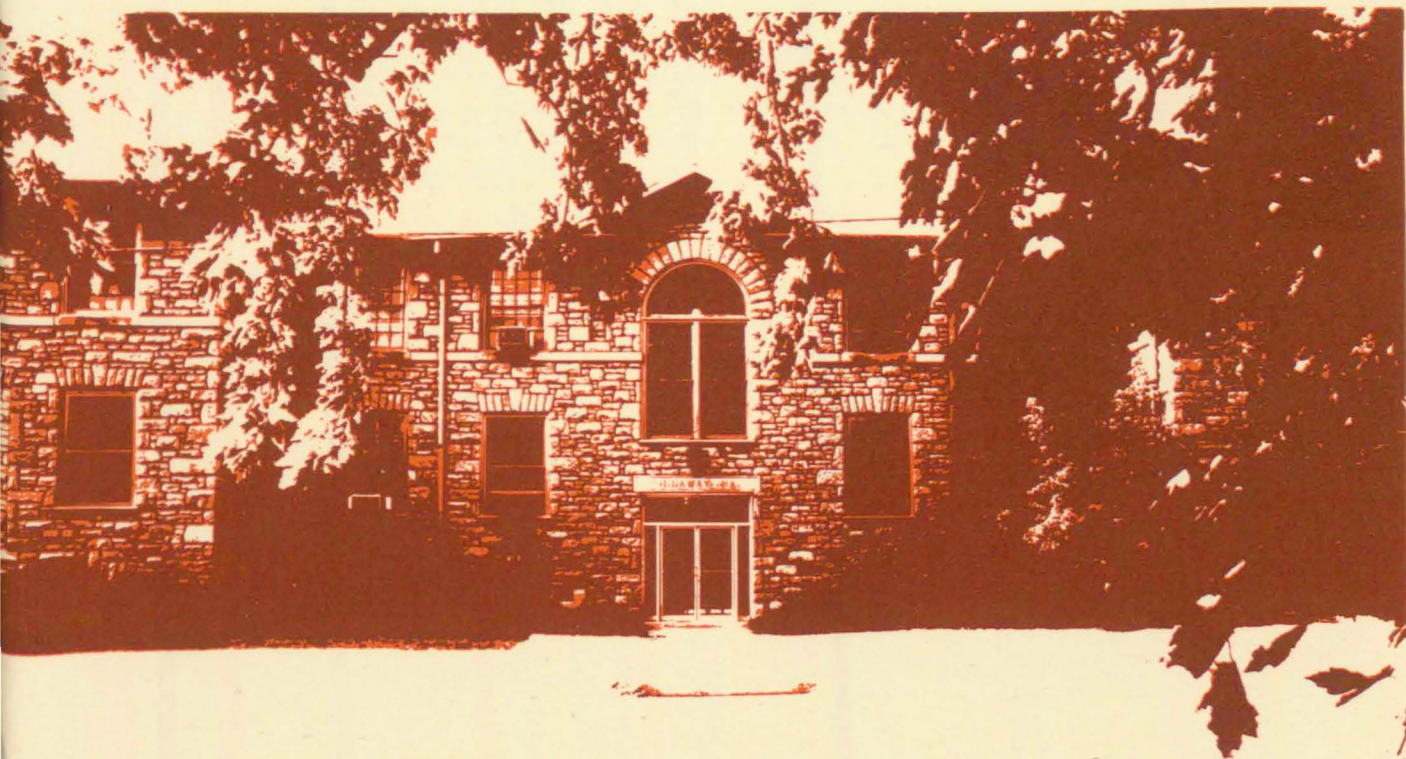


Veterinary Medicine

University of Missouri-Columbia

1872 - 1968



By Aaron H. Groth

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ACKNOWLEDGEMENTS

The help and encouragement of several members of the faculty and staff of the School of Veterinary Medicine are gratefully acknowledged. They include Dean B. W. Kingrey, who suggested the project; Drs. H. C. McDougale and A. J. Durant, who identified many of the individuals appearing in some of the early pictures and helped verify many dates; Dr. G. C. Shelton, Dr. T. M. Curtin and Mrs. Lottie Smith who read the manuscript and offered helpful suggestions; and Mrs. Pat Adams who as editorial assistant had the task of editing the assembled material. Special thanks are due to Dr. Paul L. Spencer for his help in preparing the material on "Regulatory Programs" and Dr. Leslie C. Murphy for the section on "Research." The dutiful typist on this project was Mrs. Wanda Reeves.

FOREWORD

The University of Missouri, established in 1839, included human medicine as part of its teaching program as early as 1845. Although Missouri was and is primarily an agricultural state, it was not until 1872 that the first instruction was offered in veterinary science and it was in 1884 that the first veterinarian was appointed to the faculty.

There were a number of good reasons for the delay in giving attention to the study of animal diseases. The University was established to offer instruction in the liberal arts and no consideration was given to instruction in some of the more practical areas. Financial support for the new institution was inadequate and uncertain. There was sufficient controversy among some of the early administrators that interest and support of the citizens were often non-existent or at a low level.

Missouri did not take advantage of the 1862 Morrill Act which authorized the establishment of agricultural and mechanical colleges by the states until 1870 when the legislature acted to establish a Department of Agriculture at the University. In the interim, there were controversies among members of the legislature and among factions of the citizenry about the establishment of an agricultural program and its location. Even after the legislative action and initiation of an agricultural curriculum, the arguments continued. Again there was the problem of insufficient funds and there was a constant struggle for survival.

The first recommendation to add a veterinarian to the faculty was made in 1877, but no positive action was taken until seven years later. Then, with the appointment of Dr. Paul Paquin, a remarkably active program was launched. While this program has been continuous, it too has had its ups and downs. There were periods when interest and support were good and teaching and research programs were maintained at a high level. There were other times when the Department was heavily burdened with service projects and the other programs were placed in the background. However, the Department of Veterinary Science, since its inception in 1885 until its succession in 1949 by the School of Veterinary Medicine, has had an interesting and varied history. An attempt is made, in the succeeding pages to report some of the history of the Department and the School.

A. H. Groth, B.S.; M.S.; D.V. M

Veterinary Medicine at the University of Missouri

by

A. H. Groth, B.S.; M.S.; D.V.M.

The University of Missouri was established by action of the legislature in 1839, and is the oldest state university west of the Mississippi River and in the Louisiana Purchase Territory. The territory purchase was made by Thomas Jefferson, third president of the United States, who also planned and founded the University of Virginia. Jefferson's influence on the University of Missouri is apparent on the original red campus as Francis Quadrangle is a replica of a quadrangle on the Virginia campus.

1845-1872

Medical science was included in the University's instructional program in 1845 when the McDowell Medical College in St. Louis became the Medical Department of the University. This arrangement ended in 1855, and there was no medical program until 1872 when a two-year program of medical education was activated on the Columbia campus.

1872-1884

The first instruction in veterinary medicine was offered in 1872. Professors H. J. Detmers and L. J. Smith were employed as "lecturers in veterinary surgery" by the Agricultural Department which had been established in 1870 and which later became the College of Agriculture. Dr. Detmers, born and educated in Germany, taught comparative anatomy, physiology and veterinary science; he conducted clinics at several midwestern universities between 1869 and 1875. In 1885 he organized the College of Veterinary Medicine at Ohio State University. His first graduate, Mark Francis, became a member of the faculty of Texas A. & M. University and cooperated with University of Missouri veterinarians on some of the early research concerning bovine piroplosmosis (Texas fever). In 1877 a recommendation for the appointment of a veterinarian to the Missouri faculty was made to the Board of Curators. No action was taken, probably because there were no funds available for the position.

1884-1891

The first veterinarian to be appointed as a regular member of the faculty was Dr. Paul Paquin, a French-Canadian who earned the D.V.S. degree at McGill University in Montreal, Quebec. His appointment in 1884 signified the begin-

ning of a continuous program concerned with diseases of livestock and poultry. Dr. Paquin's duties were numerous and demanding. He taught courses to agricultural and medical students, established and operated one of the first "vaccine virus laboratories" in the country (probably the first such laboratory at a state university), conducted research on animal diseases and investigated diseases in various parts of the state.

Governor Thomas T. Crittenden recommended to the legislature of 1885 the establishment of a Veterinary Department at the University, an Office of State Veterinary Science and a new official to be known as state veterinarian. On April 3, 1885 the legislature passed a bill creating the Office of State Veterinarian to be connected with the Agricultural Department of the University. The bill also required the state veterinarian to visit cases of contagious diseases occurring in the state. To facilitate such travels most of the railroads granted passes to Dr. Paquin, who served as the first state veterinarian.

On March 5, 1885 Dr. Paquin investigated a disease at what was then known as the Missouri State Lunatic Asylum at Fulton. The disease proved to be contagious pleuropneumonia which was causing heavy losses and much concern in Illinois and many other states. The diagnosis was confirmed by Dr. M. R. Trumbower of the U.S. Bureau of Animal Industry and by a Dr. Haggard of Kentucky. The legislation authorizing the formation of the Bureau included a specific order to eradicate pleuropneumonia in the United States. The Comptroller of the U. S. Treasury allowed the purchase and slaughter of the diseased animals on April 21, 1885. Through this ruling and the splendid cooperation of Missouri officials the state was freed of the disease by May 1, 1885.

This was the only known occurrence of pleuropneumonia in Missouri and clearly demonstrated the value of the Office of the State Veterinarian. Dr. Paquin, in reporting the results of his investigations, issued his first official bulletin identified as Bulletin Number 15. It was addressed to Governor Crittenden, the State Board of Agriculture and Dean J. W. Sanborn of the Agricultural Department.

A young Boone County native, Stanley N. Smith, was Dr. Paquin's driver on this and other trips in the area. These contacts with veterinarians were largely responsible for the young man's decision to study veterinary medicine. After

attending the University he entered the New York College of Veterinary Surgeons from which he was graduated in 1892. Dr. Smith practiced in Columbia from 1892 to 1950 when he joined the faculty of the University.

The two-year medical program activated at the University of Missouri in 1872 was later extended to three years and eventually to four years. Dr. Paquin soon became associated with the Medical School as a teacher and a student. The Board of Curators evidently valued his teaching of comparative medicine as it stated "Human medicine is now acquiring the vast stores of valuable data from the study of animal maladies. The barriers to the study of the lower animals are less impassable. The acquisition of this new degree will bring a compound of information of great value to practitioners in our stock interests." Dr. Paquin was awarded his M.D. degree in 1887.

The vaccine virus laboratory was operated by Drs. Paquin and Woodson Moss, professor of Anatomy and Physiology in the Medical School. Smallpox vaccine was produced for physicians and blackleg vaccine was distributed to veterinarians and farmers.

In 1886 Dr. Paquin was sent to France for several months to study under some of the European authorities on animal diseases. *Coleman's Rural World* of February 4, 1886 commended the Board of Curators for this action which enabled Dr. Paquin to take advantage of recent investigations by Louis Pasteur and others. In a letter to *Coleman's Rural World*, Dr. Paquin described his studies in France: "I study principally contagious diseases of animals at the Alfort Veterinary School under Messrs. Nocard and Trasbats, the former a collaborator of M. Pasteur. At the Hospital de la Charite, I studied under the well known Dr. Lantern, an authority on microscopic investigations of diseases. Later I shall follow for some time, I suppose, the laboratory of M. Pasteur."

When he returned to the University, Dr. Paquin received fresh vaccine from the Montpellier Vaccinal Institute

in France to immediately inoculate calves for the production of more smallpox vaccine. He also was prepared to practice the latest systems of vaccination against chicken (fowl) cholera, hog cholera, splenic fever (anthrax), hydrophobia (rabies) and other such diseases.

A laboratory building for Dr. Paquin was completed in 1887. Building cost was \$6,500 and he was authorized to spend \$3,900 for equipment. The completion of the building prompted Dean J. W. Sanborn of the Agricultural College to announce: "The institution now has a new veterinary building, thoroughly equipped with the best modern appliances for study of animal diseases, and especially contagious diseases so destructive to our stock interests." Texas fever was one of the first diseases to be studied.

The building, which was located on the east (white) campus immediately east and north of the present Memorial Union Tower, was shared with the Horticulture Department until 1895 when Veterinary Science was moved to the third floor of Switzler Hall on the west (red) campus. In 1904 the frame building was moved to a site on the southeast part of the campus near Ashland Road where for a number of years it was used as a sheep barn.

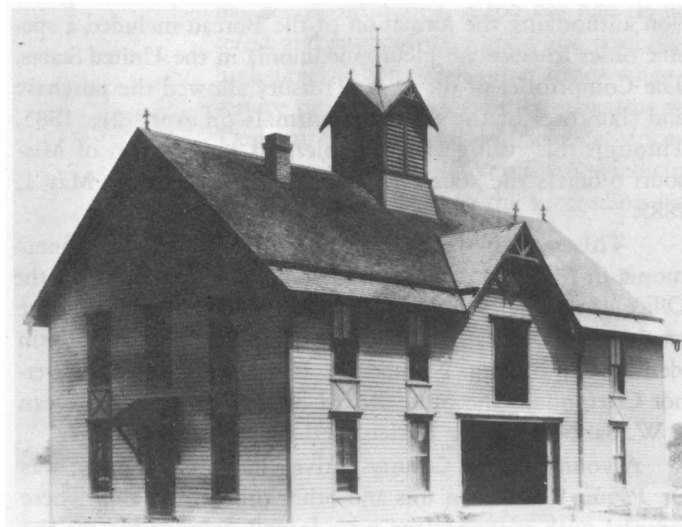
John Waldo Connaway, a medical student from Stockton in Cedar County, was appointed Assistant Veterinarian in 1888. During the next year he was apparently on leave to attend the Chicago Veterinary College where he received the M.D.C. degree (doctor of comparative medicine) in 1890. During his absence a medical school classmate, Paul Evans, served as Assistant Veterinarian. Both Connaway and Evans received the M.D. degree in 1891.

During this period, Dr. Paquin had a number of different titles on the University faculty. They included: professor of veterinary science and state veterinarian; professor of comparative medicine and veterinary science; director of University Pathology Laboratory; professor of bacteriology and pathological anatomy; director of the Laboratory; and lecturer in bacteriology.

Dr. Paquin's research on Texas fever was reported in an early publication of the Agricultural Experiment Station, Bulletin Number 11, *Texas Fever*. It reported investigations made by Paquin and Connaway between September, 1888 and March, 1889. These investigations began the cooperation and collaboration with Dr. Mark Francis of Texas and other veterinarians in tick-infested southern states.

A joint legislative report, dated April 3, 1889, commended the work in veterinary science and praised Dr. Paquin. He continued to serve as state veterinarian, taught courses to agricultural and medical students, conducted the diagnostic laboratory and conducted research on animal diseases until his resignation in 1891. Dr. Connaway succeeded him as head of the Veterinary Science Department, but was not appointed state veterinarian. This position was filled by Dr. T. J. Turner who was a practitioner in Mexico, Missouri.

While Dr. Paquin was only 31 years old when he resigned, he had a remarkable record as a member of the University faculty. F. B. Mumford in his *History of the Missouri*



First laboratory building for Veterinary Medicine—1887.



Dr. Paul Paquin (right), first veterinarian at the University of Missouri, spraying a heifer. He is assisted by J. W. Connaway, who was then a student at the University—1888.

College of Agriculture made the following observation: "His special line of work was in the domain of hygiene in its broadest sense, i.e. with reference to all living things, but chiefly as applied to man and domestic animals. His work at Missouri was divided, but so thoroughly systemized that it ran smoothly and harmoniously. It was, first *practical*, as chief of the veterinary sanitary department for nearly seven years, under three successive legislatures and a number of boards of curators; second, *scientific* and *hygienic*, as director of the laboratory of pathology of the state university; third, *educational*, in teaching comparative medicine in medical and agricultural departments, and lecturing and directing laboratory work in bacteriology in the state university; fourth, *experimental*, as in his experimental work on Texas fever, blackleg, etc.; in connection with the Agricultural Experiment Station in which he met with unqualified success."

While on vacation in 1890, Dr. Paquin visited the Battle Creek Sanitarium and Hospital, Battle Creek, Michigan which was established and operated by Dr. J. H. Kellogg, superintendent. The Sanitary Laboratory of Hygiene was a part of the operation, and Dr. Paquin accepted the position as director of this laboratory.

Dr. Paquin pioneered the publishing of a monthly periodical, the *Bacteriological World* during his last year at the University. He was listed as the editor and Dr. T. J. Turner, a veterinarian at Mexico, Missouri was associated with him as business manager. Featured in the early issues was a series of "Lessons on Bacteriology" by Dr. Paquin.

An editorial referred to the publication as a "new departure in professional and scientific journalism on this continent, and as a child of necessity. It was conceived as an aid to physicians, veterinarians and students in all branches of medicine." Among the early authors were: Paul Evans of the Missouri Agricultural Experiment Station and Dr. A. W. Macalester, A.M., M.D., dean, of the University Medical Department. In the September, 1891 issue (Volume 1, Num-

ber 9), Paul Paquin is listed as editor, Sanitarium, Battle Creek, Michigan. One of his editorials in this issue stated, "We had underestimated the trouble of removing ourselves, our little possessions, and our humble plant from the seat of the University of Missouri, Columbia, Missouri to the Sanitarium, Battle Creek, Michigan; and we had hoped to have ample time to get everything in proper shape so that the *Bacteriological World* should continue to publish its monthly lesson on bacteriology, etc."

The editorial in Volume 1, Number 10, told of the decision to change the name of the publication to *Bacteriological World and Modern Medicine*. Dr. J. H. Kellogg, M.D. was to have charge of the department on Modern Medicine. Within a short time, the name was changed to *Modern Medicine and Bacteriological World*. In the original publication Dr. Paquin's name appeared as, Paul Paquin, M.D., D.V.M., and later as Paul Paquin, M.D. One early issue of the periodical published a review of the book entitled, *The Supreme Passions of Man*, by Paul Paquin, M.D. It was published by the Little Blue Book Company, Battle Creek, Michigan, sold for 65 cents, and had nearly 200 pages. It included chapters on, "Appetites and Passions," "The Chemistry of Passions," "The Evolution of Sin," "Beneath the Cloak of Marriage," and "Solution to the Liquor Problem." It was said to be radically different from any medical work on the subjects.

The February, 1893 issue of the periodical is the last one in which Dr. Paquin's name appeared. Efforts to learn about his later activities have been unsuccessful. However, a two-block-long street which joins College Avenue and Hitt Street at the northeast edge of the campus is called "Paquin Street" in his honor.

1891-1910

Members of the General Assemblies who served during the 1890s showed much interest in livestock and horticultural problems. The early interest in veterinary science was undoubtedly due to two influences. First, the livestock men of the state could and did influence legislation; and second, livestock men of the time had a feeling of helplessness in the face of many serious diseases, most important of which was hog cholera.

Additions to the faculty during Dr. Connaway's early years as head of the Department of Veterinary Science were primarily graduates of the Medical School. They included: Robert Emmet Graham, M.D., instructor in bacteriology and pathology in the Department of Veterinary Science; B. Meade Bolton, M.D., professor of bacteriology and pathology; and William Ophuds, M.D., professor of bacteriology and pathology. While the University catalog didn't mention a leave of absence, Dr. Connaway was a student at Johns Hopkins University during 1894-1895. The receipt for his registration fee is among some of his personal effects that have been preserved in a scrapbook on veterinary medicine.

Following his return from Johns Hopkins University, Dr. Connaway resumed research on Texas fever and the second report of these studies was published in the January,

1897 Bulletin Number 37, *Texas Fever Experiments*. It reported results of experiments conducted during the summer of 1896 by the Missouri Experiment Station, the Missouri State Board of Agriculture and the Texas Experiment Station where Dr. Mark Francis was the investigator. The studies covered the following phases of the problem: 1) Confirming the "Tick theory" of transmission; 2) Prevention of Texas fever by (a) Dipping tick-infested cattle and (b) Inoculation of susceptible cattle with blood serum from the tick-infested cattle in an attempt to produce immunity; 3) Disinfection of pastures by mowing, burning or cultivation; and 4) To determine if Australian cattle fever is identical to Texas fever. Results of this research contributed greatly to the eventual eradication of the ticks and to the control and eradication of the disease in the United States. According to Dean M. F. Miller the research cost less than \$10,000 but was responsible for saving the cattle industry many millions of dollars.

A request was made to the legislature in 1898 for \$30,000 to provide a building "for livestock judging, dairy work and veterinary science, not by the University alone, but by the stock feeders and dairymen all over Missouri." No funds were available until 1901 when the 41st General Assembly appropriated about \$12,000. The building that was constructed was known as the "Livestock Building" and was located just east of the present dairy building (Eckles Hall) on the east (white) campus. It housed laboratories, a lecture room, library and office on the second floor and two animal-rooms and a dissecting room on the first floor. A judging arena was at the rear and was used by the Department of Animal Husbandry for several years. Later the entire building was used by the Department of Veterinary Science. Following the construction of Connaway Hall it was occupied by the Department of Agricultural Engineering and is still used by that department.

The Board of Curators announced in 1899 that the Experiment Station had discovered an inoculation for preventing Texas fever. The disease had been the greatest obstacle in improving the quality of southern cattle by the use of purebred bulls from herds in tickfree territory. Losses in the

imported cattle had rarely been less than 40 per cent and frequently were more than 70 percent. Southern buyers could not pay northern breeders satisfactory prices and take the risk of losing the bulls from Texas fever. For several years Dr. Connaway in Missouri and Dr. Francis in Texas had worked to develop a satisfactory method of premunition against the disease. The University stated that, "The discoveries concerning Texas fever are already exerting a profound influence on interstate and international commerce in livestock." Dr. Connaway had immunized 1800 cattle with a loss of only 8 per cent.

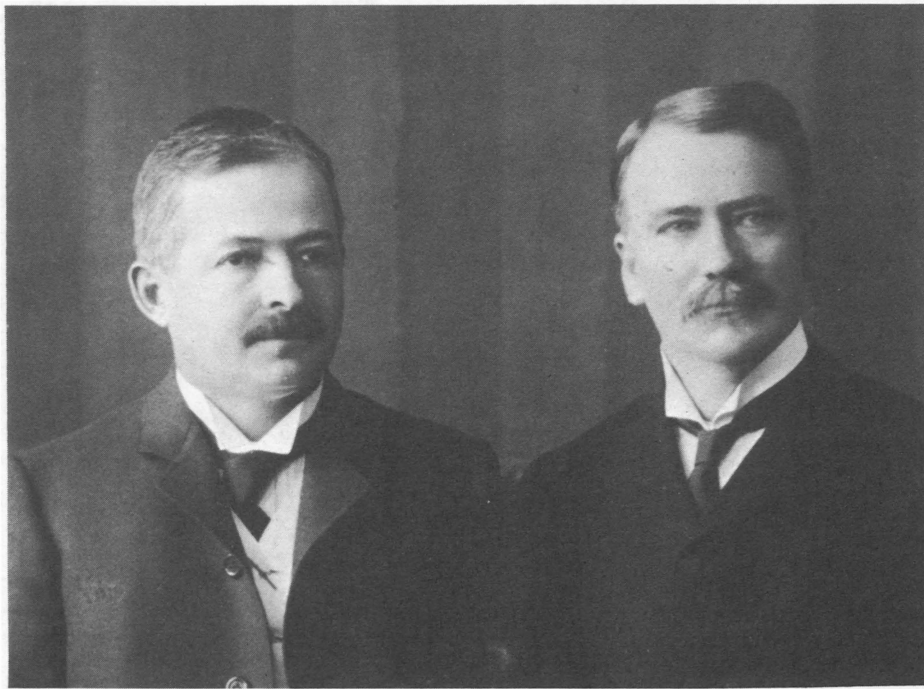
The work of Dr. Connaway was further recognized in the 1902 report of the President of the Board of Curators: "Dr. J. W. Connaway, professor of comparative medicine, has been making some careful investigations in connection with contagious diseases of domestic animals." Bovine tuberculosis and hog cholera were included among the contagious diseases that were studied.

In 1904 Dr. Connaway was granted leave to study in Europe. His close friend and collaborator, Dr. Mark Francis was granted leave at the same time. They were photographed together in Hanover, Germany in August, 1904. The following year Dr. Connaway was at the University of Berlin and he returned to Missouri in the fall of 1905. During his absence Dr. John Blakeslee Tiffany, a graduate of Cornell University, was acting assistant professor in charge. Another Cornell graduate, Dr. Robert J. Foster, was a member of the faculty in 1903-1904. He was on the faculty of Kansas State University during the next year and then enlisted in the cavalry of the United States Army where he served with distinction until his retirement in 1944. Dr. Foster was one of the officers responsible for organizing the Army Veterinary Corps of which he was Chief for several years. He retired after 39 years of service at the rank of colonel.

While Colonel Foster was on the University faculty he met Miss Alice Johnston, a student from Boonville, whom he married in 1909. The Fosters gave several books to the Veterinary Medical Library and in 1964 established the Alice Johnston Foster Fund with a gift of approximately \$20,000 to be used in the field of veterinary medicine. In 1967 Col. Foster was made an Honorary Alumnus of the University of



Acute cases of Texas Fever for artificial tick-infestation. These animals were not inoculated.



Dr. Mark Francis and Dr. John Connaway were collaborators on some of the early research on Piroplasmosis (Tick Fever) of cattle.

Missouri at the first Awards Night held by the School of Veterinary Medicine.

