6-30-91	47,891.00	20,114.00	68,005.00	4,997.85	N/A	5-29
Total Beginning Grants							877,357.00	277,107.00	1,154,464.00	413,590.22		
Additions:												
14. Atrial Natriuetic Peptide	AES	Solvay Animal Health	Olsen	None	10-1-90	3-31-91	8,482.00	0.00	8,482.00	8,482.00	N/A	5-28565
15. Growth factor-binding	BGR	Pharm. Mfg.	Ross	None	1-1-91	12-31-91	10,000.00	0.00	10,000.00	10,000.00	N/A	5-30265
16. Diet Performance in Dogs	AES	Mark Morris Assoc.	Toll	None	1-15-91	1-14-92	48,572.00	0.00	48,572.00	48,572.00	N/A	5-28567
17. Influence of Carnitine-greyho	AES	Mark Morris Assoc.	Toll	None	7-15-90	7-14-91	53,845.00	0.00	53,845.00	53,845.00	N/A	5-28564
Total Additions							120,899.00	0.00	120,899.00	120,899.00		
Total Anatomy & Physiology							998,256.00	277,107.00	1,275,363.00	534,489.22		

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KSU COLLEGE OF VETERINARY MEDICINE
GRANT STATUS REPORT: CURRENT FUNDED
FOR FISCAL YEAR 1991

DEPARTMENT\TITLE	AES BGR	SPONSOR	PRINCIPLE INVESTIGATOR	Co- INVESTIGATOR	BEGINNING DATE	ENDING DATE	SPONSORS	SPONSORS	SPONSORS	FY 91	FUTURE YEARS	ACC NUMBER
							DIRECT COST	OVERHEAD AMOUNT	TOTAL GRANT	AMOUNT AVAILABLE (Direct+OH)		
Clinical Sciences												
Beginning Grants:												
1. Assess Products flea control	AES	Johnson & Sons	Oehme	None	9-15-89	9-14-91	48,042.00	20,178.00	68,220.00	47,617.48	N/A	5-28756
2. Toxi-lab detection system	AES	Marion Labs	Oehme	None	12-23-87	12-22-91	30,000.00	0.00	30,000.00	9,819.42	N/A	5-28753
3. Hazard for Ark City Dump	AES	Dept of Interior	Oehme	None	2-18-87	8-18-90	16,462.00	6,338.00	22,800.00	1,782.38	N/A	5-28751
4. Pulmonary edema from canine	AES	American Heart	Pickrell	None	7-1-89	6-30-90	20,000.00	1,200.00	21,200.00	3,331.88	N/A	5-30200
5. Diabetes Induced Hypo-matura	AES	Great Plains Diabetes	Pickrell	None	7-1-89	6-30-91	8,400.00	0.00	8,400.00	5,414.52	N/A	5-28754
6. Cationic Trypsin Domestic Cat	AES	Gastro Society	Williams	T. Medinger	6-1-90	12-31-91	2,000.00	0.00	2,000.00	2,000.00	N/A	5-30221
7. Serum amylase in dog	AES	Morris Animal Foundat	Williams	None	8-1-89	3-31-91	19,220.83	0.00	19,220.83	14,844.66	N/A	5-28755
Total Beginning Grants							144,124.83	27,716.00	171,840.83	84,810.34		
Additions:												
8. Laser Video Disc	BGR	CONVINCE	Brightman	M. Hall	1-1-91	6-30-92	25,270.00	0.00	25,270.00	25,270.00	N/A	5-30
9. Estrus in Greyhound Bitches	BGR	Ks. Racing Comm.	Bruyette	None	1-1-91	12-31-91	28,670.00	0.00	28,670.00	28,670.00	N/A	
10. Zoological Residency Program	BGR	City of Topeka	Carpenter	None	8-18-90	8-17-93	72,000.00	0.00	72,000.00	36,000.00	36,000.00	5-30254
11. Equine Pacreases colic horse	AES	Am. Quarter Horse	Cox	Williams/Kennedy	10-1-90	9-30-91	19,020.00	0.00	19,020.00	19,020.00	N/A	5-28759
12. Diets Racing Greyhnd\Survey	BGR	Ks. Racing Comm.	Gabbert	None	1-1-91	12-31-91	45,820.00	0.00	45,820.00	45,850.00	N/A	
13. Dermal Safety in dogs & cats	AES	Church & Dwight Co.	Oehme	None	6-18-90	6-17-93	88,028.00	36,972.00	125,000.00	62,500.00	62,500.00	5-28757
14. Respirable particle in swine	AES	Natl Pork Producers	Pickrell	None	7-1-90	6-30-91	11,300.00	0.00	11,300.00	11,300.00	N/A	5-28758
Total Additions							236,168.00	36,972.00	273,140.00	174,670.00		
Total Clinical Sciences							380,292.83	64,688.00	444,980.83	259,480.34		
CURRENT COLLEGE TOTAL							2,988,878.74	737,317.31	3,726,196.05	1,759,283.81		

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