Two veterinarians were appointed to the faculty in 1907. They were: Dr. Edgar Newton Larue, a graduate of the Kansas City Veterinary College and Dr. L. Sheldon Backus, a graduate of Cornell University. The latter was a native of Columbia who remained on the faculty until 1925 when he established a practice in Orlando, Florida. Also in 1907 Dr. David F. Luckey, who had been state veterinarian since 1900, was appointed state lecturer on veterinary sanitation. Dr. Luckey was a native of Missouri and graduate of Central Missouri State College and the Ontario Veterinary College. He served as state veterinarian from 1900 to 1913 and from 1914 to 1922. During these periods he carried out a vigorous program aimed at the control and eradication of livestock diseases. Through his efforts the intradermal test for bovine tuberculosis was recognized as the official tuberculin test.

1910-1931

Construction on the Veterinary Science Building (Connaway Hall) was begun in 1910 with completion scheduled for the fall of 1911. The 45th General Assembly (1909) had appropriated \$10,000 for the building and in 1911 an additional \$5,000 was appropriated. The building was described as follows: "Built of natural stone, it has three stories and contains laboratories, operating rooms, offices, classrooms and a museum. Located on the college farm, not far from the barns, this building greatly facilitates the work of the Department of Veterinary Science. Although considerable expenditures were necessary for repairs and changes, this building was gradually arranged so that it has contributed

successfully to teaching and research." Total cost of the building with equipment was \$31,906.24. The completion of the building was described as recognition of the fine service of the Department under the intelligent leadership of Dr. Connaway, who had made a lasting contribution to animal pathology in connection with Texas fever of cattle.

The Board of Curators in 1910 reported on the distribution of anti-hog cholera serum: "Elaborate tests have been made of the immunizing properties of the serum against hog cholera. The serum was developed by the United States Department of Agriculture and the practical application has been much improved. The 45th General Assembly appropriated \$10,000 for the production and distribution of anti-hog cholera serum, and while this was inadequate to meet all of the demands made upon the Department of Veterinary Science it did provide the equipment and the necessary beginning of an important work by the Department. During the past two years the preventive work saved more than \$1,000,000 in losses from hog cholera."

Originally, relatively small quantities of serum were produced and distributed at no cost to farmers who were willing to use it in their herds. The object was to learn if the vaccination of hogs with anti-serum and virus was a practical means of preventing hog cholera. Acceptance of the program was so great that funds were soon exhausted and it was then decided to provide the serum and virus at the cost of production. The General Assembly of 1911 appropriated an additional \$25,000 before it was decided to charge for the products. In 1920 the serum was produced and distributed for 1½ cents per cubic centimeter. The University did not promote the sale of serum to the extent that it competed with the production of the existing commercial laboratories.



Connaway Hall—1911

The serum and virus were available for purchase by any Missouri resident.

The buildings originally used for serum production were located at the foot of the hill and the extension of East Rollins Street. Some of the original frame buildings are still on that first location. The largest building where serum producing hogs were bled was later used to house cattle and poultry. Dr. C. W. Turner of the Department of Dairy Husbandry used the building for some of his endocrinology research.

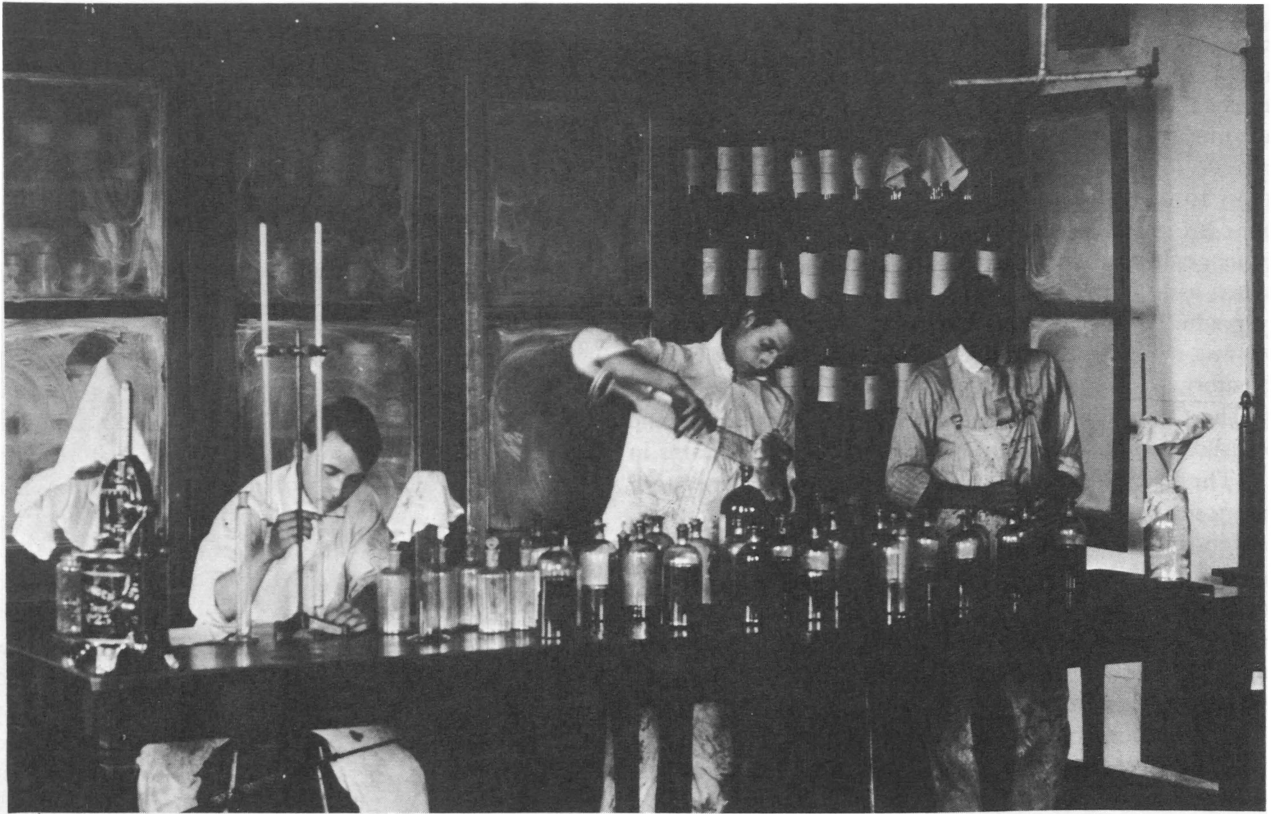
The Department of Veterinary Science evidently employed a number of students and some graduates of the College of Agriculture beginning in 1908. Most of them were concerned with some phase of the serum production program. Several of these young men became leaders in agricultural programs. Among them was George S. Templeton, who served as head of the Department of Animal Husbandry at Texas A. & M. University and at Mississippi State University and also as superintendent of the U.S. Rabbit Research Laboratory, Fontana, California.

Production and distribution of the anti-hog cholera serum and virus attracted much attention among the farmers of the state, and in 1915 the legislature appropriated \$50,000 to expand the program. Ninety acres of land about three miles north of Columbia and on the west side of the railroad track were purchased for \$9,000 as a site for the serum production plant. The remaining funds were used for the construction of laboratory buildings, swine barns, slaughtering facilities with refrigeration, an incinerator and a deep well water system.

For some 21 years the production and sale of serum and virus by the University assured veterinarians and farmers of a supply of these biologics from a reliable source and at a reasonable cost. It is probable that the use of virulent virus by laymen also resulted in the spread of hog cholera. With the operation of more privately owned serum plants and improved regulation of production methods, the need for the state to continue production no longer existed. The last serum was sold on November 13, 1936.

The Veterinary Medical Research Farm (1925) was originally a hog cholera serum production plant.





The hog cholera serum was produced and distributed for 1-½ cents per cubic centimeter.



Vaccinating hogs with serum at Rankin Farm No. 8 in Tarkio, Mo.

Again the extension director instructed the agents to use the local practitioner when one was available. A gradual improvement resulted and it was probably hastened by the fact that Missouri was without an extension veterinarian for several years. Unfortunately the extension director used the earlier difficulties as an argument against employing an extension veterinarian, who was requested by the Missouri Veterinary Medical Association.

During the late 1930's there was a number of faculty changes. H. C. McDougale, at the rank of instructor had begun to study for the D.V.M. degree at Michigan State University. This was necessarily done when he could obtain leave of absence from the faculty and it was not until 1946 that he was awarded the degree. Dr. Frank Olvey was appointed as an instructor and Dr. Uren was transferred to the extension staff where he remained until 1948 when he returned to full-time teaching. Missouri then had no extension veterinarian until 1964. Dr. Piercy resigned in 1937 to accept a position with the Texas Experiment Station to do research on anaplasmosis. He continued such research at Louisiana State University and later went to the University of Georgia where he was assistant dean of the School of Veterinary Medicine at the time of his death in 1967.

E. R. Doll, a graduate of the College of Agriculture, was on the Experiment Station staff in 1938-1939. He later earned the D.V.M. degree at Michigan State University, then went to the University of Kentucky where he had a long and distinguished career in animal disease research. Dr. Virgil Robinson, who is now an outstanding pathologist,

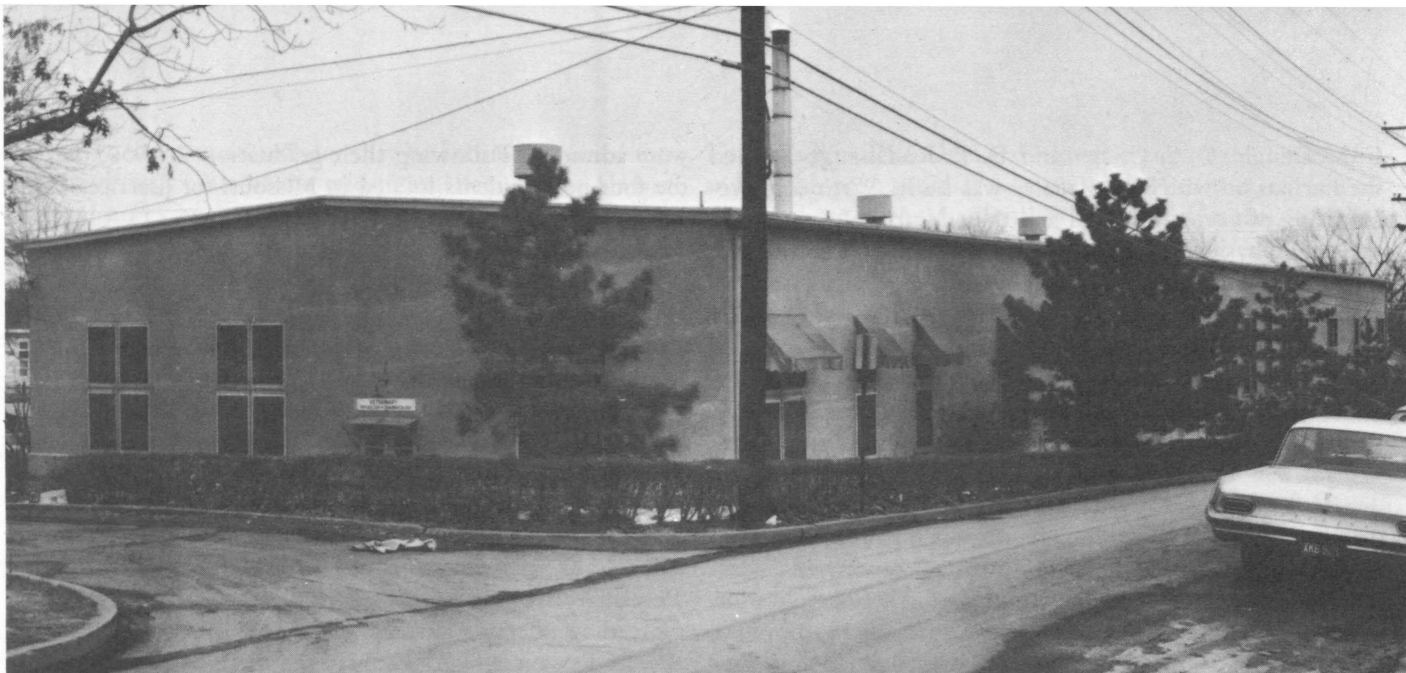
was on the faculty in 1939-1940. His vacancy was filled by the appointment of Dr. Donald E. Rodabaugh who remains on the faculty as professor of veterinary pathology.

The Department was being called on for more and more service to other departments and to livestock and poultry producers of the state. Some of this service developed from research projects in the Experiment Station. To confirm results of research in the laboratory, it was desirable to have large numbers of animals and birds available. This could be done by extending the studies to herds and flocks on farms. The production and distribution of an effective fowl pox vaccine was an example. Such vaccine was not available from commercial laboratories. To fill this need the Department was asked to develop an effective one and distribute it to Missouri poultry producers. The project was continued for several years and thousands of doses of the vaccine were distributed.

Infectious abortion (brucellosis) of cattle and swine was another disease that was studied by members of the Department. They were especially interested in the comparative value of the agglutination and complement-fixation tests in diagnosing the disease. Studies involved testing blood samples from suspected and infected herds within the state. Results of the tests were used to detect infected animals so that they could be removed from the herds and so prevent the disease from spreading. A cooperative state-federal program was developed for testing blood samples in the laboratory that was located in Connaway Hall. The laboratory was later moved to Jefferson City (1948) and a second one was es-



Dr. Knight assists in the production of an effective fowl pox vaccine in 1940.



Veterinary Sciences Building—1968.

tablished at Springfield. By 1963, the incidence of brucellosis in Missouri cattle had been sufficiently reduced to qualify the state as a Modified Certified Brucellosis Area.

Pullorum disease of poultry was being studied by Drs. Durant and McDougle. Development of an antigen for use in the tube agglutination test was one of the objectives. When this was accomplished another heavy service load resulted. For a number of years all the antigen used by laboratories in the state was produced by the Department. In cooperation with the Missouri Poultry Improvement Association the official blood testing of all turkey breeder flocks in the state was conducted in the Department's laboratory. This program, as with that on brucellosis involved the removal of reactor birds from the breeder flocks. Because this is a regulatory activity it was finally taken over by the state veterinarian with the testing being done in the Springfield laboratory.

The Impact of World War II (1946-1968)

The war years and those immediately following were difficult ones for the Department and for the University. Dr. Rodabaugh was in the armed forces as were many other members of the University faculty. Student enrollment, at a low ebb during the war, skyrocketed in the years immediately after its close. Funds were cut back and equipment was in short supply or unavailable. Construction of needed buildings was out of the question. When the discharged veterans began to enroll in record numbers, the University was hard pressed to accommodate them. Buildings that were no longer needed on military posts were dismantled, moved to the campus and rebuilt to be used as classrooms, laboratories and dormitories. Because many of the veterans were married and had families, hundreds of trailers were located on and near the campus in "trailer villages." Returning faculty members were joined by new recruits when and if they could be found.

A considerable number of the returning veterans wanted to study veterinary medicine, but they could not gain admission to any of the ten schools of veterinary medicine in the United States and Canada because all of them were swamped with applicants. There was a shortage of veterinarians and a need to train them in greater numbers. In Missouri, the average age of veterinarians was 58 years and there were more than 20 counties that had no veterinary graduate.

On several occasions the Governor's Board of Visitors had recommended the establishment of a School of Veterinary Medicine. This recommendation was brought to the attention of members of the General Assembly by groups of veterans. Their inability to be admitted to any of the existing schools was also stressed. The result was that the 63rd General Assembly appropriated \$240,000: "to establish a school of veterinary science." The appropriation was to be expended for:

- A) Personal Service—\$65,000
- B) Additions, Building and Equipment—\$125,000
- C) Repairs & Replacements, Remodeling Building and Equipment—\$50,000

The appropriation was for the fiscal year July 1, 1946 through June 30, 1947.

Quite obviously the University administration had enough problems without having to assume the responsibility for developing a new professional program. So it is understandable that the University felt that it had something dumped in its lap and that it was less than enthusiastic about a "School of Veterinary Science." To complicate the situation Illinois, Minnesota, California, Oklahoma, Georgia and Alabama were faced with similar situations. In Alabama the new school was to be established at Tuskegee Institute.

At Missouri the responsibility of developing a "School of Veterinary Science" was given to the College of Agriculture. Obviously Dr. Durant and his Department of Veterinary Science carried most of the load but final decisions were made by the dean of the College of Agriculture. The following veterinarians: Drs. Durant, Cecil Elder, A. W. Uren, H.

C. McDougale, O. S. Crisler and D. E. Rodabaugh formed the nucleus on which the faculty was built. With some remodeling of Connaway Hall and the addition of a one-story wing the physical plant was ready for use. A "temporary" building was erected immediately southeast of Connaway Hall on land that had been used as poultry range. This building had been on a military base and after being dismantled and moved to the campus was reconstructed. It provided space for clinical activities and the teaching of veterinary physiology and pharmacology. Twenty odd years later, in 1968, the building is still in use.

Difficulties were numerous in recruiting new faculty members. Not only the new schools but many of the established ones were competing for available prospects and salaries at Missouri were not competitive. A further complication was the attitude of the Missouri veterinarians. Some were actively opposed to the program and only a small minority was offering its support.

Dr. Durant worked closely with the Council on Education of the A.V.M.A. and with his friends, Deans R. R. Dykstra and H. D. Bergman at Kansas State University and Iowa State University, respectively. He also arranged for meetings of the officers of the M.V.M.A. with the University administration. Dr. John L. Wells, secretary of the M.V.M.A. and Drs. W. A. Hagan, W. A. Haigler and W. A. Aitken of the Council on Education were especially helpful in the early stages.

With only limited funds available, it was decided to admit 30 students in each class and that only Missouri residents would be admitted. It was believed that the first class would be accepted in the fall of 1947, but the pressure was so great that the first class was admitted in the fall of 1946. Only limited publicity was given to the change in plans and there were not enough qualified Missouri residents to fill the first class. Three men from Nebraska and one from Tennessee

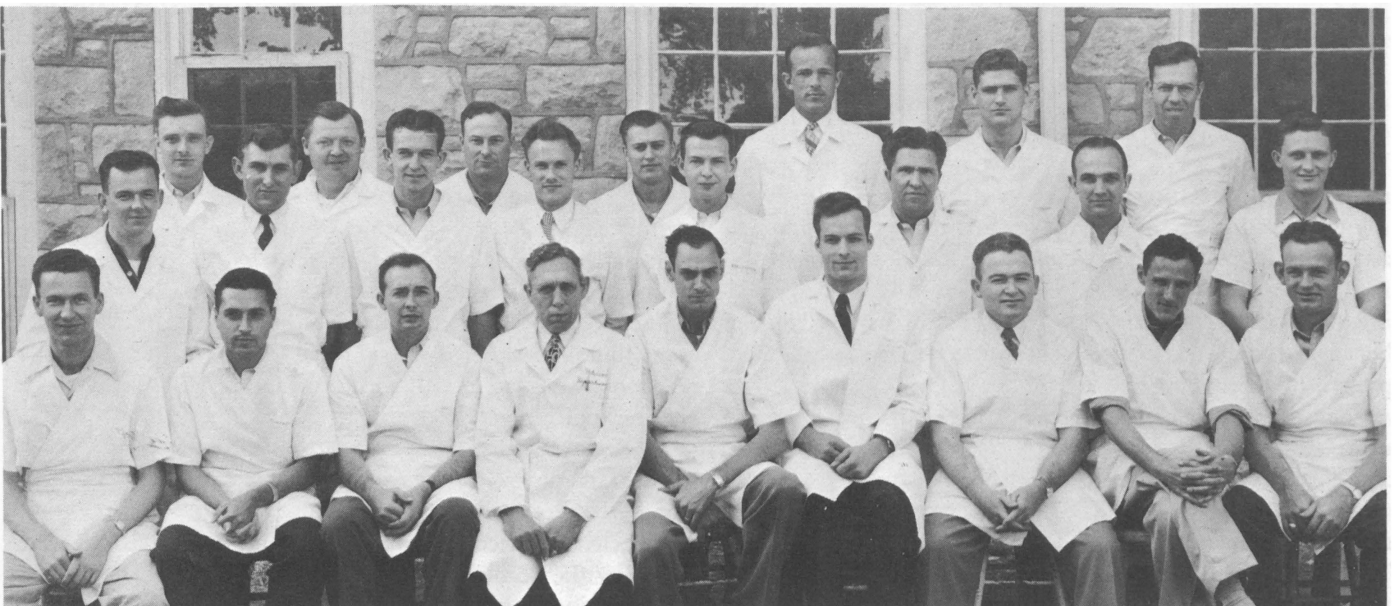
were admitted. Following their graduation in 1950, two of the four non-residents located in Missouri for practice. They are still at their original locations.

1946-1968

One of the faculty positions which most urgently needed to be filled was that of an anatomist. Veterinary Anatomy is a basic first-year subject and qualified teachers were extremely scarce. Dr. Durant made a wise and fortunate move when he persuaded Dr. J. E. Weinman to leave his practice in Lincoln, Nebraska and join the faculty. A graduate of The Kansas City Veterinary College, Dr. Weinman had taught veterinary anatomy there and at the St. Joseph Veterinary College. Although he had been in practice for more than twenty years, Dr. Weinman quickly adjusted to the academic environment. He taught gross anatomy and served as chairman of the Department of Veterinary Anatomy until his retirement in 1960.

Two recent graduates of Michigan State University were appointed to assist Dr. Weinman. They were Drs. B. E. Stickrod and R. C. A. Costello who both soon resigned to enter private practice. In 1947 three recent Kansas State University graduates joined the new faculty, Dr. D. R. Peterson was in veterinary physiology, Dr. D. M. Trotter was in veterinary pathology and Dr. A. A. Case was in veterinary medicine and surgery. Dr. Case, whose father and two brothers were veterinarians, came from Ohio State University and was given the responsibility of developing the clinical program. Drs. Peterson and Trotter resigned in 1948 to join the faculty of the new school at Oklahoma State University. Dr. Case is now professor of veterinary medicine and surgery and has taught courses in large animal medicine, radiology, and toxicology and poisonous plants. He is recognized as an authority on plant and chemical poisoning of livestock, a

Class of 1950.



field in which it was necessary that he become involved during the drouth years of the mid-1950s. Because the University had no extension veterinarian, Dr. Case was drafted to provide consultation and help to veterinarians and livestock producers who were experiencing losses that appeared to be caused by consuming vegetation grown under drouth conditions. The investigations of Dr. Case and other University staff members led to recognition of the nitrate problem and to the development of preventive measures.

Several other recently graduated veterinarians were added to the faculty during 1948. Among them were Dr. G. D. Goetsch in veterinary physiology, Dr. D. A. Hill in veterinary bacteriology, Dr. G. C. Shelton and Dr. H. H. Berrier in veterinary pathology, Dr. R. B. Moody and Dr. H. W. Howell in veterinary medicine and surgery. Drs. Goetsch, Hill and Shelton all resigned within a few months, but Dr. Shelton returned to the faculty in 1949 to develop the teaching and research programs in veterinary parasitology. He later became chairman of the Department of Veterinary Microbiology and associate dean of the School. Dr. Berrier is an associate professor and teaches clinical pathology. Dr. Moody taught courses in veterinary medicine and surgery and was a large animal clinician until his resignation in 1951. Dr. Howell remained as a small animal clinician and taught courses in small animal medicine and surgery until 1963 when he resigned.

The losses to Oklahoma State University were partially offset in 1948 when Dr. D. V. Benson came from Stillwater to teach microscopic anatomy. In 1952 he transferred to Veterinary Medicine and Surgery where he remained until 1955 when he resigned to enter practice at Fayette, Missouri.

Two newly graduated Ohio State University alumni became faculty members in 1949. Dr. L. D. Kintner was in veterinary pathology and Dr. W. M. Moore was an ambulatory clinician. The latter resigned after one year to enter practice in Dayton, Ohio. Dr. Kintner is professor of veterinary pathology and is recognized as a leader in the field. Dr. S. C. Benbrook, an Iowa State University graduate and son of Dr. E. A. Benbrook who was a long time member of the Iowa State faculty, became a member of the Veterinary Bacteriology Department in 1949. He did the poultry diagnostic work until 1950 when he was recalled to active duty in the Army Veterinary Corps where he remained as a career officer.

Dr. Durant made another wise move when he induced Professor B. B. Roseboom, the retired head of the Veterinary Physiology Department at Michigan State University, to come to Missouri. Professor Roseboom was recognized as an outstanding teacher of animal physiology. Unfortunately at that particular time Mrs. Roseboom was critically ill and remained so until her death early the next year. This delayed Professor Roseboom's arrival for more than a semester and seriously complicated the problem in the Veterinary Physiology Department. Dr. Uren who was teaching veterinary pharmacology volunteered to also teach the course in Veterinary Physiology until the arrival of Professor Roseboom.

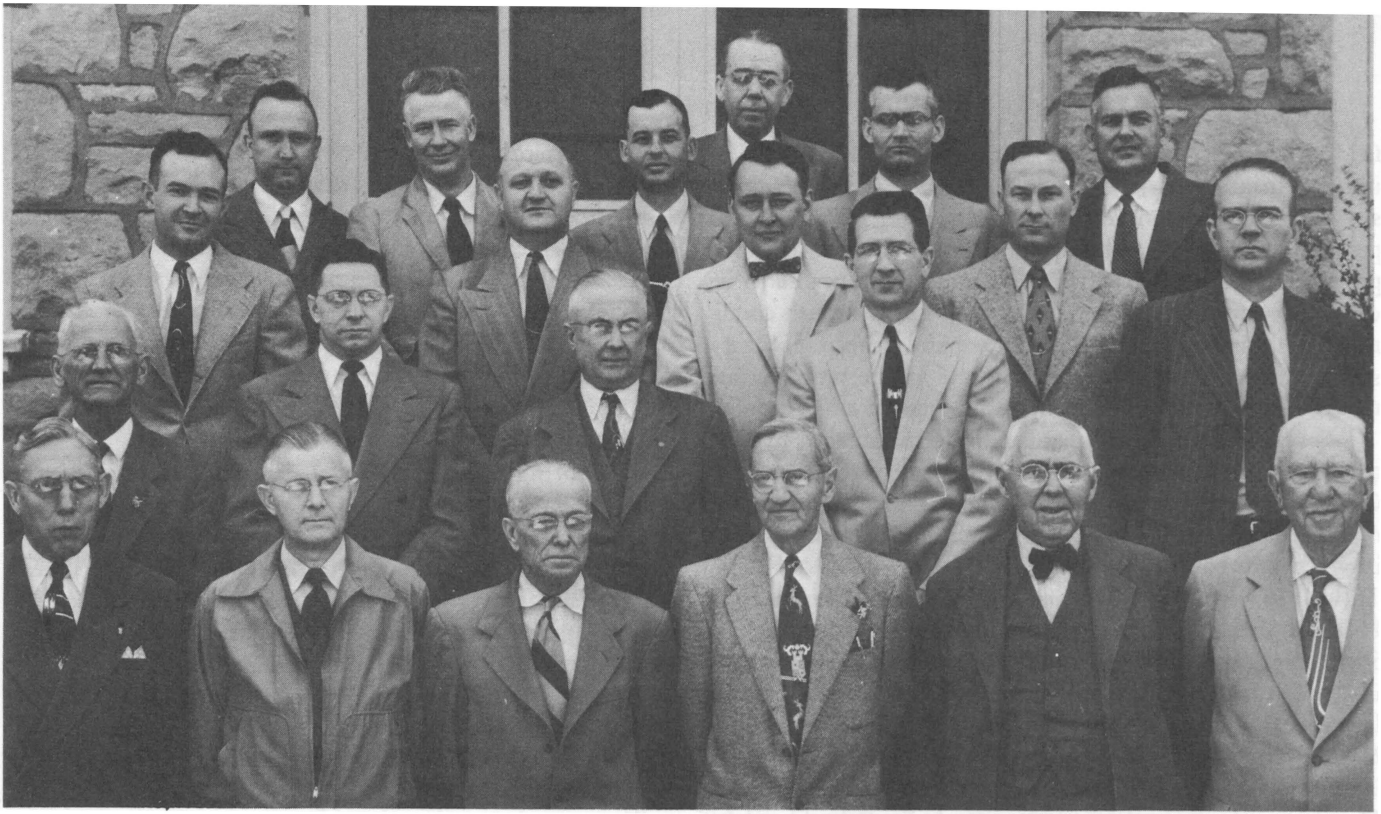
This was typical of Dr. Uren's long service to the University and to the profession. It was also typical of the attitude of all members of the faculty during the early years that the School of Veterinary Medicine was struggling to exist. Dr. Uren and Professor Roseboom continued to teach until a few days before their deaths. Professor Roseboom died in April, 1956 and Dr. Uren in October, 1960. Both men were within a few months of retirement.

The class which had been admitted in 1946 was to be graduated in June, 1950. Some notable progress had been made in bringing together a faculty that included several competent teachers and in acquiring some of the essential equipment. However, there was growing concern on the part of the fourth-year class and on the part of other classes and the faculty over the potential value of their degrees following graduation. Development of the clinical program had not kept pace with the recommendations of the Council on Education and the University administration had not acted to meet some of the "Essentials of An Acceptable Veterinary Medical School." Rumors were being circulated that the first graduates would have no more status than non-graduates, and that they would be limited to two or three states in which they could be licensed to practice their profession. A particular reason for concern was the failure of the Board of Curators to take any action that would give a School of Veterinary Medicine some official status in the University plan of organization. The teaching program was still in the Department of Veterinary Science in the College of Agriculture.

During the period when the program in veterinary medicine was being expanded the College of Agriculture had experienced a tragic loss in the death of Dean E. A. Trowbridge, who had been in that position only a short time. His illness and death placed additional responsibilities on Associate Dean Sam B. Shirky who was already burdened with more than his share of problems. To succeed Dean Trowbridge, the University was fortunate in securing Dr. John H. Longwell, who left the Presidency of North Dakota Agricultural College to return to his alma mater. Dr. Longwell was an experienced administrator who was familiar with the University of Missouri and with the problems of the state.

In the summer of 1949, Dean Longwell was authorized to proceed with plans to effect a more formal organization of the veterinary medical program. One of the first steps was to appoint a director who would head the school. Dr. Durant and several other members of the original faculty were not interested in the position. Two or more men at other institutions were contacted. The first person that was offered the position accepted but later decided to remain in his present position when the salary offered at Missouri was met by the institution where he was then employed.

I was among the others who were contacted. In the letter which I received from Dean Longwell on July 26, 1949 he stated: "The School of Veterinary Medicine has just finished its third year of instruction and will have the full



Veterinary Medical Faculty—1950.

four-year curriculum in operation this next school year, with the first men graduating in June, 1950. The organization here consists of a Division of Agricultural Sciences, which includes the College of Agriculture, the Agricultural Experiment Station, the Agricultural Extension Service, the School of Forestry, the School of Home Economics, and the School of Veterinary Medicine. This Division will be under the direction of a Vice President in charge of Agricultural Sciences. The Director of the School of Veterinary Medicine will be responsible to this Vice President but will have ready access to the President in case he so desires. The Director will be a member of the University Committee of Deans. He will be responsible for the teaching and research program in Veterinary Medicine. As indicated by this organization, we want to keep Veterinary Medicine rather closely associated with Agriculture and the Agricultural Experiment Station.

"We would like, if possible, to have the Director start work on September 1st. The staff is practically complete, and we plan to have the school in shape to be inspected by the Council on Education of the American Veterinary Medical Association some time during the fall."

When I visited the University of Missouri late in August I had a brief session with Dean Longwell who then turned me over to Dr. Durant. He took me to Connaway Hall where I met a few faculty members and to the temporary building that was being prepared for the clinical facility. When Associate Dean Shirkey became available I was escorted to the office of the President where I met Dr. Elmer Ellis, Dean of the College of Arts and Science and Acting President, while President F. A. Middlebush was on vacation. Dr. Ellis knew very little about the situation and referred questions to Deans Longwell and Shirkey.

In spite of some misgiving I decided to accept the position and reported for duty on October 1st. While assurance had been given that the Board of Curators was agreeable to the plan of organization and would approve it at the October meeting, it was not until December that any action was taken. Then, instead of a Division of Agricultural Sciences being headed by a vice president, it was headed by a director. The office was filled by Dean Longwell, who retained the title, dean of the College of Agriculture. So, while a School of Veterinary Medicine was formally established, it was still actually under the dean of the College of Agriculture. This was a major disappointment, but so many things needed to be done before the visit of representatives of the A.V.M.A. Council on Education, which was scheduled for early in January, 1950, that there was not sufficient time to accomplish all of them. One of the most important needs was to strengthen the clinical part of the program. Arrangements were made with Dr. Stanley N. Smith, who had practiced in Columbia since 1892, to purchase his equipment and to appoint him to the faculty. Since Dr. Smith was past the age of retirement from the faculty, he could not be appointed at any of the academic ranks, so he was appointed as a special lecturer and clinician. Dr. Smith moved to the campus and we were assured of a reasonable number of both large and small animal cases and the ambulatory clinic became a reality. Assurance had been given that arrangements had earlier been made for Dr. Smith to join the faculty, but no agreement had been reached. It was also necessary to secure additional equipment and to renovate Connaway Hall, as well as complete some of the remodeling and construction that was in progress.

In spite of the often frustrating and disappointing ex-

periences, there were some bright moments. It was fortunate that we had men of the caliber of Deans Longwell and Shirky in their respective positions, for while they did not understand many of the problems involved in veterinary medical education, they were familiar with University administrative problems and procedures, and with Missouri problems as well. Quite probably our problems received a much more sympathetic hearing than they would have received through direct contact with the Office of the President.

The members of the A.V.M.A. Council on Education, Drs. James Farquharson, W. A. Hagan and W. A. Airken, who made the evaluation were helpful and understanding. President Middlebush was advised in a session with these men that while the plan of organization was not entirely acceptable, the designation School of Veterinary Medicine, was satisfactory. They recommended that the title of the head of the School be changed from director to dean. The Board took such action at its next meeting. While this corrected a certain deficiency, it resulted in one dean being administratively responsible to another dean.

The report of the Council recognized many deficiencies in the School, made a number of helpful recommendations, and placed the School on probationary approval. While this action relieved the primary concern of the class that was about to be graduated by allowing its members to take licensing examinations in most states, it also had some undesirable effects. The action was accepted by the president, the Board of Curators, and the General Assembly as the answer to all of the problems. It remained difficult, in fact almost impossible, to obtain any funds with which to carry out the recommendations of the Council. The few members of the legislature who visited the School were convinced that Missouri had a School of Veterinary Medicine second to none and they would tell with great pride of the important part that they played in providing the original appropriation of \$240,000. This was understandable for none of them had seen another such school.

The officers of the M.V.M.A., especially President A. D. Glover who had been one of my students at Colorado State University, and Secretary John L. Wells, were most helpful and cooperative. This was also true of the veterinarians who have succeeded them in these offices. The loyalty and dedication of the faculty and student body were also a source of much satisfaction and helped immeasurably in overcoming some of the many obstacles. The students were largely veterans of World War II who were mature and had a definite purpose in attending the University. Teaching to such students was an interesting and challenging experience.

Commencement Day for the 26 members of the first graduating class was June 6, 1950. The date is significant for several reasons: the exercises were the first such to be held in Memorial Stadium, President Harry S. Truman was the speaker (he also was awarded an honorary degree), a hard rain fell before President Truman completed his address, and a record was set in elapsed time for conferring degrees. In spite of the rain and the haste, President Middlebush did

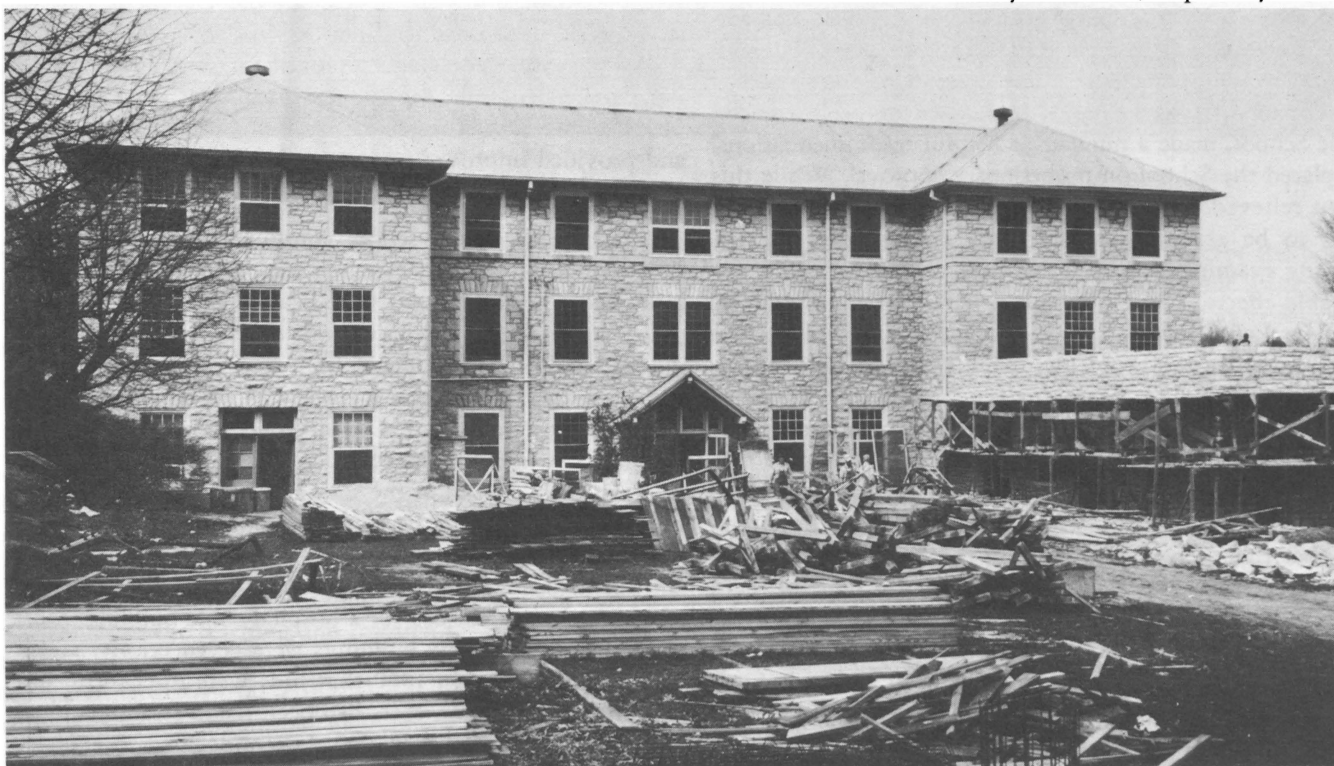
state, "and for the first time in the history of the University of Missouri, the degree, Doctor of Veterinary Medicine."

All members of the class took the state board examinations in Missouri and all of them passed with very creditable grades. Several took such examinations in a number of other states and all of them received their licenses to practice. One member of the class made the highest average of all those who took the examinations in Kansas that year. Nineteen of the 26 chose to remain in Missouri to practice. All members of the class except one are still living (1968) and every one of them is a credit to his school and to his profession.

One of the strongest recommendations of the Council on Education was that the faculty be strengthened in the clinical area. It especially recommended that an experienced practitioner be appointed to develop this area. We were fortunate in being able to get Dr. E. F. Ebert in 1950 to accept the appointment. A graduate of Colorado State University, he had been in general practice in the Kansas City area for several years and had employed a number of students during their summer vacations. His appointment gave the other members of the clinical staff stability and direction and provided improved instruction of third and fourth year students.

The needs of the school continued to be many and varied. Additional faculty members was one of the most important needs and some funds were made available for this purpose. But there was a definite limit on expansion because of the inadequate physical plant. Each time the budget request was presented, it included a request to provide funds for a hospital-clinic building. Our division, however, was not alone in the need for more space. Every other division of the University and all of the state-supported institutions had similar needs. To partially solve this problem, a \$75,000,000 bond issue was approved in 1956. The University received a fair but inadequate share of the funds. It included \$800,000 of a requested \$1,000,000 for a hospital-clinic building. Most of the other University buildings were given priority and it was not until late in 1960 that bids were opened on our building. Construction costs had been rising steadily and all of the bids exceeded \$800,000. It was decided to exercise several options and proceed with construction, even though it would result in an unfinished building. Only the first floor could be used and while it lacked a great deal of being completed, it could be used and it was occupied in the fall of 1961. Dedication ceremonies were held on Sunday, October 29, 1961. President James A. McCain of Kansas State University was the principal speaker. The 37th Annual Conference was held on October 30 and 31. Following the dedication, upper-class students conducted tours of the building and members of the Women's Auxiliary to the Missouri Student Chapter of the A.V.M.A. served refreshments in the lobby. An additional appropriation was requested of the next General Assembly to permit completion of the building. The \$190,000 that was provided made this possible in the spring of 1964.

Funds had been regularly requested to remodel and add to Connaway Hall, but it was not until 1961 that an appropriation was made. The \$260,000 that was provided would permit only part of desired expansion and in 1963 the National Institutes of Health provided a grant of \$198,484 to supplement the state funds. Again, rising costs of construction made it impossible to add all of the space that was originally planned. It did permit the adding of two stories to the one-story wing that had been constructed in 1948 and to build a two story wing at the opposite end of Connaway Hall. It also provided for extensive changes of the original building. After construction had been completed on the two-story west wing, the University administration made sufficient money available to add a third story, but not to finish the interior. So, after graduating 14 classes in very inadequate facilities, it appeared that faculty and students could look to the future with more optimism.



Remodeling of Connaway Hall—1948.

Construction on the changes in Connaway Hall did not get under way until the fall of 1964, with most of it being completed in the late summer of 1965. However, the remodeling of the main building has been almost a continual process. When funds become available the unfinished third floor of the west wing will be the next to undergo completion.

As indicated there were a few additions to the faculty between 1951 and 1963. In Veterinary Anatomy they were: Drs. W. W. Crenshaw, M. K. Wykoff, R. C. McClure, P. D. Garrett, and F. R. Preuss; in Veterinary Microbiology:

Drs. M. E. Taylor, P. M. Newberne, E. L. McCune, D. C. Blenden, R. W. Loan, and F. W. Clayton; in Veterinary Medicine and Surgery: Drs. C. J. Bierschwal, D. V. Benson, J. T. McGinity, W. P. Blake, J. E. English, K. H. Niemeyer, T. A. Farmer, L. G. Tritschler, J. H. Moser, E. R. Bacallo, and A. W. Dobson; in Veterinary Pathology: Dr. H. B. Wright; in Veterinary Physiology and Pharmacology: Drs. A. D. Allen, H. E. Dale, L. E. Davis, E. D. Kearley, S. D. Beckett, R. P. Botts, C. M. Cornell, and A. W. Merrick. Some of them remained only a year or two, but all of them made, or are making, valuable contributions to the training of the various classes.

In the fall of 1963 Dr. Cecil Elder, chairman of the Department of Veterinary Pathology, reached the mandatory retirement age. He had been on the faculty since 1931 and had contributed in many ways to the University and to the School of Veterinary Medicine, especially during

its formative years. I had also reached the age at which I would be relieved of administrative responsibilities, although I would be permitted to continue as a member of the faculty. President Elmer Ellis appointed a committee of three members of our faculty to screen prospective candidates for the position. The committee recommended the appointment of Dr. Burnell W. Kingrey, professor and head of the Department of Veterinary Medicine and Surgery and director of Clinics at Iowa State University. Dr. Kingrey accepted the appointment and became the second dean of the School of Veterinary Medicine on September 1, 1963.

At the time of Dr. Elder's retirement his successor had not been appointed and I served as acting chairman of the Department of Veterinary Pathology until the spring of 1964 when Dr. Lawrence G. Morehouse came from the staff of the National Animal Disease Laboratory to fill the vacancy.

When the clinical activities moved to the new building in 1961 it was possible for the Department of Veterinary Physiology and Pharmacology to take over almost all of the space in the building that had been shared by two departments. This involved a certain amount of remodeling and here again this has been rather a continuing process. Notable changes have included conversion of the small animal ward into a research laboratory and making office-laboratories out of space formerly used for student dormitories and the clinical pathology laboratory. Probably the most important change involved the move of the School Library from the third floor of Connaway Hall to the large class room in the Veterinary Sciences Building, as it is now designated. With the added space and an increase in the operating budget, it was possible to appoint several more faculty members in all of the departments. These progressive steps have made it possible to increase the size of each first-year class and in the fall of 1965 the class was doubled by the admission of 60 instead of 30 students. This not only made it possible to accept more of the qualified Missouri applicants but also to admit a few highly qualified non-residents. In selecting the latter, preference has been given to applicants from states that have no school and especially to such states that border Missouri. It has also resulted in more women students being admitted.

An important and valued appointment to the faculty was Dr. Leslie C. Murphy as director of Research Development, who came from the National Institutes of Health. His responsibilities include providing assistance in preparing research proposals and the subsequent applications to granting agencies for funds to support the research. His efforts have been so effective that within a three-year period

grants from the National Institutes of Health exceeded the \$100,000 minimum required to qualify the School for a General Research Support Grant. For the calendar year of 1967 this amounted to \$50,311. Not only has the availability of funds from granting agencies made it possible to expand research activities, but it has also provided support for additional graduate students. Four basic departments now offer work leading to the doctor of philosophy degree. All of the five departments have master of science programs.

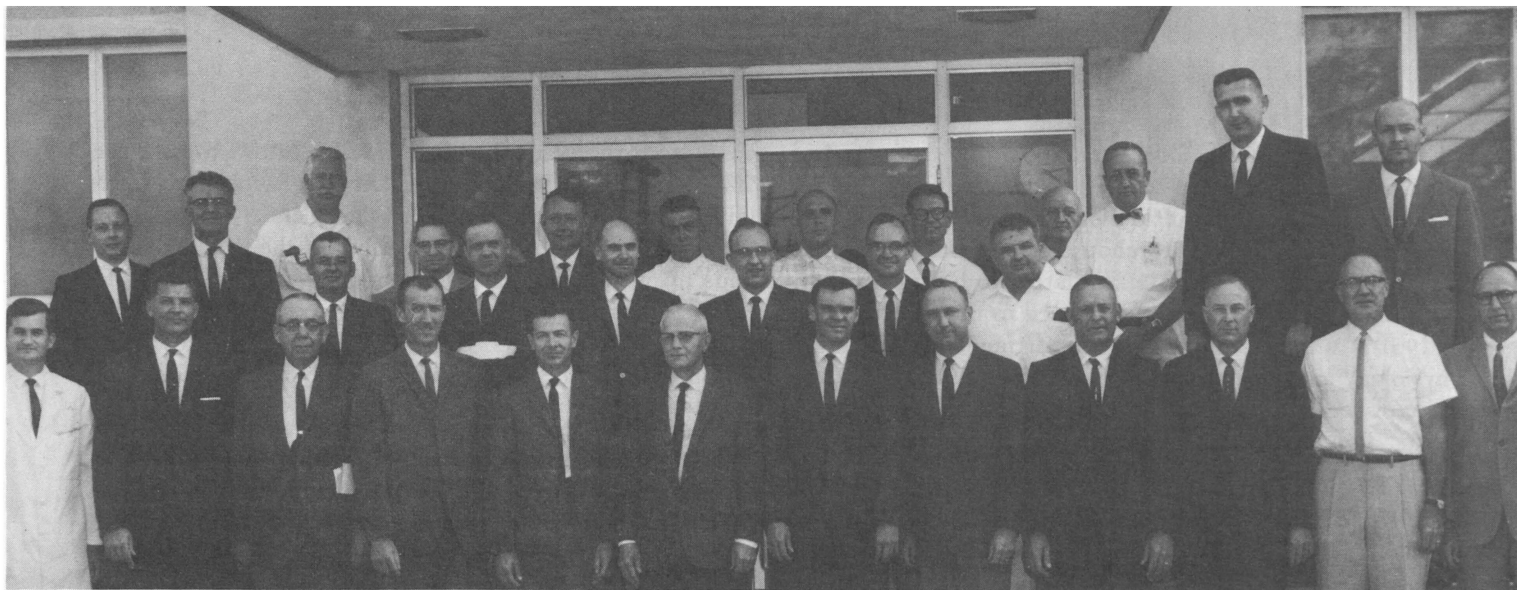
Another important faculty appointment was that of Dr. Fayne H. Oberst as director of Veterinary Medical Extension and extension veterinarian. This partially filled a void that had existed since 1948 when Dr. A. W. Uren returned to the resident teaching staff. This is discussed at greater length under Continuing Education.

The attitude of the physicians on the faculty in the School of Medicine and in Boone County to the School of Veterinary Medicine was in direct contrast to that of many of the Missouri veterinarians. Dr. Trawick Stubbs, who was then dean of the School of Medicine, was most cordial and offered to be of all possible help. The same was true of the members of the Boone County Medical Society, who invited members of our faculty to provide the speakers at one of the monthly meetings of the Society. At a later date the society members were guests of our faculty at the School of Veterinary Medicine. When Dean Stubbs was succeeded by Dr. M. P. Neal as acting dean the two schools cooperated in sponsoring a University Lecture, primarily for students and faculty in medicine and veterinary medicine. Faculty members in similar subject matter fields began to confer and to exchange ideas. From the very beginning, our students and faculty were granted use of the Medical Library.

With the appointment of Dr. Roscoe L. Pullen as dean of the School of Medicine and the expansion of the medical

Veterinary Clinic—Hospital





Veterinary Medical Faculty—1965

program to four years, cooperation and collaboration was slowly extended. The medical faculty was rapidly increased as the new buildings were planned and eventually completed. Members of our faculty were on the committee which planned the laboratory animal facility for the medical school. When the campus was visited by a site selection committee for the proposed National Animal Disease Laboratory, Dean Pullen took an active part in the activities. He was present at the earlier hearings which the committee held in St. Louis.

Dr. Vernon E. Wilson succeeded Dr. Pullen as dean in 1960 after having been associate dean of the University

of Kansas Medical School. He had worked closely with the School of Veterinary Medicine at Kansas State University and had developed an understanding of veterinary medicine that is equalled by few physicians. One of his early moves was the appointment of a veterinarian to take charge of the laboratory animal facility, with a dual appointment to our faculty. This led to other dual appointments in both faculties and to greater cooperation in post doctoral training programs. A training program in Laboratory Animal Medicine utilizes the Medical Center facilities.

Veterinary Medical Research

Much of the recognition gained by Drs. Paquin and Connaway resulted from their research on Texas fever, black-leg, hog cholera and brucellosis. For years it evidently was possible to maintain a reasonable balance in time and effort spent on research, teaching and service, but this situation changed after World War I. The service and teaching loads steadily increased, but research funds failed to increase. During this period a few experiment station projects were maintained on diseases of poultry and swine as well as parasites of cattle and sheep.

With the added responsibility of developing the four-year program it was necessary to curtail the research effort until it was almost nonexistent. Funds did not permit the addition of faculty members to continue or expand research. The small amount of experiment station money was mostly used for salaries with little left for operating funds. Also some of the space which had been used for the research activities was converted to teaching areas. Thus, the period following World War II was frustrating and disappointing as far as research was concerned. In spite of this, some progress was made. A few modest grants from commercial and federal organizations supplemented the experiment station funds and made possible some studies on leptospirosis, enteric diseases of swine, diseases of turkeys, and a limited amount of clinical research. Even if funds could have

been secured to add faculty members, there was no space available in which they could work.

With the completion of the Veterinary Hospital-Clinic and the renovating of Connaway Hall in the early to mid-1960s, the space situation was markedly improved. This made it possible to increase the size of classes, as well as to recruit additions to the faculty. Dean B. W. Kingrey was able to take some constructive action that had a most stimulating effect on the overall research efforts in the School. This action included the appointment of Dr. L. C. Murphy as director of Research Development, convincing the University administration of the need for an increased research budget, and the addition of several well-trained young faculty members. Additional technical and clerical staff members were also added. Another important action was the establishment of a Research Council, with Dr. Murphy as chairman and one member from each of the five departments.

The responsibilities of the Research Council are:

- to organize administration procedures for research funds,
- to organize administration procedures for non-departmental research space,
- to recommend allocation of undesignated research money, and,
- to design a long-range Research Facility Construction Plan.

Funds for research became available from four categories

of sources: 1) Veterinary Medicine Research Expense and Equipment, 2) Agricultural Experiment Station, 3) Grants and Contracts and 4) Gifts. Funds from each of these sources have increased at a rapid rate, with those from Veterinary Medicine Research E & E and Grants and Contracts providing the largest increases. Highly significant was the eligibility of the School for a General Research Support Grant by the National Institutes of Health. To be eligible a School must have a minimum of \$100,000 in N.I.H. grants during a fiscal year and present a varied research program.

With a more favorable financial situation, it has been possible to add to and improve the physical facilities which are devoted to research. At the Research Farm (Old Serum Plant), buildings have been added and remodeled and much needed equipment has been purchased. Dr. D. E. Rodabaugh serves as supervisor of the facilities at the farm. More than a dozen projects have utilized the facilities at the farm during a fiscal year.

In 1964, the University acquired a 563-acre farm located southwest of Columbia, which is now known as the Sinclair Comparative Medicine Research Farm for Aging and Chronic Diseases. The facility is used by researchers who are participating in the Interdivision Health Related Research Program. Dr. Murphy is chairman of an Advisory Committee

to the director of Sinclair Farm. Also on the Committee is Dr. R. B. Wescott of the veterinary medical faculty. Dr. C. C. Middleton, also of the faculty, is director of the farm. A substantial U.S. Public Health Service grant has effectively supplemented University funds and permitted a rapid development of the facility.

Other University research facilities and programs which are available to and participated in by divisional faculty members include: The Research Reactor, the Low Level Radiation Laboratory, the Environmental Health Program, the Laboratory Animal Welfare programs and the Missouri Regional Medical Program.

The research budget has increased from approximately \$90,000 in the Fiscal Year of 1963-64 to an estimated \$1,275,000 for the Fiscal Year of 1967-68. In 1967 research projects involved 60 members of the professional staff with 41 supportive staff members also working on these projects. There are presently 54 graduate students in the School of Veterinary Medicine and for the following year an estimated 60-65. Seven graduate students are presently receiving support through special and post-doctoral fellowships provided by the Public Health Service. Four of the five departments offer programs leading to the master of science and doctor of philosophy degrees. The other has a master of science program.

Regulatory Programs and The University of Missouri

Veterinarians at the University have been concerned with and involved in animal health regulatory programs since 1885 when the legislature established the Office of State Veterinarian and appointed Dr. Paul Paquin to serve in that capacity.

This action was no doubt stimulated by the widespread prevalence of bovine pleuropneumonia in Illinois and in other parts of the country. While the disease did appear in Missouri (the State Hospital herd at Fulton) it was promptly diagnosed and eradicated without spread to other herds.

Originally and for many years, the state veterinarian was responsible to the State Board of Agriculture and to the dean of the College of Agriculture. The office was located on the University campus and the state veterinarian was expected to give some lectures to students and to work in the laboratory that had been established by Dr. Paquin. However, his principal responsibility was to investigate disease in livestock and to help control such diseases. This involved using available vaccines, disposing of carcasses, and making recommendations for improved sanitation on the premises. There were no state laws or regulations other than those that applied to moving cattle from tick infested areas, and these were largely an understanding between the involved states.

When Dr. Paquin left Missouri to accept a position at Battle Creek, Michigan, Dr. T. J. Turner was appointed state veterinarian. *The Bacteriological World*, which was es-

tablished and for a time edited by Dr. Paquin, reported in late 1891 that Dr. T. J. Turner, state veterinarian of Missouri, attended a meeting of the United States Veterinary Medical Association in Washington, D.C. Dr. Turner was elected secretary of the Association and in 1894 he was elected vice president, representing the midwestern segment of the profession. In 1895-1896, Dr. T. A. White was professor of veterinary surgery and lecturer in veterinary surgery (in service of the State Board of Agriculture) and probably the state veterinarian. He evidently continued in the position until 1900. The first meeting of the Interstate Association of Livestock Sanitary Boards was held in Ft. Worth, Texas on September 27-28, 1897. Missouri was represented by J. W. Hill and J. W. Connaway. Hill was not identified but he probably represented the State Board of Agriculture. R. J. Kleberg of the King Ranch in Texas and a member of the Texas board was responsible for calling the meeting, principally to get information on the results of experimental dipping of cattle to remove ticks. These experiments had been underway for some time at the Ft. Worth stockyards and were a joint effort of the U.S. Bureau of Animal Industry which had been established in 1884, the King Ranch, the Stockyards Company, and Dr. Mark Francis of the Texas Experiment Station.

The states that were represented at the meeting were: Illinois, Kansas, Missouri, Nebraska, Texas, Colorado, and Oklahoma Territory. Representing the U.S. Bureau, Dr.

Victor A. Norgaard told of his experiences in dipping cattle on the King Ranch. Mr. Kleberg had observed earlier that cattle which he had dipped to relieve itch had lost many of the ticks that were on them.

Dr. Mark Francis was the first to use oil for dipping cattle to remove ticks and Dr. Connaway also had been experimentally dipping tick infested cattle. Dr. Connaway discussed his experiments and referred to the work of Dr. Francis who was not at the meeting. Connaway and Francis had cooperated on much of their tick research.

The quarantine lines that were in effect and the dates during which cattle were permitted to move from infested to clean areas were also discussed. It was hoped that by dipping cattle from infested areas, the ticks would be removed and would not be carried to clean areas where they would infect susceptible cattle.

The Ft. Worth meeting was a most significant occasion because it brought together regulatory officials, cattlemen, and research veterinarians, and it resulted in the eventual formation of the U.S. Livestock Sanitary Association. It also brought to the attention of people in other states the progressive and effective research by Dr. Connaway through the Missouri Experiment Station.

Regulatory veterinary medicine in Missouri really began when Dr. D. F. Luckey was appointed state veterinarian on January 15, 1900. Dr. Luckey was a native Missourian orphaned at the age of 10 years and who had worked as a farm laborer for 50 cents a day so that he could attend Central Missouri State College. Following graduation, he taught school in several Missouri communities, including Aurora where he served as principal. With money that he saved, he entered the Ontario Veterinary College, which was the first veterinary college to be established in North America. He was graduated in 1898 and returned to Missouri to enter private practice until his appointment as state veterinarian.

During 1907-1912, glanders was prevalent among the horses of the state, especially in Kansas City and St. Louis. Dr. Luckey, with the cooperation of the veterinarians in the two cities waged a campaign for its eradication and finally through use of the mallein test, brought the disease under control.

In addition to launching several programs on the control and eradication of livestock diseases in Missouri, Dr. Luckey took an active part in the affairs of the U. S. Livestock Sanitary Association. In 1901 he presented a paper on "Texas Fever," in 1902 he discussed "The Control of Texas Fever," and in 1903 he responded to the Address of Welcome and was elected a vice president of the Association. In 1904, when the meeting was held in St. Louis, he gave the Address of Welcome. He discussed a paper given by Dr. Leonard Pearson of Pennsylvania on "Tuberculosis and the Use of Tuberculin," in 1905. The paper that he presented in 1906 was entitled, "Obstacles in the Way of Controlling Tuberculosis in Cattle." He was president of the Association in 1907. During his administration he campaigned vigorously for the eradication of fever ticks. Dr. Tait Butler of North Carolina was a strong supporter for tick eradication. Dr. A.

D. Melvin, chief of the U. S. Bureau of Animal Industry was convinced that this could be accomplished and an eradication program was soon started. Dipping of cattle in Missouri was initiated in 1908.

For several years, Dr. Luckey had been concerned about the limitations of the subcutaneous tuberculin test. Being convinced that the intradermal test had many advantages, he authorized its use in 1908 in Missouri and in 1911 it was approved as the official test in the state. Several midwestern and western states adopted the intradermal test, but it received little support in the eastern states. It was not until cattle owners in Pennsylvania and New York demanded its use that it was finally adopted by the Bureau of Animal Industry in 1921.

Dr. Luckey was also largely responsible for the first legislation to regulate the practice of veterinary medicine in Missouri which was passed in 1905. He held Missouri license Number 2, and was a member of the examining board for many years.

When foot and mouth disease appeared in 1914-1915 causing large losses in Illinois and other midwestern states, Dr. Luckey initiated the system of deputizing practicing veterinarians to represent his office. He also placed guards on all bridges and ferries that crossed the Mississippi River into Missouri. By these actions he was successful in keeping the state free of foot and mouth disease.

His service as state veterinarian ended in 1913, but he returned to that office in 1914 and continued until 1922 when he became associated with the East St. Louis Livestock Exchange. Later he served briefly on the staff of Ft. Dodge Laboratories. Dr. Samuel Sheldon of Trenton served as state veterinarian during the one year that Dr. Luckey was not in office.

Much belatedly, in 1944 Dr. Luckey was recognized for his efforts in the improvement and eventual adoption of the intradermal test for tuberculosis when he received the 12th International Veterinary Congress Award. Had it not been for Dr. Luckey's faith in the test and his persistence in promoting it, the control and eradication of bovine tuberculosis would have been greatly delayed.

Dr. Luckey and Dr. Connaway were closely associated for many years, and while they did not always agree, both were men of great vision and in many respects years ahead of their time. Hog cholera eradication, which was always advocated by Dr. Connaway, did not receive Dr. Luckey's support until his later years. In 1950 when Dr. Luckey received his past president's key at the meeting of the U. S. Livestock Sanitary Association in Phoenix, Arizona, he urged that hog cholera be eradicated and that no time be lost in starting. Most of his last years were spent in waging a one-man campaign against hog cholera. He died at Tarkio, Missouri on May 3, 1956.

When the office of the State Board of Agriculture was moved from Columbia to Jefferson City in 1918, the Office of the State Veterinarian was also moved to the capital city. As a department of the state government, the respon-

sibilities became more regulatory than educational and promotional. In the early years of its existence, the State Board of Agriculture was a frequent critic of the College of Agriculture and there was often friction between them. This situation was eventually corrected and the relationship became quite harmonious. They cooperated in holding many "Farmers' Institutes" which were one- or two-day educational meetings for farmers held at different towns in the state. Some railroads also cooperated and the Farmers' Institutes were combined with Demonstration Trains which would make a number of stops at towns along the railroad. It was not until 1933 that the State Board of Agriculture was replaced by a State Department of Agriculture under a commissioner.

With the state veterinarian's office no longer on the Columbia campus there were fewer contacts with veterinarians on the faculty. However, the relationship remained good and there was cooperation in investigation of disease outbreaks and especially in doing the laboratory work, since there was no diagnostic laboratory in Jefferson City. All of the blood samples tested for brucellosis were handled in a laboratory in Connaway Hall until 1948 when a laboratory was made available in Jefferson City. At each short course and conference for veterinarians held at the University the state veterinarian was always on the program to discuss regulatory programs and to explain changes in regulations. Since 1950 he has been invited to speak to the fourth-year class on matters pertaining to his office. When Dr. Luckey left the office in 1922 he was succeeded by Dr. Homer A. Wilson of Malta Bend who served until 1934. Dr. Wilson continued the programs activated by Dr. Luckey and maintained contact with livestock and poultry producers by means of frequent articles in the publications of the State Board of Agriculture. He was popular with the practicing veterinarians and received excellent cooperation in enforcing laws and regulations.

Dr. Hugh E. Curry of Kansas City was the state veterinarian from 1934 until 1942. Area testing of cattle for tuberculosis was an important project of both Drs. Wilson and Curry. This was conducted even though there was strong opposition from many of the breeders of purebred beef cattle. Missouri attained the status of a Modified Accredited Tuberculosis state in the early 1940s.

Dr. John W. George of Harrisonville was appointed by the Republican governor and served from 1942-1945, at which time the Democrats again gained control of the governor's office. It was during the service of Dr. George that the first law to regulate livestock auctions was passed. Regulations provided under the law were promulgated and enforced. Interest in brucellosis control, especially in dairy herds, began to increase during this period and many herds were tested. Calf-hood vaccination against the disease was started.

Dr. Curry returned to the office in 1945 and served until 1953. Vesicular exanthema was widespread in the state during 1952 and 1953 proving to be one of the biggest problems with which Dr. Curry had to contend. There was grow-

ing pressure from dairymen to initiate an active program for the eradication of brucellosis. This eventually led to the appointment of Dr. Leonard A. Rosner in 1953. Legislation providing for a state-wide program was passed in 1954. This was one of the main projects during Dr. Rosner's tenure and it resulted in Missouri attaining Modified Certified Brucellosis status in 1963. Many of the laws regulating disease control were revised and updated under Dr. Rosner. The Hog Cholera Eradication Program was started although only moderate progress was made. Sheep scabies was a problem for all state veterinarians and it was not until the program was accelerated on a national basis that much progress was made. Missouri was declared a Scabies Free State in 1963 under the direction of Dr. Rosner.

In January, 1964 Dr. George C. Stiles of Windsor became the state veterinarian. He is the first alumnus of the University of Missouri School of Veterinary Medicine to hold the office. Progressive steps in the Hog Cholera Eradication program have been made under Dr. Stiles and there is a distinct probability that Missouri will attain the goal of Hog Cholera Free by 1970. The regulation of livestock markets has been an increasingly larger task, as there are more than 125 markets that are presently licensed as marketing centers for livestock.

The several veterinarians who have served as assistant and deputy state veterinarians have made valuable contributions to the regulatory programs. Worthy of special mention is Dr. Edward B. Ward of Perry and Jefferson City, who spent over thirty years as an assistant to Drs. Luckey, Wilson, Curry and Rosner. Dr. Harvey Young of Columbia and Dr. H. C. Tuck of Morrisville also had long periods of service. More recently Dr. Paul L. Spencer has served from 1951 to 1968 under Drs. Curry, Rosner and Stiles. During much of this period he also served as secretary of the Missouri Veterinary Medical Association and as secretary of the Missouri Veterinary Medical Examining Board. He is presently assistant superintendent of the Livestock Division for Illinois.

The federal regulatory agency which originally cooperated with the states on disease control was the Bureau of Animal Industry. It was authorized by an act of Congress in 1884 and Dr. D. E. Salmon was its first chief. Although livestock producers were experiencing heavy losses from a number of diseases for several years and the apparent need for a regulatory body at the federal level was clear, there was much opposition in Congress. Some congressmen feared that the federal agency would usurp the rights of the individual states and many of the members had a very poor opinion of veterinarians and the veterinary profession.

Congressman William H. Hatch of Missouri, chairman of the Committee on Agriculture in the House of Representatives to which the bill was referred, defended veterinarians and veterinary medicine. He referred to a number of foreign and American veterinarians, spelling out their scientific accomplishments and calling attention to the high regard in which they were held by other scientists. He conceded that

the profession was small and young, especially in this country, but he also predicted that it would grow and increase in stature if given the opportunity. The eradication of pleuropneumonia and later Texas fever proved the wisdom of Colonel Hatch's statements. His interest in agriculture became even more apparent in 1887 with the passage of the Hatch Act, which provided for establishing State agricultural experiment stations and also made funds available for their support.

During the extensive reorganization of the U.S. Department of Agriculture under the Eisenhower administration, the various bureaus were combined into the Agricultural

Research Service. Research and regulatory activities were divided into divisions, the one concerned with animal diseases being the Animal Disease Eradication Division. Under the Johnson administration the name was changed to Animal Health Division.

There is, and has been, good working relations with the federal agencies that cooperate in the several programs. The federal veterinarians in charge have been capable and dedicated regulatory veterinarians. Their services and the federal funds allocated to the various projects have had an important part in the success of the programs.

The Kansas City Veterinary College and The University of Missouri

The Kansas City Veterinary College began operation in October, 1891 and continued until the close of the 1917-1918 session. It was one of three schools which trained veterinarians at Kansas City, Missouri. The others were Western Veterinary College, 1897-1908 and University Veterinary College, 1902-1906. A fourth Missouri school was St. Joseph Veterinary College, 1905-1923 located in St. Joseph.

The K.C.V.C. graduated 1,789 veterinarians, almost twice as many as the total of the other three. Most of the early graduate veterinarians who practiced in Missouri were alumni of the college. These veterinarians, the officers of the college and faculty members of the college became active in the Missouri Veterinary Medical Association and in the various programs of the state that were concerned with animal diseases. They also soon dominated the politics of the M.V.M.A.

Most of K.C.V.C. graduates were men of high caliber who tried to provide the best possible service to the livestock interests, but this unfortunately was not true of all of them. The earliest graduates received their degrees after attending one term of six months. The instruction course was mostly lectures. In 1889 the requirement for graduation was changed from one to two terms of six months each with an optional third term without fee. In 1895 the directors of the college inaugurated a three-year graded course.

While the professional program was being upgraded, there was no apparent change in requirements for admission, as far as academic training was concerned. If a prospective student could read and write and had sufficient funds to pay his tuition, he was admitted. About the only source of income for the college was the tuition paid by the students. The officers and faculty, with few exceptions, received no compensation but earned their livelihood in private businesses. Some of them maintained private practices, others were employed by the city, state or federal governments, while still others were engaged in the production of biologicals, especially anti-hog cholera serum.

The Department of Veterinary Science at the University, even after the establishment of many of the private

veterinary colleges, continued to offer a number of courses in veterinary medical subjects to agricultural students. These included: veterinary anatomy; veterinary physiology; veterinary medicine and surgery; topographic veterinary anatomy; veterinary medicine; veterinary surgery and obstetrics; and contagious, infectious, and parasitic diseases of farm animals. A separate course in poultry diseases was also offered.

Most of these courses were required for students majoring in animal, dairy, or poultry husbandry. With the additional courses in nutrition and livestock management most of the graduates of the College of Agriculture were comparatively well qualified to cope with livestock disease problems and to compete with some of the early graduates of the private veterinary colleges. Furthermore, a high school education, or its equivalent, was required for admission to the four year curriculum of the University. Many of the early county agents were recruited from graduates of the University who had such a background of training.

The extension programs were not received with universal enthusiasm in all sections of the state. In many counties, the agents were viewed with suspicion by the farmers. Thus it was only natural for a county agent to use his knowledge of animal diseases to help gain acceptance. This, of course, led to misunderstandings with the veterinarians and criticism of Dr. Connaway and the University.

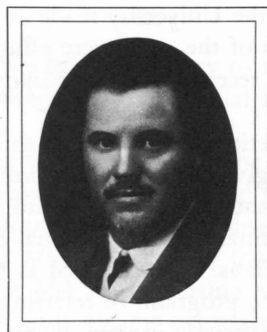
Another source of contention was the distribution of anti-hog cholera serum and virus to farmers and county agents. These products were of course also available to veterinarians, but many of the K.C.V.C. alumni were being pressured to buy their serum from commercially operated laboratories. In fact some of the practitioners were stockholders in commercial laboratories.

The Committee on Ethics of the M.V.M.A. in 1912 brought charges against Dr. Connaway and requested his resignation as a member of the Association. He was accused of refusing to sell serum to veterinarians, while selling it to farmers and agricultural graduates. He was also accused of encouraging his former students to take the examinations given by the State Veterinary Examining Board. The practice

A Tribute To Dr. Kinsley

Presented by . . .

DR. JOHN W. CONNAWAY, FEBRUARY 12, 1942, AT
CLOSING SESSION OF THE ANNUAL SHORT COURSE OF
THE MISSOURI VETERINARY MEDICAL ASSOCIATION
GIVEN AT THE UNIVERSITY OF MISSOURI.



Dr. Albert Thomas Kinsley

Reprint from K.C.V.C. Alumni Quarterly, March, 1942.

act did not require a degree in veterinary medicine to take the examinations. Another accusation was that Dr. Connaway "asserts that after schooling agricultural students six weeks they are more competent to practice veterinary medicine than the veterinarians."

The result of all of this was that Dr. Connaway's name was removed from the membership roll of the M.V.M.A.

Some years later he was cleared of the charges and reinstated as a member in good standing.

Dr. Connaway, of course, denied all of the charges and in a 14-page statement written in 1914, accused Drs. A. T. Kinsley and Sesco Stewart, President and Dean, respectively of K.C.V.C., with responsibility for inspiring the charges. This of course led to strained relations with the two Kansas City veterinarians. Drs. Connaway and Kinsley later became reconciled and on February 12, 1942, Dr. Connaway presented a fine tribute to Dr. Kinsley during the annual short course for veterinarians. This was shortly after Dr. Kinsley's death late in 1941.

In the 1914 statement by Dr. Connaway, he predicted that the private schools of veterinary medicine could not continue to compete with publicly supported schools in training veterinarians. He was convinced that the officers and alumni of the Kansas City school were well aware of this and they realized that the days of the private schools were numbered.

It is quite possible that the friction which developed as a result of this action on the part of the K.C.V.C. people, had considerable effect on the University giving serious consideration in 1914, to establishing a school of veterinary medicine. Dr. Connaway was apparently in favor of such action. There were indications that he had been quietly campaigning for such action over a period of years.

There was, however, no evidence that Dr. Connaway wanted a school of veterinary medicine to improve his personal position. It was rather because of his sincere and honest desire to provide veterinarians who were better trained and so would be capable of providing better service to the livestock producers of Missouri. This was typical of Dr. Connaway throughout his entire dedicated service. While he did live to see the establishment of the School of Veterinary Medicine at the University of Missouri, it was not accomplished until he had been retired for 14 years.

Continuing Education

Short Courses and Post-Graduate Conferences

Continuing education for veterinarians became a part of the University's program in 1925. Dr. G. G. Graham, for many years president of Jensen-Salsbery Laboratories, is credited with suggesting that a special short course for veterinarians be held as a cooperative effort of the University and the M.V.M.A. Dr. Graham suggested to Dr. Hugh McConnell, then president of the M.V.M.A., that if he wanted to do something constructive for the Association he should contact Dr. Connaway about holding such a short course. The University had been holding short courses for various groups for a number of years and Sam B. Shirky, who was associate dean of the College of Agriculture, was also superintendent of short courses. Evidently, he and Dean F. B. Mumford were agreeable to holding a short course for veterinarians and it was held in late December, 1925, extending over a

four-day period. Like the ones offered during the next several years, it was comprehensive in its scope.

It was not called a "Short Course" but a "Special Course for Graduate Veterinarians" which was given through the cooperation of the M.V.M.A. and the Missouri College of Agriculture. No mention was made of the Department of Veterinary Science. The back cover of the program listed "Committees on Arrangements" for the M.V.M.A.: Drs. Hugh McConnell, Horace Bradley, A. T. Kinsley, Stanley Smith and F. C. Cater, and for the College of Agriculture: Dr. J. W. Connaway, Professors E. A. Trowbridge, H. L. Kempster, A. C. Ragsdale, and A. J. Meyer.

The Group Outline of Topics consisted of:

Group I—Cattle Diseases and Cattle Husbandry

Group II—Swine Diseases and Swine Management

Group III—Poultry Diseases and Poultry Management
 Group IV—Diseases of Pet Animals—Dogs, Cats, etc.
 Group V—Diseases of the Horse and Sheep
 Group VI—General Topics—Evening Program

It was explained that: "It will be inconvenient to the instructors to carry out the daily schedule of the work in the exact serial order of the topics in the group outlines. The subject matter therefore of some groups will be spread over the four days of the session. A working schedule for each day will be prepared with the view of giving to each person in attendance the greatest amount of instruction possible in the limited time. These daily schedules will be furnished at the time of enrollment."

Certainly an effort was made to cover much territory. Group I, for example, included "lectures, clinical demonstrations, and laboratory practicums." The lecturers and demonstrators included some of the top talent of the day: Drs. John Adams of the University of Pennsylvania, R. R. Dykstra of Kansas State University, and E. T. Hallman of Michigan State University contributed to the program on cattle; Dr. A. T. Kinsley, Kansas City, on swine diseases; Dr. F. R. Whipple, Peoria, Illinois on pet animals; Dr. E. M. Nighbert, Zoological Division, U.S.B.A.I., on diseases and parasites of sheep; Dr. Stanley Smith, Columbia, on horses and mules; and Dr. Sivert Eriksen, Mountain Grove Poultry Station, on poultry. In addition to these all of the members of the Department of Veterinary Science and several other faculty members in the College of Agriculture contributed lectures or demonstrations. Evening sessions featured addresses by Dean Mumford, Dr. M. P. Ravenel of the medical faculty, Dr. Adams as president of the A.V.M.A., and Dr. H. A. Wilson as state veterinarian.

There were 57 in attendance that were photographed on the south side of Connaway Hall. Evidently the weather was favorable, as there was no snow and many posed without their top coats. Each one in the picture is identified by name and location.

A copy of the program for 1926 is missing but programs are available for most of the succeeding years. Contributors to the programs each year included leaders in the veterinary profession. The president of the A.V.M.A. appeared with considerable regularity. Frequently a past president or a future president of the A.V.M.A. would be on the program. Many of the speakers were present, past or future deans of schools of veterinary medicine. Outstanding practitioners in all of the specialties were always among those on the pro-

grams. In fact, year after year the list was a cross section of "Who's Who in the Profession."

Drs. H. E. Bemis, E. L. Quitman, I. E. Newson, Robert Graham, and R. A. Moore were among the "visiting specialists" in 1927. Those present in 1928 were Drs. Reuben S. Hilty, T. A. Sigler, R. R. Dykstra, Elmer Lash, and D. M. Campbell. In 1929 they were Drs. T. E. Munce, T. H. Ferguson, L. H. Pammel, Willard H. Wright, C. M. McBryde, J. V. Lacroix and H. Preston Hoskins. Each year several Missouri veterinarians also appeared on the program, as did members of the Department of Veterinary Science and other departments and divisions of the University. Dean Mumford was a rather regular speaker at evening sessions. Occasionally the president of the University made an address. Certainly the veterinarians of the state were afforded "red carpet" treatment and they received the latest information available to the profession.

In 1934 the meeting was reduced to three days in length. No explanation is given for this reduction. In 1935 for the first time, the designation was changed from "Special Course for Graduate Veterinarians" to "Annual Short Course for Graduate Veterinarians." It was titled as the *eleventh*. Also for the first time the program, in referring to the banquet, noted "ladies are especially invited, bring your wife." Traditionally, the president of the M.V.M.A. served as toastmaster at the banquet which was usually held at the Boone Tavern, now the Daniel Boone Hotel. For several years, through 1935, lunch was served at noon each day of the meeting in Room 108, Connaway Hall.

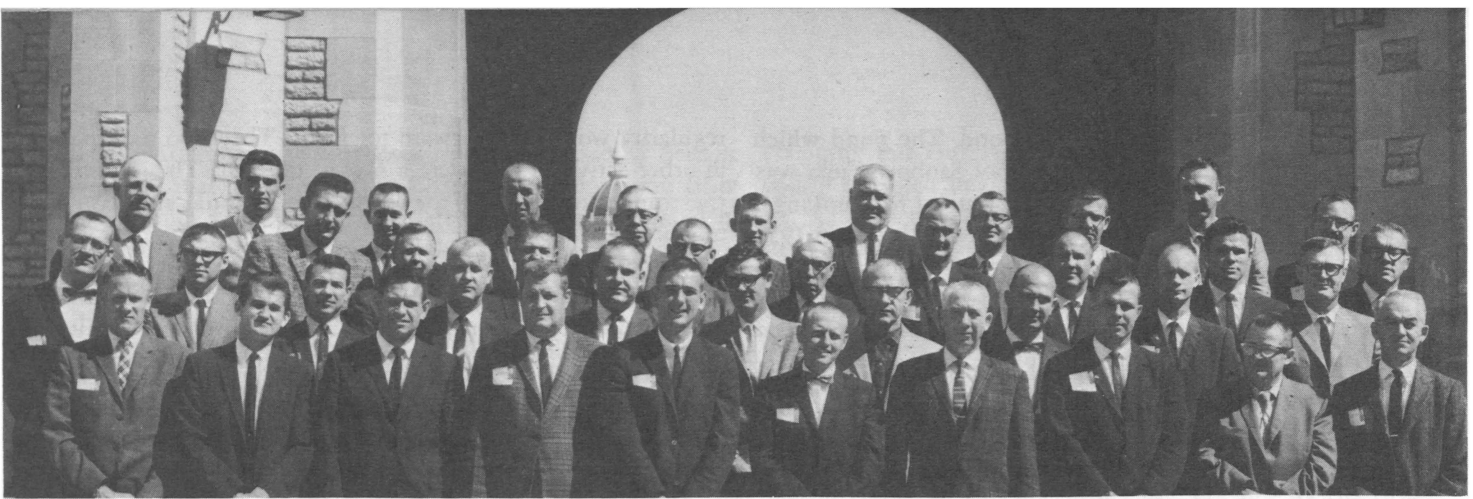
In 1937, Col. R. J. Foster who had been a member of the faculty in 1902-1903, returned to speak as president of the A.V.M.A. and chief of the U.S. Army Veterinary Corps.

Dr. J. D. Ray, who was connected with Kinsley Laboratories, served as secretary of the M.V.M.A. from 1926 until 1932 when he left Kansas City to join the staff of Corn State Laboratories in Omaha, Nebraska. He, with the members of the University faculty, had much of the responsibility for planning the programs during this period.

The program for 1938 announced that space was available for commercial exhibits. This announcement did not appear in the 1943 program. Apparently more veterinarians were bringing their wives to Columbia and in 1939 a tea for the ladies was held during the afternoon of the second day of the meeting. Wives of faculty members were hostesses for the tea, which for several years was held at the home of Dr. and Mrs. Cecil Elder. The wives of the veterinarians

Graduate veterinarians attending Veterinary Department special course on Dec. 28-31, 1925. (See Page 50 for identification)





Veterinary Medicine Short Course—1965.

had organized a Women's Auxiliary to the M.V.M.A. and were holding business as well as social meetings while in Columbia.

The 1943 programs showed that the meeting time had been shifted to November and reduced from three to two days. As World War II was still in progress, many veterinarians were in the armed forces, and those in practice were extremely busy. The M.V.M.A. meeting had been shifted to the winter months, so it became necessary to hold the short course at another time.

Some M.V.M.A. members felt that a fall meeting in Columbia and the winter state association meeting elsewhere brought the meetings too close together. The 1953 meeting was held late in June, but there were objections to a summer meeting. It was concluded that it was too hot and too close to the A.V.M.A. meeting. In 1954, the fall dates were resumed and while they are not satisfactory for everyone, the attendance has been consistently good.

In 1931, 1939, and 1940, special short courses on poultry diseases were held for the veterinarians. Attendance was in the twenties and for a time it seemed that there was some increased interest in poultry diseases. Unfortunately this did not last and eventually laymen and commercial laboratories became the principal sources of information on poultry problems.

A few other short courses in specialized areas have also been held. Subjects have included rabies, mycology, labora-

tory diagnosis, and evaluation of bulls for breeding soundness. There has been considerable interest in the latter subject, with the result that practitioners have been able to provide an additional valuable service to their clients. Several have also become proficient in pregnancy diagnosis and infertility problems. With the appointment of Dr. F. H. Oberst in 1964 as director of Veterinary Medical Extension, contacts with district associations were improved. Various faculty members and guest speakers discussed subjects of special interest to practitioners who attended these meetings. A number of short courses have been held in various parts of the state for livestock producers. Practicing veterinarians and other faculty and extension personnel have cooperated effectively in conducting such short courses.

Dr. Oberst accepted a position at Michigan State University in 1965. Following his departure there was an interruption in extension activities until 1966, when Dr. Terrence M. Curtin was appointed director of Continuing Education and Veterinary Medical Extension. Under his guidance plans were developed to hold short courses in several specialized areas for practitioners. Dr. Bonnard Moseley joined Dr. Curtin in 1967 as extension specialist and is still performing this job. In July, 1968 Dr. William F. McCulloch assumed the position of director of Continuing Education and Veterinary Medical Extension.

Student Organizations

Student organizations during the early years of the University consisted of two literary societies. They were most serious in their objectives, although they eventually provided an opportunity for some social activities on the part of their student members. There seemed to be little tendency on the part of students in the different colleges and departments to organize into clubs and it was not until 1904 that agricultural students formed an organization called the Agricultural Club. There also was organized during that year a Horticultural Club. This was to be expected as horticulture, with 182 students, had the largest enrollment in the College. Ani-

mal husbandry with 180 was a close second. There were 45 enrolled in veterinary science, but in the following year the number had increased to 133. In addition to the Horticultural Club, students majoring in other departments formed their own clubs; however, the Agricultural Club was considered the parent club which offered something to all agricultural students. For many years it was one of the most closely knit student organizations on the campus, with great loyalty among the members to one another and to the College. Many stories have been told of students from other divisions, who, when they wandered onto the white campus,

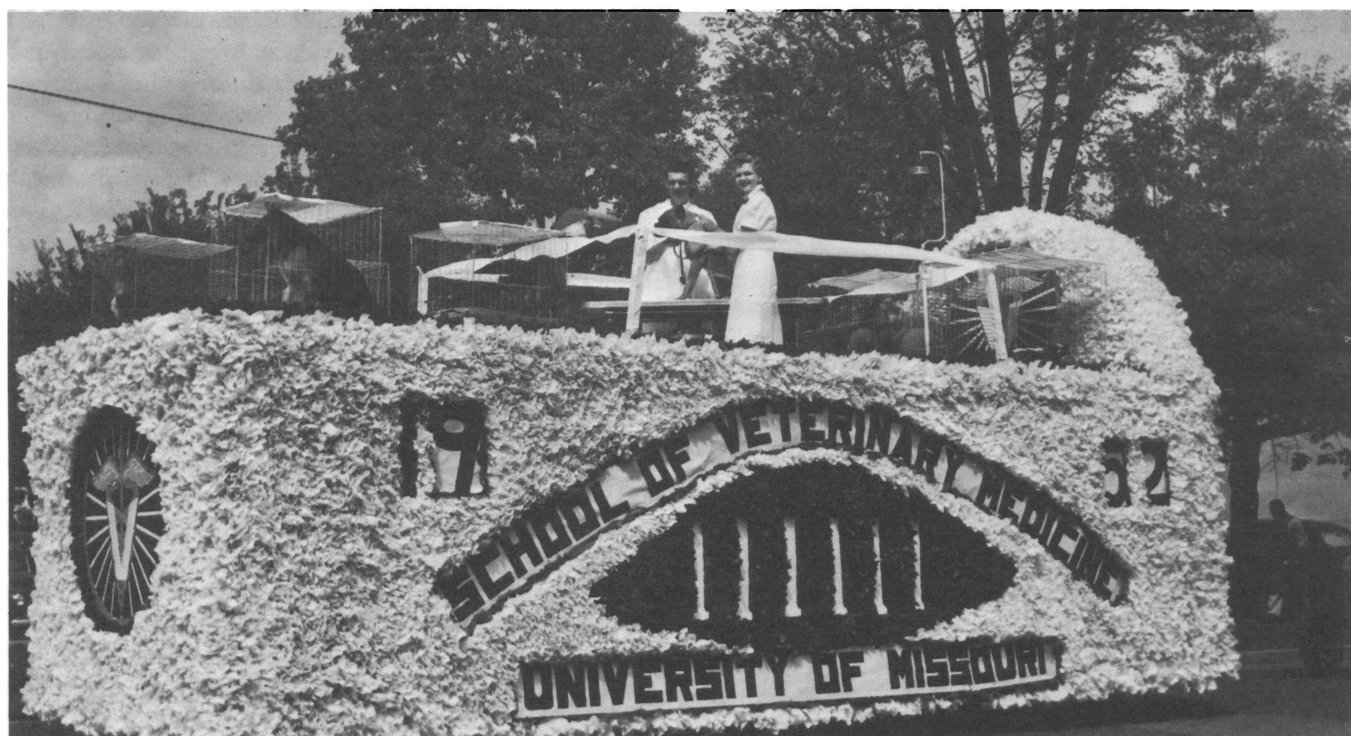
were seized and dunked in the fish pond. The pond which was across from the southeast corner of Sanborn Field was stocked with gold fish and was ideally suited for dunkings. The fish were removed and the pond filled with dirt in 1952 or '53. All of the principal agricultural student activities, such as the Farmer's Fair, the Barnwarmin', the College Farmer, and the management of the paddling line, have been under the jurisdiction of the Agriculture Club.

When a preveterinary curriculum was first offered in the College, these students usually joined the Agriculture Club. Somewhat later they formed their own club, but retained membership in the parent club. Even after the professional curriculum was initiated this was true.

Each school of veterinary medicine had an organization of its professional students. In the late 1920s the Ameri-

regularity won the top award for floats. They also took part in other activities that were a part of the Fair. They entered the competition during the Little International and won a number of prizes.

The Veterinary Medical Club and later the Student Chapter of the A.V.M.A. also sponsored its own activities. There was a picnic in the fall to which all of the faculty members were invited. In the winter the club had a dance and in the spring a banquet. The faculty was also invited to these functions. Both groups were small and there was a very close relationship between them. As soon as all four classes were filled there was always a basketball tournament in the winter and a softball tournament in the spring to determine the school championship. Faculty members served as referees and umpires and received much goodnatured ribbing in the



Missouri Student Chapter of the A.V.M.A. float in parade at Farmer's Fair—1952. Clyde and Joyce Chandler are on the float.

can Veterinary Medical Association became interested in the students as future members of the profession. This interest led to the formation of Student Chapters of the A.V.M.A. at each of the schools. When the new schools reached the fourth year in their development they were permitted to petition the A.V.M.A. for a charter to establish a Student Chapter. The charter of the Missouri Student Chapter was issued on June 1, 1950 and is signed by the officers of the A.V.M.A.

There remained a rather close relationship between the "Ag. Club" and our students for a number of years. This was natural because our students had often been active in the "Ag. Club" before they began the study of veterinary medicine. Each spring they entered a float in the parade that was a part of Farmer's Fair and with rather monotonous

course of the tournament.

Early in its existence the Student Chapter worked out an arrangement with the Department of Intercollegiate Athletics by which members of the Chapter would sell refreshments at home football games and receive a percentage of the net sales. This amounted to several thousand dollars each year and gave the Chapter an income to finance membership dues and all of its activities. It also made the Chapter the envy of all other student organizations on the campus. For some years it was a fine arrangement, but eventually it became pretty much a matter of "easy come, easy go." Fortunately some very worthwhile projects were sponsored by the Chapter, one of which was the establishment of a loan fund and another was a quarterly publication which was originally named *The Veterinary Scope* but is now *The Missouri Veterinarian*.

As attendance at the football games increased it became apparent that members of the Chapter could not serve all of the stadium and sections of it were assigned to other student groups. This of course reduced the Chapter's income, but it still produced a rather substantial sum. It also encouraged better management of the funds.

It was customary for the Student Chapter that was located nearest to the meeting place of the annual A.V.M.A. convention to serve as host to the delegates from all of the other Student Chapters, the delegates from the Women's Auxiliaries, and their spouses. In 1959 the A.V.M.A. met in Kansas City and since Columbia and Manhattan, Kansas are equidistant from Kansas City, the Student Chapters at Missouri and Kansas State University served as co-hosts. The visitors spent one day on each campus.

Wives of the students formed their own organization which became the Women's Auxiliary to the Student Chapter. Both organizations held regular meetings and usually had programs designed to contribute to their professional improvement. The Auxiliary sponsors its own projects, one of which is the preparation of a yearbook, which is exhibited at the A.V.M.A. Convention. Because the wives of our students have been so instrumental in helping their husbands acquire their education, they are awarded a H.P.H.T.C.

(Helping Put Hubby Through College) Certificate near the end of their final semester.

Chapter members participate actively in Career Day and in guiding groups of visitors through the School. This is especially true on University Day and when large numbers of 4-H Club and Future Farmers of America members are on campus. Each fall the second year class entertains the incoming first year class at a picnic. A Code of Ethics which included the Honor System during examinations was prepared by a committee of Student Chapter members and submitted to the membership for consideration and adoption. It was accepted by the first year class, but not by the other three classes. Subsequently it was accepted by each incoming class until all four classes were under its provisions. By this action the students became better conditioned to acceptance of the profession's Code of Ethics following graduation.

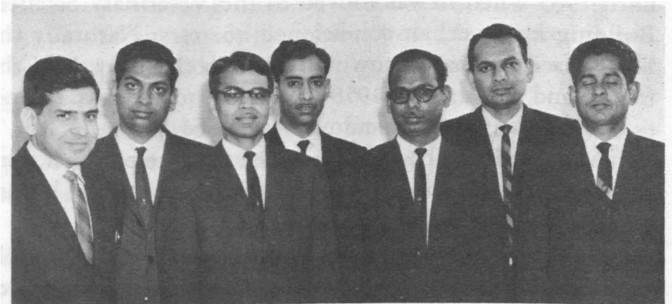
Initially only a limited number of awards were available to our students and they were presented at the annual spring banquet. As the number of awards was increased, a separate Awards Night was established and individual awards were presented to student and faculty winners. One of these student awards is presented by *The Missouri Veterinarian* for the best case report prepared by a student.

The International Program to Aid Developing Countries

In 1957, the University of Missouri signed a contract with the International Development Program "to provide technical assistance in agriculture and veterinary science" to the Indian states of Assam, Bihar, Orissa and West Bengal. The assistance was of two types; technicians (faculty members) were sent by the University to India and faculty members in agriculture and veterinary science from schools in the four states came to the University for specialized training. This training usually led to a graduate degree.

A veterinarian was to be a member of the team that would be assigned to the project for two years. Since all of the departments in the School of Veterinary Medicine were understaffed, it was necessary to try to recruit a veterinarian for the assignment. Many other land grant universities were involved in similar programs and it was difficult to find a veterinarian who was interested in such an assignment.

Finally, in the fall of 1960, Dr. Harold M. Wood, a practitioner, from Compton, California was appointed to go to India. He was a graduate of Texas A. & M. University and also held a B.S. degree in entomology from Washington State University. Most of his time was spent in Orissa with limited periods in the other three states. His efforts were directed largely toward trying to improve clinical skills of faculty and students. It was necessary to try to impress both groups with the fact that it was not degrading to use one's hands, but rather an indication of skill and professional proficiency. He also was responsible for providing an adequate



Exchange veterinarians from India.

water supply for the Indian university, establishing a laying flock of chickens and an improved feed and food program.

The faculty members who came from India were selected by a committee of Indian officials and the chief of party for the University. Most of them were sincere in their desire to add to their information and worked hard to accomplish their goal. Some were not as well prepared as they should have been, and a few had a language problem. A majority of them had no knowledge of how to do things with their hands. A few had no desire to learn how to do so. In addition to the Indians who were under the program, there were a few who came on their own initiative. As a rule they were a better prepared and harder working group, but many had serious financial problems.

After several years under the original contract, which was renewed at two year intervals, the program was changed

materially. Emphasis was placed on the establishment of a university in one state patterned after the land grant university of the United States. In the spring of 1966 Dr. W. W. Crenshaw of the Veterinary Physiology Department be-

gan a two-year assignment at the Orissa University of Agriculture and Technology at Bhubaneswar.

A list of Indian veterinarians who have studied at the School of Veterinary Medicine is included.

Communications

Within any group of individuals there is a strong need to communicate. Communications is a broad term relating to both verbal and written messages among people.

The School of Veterinary Medicine divides its communication areas into library facilities, medical illustrating, medical records, publications and photography. Also continuing education fits precisely into communications, but it is described in a previous section.

The library of the University of Missouri - Columbia appointed Miss Meddie Hombs to organize a divisional library for Veterinary Medicine in 1951. Most of the books were obtained through the Agricultural and Medical libraries.

In 1958 Mrs. Jewel Sutton replaced Miss Hombs for a short time as librarian. Formerly with the Geology Library since 1951, Mrs. Sutton died in 1958 after an unsuccessful cancer operation.

Mrs. Minnette Williams came in February, 1958 from the Main Library where she had worked 2 years at the circulation desk. She is still on the job and is listed as a sub-professional librarian with 9 credit hours of library science.

Location of the library was in Room 210 Connaway until 1965 when it was moved to the Veterinary Sciences Building in larger, air-conditioned quarters. Naturally the library facilities have grown along with the growth of the faculty and students. In 1958 the annual report lists 175 periodicals and in 1968 the number increased to 419.

Mrs. Williams has 3 student assistants helping her with the heavier work load. During the school year the library remains open 64 hours per week.

Dr. Phillip D. Garrett, a 1961 graduate of the School, has a flair for art. He joined the faculty in 1962 in the Department of Veterinary Anatomy and when the other faculty members learned of his skill they besieged him with requests for various projects requiring artwork.

In 1966 he was given the additional title of medical illustrator. His work in this area includes architectural drawings and scale models, illustrations for research papers, theses and books that faculty members are involved in writing, visual teaching aids and a dabbling of photography. He is consulted frequently by his colleagues for art ideas in their projects.

Dean Kingrey received a grant in 1965 from the National Institutes of Health for setting up a medical records program. The first step was to hire an individual with previous training in this specialized area. Miss Connie Belden, a registered medical records librarian with a R.R.L. degree started to work in February, 1965. She had previously worked as assistant record librarian at St. Luke's Hospital in Kansas City, Missouri.

The program involves the development of: 1) a standard nomenclature of veterinary diseases and operations, 2) a functional institutional medical records system and 3) an automated data processing procedure for summarizing and retrieving information recorded during the examination and treatment of clinic patients.

The need for a standard reporting system has long been recognized and the attempt to standardize nomenclature and other aspects of disease reporting have a long history. Miss Belden resigned in August, 1966 when she married Dr. Curt N. Daniels, a 1965 graduate of the School.

Miss Bonnie Owens had been working in this area as a clerk-typist since March, 1966 and was promoted to veterinary medical records clerk in December, 1966. Miss Owens left in April, 1968. Currently there is a medical records librarian handling the work again. Mrs. Judy Linden has a B.S. degree from St. Scholastica College in Duluth, Minn. and also has her R.R.L.

In 1966 a newly created position in the Dean's Office was filled by Mrs. Patricia Adams, a 1964 journalism graduate. Her husband, John, was also an entering first-year veterinary medical student. Mrs. Adams previously worked for The C. V. Mosby Medical Publishing Co. and was director of public relations for an insurance firm in St. Louis.

The responsibilities in this new position of editorial assistant included publications, public relations, news releases and editorial work. A monthly publication called the "Faculty News" was first published in March, 1967 for veterinary medical faculty only. A year later the name was changed to "Faculty Newsletter" and designed in a more attractive format and circulation was increased to include MVMA members, deans of other veterinary schools and the veterinary student body. Also a weekly calendar of events was distributed for the faculty's benefit.

To expand the operations in this area a graduate student in photography was hired on a part-time basis in the summer of 1968. The School has a growing need for such services and Mr. James Bottom will try and lay the ground work for a permanent position to be filled at a later date.

John Waldo Connaway 1859-1947

Dr. John W. Connaway, a native and long-time Missourian, was the last survivor of the early veterinarians chosen by public institutions to develop a veterinary service for a growing livestock industry exposed to the ravages of deadly infectious diseases. He died on October 4, 1947 at age 88. However he lived to see, if not to enjoy, the blooming of his labors into a faculty of veterinary medicine at the University that he served for nearly sixty years.

To those who take the trouble to understand American veterinary history, his life commemorates the earliest advance guard of the veterinary service we are still trying to complete. He belonged to the roster of pioneers comprising Robert Jennings of Ohio, James Law of New York, E. W. Prentice of Illinois, Mark Francis of Texas, M. Stalker of Iowa, C. A. Cary of Alabama, and lesser figures who upheld the dignity of veterinary science while a competent service was being slowly and painfully developed to its present level.

Time unhorsed their critics who came galloping in from the unfinished barracks of the forming educational system, totally unaware that the basic purpose of their art was to render a public service in a manner becoming of a learned profession, and not merely to go forth and establish a business. Although this may seem foreign to obituary material it is not avoidable in the biography of Dr. Connaway and his contemporaries, teachers of veterinary science in his day.

Born at Stockton, Missouri, November 18, 1859, he joined the faculty of the University of Missouri in 1887 and the staff of the Missouri Agricultural Experiment Station in 1888, was graduated from the Chicago Veterinary College in 1890, joined the A.V.M.A. in 1890, and was among the prominent Midwest veterinarians who worked for holding the annual meeting in Chicago that year. He sponsored the Texas fever convention at Ft. Worth (September, 1897) which launched the organization now known as the U. S. Livestock Sanitary Association. The same month Dr. Connaway made a strong plea for tick eradication before the A.V.M.A. (Nashville, 1897), a manifestly original idea at that time. One thinks of Connaway, Paquin, Dinwiddie, and Francis as the foremost field men in bovine piroplasmosis investigation.

He was made professor and head of the Department of Veterinary Science, University of Missouri, in 1891, and held that position until he retired as professor emeritus in 1931. He served also on the faculties of the College of Education, College of Arts and Sciences, School of Medicine, and College of Agriculture.

At a testimonial dinner given in his honor in 1937 by 200 colleagues and friends, the occasion was commemorated with the following citation: "Your contributions to knowledge in the field of animal pathology have brought fame to you and the University of Missouri. You are recognized as a great teacher and your good influence on the students



Dr. John W. Connaway

will be a continuing force in their lives."

To this an outside biographer would be inspired to add: "You shaped the destiny of two generations without fanfare or selfish desire."

The above appeared in the January, 1948 issue of *Journal of the A.V.M.A.* It was written by Dr. L. A. Merillat, editor-in-chief.

In *Agricultural Experiment Station Bulletin 769, Missouri College of Agriculture*—"Through a Half Century Retrospect (1961)—the author, Dean Emeritus M. F. Miller, includes Dr. Connaway among some half dozen interesting, early faculty men. The following is quoted from that publication.

"Dr. J. W. Connaway

"The oldest of the early faculty members from the standpoint of appointment was Dr. J. W. Connaway. He was really a most interesting character, in the most complimentary sense of the term. Trained in both human and veterinary medicine, he found this double training quite advantageous. He was greatly interested in research, both fundamental and applied. One of my earliest recollections when I came to Missouri (in 1904), was having Dr. Connaway show me 8 x 10 photographs of the paths of Texas fever ticks on a glass plate covered with dust. That was when he was working on a method of controlling this tick.

"Dr. Connaway of Missouri and Dr. M. Francis of Texas were the men who worked together in developing the plan of dipping cattle to remove the ticks which carried Texas fever from one animal to another. The experimental cattle

they used were kept in small lots on the land where Rothwell Gymnasium now stands. The animals had no protection excepting a pole frame covered with tree branches. The total cost was probably not over \$10,000 but the results meant untold millions to the great cattle states of Texas and Oklahoma as well as a great deal to all other Southern states in the original Texas fever area, extending as far north as the Missouri River.

"The plan of treatment was that of dipping animals in a solution which would kill the fever carrying ticks on their bodies. There was, at first, much objection to this dipping process among the farmers and the project moved ahead slowly. The U. S. Department of Agriculture adopted the plan and the ticks were finally eliminated to the southern boundary of the United States.

"Another activity in which Dr. Connaway was engaged was that of the serum treatment for controlling hog cholera. This program was greatly increased in 1915 when the legislature appropriated money for the establishment of a central laboratory at the College for manufacturing and distributing serum. While Dr. Connaway was much interested in this development, he was also interested in research which would provide a method of eradicating cholera from the state.

"The veterinarians of Missouri were more interested in partial control of the cholera, than in eradication, since the serum vaccination would give immediate returns on herds so treated. Dr. David F. Luckey, who was state veterinarian at the time was violently opposed to giving any great amount of attention to eradication, arguing that it was impractical. The controversy between the two men lasted as long as Dr. Luckey was state veterinarian. It is interesting to know, however, that long after Dr. Connaway's death, Dr. Luckey also adopted the idea that hog cholera should be eradicated and wrote a strongly worded paper to that effect. There is little doubt that it will be eradicated in years to come. Dr. Connaway was a farsighted one, much ahead of his time, although the temporary control by vaccination has been necessary for immediate benefit of hog raisers.

"In his early research, Dr. Connaway was largely responsible for the development and use of a serum for the control of blackleg in cattle, and the ramifications of his research were widespread. There never was a man who was more honest, more sincere, or more interested in the welfare of people. He had certain rather peculiar characteristics, but he was a wonderful gentleman, whose medical interests were in both domestic animals and people."

Adrian Jackson Durant **1886-**

A native of Bromley, Alabama, Dr. Adrian J. Durant was born on December 9, 1886. After graduating from the University Military School, Mobile, Alabama he enrolled in the University of Missouri in the fall of 1909 as a freshman in the College of Agriculture. In 1913 he was awarded the B.S. degree and in 1915, the A.M. degree. He was a

student assistant in 1912 and the following year he was a research assistant in the Experiment Station. Upon completing requirements for the M.S. degree he began working toward the Ph.D. degree. However he decided to become a candidate for the D.V.M. instead and in 1925 received this degree at Michigan State University.



Dr. A. J. Durant

During his early years on the faculty, Dr. Durant was associated with Dr. Connaway in research on hog cholera, tuberculosis, and brucellosis. He also developed a strong interest in diseases of poultry and in 1916 he was given the responsibility for teaching the course in poultry diseases. His interest in this area continued to increase and he soon became involved in research on fowl paralysis and leucosis, pullorum disease and blackhead of turkeys.

While working on blackhead he refined a technique for ablating and for the surgical removal of the ceca, thus protecting against field infection with the causative agent.

Later in cooperation with the game section of the State Conservation Commission he developed an operation that muted the gobblers of wild turkeys, thus protecting them from poachers in areas where the commission was trying to increase the population of these birds.

In 1931 Dr. Durant succeeded Dr. Connaway as chairman of the Department of Veterinary Science. He continued in this capacity until 1949 when the Department was succeeded by the School of Veterinary Medicine. He remained a member of the faculty in microbiology until his retirement in 1957.

Prior to World War II, a curriculum in preveterinary medicine had been developed and a number of Missouri boys had been accepted by the existing schools of veterinary medicine. When it was later determined that the University was to train veterinarians it became Dr. Durant's responsibility and that of his faculty to plan for the facilities, organize a curriculum, and try to recruit additions to the existing faculty. All of this was a tremendous task, because everything had to be held to a minimal cost, and competition for faculty members was severe. Several other schools were also being activated or were in the planning stage. In spite of all of these obstacles the first class was accepted in the fall of 1946 in the Department of Veterinary Science and the pro-

gram was underway.

In addition to his professional interests, Dr. Durant has long been involved in breeding and promoting dairy goats. He has served as president of the National Association of Dairy Goat Breeders, has judged many dairy goat shows, and is recognized as an authority on diseases of dairy goats. For years he has written a section on diseases in the *Dairy Goat Journal*.

His hobby, which he has long enjoyed, is hunting and rearing bob cats. He has owned some of the best bob cat hunting hounds in the country and his reputation as a hunter of bob cats is nationwide. At one time he also enjoyed hunting raccoons.

Otto Smith Crisler 1879-1963

A native of Kentucky, Dr. Otto S. Crisler was born on June 6, 1879, at Limaberg, Kentucky. His preparatory schooling was at Morgan Academy in Burlington, Kentucky. As a youngster he frequently rode with an uncle Dr. L. H. Crisler, who was a practicing veterinarian in Burlington and Covington, Kentucky. Young Crisler was graduated from the Indiana Veterinary College at Indianapolis in 1910. He had assisted at Burlington, Kentucky during the summer of 1909 prior to graduation, and returned there for practice following graduation. In June of 1912, he was appointed county livestock inspector, serving until February, 1913 when he located for practice at Newport, Kentucky until the following September. He then joined the staff of the Kentucky Agricultural Experiment Station. There he was concerned with the production and administration of anti-hog cholera serum and botulinus antitoxin. While still at the University of Kentucky he was made a collaborator with the U. S. Bureau of Animal Industry and was involved in the eradication of foot and mouth disease.

He joined the University of Missouri on December 15, 1917 as superintendent of the Anti-Hog Cholera Serum Plant. When serum production was discontinued in 1936, he was appointed as an instructor in the Department of Veterinary Science. In 1941 he was promoted to the rank of assistant professor. He taught courses to agricultural students, supervised the health of University herds and flocks, assisted with laboratory diagnosis and collaborated on some of the research projects.

Dr. Crisler was one of the best informed men in the country on the production and use of anti-hog cholera serum. He was thoroughly informed on hog cholera in its uncomplicated form. To him the only satisfactory method of protecting swine against the disease was by the simultaneous use of adequate amounts of serum and potent virus. He never accepted the more recently developed tissue vaccines and attenuated vaccines as being effective in the prevention of hog cholera.



Dr. O. S. Crisler

In 1949 Dr. Crisler reached the compulsory retirement age of 70 years. However, because of the difficulty in recruiting clinicians, he continued on the faculty in the Department of Veterinary Medicine and Surgery until 1954 when he was retired by being placed on limited service. During 1949 to 1954 he was in charge of the pharmacy and here he ruled supreme. He believed very strongly that a veterinarian did not need to carry a complete pharmacy to be successful in practice. He had a deep and abiding faith in such products as white liniment, compound cresol solution, nux vomica and chloral hydrate. He was most contemptuous of many of the new drugs that were appearing on the market. Students who came under his influence while serving their periods in the pharmacy are not likely to forget the teachings of this rugged individualist. So far as he was concerned there was only one way to do a thing, and that was the way he did it.

Dr. Crisler's main interest, other than veterinary medicine was gardening. He took great pride in growing vegetables and giving them to his neighbors. Each year his garden received a liberal application of barnyard manure, and it was to this that he attributed at least some of his success as a gardener.

He died suddenly on February 14, 1963 at the age of 83.

Andrew Waldemere Uren **1891-1960**

Born at Iron Mountain, Michigan on June 5, 1891, Dr. Andrew W. Uren became a member of the faculty of the University of Missouri in September, 1924 following his graduation from Michigan State University with the D.V. M degree in June of the same year. In 1934 he received an M.S. degree in animal pathology at M. S. U. His original appointment was at the rank of instructor and in 1930 he was promoted to assistant professor. In 1938 he was transferred to the Extension Department where he served as extension veterinarian until 1948. He was made an associate professor in 1940 and following his return to the School of Veterinary Medicine in 1949 he was advanced to professor.

All of Dr. Uren's professional career was spent at the University of Missouri. He was dedicated to his profession and to his work on the University faculty.

During the early years of his service Dr. Uren taught courses in topographical anatomy, physiology, stock farm sanitation, and at times poultry diseases to agricultural students. He also had much of the responsibility for the health of University owned livestock and much of the diagnostic work. He was associated with other members of the Department in research on brucellosis and pregnancy disease of sheep, grass tetany in cattle, and with members of the Dairy Department on endocrinology and milk secretion.

With the appointment of Professor B. B. Roseboom in 1949 it was planned for him to teach the courses in physiology and Dr. Uren would teach those in pharmacology. However, it became necessary for Dr. Uren to teach courses in both subjects until well into the second semester of 1949-1950. During the next few years he also taught courses in obstetrics and infertility problems.

Dr. Andrew Uren was loyal and sincere almost to a fault. This loyalty and honesty, coupled with no excess of



Dr. A. W. Uren

tact and diplomacy, were at times a matter of concern to his friends and colleagues. It did not, however, lessen the respect which he justly merited.

Rather miraculously he survived two serious attacks of pneumonia. These periods of illness, however, had taken their toll and he died on October 30, 1960, after an illness of three weeks, bringing to a close a period of 36 years of continuous service to the veterinary medical profession and the University of Missouri.

Cecil Elder **1893-**

Dr. Cecil Elder joined the faculty in 1931 after having been a member of the faculties at Kansas State University and the University of Wyoming. In 1946-1947 he served as one of the veterinarians who went to China in an advisory capacity to the government.

Born at Aurora, Illinois on June 23, 1893, he moved to Kansas at an early age and attended Kansas State University where he earned the D.V.M. degree in 1916. Ohio State University conferred an M.S. degree in veterinary pathology on him in 1924.

Prior to the year's leave of absence in China most of Dr. Elder's time was devoted to research on a number of animal diseases. In Wyoming it was principally tuberculosis, with some attention to brucellosis. After coming to Missouri, he continued his research on brucellosis and he also



Dr. C. Elder

studied pregnancy disease and internal parasites of sheep, hog cholera, necrobacillosis of calves, internal parasites of cattle, and swine enteritis. He was active as a member of several regional research committees, especially those concerned with diseases of swine.

With the establishment of a four-year program in veterinary medicine, Dr. Elder was placed in charge of the area of pathology. He organized the Department of Veterinary Pathology and taught courses in pathology at the undergraduate and graduate levels. He continued to supervise research on diseases of cattle and swine although he had little time to participate in the actual research.

For many years he was chairman of the committee responsible for the annual short courses and post graduate con-

ferences for veterinarians of the state. The technical programs and the entertainment provided were consistently of the highest order and well received by the veterinarians and their wives.

As a charter member of the American College of Veterinary Pathologists, he took an active interest in it and in the Conference of Research Workers in Animal Diseases. In 1959-1960 he was president of the latter.

In 1957 his alma mater, Kansas State University honored him by conferring its award for distinguished service to veterinary medicine. Upon reaching the age of compulsory retirement he was made professor emeritus of Veterinary Pathology effective September 1, 1963.

Joseph Ephrum Weinman 1890-



Dr. J. E. Weinman

Dr. Joseph E. Weinman was born near Round Valley, Custer County, Nebraska on June 14, 1890. In 1913 he was graduated from the Kansas City Veterinary College and immediately entered private practice in Nebraska. He returned to K.C.V.C. in the fall of 1914 and taught anatomy during the school year. From 1915 to 1918 he was again in practice until he enlisted in the Army Veterinary Corps. Following his discharge from the service he was once more in practice at Arcadia, Nebraska until February, 1920. He then became head of the Department of Veterinary Anatomy at the St. Joseph Veterinary College, St. Joseph, Missouri where he remained until the school closed in November, 1923.

At that time he located in Lincoln, Nebraska, where he practiced until 1946 when he joined the University as professor of Veterinary Anatomy. When the School was departmentalized in 1949 he was made chairman of that department. He served in this position until his retirement in 1960.

Although Dr. Weinman had been away from teaching for many years, he readily adjusted to the academic environment on the University campus. He thoroughly enjoyed teaching anatomy and took a special and personal interest in each student. If a student failed to pass anatomy it most assuredly was not the fault of Dr. Weinman.

While practicing in Lincoln, Dr. Weinman served on the Nebraska Board of Veterinary Examiners from 1939 to 1946. He also served as veterinarian for the racing commission at the Nebraska State Fair. In 1933 he was president of the Nebraska Veterinary Medical Association.

He has been interested in raising and racing thoroughbreds for years and still maintains a few on his farm east of Columbia, where he and Mrs. Weinman make their home. They also operate the Adell Trailer Court which is located on the farm.

A son, Dr. Donald E. Weinman, joined the faculty as a member of the Veterinary Physiology and Pharmacology Department in the fall of 1965.

Benjamin Brokaw Roseboom

1884-1956

A member of the faculty for only seven years and a non-veterinarian notwithstanding, Professor Benjamin B. Roseboom had a remarkable influence on students and faculty during the early years of the School of Veterinary Medicine. He came to the University of Missouri in 1950 following retirement from Michigan State University after forty years of continuous service.

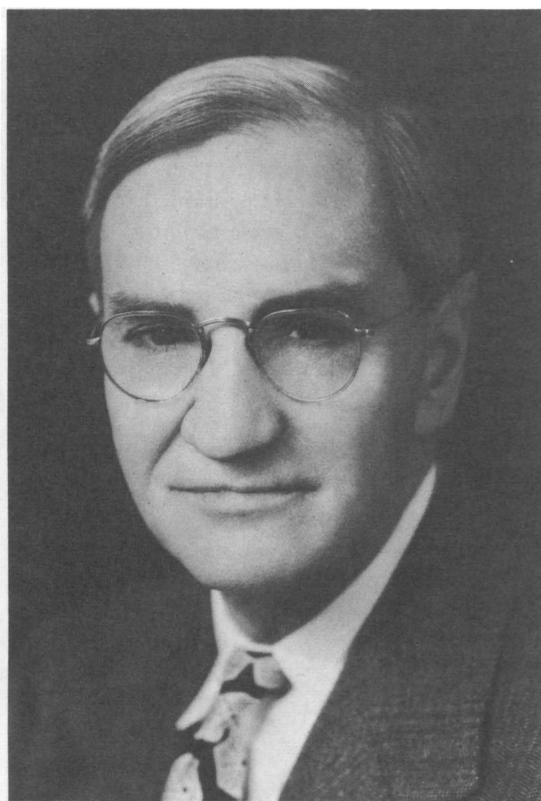
At Michigan State he had taught zoology, geology, physiological chemistry and physiology. He headed the Department of Physiology and Pharmacology there from the time of its organization in 1923 until his retirement in 1949.

Born in Auburn, New York, he received the B.S. degree from Hamilton College in 1908 and the M.S. degree in physiology from the University of Chicago in 1932. While teaching was his primary interest, he kept abreast of research development, not only in physiology, but related fields. He had a remarkably keen insight into the problems of teaching veterinary medical subjects. His success as a teacher could largely be attributed to his kindly, tolerant understanding of human nature, his freedom from prejudice and the scholarly breadth of his knowledge.

Professor Roseboom was continued on the faculty for two years after he reached the retirement age of 70. He had decided to retire at the end of the second semester in 1956. He failed to reach this goal for he died of a coronary thrombosis on April 30, 1956.

It is probable that he would not have especially enjoyed retirement. Teaching was his life, and he was never happier than when he was lecturing on physiology or supervising a laboratory in his specialty.

The one outside interest that he had was bowling. He



Dr. B. B. Roseboom

was largely responsible for organizing a faculty bowling league and in getting faculty members in the School to enter a team. Until his health no longer permitted, he was the anchor man on the team.

Aaron Holland Groth

1898-

The first dean of the University of Missouri School of Veterinary Medicine, Dr. Aaron H. Groth was born on August 29, 1898 on a farm near St. Ansgar, Mitchell County, Iowa.

Receiving most of his education in his home state, he was awarded a B.S. degree in animal husbandry in 1921 and a D.V.M. in 1931 by Iowa State University, Ames. In 1937 he received an M.S. degree in animal nutrition from Colorado State University, Ft. Collins. His graduate minors were veterinary physiology and veterinary histology and his thesis was written on "A Comparison of Pastured and Ensiled Beet Tops as a Fattening Feed for Yearling Steers."

From 1921-22 Dr. Groth served as a field representative for the Iowa Beef Producers Association. He joined the teaching staff of Texas A. & M. College in 1923 starting as an instructor and later becoming assistant professor in animal husbandry before he left in 1927.

Dr. Groth returned to Iowa State for his D.V.M. and from 1931-34 he was field veterinarian for the Minnesota Livestock Sanitary Board. During 1934-37 he became assistant professor and assistant pathologist at Colorado State.

In 1937 he accepted appointment to the faculty of Louisiana State University where he was assistant professor and later professor of veterinary science and veterinarian for the Agricultural Experiment Station there. He left Louisiana State in 1946 when he was made director of the Animal Disease Research Laboratory of the Bureau of Animal Husbandry, U. S. Department of Agriculture at Auburn, Ala.

Dr. Groth was contacted in 1949 by Dean John H. Longwell of the University of Missouri College of Agriculture as a director was needed for the School of Veterinary Medicine which was still under the Agricultural Sciences Division. After much thought, Dr. Groth decided to accept the position and started in October, 1949.

His appointment was a step toward recognition of the School by the A.V.M.A. Their Council on Education had recommended that the School be separated from the College of Agriculture under its own administrative officer. He was instrumental in moving the School from a division into a separate school.

It has been said that Dr. Groth was the "right man in the right spot at the right time." He believed strongly in maintaining close relationships between veterinary medicine and agriculture and in developing the public health aspects of veterinary medicine.

A member of the Missouri State Animal Disease Control Committee (formerly the Missouri Committee for Control of Brucellosis) which advised on the State Brucellosis eradication programs, Dr. Groth was a strong supporter of intensive efforts to eradicate that disease. He also frequently called attention to the need for stronger prevention and control measures for other animal diseases.

In May, 1951, Dr. Groth wrote a brief article for the student publication *The Veterinary Scope* as follows:

"As a faculty we are trying to train our students to be veterinarians who will be a credit to the profession; veterinarians that you will be glad and proud to welcome as colleagues and who will work with you in giving Missouri the veterinary service to which it is entitled."

During his 19 years with the University, he also served as professor of veterinary medicine and director of the clinics. In 1963 he was named dean emeritus and professor of veterinary pathology. In 1958 he received the Centennial Award from Iowa State University and in 1961 he was honored as Missouri Veterinarian of the Year. He also received special recognition for his long and devoted service to the School and the profession at the 1968 Awards Night.

Active in organizations, Dr. Groth became a walking directory with his memory of people he had met in local, state and national groups. His friends and acquaintances included veterinarians as well as livestock and dairy people.

His professional society memberships include Alpha Tau Alpha, Alpha Psi, Phi Zeta, Gamma Sigma Delta, Sigma Xi, M.V.M.A., A.V.M.A. and the Conference of Research Workers in Animal Diseases. In 1968 he was elected to honorary life membership of the Animal Disease Research Workers of the Southern States. His son was elected president which made it the first time a father and son had served in that office. He is also a member of the Animal and Animal Products Research Advisory Committee.

Throughout his career he has authored and co-authored numerous publications.

His hard work over the years to give Missouri a sound School of Veterinary Medicine has paid off in dividends. The graduates of the School have been a credit and reflection of Dr. Groth's devotion to them.

He will always be known as the "student's dean" as their interest, education and welfare were always uppermost in his consideration. He not only knew each student on a



Dr. A. H. Groth

first-name basis, but he kept abreast of their family and hobbies.

In 1952 the students included a profile of Dr. Groth in their "Faculty Personality" in the *Veterinary Scope*, Vol. 11, May, 1952 as follows: "With such fine leadership and administrative ability as exemplified by Dr. Groth, the University of Missouri School of Veterinary Medicine will continue to strive for and maintain its goal; that of producing capable, qualified practitioners of veterinary medicine for the State of Missouri."

Dr. Groth retired as dean emeritus and professor in August, 1968 and moved to a new home in Dunedin, Florida.

...P. Adams

Stanley Nelson Smith 1871-1961

Dr. Stanley N. Smith, who was known for many years as the dean of Missouri practitioners was born November 30, 1871 on a farm near Woodlandville in Boone County, Missouri. His father raised purebred Hereford cattle and fine horses, thus giving Stanley an early opportunity to develop a liking for animals.

While a student at the University he became acquainted with Dr. Paul Paquin, the first veterinarian to be appointed to the University of Missouri faculty. Dr. Smith's father often provided the teams and buggies which Dr. Paquin used in his travels to investigate disease outbreaks in the surrounding area. One of these outbreaks in 1885 was suspected of being contagious pleuropneumonia at Fulton in Callaway County. Stanley Smith accompanied Dr. Paquin to Fulton, where he was met by veterinarians with the U.S. Bureau of Animal Industry. These contacts with veterinarians, plus his desire to work with animals, had a strong influence on his decision to study veterinary medicine. He later enrolled in the New York College of Veterinary Surgeons in New York City and was graduated in 1892.



Dr. S. N. Smith

Following graduation Dr. Smith returned to Columbia and established his practice which he continued until 1950, when he joined the faculty of the School of Veterinary Medicine. Because he was past the University retirement age, he could not be appointed at any of the usual academic ranks, and his appointment was that of "special lecturer and clinician."

The appointment of Dr. Smith provided the School with an increased number of clinical cases and especially provided an ambulatory clinic. Clinical staff members and facilities were not made available when the School was first started, as was recommended by the A.V.M.A. Council on Education. With a class due to be graduated in 1950, it was imperative that clinical cases be made available. The contacts which members of the early classes had with Dr. Smith were most valuable for they were associated with a practitioner of long experience.

As a diagnostician Dr. Smith had few equals and he had an exceptionally effective ability to deal with clients of all kinds and under all circumstances. Probably the most remarkable characteristic of this man was his outlook on life. He did not live in the past, but kept abreast with changes and developments. If a new therapeutic agent became available and he had a case on which it might be indicated, he would use it and report the results to his students.

Saddle horse breeders and exhibitors in central Missouri held Dr. Smith in high esteem, for he was responsible for saving the lives of many of their fine horses. His services were especially in demand to set the tails of saddle horses. This frequently took him to other states in the Midwest.

In 1953 the Boone County Horse Show presented him with a scroll in recognition of his continued interest in and service to the show. He had other civic interests for he served on the city council, was mayor of Columbia from 1905-1907 and again from 1909-1911. The first street paving in the city was done during his administration.

Dr. Smith remained active until he fell on the porch of his home and fractured the right femur in April, 1960. He had made two calls in the country earlier in the day. Because of a coronary condition, which made him a poor risk for use of a general anesthetic and because of his advanced age, the fracture was not reduced. He remained in Boone County Hospital until his death on June 22, 1961.

The Stanley N. Smith Memorial Fund in Veterinary Medicine has been established by his daughter Queen and by his friends and associates.

Burnell Wayne Kingrey 1921

The second dean of the University of Missouri School of Veterinary Medicine, Dr. Burnell W. Kingrey was born in 1921 in Worthington, Minnesota. He was awarded a D.V.M. degree in 1944 and an M.S. degree in 1954 by Iowa State University.

After graduation in 1944, Dr. Kingrey operated a general veterinary practice for nine years in Lena, Illinois. He returned to Iowa State University as an assistant professor of veterinary medicine and surgery in 1953. Later in 1955 he became a professor and head of the Department of Veterinary Medicine and Surgery. In 1959 he was also director of the clinics.

In addition to his academic work at Iowa, he was an animal disease research consultant in 1961 to Argentina and Chile, and in 1962 he helped organize the new college of veterinary medicine at San Carlos University in Central America.

His alma mater selected him "Professor of the Year" and initiated him into its highest honorary society, the Cardinal Key, in 1961.

Dr. Kingrey was appointed dean at the University of Missouri - Columbia in 1963. Under his leadership the School has made rapid and constructive progress.



Dr. B. W. Kingrey



Dean Kingrey congratulates Dean Emeritus A. H. Groth at Awards Night, 1968

Dean Kingrey has been recognized in *Who's Who in America*, *American Men in Science* and *Leaders in American Science*. He received the Alpha Zeta Tall Corn Award in 1963 and a Diploma of Honor from San Carlos University in 1962. He belongs to several honor societies: Phi Zeta, Phi Kappa Phi, Gamma Sigma Delta, Delta Psi Omega and Sigma Xi.

His other memberships include the A.V.M.A.; Iowa, Central Iowa, Illinois and Missouri Veterinary Medical Associations; New York Academy of Sciences; American Public Health Association; Animal Care Panel; American Association for Advancement of Science; American Association of Veterinary Clinicians; Cyclone Club; Iowa State University Alumni Club and Veterinary Medical Alumni Club; and the National Association on Standard Medical Vocabulary.

He is the author or co-author of more than 29 publications and chapters and sections in 4 professional books. He has made presentations at close to 100 meetings.

Dean Kingrey looks to the future of the School with much optimism for fulfilled goals.

Non-Academic Staff

The members of the non-academic staff at most universities are invariably the unsung heroes and heroines. They are the "behind-the-scenes" workers who do not teach undergraduate and graduate students, who do not publish or present learned discussions at scientific meetings or make earth-shaking decisions in the academic world. Nevertheless, they play a most significant and valuable part in all of the programs. As the School of Veterinary Medicine continues to grow and research activities are expanded these staff members will become increasingly important. The secretaries, the clerks and typists, the laboratory technicians and the animal caretakers are all essential to the various programs and their efficiency and loyalty can mean the difference between success and failure.

The Department of Veterinary Science and the several departments of the School of Veterinary Medicine has had and still has many staff members who rate high because of their contributions. Unfortunately all of them cannot be given individual recognition. I would be remiss, however, if some of them were not mentioned.

For long and faithful service two of these staff members are in a class by themselves. Miss Stevie Faye Stemmons began work under Dr. Connaway on November 29, 1920 and she continued to work in the same office until her retirement on January 31, 1958. During these years she kept the departmental and school accounts, typed the orders, recorded the grades, took dictation, typed the letters and manuscripts, answered the telephone, ran the errands, kept track of everyone's appointments and all of the other tasks that a secretary is expected to perform. All of the dictation had to be taken in shorthand during much of the time, although she did use an Edison dictaphone for a few years. She had a definite preference for a manual Underwood typewriter and was not at all interested in one of the newer electric machines. When she retired, her machine was traded for an electric one and Miss Stemmons promptly bought the old one for her personal use.

Luther Sullins, the other long-standing member, was employed by the Department of Veterinary Science in 1920 at the Serum Plant, where he was responsible for the management and feeding of the hogs used in production of anti-hog cholera serum and virus. When production was discontinued in 1936 he cared for the livestock and poultry that were used in the research projects. Poor health made it necessary for him to retire on September 30, 1963.

During all of the years of his employment, Mr. Sullins lived in the house on the farm. The original part of the house was built of hewn walnut logs that were cut from trees grown on the farm. Several walnut trees remained in one of the pastures until the University sold them to a lumber company in the late 1950s. The builder of the house was a Frenchman, who preferred wine as a beverage and he had planted a sizeable vineyard. A few of the original grape vines were still in the garden when Mr. Sullins retired.

Another of the early animal caretakers was Paul Maxwell, who was responsible for the care of the animals maintained at the original serum plant located at the base of the hill east of Rollins Street.

As the clinic and hospital part of the School developed it was necessary to have someone on duty to care for both large and small animals. In the beginning the small animals were cared for by the four students who lived in the building. Eventually it was necessary to have someone on duty throughout the day and in 1955 Robert E. Shaw was appointed. He had a few eccentricities, but he took great pride in his work and tolerated no irregularities on the part of faculty or students. He retired in 1961.

In the large animal area Ralph Bryan, 1951 to 1961 and Turner Tucker, 1952 to 1964 were typical of those who supplemented the efforts of the clinicians to relieve the suffering of sick and injured animals. Most of their years of service were in the old building that required extra efforts to maintain it in a reasonably clean state. Here again students provided much of the early help, some of them working full time to earn funds for later schooling. Among those who eventually earned their D.V.M. degrees were: Walter W. Love, Walter E. Landaker, James R. Wilson, and Nicholas E. Palumbo. William Donaldson, who had been beef cattle herdsman in the Department of Animal Husbandry from 1934 to 1961, joined our staff in the large animal area late in 1961. Shirley Sturm came with us in 1960 in the small animal area and was later moved to the pharmacy. Both are still on their respective jobs.

Many of our workers in offices and laboratories have been the wives of our students or prospective students in veterinary medicine. Among them are Myrtice M. McCrady, Donis D. Owings, Patricia D. Rice, Mary E. Thomas, Doris M. Fischer, Mildred Baird, Norma Owings, Shirley A. Pemberton, Evelyn Clark, Norma Sue Powell, Mary Lou Wal-lach, and Carolyn S. Gwin. These girls and others who were working elsewhere on the campus were not only providing valuable help to the faculty, but were also sharing the financial burden to educate their husbands. Many of them were also raising children. Each year it seems that more and more students find it necessary to earn part of their own way through the University. This includes pre-professional as well as professional students. A few members of some of the early classes had appointments as laboratory technicians and assistant instructors. They either had bachelor of science degrees or had received special training and experience while in the service. Lawrence F. Good, Ernest E. Burgess, Gerald D. Andes, and Wilson H. Wohler, Jr. were in this group.

Some of the full time technicians deserve special mention. Mildred Allen worked in the brucellosis testing laboratory in 1936-1937 and in 1944 returned as a technician in the veterinary pathology laboratory, then was transferred to veterinary microbiology where she is still employed. Len: Thornton worked part time in the pullorum testing labora-

tory in 1945-1946 and returned in 1952 as a full time technician in microbiology. Among the other technicians, Judith Cavecy had been in the diagnostic laboratory since 1960 and Mildred Floyd has been in the histology laboratory since 1962. These and many others are daily doing their work quietly and efficiently.

None of the other members of our clerical staff can approach Miss Stemmons' record, but several have had important parts in developing and maintaining the veterinary medical program at the University. Shirley J. Bolli, who was secretary to the dean for seven years came to that position as a new high school graduate after only a few weeks of office experience. Her husband, Don was on overseas duty during most of his three years in the navy. With the help and guidance of Miss Stemmons, Mrs. Bolli quickly adjusted to all of the demands of the job. She was an exceptionally good typist and all of the faculty members wanted her to type their manuscripts. Because of our inability to employ an adequate number of secretaries, she and Miss Stemmons did the secretarial work for most of the departments in the

School. When Don Bolli became a trooper in the Missouri Highway Patrol he was assigned to Mexico, Missouri and Mrs. Bolli resigned in March, 1962.

The position was filled by the appointment of Mrs. Lottie Smith, whose late husband, Newcomb Smith, had been a member of the faculty in the Soils Department. Mrs. Smith had worked in other University offices and was familiar with the procedures that related to the several business offices of the University. She has continued in the position under Dean Kingrey and her experience and stabilizing influence has been invaluable to him and to the faculty and students. She continues to cope with the increasing problems of a growing division with efficiency and aplomb.

Mrs. Helen Hood in veterinary medicine and surgery and Mrs. Delores Melloway in veterinary microbiology have also served their respective departmental faculties in a most efficient manner and over an extended period. There are many others who have shorter periods of service but have become important members of the staff and who will continue to add to the stature of the School.

Veterinary Medicine at the University of Missouri

- 1839—The University of Missouri was established by action of the General Assembly. It was the first state university in the Louisiana Purchase and west of the Mississippi River.
- 1845—Medical science was first taught as a part of the University program when the McDowell (St. Louis) Medical College became the Medical Department of the University.
- 1850—A proposal was made to the Curators that agriculture be taught at the University. No action was taken.
- 1853—The Missouri State Agriculture Society was organized at Boonville.
- 1854—A proposal was made to the legislature that \$20,000 be appropriated to endow a professorship in agriculture. It was defeated.
- 1856—The connection with the McDowell Medical College terminated when action by the Legislature prohibited members of the University faculty from engaging in any profession other than teaching. Medical faculty members were all practicing physicians.
- 1858—Northwest Missouri citizens proposed that an agricultural college be established at St. Joseph. The U.S. Congress passed the first Morrill Act which was vetoed by President James Buchanan.
- 1862—The Morrill Act was again passed and signed by President Abraham Lincoln.
- 1864—The State Board of Agriculture was organized for the general benefit of the state. As early as 1883 the Board was telling farmers that, "the age of farming without books has gone by."
- 1867—An unsuccessful effort was made to re-establish the earlier arrangement with the medical college in St. Louis.
- 1870—After years of controversy and many factional battles in the General Assembly and among several counties, action was taken to establish a College of Agriculture as a part of the University at Columbia. The Curators created the Chair of Agriculture and George C. Swallow was elected to fill the position. He was made the first dean of the College two years later.
- 1872—The first instruction in veterinary medicine was offered when Professors H. J. Detmers and L. J. Smith were employed as "lecturers in veterinary surgery." Dr. Andrew W. McAlister, an alumnus of 1864 and a practicing physician in Columbia, in a meeting of the Boone County Medical Society proposed re-activation of the teaching of medicine at the University. He and a colleague would teach without salary other than fees of the medical students. The proposal was presented to the Curators, who approved and the first session began on February 17, 1873. The course was to be as full and complete as those of other medical colleges, except for clinical instruction.
- 1877—Dean Swallow recommended the appointment of a veterinarian to the faculty. No action was taken.
- 1882—The first Farmer's Institute was held by the State Board of Agriculture at Higginsville on November 1.
- 1884—Dr. Paul Paquin was appointed to the faculty. He was the first veterinarian with a full time appointment.
- 1885—Governor Thomas T. Crittenden recommended establishing a Veterinary Department at the University, an Office of State Veterinary Science, and a new official to be known as state veterinarian. The legislature acted favorably on the recommendation and Dr. Paquin was appointed the first state veterinarian and head of the Department of Veterinary Science. A vaccine-virus laboratory was established, probably the first such laboratory by a state university.
- 1887—Dr. Paquin received the M.D. degree from the University. The Hatch Act, establishing Agricultural Experiment Stations was passed.
- 1888—John W. Connaway, a medical student, was appointed assistant veterinarian. Paquin and Connaway began research on Texas fever.
- 1889—Dr. Paquin offered a course in comparative medicine. Results of Texas fever experiments were published as Experiment Station Bulletin No. 11.
- 1890—The Chicago Veterinary College conferred the M.D.C. degree (doctor of comparative medicine) on Connaway.
- 1891—Dr. Paquin resigned to accept a position at Battle Creek, Michigan. Dr. Connaway succeeded him as chairman of the Department of Veterinary Science. Dr. Connaway received the M.D. degree. Dr. Paquin started publication of a new journal, *The Bacteriological World*. The first state appropriation to support the Farmer's Institute was made. They were continued until 1933.
- 1892—Francis Quadrangle on the west campus was so named in honor of David R. Francis in recognition of his service in rebuilding the University after the fire of January 9, 1892 when he was governor of Missouri.
- 1896-1897—Research on Texas fever was resumed. Results were published as *Experiment Station Bulletin No. 37, Texas Fever Experiments*.
- 1898—A request for an appropriation of \$30,000 to construct a livestock

- building was denied.
- 1899—The Board of Curators announced the discovery by the Experiment Station of an inoculation that would prevent Texas fever. Dr. Mark Francis of Texas cooperated with Dr. Connaway on the research.
- 1900—State Board of Agriculture recommended the experiments in inoculating northern cattle with Texas fever.
- 1901—An appropriation of \$12,000 was made for the livestock building.
- 1904—While Dr. Connaway studied with Dr. Francis in Europe, Dr. John B. Tiffany was appointed to serve during Connaway's absence.
- 1905—The first law to regulate the practice of veterinary medicine was enacted, largely through the efforts of Dr. Luckey, state veterinarian.
- 1910—Construction was started on the Veterinary Science Building (Connaway Hall). The legislature appropriated \$10,000 for the production and distribution of anti-hog cholera serum.
- 1911—Connaway Hall was completed and an additional \$25,000 was appropriated for serum production.
- 1914—Dr. Connaway was accused of unethical conduct and asked to resign his membership in the Missouri Veterinary Medical Association. In replying to the charges, he severely criticized the officers and some of the graduates of the Kansas City Veterinary College and predicted the eventual closing of all privately operated schools. Co-operative Extension in Agriculture and Home Economics became a part of the University. Hog cholera eradication was one of nine initial projects.
- 1915—A \$50,000 hog-cholera appropriation made it possible to build a new plant for serum production located three miles north of Columbia.
- 1917—The first veterinarians to do extension work were appointed. They were, Drs. F. W. Caldwell and J. S. McDaniel.
- 1925—The first short course for veterinarians was held on the last four days in January.
- 1929—All faculty members for the first time were veterinarians.
- 1931—Dr. Connaway retired from the faculty and Dr. Durant succeeded him as department chairman. The Missouri Veterinary Medical Association criticized the University, the Extension Service, and the Department of Veterinary Science for activities of county agents in veterinary medicine.
- 1933—State Board of Agriculture was abolished by legislative action which also provided for a commissioner of agriculture.
- 1936—Production and sale of anti-hog cholera serum were stopped.
- 1941—A two-year course in pre-veterinary medicine was offered in the College of Agriculture. Students who enrolled in such a course were advised by faculty members in the Department of Veterinary Science.
- 1943—The governor's Board of Visitors again recommended that the University establish a School of Veterinary Medicine. Veterans of World War II began to exert pressure on members of the legislature to provide funds for a school. Dr. Durant was directed to submit an estimate of the cost.
- 1945—Pressure from the veterans increased. Dr. Durant's estimate was \$375,000.
- 1946—The 63rd General Assembly appropriated \$240,000 to establish a "School of Veterinary Science." A class of 28 was admitted at the beginning of the fall semester. The Board of Curators approved a six-year curriculum, two years of pre-veterinary medicine and four years of professional veterinary medicine, leading to the degree of doctor of veterinary medicine and bachelor of science in agriculture.
- 1949—Action by Curators established a Division of Agricultural Sciences of which the School of Veterinary Medicine was a part. Dr. A. H. Groth was appointed director of the School.
- 1950—The Council on Education of the American Veterinary Medical Association inspected the School. The Council placed the School on Public Probationary Approval, the lowest rating. Dr. Groth's title was changed to dean. The first class was graduated on June 6 during a hard rain. Exercises held in the stadium and President Harry S. Truman was the speaker.
- 1956—An appropriation of \$800,000 was made for construction of a hospital-clinic building.
- 1960—Construction started on Hospital-Clinic. The School of Veterinary Medicine became a separate autonomous division on the same administrative level as the School of Law and the School of Medicine. The Division of Agricultural Sciences was done away with and all of the schools except veterinary medicine were placed under the College of Agriculture.
- 1963—Dr. Groth retired as Dean and Dr. B. W. Kingrey was appointed Dean. Dr. Shelton was appointed Assistant Dean.
- 1964—The Departments of Veterinary Anatomy, Veterinary Microbiology, and Veterinary Physiology and Pharmacology were approved to offer work leading to the doctor of philosophy degree. Phi Chapter of Phi Zeta, the honor society of veterinary medicine, was installed at the School.
- 1965—A Medical Records Library was started at the Clinic. The first-year class admitted to the School was doubled to 60 students. The Sinclair Farm for Aging was established.
- 1966—Dr. Shelton was promoted to Associate Dean. A new section of Radiology and Radiation Biology was established.
- 1967—A new section of Anesthesiology was established. *The Faculty Newsletter*, published monthly for the faculty of the School, was started. The School received its first General Research Support Grant of \$50,311 from NIH. The first Awards Night was held in May and the first Pre-Commencement Program was scheduled at 2 p.m. on Graduation Day.

Faculty Members by Departments 1949-1968

Veterinary Anatomy

- J. E. Weinman, D.V.M., Professor and Chairman of Department 1946-1960.
- D. V. Benson, D.V.M., M.S., Associate Professor, 1948-1952.
- W. W. Crenshaw, B.S., D.V.M., M.S., Associate Professor, 1952-1963.
- M. K. Wykoff, D.V.M., Assistant Professor, 1957-1961.
- R. C. McClure, D.V.M., Ph.D., Professor and Chairman of Department, 1960-
- F. R. Preuss, D.V.M., Ph.D., Visiting Professor, 1961-1962.
- F. E. Romack, B.S., M.S., Ph.D., Assistant Professor, 1961-1965.
- P. D. Garrett, B.S., D.V.M., M.S., Assistant Professor, 1962-
- H. D. Dellmann, Docteur Vétérinaire, Dr. med. vet., Ph.D., Professor, 1964-
- R. W. Carithers, D.V.M., Instructor, 1965-1968.
- N. H. McArthur, D.V.M., Instructor, 1965-
- A. A. Zakaria, B. Ch.D., M.S., Research Associate, 1965-1968.
- R. A. Arnold, B.S., D.V.M., M.S., Instructor, 1966-
- W. S. Bivin, B.S., D.V.M., Instructor, 1966-
- D. D. Draper, D.V.M., Instructor, 1966-
- J. E. Breazile, B.S., D.V.M., Ph.D., Professor, 1967-
- V. S. Cox, Jr., D.V.M., Research Associate, 1967-
- D. W. Duffield, B.S., D.V.M., Research Associate, 1967-
- A. E. Marshall, B.S., D.V.M., Research Associate, 1967-
- G. P. Kozlowski, B.S., M.S., Research Associate, 1967-1968.

Veterinary Medicine and Surgery

- O. S. Crisler, D.V.M., Assistant Professor, 1917-1963.
A. A. Case, B.S., M.S., D.V.M., Professor, 1947-
H. W. Howell, D.V.M., Associate Professor, 1948-1963.
R. B. Moody, D.V.M., Assistant Professor, 1948-1951.
A. H. Groth, B.S., M.S., D.V.M., Professor, Chairman of Department, Dean, Dean Emeritus, 1949-1968.
W. M. Moore, D.V.M., Instructor, 1949-1950.
E. F. Ebert, D.V.M., Professor and Chairman of Department, 1950-
Stanley N. Smith, D.V.M., Special Lecturer and Clinician, 1950-1961.
C. J. Bierschwal, D.V.M., M.S., Professor, 1951-
D. V. Benson, B.S., D.V.M., M.S., Associate Professor, 1952-1953.
J. T. McGinity, D.V.M., M.S., Associate Professor, 1952-
W. P. Blake, D.V.M., Assistant Professor, 1953-1955.
J. E. English, B.S., D.V.M., M.S., Associate Professor, 1954-
K. H. Niemeyer, B.S., D.V.M., M.S., Associate Professor, 1955-
T. A. Farmer, D.V.M., Assistant Professor, 1958-1961.
L. G. Tritschler, B.S., D.V.M., M.S., Assistant Professor, 1960-
A. W. Dobson, D.V.M., M.S., Assistant Professor, 1961-
E. R. Bacallao, D.V.M., Instructor, 1962-1965
J. H. Moser, D.V.M., Assistant Professor, 1962-1965.
J. D. Carter, B.S., D.V.M., Instructor, 1963-1967.
B. W. Kingrey, D.V.M., M.S., Professor, Dean, 1963-
T. M. Eagle, D.V.M., Associate Professor, 1964-
P. T. Pearson, D.V.M., Ph.D., Professor, 1964-1965.
R. E. Hoffer, D.V.M., M.S., Associate Professor, 1965-
E. A. Corley, B.S., D.V.M., Ph.D., Professor, 1966-
K. L. Kraner, B.S., D.V.M., Professor, 1966-
E. C. Mather, D.V.M., Instructor, 1966-
M. P. Rines, B.S., D.V.M., Ph.D., Professor and Chairman of Department, 1966-
J. R. Bryan, D.V.M., Research Associate, 1967-1968.
H. E. Jensen, D.V.M., Research Associate, 1967-
D. W. Johnson, B.S., D.V.M., Ph.D., Professor, 1967-
W. T. Kerber, D.V.M., Assistant Professor, 1967-
C. E. Martin, B.S., D.V.M., M.S., Assistant Professor, 1967-
L. R. Nelson, B.S., D.V.M., Research Associate, 1967-
J. D. Rhoades, B.S., D.V.M., M.S., Assistant Professor, 1967-
C. E. Short, D.V.M., Assistant Professor, 1967-
J. W. Ticer, B.S., D.V.M., M.S., Ph.D., Associate Professor, 1967-
W. A. Wolff, D.V.M., M.S., Assistant Professor, 1967-
L. M. Cornelius, D.V.M., Research Associate, 1968-
J. P. Hickcox, B.S., D.V.M., M.D., Assistant Professor, 1968-
W. R. Threlfall, D.V.M., Research Associate, 1968-
R. A. Stuhlman, D.V.M., Research Associate, 1968-
P. M. Newberne, D.V.M., M.S., Instructor, 1954-1958.
E. L. McCune B.S., D.V.M., M.S. Ph.D., Assistant Professor, 1956-
D. C. Blendon B.S., M.S., D.V.M., Associate Professor, 1957-
R. W. Loan, B.S., D.V.M., M.S., Ph.D., Professor, 1961-
F. W. Clayton, D.V.M., M.P.H., M.S., Assistant Professor, 1962-
R. P. Botts, A.B., B.S., D.V.M., M.P.H., Assistant Professor, 1963-
L. C. Murphy, B.S., D.V.M., Professor and Associate Dean, 1964-
B. D. Rosenquist, D.V.M., M.S., Ph.D., Assistant Professor, 1964-
C. W. Purdy, III, B.S., D.V.M., M.S., Instructor, 1965-1968.
R. B. Wescott, B.S., D.V.M., M.S., Ph.D., Associate Professor, 1965-
R. W. Menges, D.V.M., M.P.H., Assistant Professor, 1966-
H. M. Parrish, B.S., M.D., M.P.H., Dr. P. H., Associate Professor, 1966-
E. R. Price, D.V.M., Assistant Professor, 1966-
S. L. Silberg, B.S., M.A., M.P.H., Ph.D., Assistant Professor, 1966-
F. T. Szatalowicz, B.S., D.V.M., Research Associate, 1966-1967.
S. B. Plurad, B.S., M.S., Ph.D., Research Associate, 1967-1968.
N. D. Rohde, B.S., D.V.M., Research Associate, 1967-
R. R. Ryno, B.S., D.V.M., Research Associate, 1967-
P. R. Schnurrenberger, D.V.M., M.P.H., Clinical Assistant Professor, 1967-
L. A. Selby, B.S., D.V.M., M.P.H., Dr. P.H., Assistant Professor, 1967-
R. L. Taylor, A.B., M.A., Ph.D., Associate Professor, 1967-1968.
E. R. Ames, B.S., D.V.M., Ph.D., Assistant Professor, 1968-
J. N. Berg, D.V.M., Research Associate, 1968-
C. R. Dorn, D.V.M., M.P.H., Associate Professor, 1968-
W. F. McCulloch, D.V.M., MPH., Professor & Director of Continuing Education, 1968-
Dwight Owens, B.S., M.S., Research Associate, 1968-
A. E. Schwichtenberg, D.V.M., MPH., Resident in Vet. Pub. Health, 1968-
R. F. Solorzano, B.S., M.S., Ph.D., Associate Professor, 1968-
G. H. Swenson, D.V.M., Research Associate, 1968-
A. R. Dommert, B.S., D.V.M., M.S., Ph.D., Associate Professor, 1966-

Veterinary Pathology

- Cecil Elder, D.V.M., M.S., Professor and Chairman of Department, 1931-1963.
D. E. Rodabaugh, D.V.M., M.S., Professor, 1941-
H. H. Berrier, B.S., D.V.M., M.S., Associate Professor, 1948-
G. C. Shelton, D.V.M., M.S., Instructor, 1948-1949.
L. D. Kintner, B.S., D.V.M., M.S., Professor, 1949-
A. H. Groth, B.S., M.S., D.V.M., Professor, 1963-1968, Acting Chairman of Department, 1963-1964.
B. L. Moseley, B.S., D.V.M., M.S., Assistant Professor, 1963-

Veterinary Microbiology

- A. J. Durant, B.S., A.M., D.V.M., Professor, 1912-1957.
H. C. McDougale, B.S., A.M., D.V.M., Professor and Chairman of Department, 1930-
S. C. Benbrook, D.V.M., Instructor, 1949-1951.
G. C. Shelton, D.V.M., M.S., Ph.D., Professor and Chairman of Department and Associate Dean, 1949-
M. E. Taylor, B.S., D.V.M., Assistant Professor, 1951-1953.

- L. G. Morehouse, B.S., D.V.M., M.S., Ph.D., Professor and Chairman of Department, 1964-
A. C. Strafuss, B.S., D.V.M., M.S., Ph.D., Associate Professor, 1964-1968.
S. L. Nelson, D.V.M., M.S., Ph.D., Associate Professor, 1965-
L. D. Olson, D.V.M., Ph.D., Associate Professor, 1965-
L. J. Ackerman, V.M.D., Instructor, 1966-1968.
W. O. Cowart, D.V.M., Instructor, 1966-1967
C. C. Middleton, B.S., D.V.M., M.S., Associate Professor, 1966-
W. R. Rule, L.L.B., Associate Professor, 1966-1967
R. E. Flatt, B.S., D.V.M., Ph.D., Assistant Professor, 1967-
R. D. Furrow, D.V.M., Research Associate, 1967-1968.
D. A. Schmidt, B.S., D.V.M., M.S., Ph.D., Professor, 1967-
J. D. Wallach, B.S., D.V.M., Research Associate, 1967-
H. S. Gosser, D.V.M., M.S., Research Associate, 1968-
W. H. Halliwell, D.V.M., Research Associate, 1968-
B. E. Hooper, B.S., D.V.M., M.S., Ph.D., Associate Professor, 1968-
N. M. Patton, B.S., D.V.M., Research Associate, 1968-
J. A. Schmitz, D.V.M., Research Associate, 1968-
R. Schueler, D.V.M., M.S., Research Associate, 1968-
H. F. Troutt, B.S., V.M.D., M.S., Research Associate, 1968-
Veterinary Physiology and Pharmacology
A. W. Uren, D.V.M., M.S., Professor and Chairman of Department, 1924-1960
B. B. Roseboom, B.S., M.S., Professor, 1949-1956
H. E. Dale, D.V.M., M.S., Ph.D., Professor and Chairman of Department, 1951-
A. D. Allen, B.S., M.S., Ph.D., D.V.M., Assistant Professor, 1956-1960
L. E. Davis, D.V.M., M.S., Ph.D., Associate Professor, 1959-
E. O. Kearley, D.V.M., M.S., Instructor, 1961-1963.
S. D. Beckett, B.S., D.V.M., M.S., Instructor, 1963-1966
Creighton Cornell, B.S., D.V.M., Instructor, 1963-1966.
W. W. Crenshaw, B.S., D.V.M., M.S., Associate Professor, 1963-1966.
A. W. Merrick, B.S., M.S., Ph.D., Associate Professor, 1963-1966.
R. V. Moore, B.S., M.S., Ph.D., Associate Professor, 1963-
E. E. Elefson, D.V.M., Instructor, 1965-
C. R. Short, D.V.M., M.S., Instructor, 1965-
D. E. Weinman, D.V.M., M.S., Ph.D., Associate Professor, 1965-
L. F. Hodoval, D.V.M., Instructor, 1966-
W. L. Jenkins, B.V. Sc., M. Med. Vet., Graduate Assistant, 1966-
S. D. Larks, B.S., M.S., Ph.D., Professor, 1966-
F. W. Oehme, B.S., D.V.M., M.S., Dr. med. vet., Research Associate, 1966-1968.
R. L. Doak, B.S., D.V.M., M.S., Research Associate, 1967-
G. M. Zinn, D.V.M., Research Associate, 1967-
B. M. Boulos, M.D., Ph.D., Assistant Professor, 1968-
R. E. Doyle, B.S., D.V.M., M.S., Assistant Professor, 1968-
W. P. Palmore, D.V.M., M.S., Ph.D., Assistant Professor, 1968-
M. E. Tumbleson, B.S., M.S., Ph.D., Assistant Professor, 1966-
G. K. Peterson, B.S., M.S., Assistant Instructor, 1966-1967
T. M. Curtin, B.S., D.V.M., M.S., Ph.D., Professor and Chairman of Department, 1966-
L. F. Reschley, D.V.M., Instructor, 1966-

Graduates of the School of Veterinary Medicine

1950

Brainard, Warren D.
Coley, Floyd E.
Conrad, Marshall D.
Crenshaw, Wesley W.
Eckhoff, Harold C.
Evans, James H., Jr.
Farrell, James K.
Hartley, Jesse L.
Hughes, Joseph C.
Jones, Robert P.
Knappenberger, George E.
Krautman, Edwin J.
Ledgerwood, Ray D.
McCrea, James C.
McKee, Gerald L.
Miller, Maurice
Minor, William J.
Pilcher, Harold W.
Powell, Elmer B., Jr.
Schilb, Warren C.
Schondelmeyer, William L. (Deceased)
Seelbach, James R.
Simpson, John B.
Thom, Paul H.
Wills, Thomas, D., Jr.
Zollman, Paul E.

1951

Andes, Gerald D.
Bisplinghoff, Fred D.
Boelson, Stewart H. (Deceased)

Boucher, Willis E.
Brown, Roy E.
Clark, Carl C.
Engle, Milton, Jr.
Eppright, Charles S. (Deceased)
Gerding, Ross W.
Good, Lawrence F.
Greer, Lawrence E.
Harlan, George W.
Hughes, Richard W.
Jackson, Layton C.
Ketchum, Walter F.
Krusekopf, Frederick F.
Lane, Taylor L.
Lucas, Donald F. (Deceased)
Lyle, Robert L.
McCrary, Raymond
O'Brien, Thomas D.
Rice, Leland L.
Schulz, Norman E.
Sebolt, Herbert C.
Stiles, George C.
Taylor, Milton E.
Vogelweid, Theodore J.
Vulgamott, Carroll E.
Watson, Oscar E.
Wohler, Wilson H., Jr.

1952

Brune, Theophil H.
Burgess, Ernest E.
Cary, E. Lee
Davidson, Laurence S.

Delany, Jack W.
 Doughty, Alfred W.
 Espey, Robert L.
 Fischer, George W.
 Frazier, David L. (Deceased)
 Guibor, Edna C.
 Hinds, Eugene H.
 John, James F. (Deceased)
 McCanne, Joe R.
 McCormick, Cleveland J.
 Mathewson, Arvel D.
 Miles, David N.
 Mottesheard, Donald D.
 Murphy, Clifton N.
 O'Connell, Frank J., Jr.
 Omohundro, Thomas J.
 Pfander, Burl Z.
 Pierce, John W., Jr.
 Rogers, Carl H.
 Shimp, Frank H.
 Terrel, Grant B.
 Thomas, Edward W.
 Thomas, Emerald G.
 Zacher, Joseph A.

1953

Berry, Charles A.
 Bruner, John R.
 Bryson, William F.
 Counsilman, Joseph W.
 Elliott, Floyd A.
 Eschenroeder, Harry C.
 Ganaway, James R.
 Greeley, Ralph G.
 Hibbs, Clair M.
 Higgins, Theodore
 Johnson, David N.
 Kent, Kyle C.
 Knoernschild, Kenneth L.
 Love, Walter W.
 Manfull, Ralph C. (Deceased)
 Matteson, Alexander M.
 Minnick, Joseph O.
 Mutrux, Robert A.
 Nelson, Paul L. (Deceased)
 Noland, Wilbur F.
 Owens, Vern E.
 Plegge, Chester R.
 Robertson, Hersel H.
 Rohlfing, Leo E.
 Smith, Arthur P. (Deceased)
 Thurmon, Johnny Q., Jr.
 Wallace, Robert D.
 Wheatley, Hilery E.
 Woolsey, John J.

1954

Baird, Ronald E.
 Baker, Bernard M.
 Baker, Herman C.
 Blackwell, Lewis B.
 Blum, A. Elmer
 Brown, Robert D.
 Buzard, William D.
 David, Fred S.
 Davis, Robert W.
 Dieckroeger, Charles W., Jr.
 Fischer, George F.
 Fisher, Robert A.
 Forrest, Harry J.
 Freese, Leo J.
 Goodnight, Venton D.
 Grieb, William A.
 Hickcox, John P.

Hubbard, James W.
 Keeney, Ireatess C.
 Landaker, Walter E., Jr.
 Linnerson, Glenn R.
 Madden, Fred W.
 Monsees, Charles W.
 Moore, Charles E.
 Netsch, Newell P.
 Parker, Jack O.
 Swanstone, Floyd T.
 Utgard, Herbert M.
 Williams, Leslie W.

1955

Blake, Floyd D.
 Bozarth, James W.
 Cahill, William E.
 Chandler, Clyde L.
 DeWeese, Joyce E.
 Flint, Ernest W.
 Flowers, Marion R.
 Fredman, John D.
 Grosse, Charles W.
 Groves, Robert S.
 Heutel, Lee B.
 Holt, Leland H.
 Imes, George D.
 Ingram, Sidney H.
 Miller, Jacob L.
 McGinnis, James P.
 Niemeyer, Kenneth H.
 Owings, Fon E.
 Pope, Robert E.
 Prather, James K.
 Randolph, James R.
 Snell, Marvin A.
 Steffan, Frederick L.
 Stone, Nelson L.
 White, Nelson L.
 Whitted, Harold H.
 Wilson, Raymond J.
 Wright, Harold B.

1956

Augspurger, Jerry L.
 Berk, Peter D.
 Bilyea, George D.
 Binder, Richard A.
 Blenden, Donald C.
 Bone, Walter W.
 Boucher, John H.
 Buck, William B.
 Clark, William D.
 Crawford, August E.
 Crockett, James F.
 Fuchs, Robert H.
 Hertzog, Robert E.
 Holman, John E., Jr.
 Johnson, Gerald L.
 Kimmons, John B.
 Landers, Thomas L.
 McCune, Emmett L.
 Netherton, Charles R.
 Nicoletti, Paul L.
 Price, Bill A.
 Reid, William T.
 Russell, Leon H., Jr.
 Skinkle, James R.
 Smith, Wayne D.
 Spreitzer, Allen G.
 Stefanides, Victor N.
 Weimer, Charles M.
 Wiksten, Grauman

1957

Allen, Walter G.
Barrows, George T.
Botts, Robert P.
Casey, Harold W.
Counts, Charles L.
Cramer, Dallas R.
Dobbins, James K.
Duing, Edwin F.
Evans, John W.
Genser, Mathias P.
Grosse, Robert E.
Henry, William R.
Hodges, Clifton, Jr.
Horton, Jack R.
John, Max W.
Johnson, Carl S.
Kroenke, Gail G.
Lee, Tommy T.
Lindsey, Garland D.
McQueen, James L.
Mabee, Clarence E.
Merritt, William D.
Mickley, Eugene A.
Palmer, Leonard E.
Riegel, Richard T.
Rings, Reed W.
Schmoll, Robert E.
Stark, Glenn K.
Uren, John E.

1958

Baker, James E.
Barnett, Richard S.
Basnett, Robert J.
Benson, Milton L.
Breazile, James E.
Buchmann, Kenneth H.
DeHaven, Ronald L.
Dierberg, William C.
Fairchild, Glenn A.
Frank, John J. (Deceased)
Goss, Ward A. (Deceased)
Hahn, Allen W.
Hayden, Harold E.
Hooker, Joel F.
Hughes, William H.
Jones, Alanson L.
Kuhn, Emil F.
London, William T.
McEuen, Gerald L.
Martin, Charles E.
Middleton, Charles C.
Nordyke, Lester D.
Overhulse, Thomas W.
Plegge, Eugene W.
Spargur, Ruth Thomure
Steinhoff, Homer E.
Vaughn, Jack L.
Vosbrink, Charles J.
Wright, Billy G.

1959

Brewster, William B.
Ennenbach, Eugene M.
Garwood, Glenn E.
Hertzog, James E.
Holden, John W.
Holliday, Richard J.
Hull, Richard D.
Meredith, James R.
Mozier, John O.

O'Bannon, Emmett B.
Owings, Richard B.
Palumbo, Nicholas E.
Pemberton, Robert E.
Perry, John M.
Riggins, A. Patrick
Rolf, Nelson V.
Shipley, Gene R.
Singman, Irving
Snider, H. Keith
Strange, Ralph K.
Stringer, Richard W.
Treese, Harold A.
Uren, William G. (Deceased)
Waddel, James R.
Wade, Ronald G.
Wilson, James C.
Woods, Taylor H.
Young, Fowler A. II

1960

Alber, Charles L.
Antelman, Morton
Blackshaw, Glenn D.
Broshius, George L.
Campbell, James R.
Chambers, William B.
Dickson, Sherman M.
Eskew, Nathan E.
Flentge, Robert L.
Greenwood, Floyd I.
Harvey, William P. (Deceased)
House, John L.
Kramer, Urban L., Jr.
Leezy, Charles N.
Mayfield, Donald I.
Morris, David F.
Mueller, Edgar J.
Oliver, James C.
Oshry, Michal L.
Osterholtz, Kathryn J.
Patterson, Glenn W.
Paul, Donald R.
Riley, Edgar N.
Rosebrough, Raymond M.
Smith, Hollis D.
Smith, Robert J.
Tritschler, Louis G.
Weggeman, John F.
Wood, David H.

1961

Boyd, Herman L.
Brauer, Arthur E.
Carter, James D.
Cato, Bill R.
Creed, James E.
DeGase, Paul
Fray, H. Allen (Deceased)
Garrett, Phillip D.
Golden, Robert L. (Deceased)
Gutekunst, Donald L.
Hess, Robert E.
Hoback, Douglas L.
Hooper, William E.
Jones, Walter N.
Kinkead, J. Carter
Linsenshardt, Robert A.
Michel, William E.
Montgomery, John R.
Payne, Darrell C.
Rhoades, John D.
Taylor, Jewell R.

Thorne, James G.
Watson, Cyril E.
Weaver, Ray E.
Wood, Richard L.

1962

Adelstein, Edward H.
Allen, Arthur D.
Bennett, Lee R.
Cornell, Creighton N.
Davidson, Doyle E.
Davis, Don
Hennessy, John A.
Hohlstein, Walter M.
Hubbard, Roy E.
Jenkins, Hal L.
Jenkins, Leon D.
Jury, George W.
Kelley, William N.
King, Dyarl D.
Kluge, John P.
Langley, Claude L., Jr.
Lauhoff, Bernard J.
Mobley, Donald R.
Moseley, Bonnard L.
Munger, Laddie L.
Noyes, Thomas R.
Paule, Jack R.
Phillips, Donald W.
Reynolds, Tony G.
Snider, Edward L.
Taylor, Richard F.
Thurmon, John C.
Wendling, Joseph III
White, Donald W.
Wilmarth, Fred D.

1963

Breckenridge, J. A.
Clark, Harry A.
Cooper, Harold J.
Cooper, James C.
Eckert, John C.
Frie, Ray L.
Gilmore, Max W.
Hall, Allen III
Hatten, Kenneth E.
Heseman, Gordon W.
Hessler, Jack R.
Keefe, Thomas J.
LaFevers, Richard B.
Meador, James L.
Phelen, David
Purdy, Charles W., III
Rubano, Anthony R.
Tharp, Robert L.
Townley, Merrill M.
Troxell, John F.
Viebrock, Vernon H.
Walker, J. Victor
Walker, Joseph A.
Warren, John G.
Widmer, John H.

1964

Badger, James F., Jr.
Beem, Richard L.
Blevins, Donn I.
Burden, Joe T.
Clark, Donald L.
DeGraffenreid, Glenn F.
Frame, Richard W.

Griswold, Arthur N.
Hansbrough, V. Dale
Haight, Joseph E.
Hibbler, Philip E.
Hunter, William C.
Leach, James B.
Love, M. Andrew
Miller, Donald J.
Montrey, Richard D.
Owens, Donald L.
Powell, E. Joseph
Raithel, William F.
Ranney, Royal W.
Robberson, James A.
Rolf, Christopher H.
Schwab, Glenn M.
Strauser, Glenn D.
Wallach, Joel D.
Welborn, Charles B.

1965

Allen, Larry W.
Bybee, Lewis E.
Collier, Byron L.
Creach, Dwight O.
Daniels, Curt N.
Dickerson, Preston L.
Doak, Robert L.
Doyle, Richard E.
Drake, Gentry C.
Farris, Harold E., Jr.
Garrett, Everett D.
Hamby, Homer L.
Howard, Dale W.
Jackson, George A.
Jennings, David P.
Joerling, Jerry H.
Kadel, Wade L.
Mueller, Daniel W.
Sanguinette, Ronald R.
Schmidtke, Richard P.
Scrutchfield, Wilbur L.
Sorokwasz, David W.
Starks, Vern R.
Storck, Kenneth R.
Vater, John D.
Wiggins, Larry K.
Woodward, John S.

1966

Cockrum, Rodger O.
Collier, Raymond D.
Davenport, David D.
DeGarmo, John P.
Depee, Stanley D.
Donnelly, Eugene J.
Gates, George A.
Gerstner, Melvin L.
Gwin, Clark A.
Johnson, Lloyd E.
Lee, Larry A.
Massman, James H.
Miles, Delbert G.
Mitchell, James D.
Moch, Ronald W.
Moore, Larry F.
Rehg, Jerold E.
Robinson, Allen G.
Schoen, Russell R.
Stuart, Barry P.
Wilborn, Kenneth R.
Wilson, Jonathan L.
Woods, Gary B.
Worley, William H.

Burgess, Aleck D.
 Carroll, Nora Lu
 Childers, Thelbert E., Jr.
 Coen, Larry W.
 Coleman, Jackie L.
 Gann, John F.
 Hallam, Teddy M., Jr.
 Hill, Gaylen G.
 Hoover, Charles G.
 Jameson, Sam W.
 Jones, Francis D., Jr.
 Kinkad, Robert L.
 Mills, James W.
 McGruder, Jerry E.
 Neill, Jackie L.
 Overstreet, John W.
 Rainey, G. Lee
 Reinhold, John E.
 Rich, James E.
 Sapp, James L.
 Schabbing, William H.
 Smith, George H.
 Spragg, Gary A.
 Widel, Philip W.
 Wilson, Stephen D.

Beck, Harold E., Jr.
 Brown, Ronald E.
 Carey, Gerald E.
 Carrier, James D.
 Cartwright, Kenneth R.
 Cloud, Dennis F.
 Cohen, Lawrence M.
 Crain, Raymond A.
 Cunningham, George H.
 Eldridge, Leo F.
 Fields, John C.
 Fleetwood, Jasper R., Jr.
 Garton, Norman L.
 Gillig, Larry T.
 Glassberg, Richard S.
 Griffith, Herbert H.
 Kuhn, Roger C.
 Levin, Stuart
 McWilliams, Paul F.
 Mirrs, Gary D.
 Mitchell, William J.
 Nave, James E.
 Ricketts, Van B.
 Robertson, Rainey, Jr.
 Scanlan, Charles M.
 Shaw, Elmer H., Jr.
 Sparks, Harold W.
 Trimmer, Harold T.
 Yates, Waybern D.

Foreign Students

<u>NAME</u>	<u>SCHOOL</u>	<u>ADVISOR</u>	<u>YEAR ARRIVED</u>	<u>DEGREE OR NON-DEGREE</u>
Bibekananda Sahoo	Orissa Vet. (Orissa)	Cecil Elder	'58	M. Sc.
Parikshit C. Das	Assam Vet. (Gauhati)	A. W. Uren	'59	M. Sc.
Allaudin Ahmad	Bihar Vet. (Patna)	A. W. Uren	'59	M. Sc.
P. B. Kuppaswamy	Bihar Vet. (Patna)	G. C. Shelton	'59	M. Sc.
Madhusedan Das	Bengal Vet. (Calcutta)	Cecil Elder	'59	M. Sc.
Saroj K. Mukherjee	Bihar Vet. (Patna)	A. W. Uren	'59	M. Sc.
Ananta Mishra	Orissa Vet. (Orissa)	D. C. Blenden	'59	M. Sc.
Priya R. Ghose	Assam Vet. (Gauhati)	J. E. Weinman	'60	*
Dina B. Mukherjee	Bengal Vet. (Calcutta)	E. F. Ebert	'59	M. Sc.
B. N. Thakuria	Assam Vet. (Gauhati)	H. E. Dale	'59	M. Sc.
Jib. N. Mohanty	Orissa Vet. (Orissa)	A. A. Case	'60	M. Sc.
G. K. RoyChoudhury	Assam Vet. (Gauhati)	A. A. Case	'59	M. Sc.

*Still working on course work.

<u>NAME</u>	<u>SCHOOL</u>	<u>ADVISOR</u>	<u>YEAR ARRIVED</u>	<u>DEGREE OR NON-DEGREE</u>
P. K. Baruah	Assam Vet. (Gauhati)	A. A. Case	'60	M. Sc.
Abdur Raquib	Assam Vet. (Gauhati)	G. C. Shelton	'60	M. Sc.
Sudarshan Sahu	Orissa Vet. (Orissa)	A. A. Case	'60	M. Sc.
J. S. Ahluwalia	Bihar Vet. (Patna)	H. C. McDougale	'61	M. Sc.
Man M. Singh	Bihar Vet. (Patna)	A. A. Case	'61	M. Sc.
Parimal K. Sinha	Bengal Vet. (Calcutta)	M. H. Ivey	'61	Ph.D.
Lakshminarayan Das	Orissa Vet. (Orissa)	A. A. Case	'61	M. Sc.
Anirudha Prasad	Bihar Vet. (Patna)	H. E. Dale	'61	M. Sc.
Purnananda Mukherjea	Bengal Vet. (Calcutta)	R. C. McClure	'61	M. Sc.
Harendra N. Sharma	Assam Vet. (Gauhati)	A. A. Case	'61	M. Sc.
Nandakishore Dutta	Orissa U. (Orissa)	H. C. McDougale	'62	M. Sc.
Ram S. Patnaik	Orissa Vet. (Orissa)	Cecil Elder	'62	M. Sc.
J. N. Panda	Orissa U. (Orissa)	H. E. Dale	'63	M. Sc.
Devendra N. Das	Orissa U. (Orissa)	G. C. Shelton	'64	
L. M. Tata	Orissa U. (Orissa)	A. A. Case	'63	
Virendra Patal	Bihar	D. C. Blenden	'61	M.S., Ph.D.
Ras Behari Gupta				Deceased
Radhey S. Sharma	U P (United Prov)	A. A. Case	'60	M.S., Ph.D.
Dharm Vir Singh	U P Vet'y Coll.	A. A. Case	'63	M.S., Ph.D.
Ram Binod Singh	Bihar Vet'y Coll.	A. A. Case	'63	M.S., Ph.D.
M. S. Khan	U P Vet'y Coll.	D. C. Blenden	'62	M.S.
G. C. Sharma	U P Vet'y Coll.	A. A. Case	'65	M.S. & now on Ph.D. program
Suresh Prasad	Bihar Vet'y Coll.	A. A. Case	'62	M.S. & Ph.D. '67
S. S. Sareen	Punjab Vet'y Coll.	A. A. Case	'63	M.S. - Deceased
S. N. Misra	Orissa Vet'y Coll.	A. A. Case	'66	M.S.
B. N. Mohanty	Orissa Vet'y Coll.	A. A. Case	'66	M.S.
P. H. T. Reddy	Bangalore Vet'y Coll. (Mysore)	A. A. Case	'66	M.S.
C. A. Khuddus	Bangalore Vet'y Coll. (Mysore)	A. A. Case	'66	M.S.
Ved Parkash	Hisser, Punjab	A. A. Case	'67	M.S. & on Ph.D. program
S. N. Baksi	Bihar Vet'y Coll.	A. A. Case	'66	On M.S. program
S. P. S. Chaudhary	U P (Mathura)	A. A. Case	'67	On M.S. program
Abdus Salam	Bombay Univ.	R. C. McClure	'67	M.S.

(Dr. Arthur A. Case, Professor of Veterinary Medicine and Surgery, compiled the information on our foreign students)

**Veterinarians Who Attended
The First Special Course
For Graduate Veterinarians
December 28-31, 1925**

- | | |
|--------------------------------------|---|
| 1. C. H. Hunnewell, Slater | 29. O. T. Murphy, Kahoka |
| 2. P. C. Denny, Mountain Grove | 30. T. J. Eagle, Bethany |
| 3. E. L. Dudgeon, Platte City | 31. E. E. Harrison, Burlington Junction |
| 4. Ray Matkin, Rockport | 32. E. O. Lueking, DeSoto |
| 5. E. D. Criswell, King City | 33. August Luh, Victoria |
| 6. L. L. Beck, Pattonsburg | 34. W. T. Duncan, Springfield |
| 7. P. C. Lahs, Independence | 35. H. L. Bussong, Belton |
| 8. J. S. McDaniel, Lexington | 36. E. T. Hallman, Lansing, Michigan |
| 9. H. A. Wilson, Jefferson City | 37. C. D. Lueckert, Blackwater |
| 10. Stanley Smith, Columbia | 38. C. A. Schulz, Independence |
| 11. D. F. Luckey, Columbia | 39. J. M. Burns, New Hampton |
| 12. H. W. Young, Columbia | 40. W. H. Thomas, St. Joseph |
| 13. H. C. Presler, Hannibal | 41. B. M. Miller, California |
| 14. H. C. Ward, Fulton | 42. Andrew W. Uren, Columbia |
| 15. R. L. Buell, Vandalia | 43. D. B. Morgan, Neosha |
| 16. Ralph Graham, Jefferson City | 44. Roy Morgan, Skidmore |
| 17. A. J. Durant, Columbia | 45. W. B. Welch, Marshall |
| 18. E. L. Young, Grandview | 46. R. L. Allen, Windsor |
| 19. F. H. Suits, Odessa | 47. Horace Bradley, Clayton |
| 20. W. J. Stone, Joplin | 48. C. D. Merdith, Joplin |
| 21. G. W. McIntyre, Mexico | 49. O. S. Crisler, Columbia |
| 22. Harold Newman, Columbia | 50. John W. Adams, Philadelphia |
| 23. A. Goodlive, Marshall | 51. F. R. Whipple, Peoria, Illinois |
| 24. J. C. King, Providence, Kentucky | 52. H. M. McConnell, Independence |
| 25. Unidentified | 53. F. C. Cater, Sedalia |
| 26. R. C. Kinnison, Chillicothe | 54. J. W. Connaway, Columbia |
| 27. G. H. Elliott, Palmyra | 55. Ray Mier, Smithville |
| 28. S. C. Dreppard, West Plains | 57. M. Gregory, Jefferson City |

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