The sudden death of Dean Raymond Kelser stunned everyone at the School of Veterinary Medicine. Dr. Kelser died on Thursday, and on Saturday, April 18, 1952 he was buried at Arlington Cemetery with full military honors. On the following Monday, Dr. Mark W. Allam was called to College Hall by Mr. William DuBarry, acting president of the University. Mr. DuBarry asked Dr. Allam if he would accept the position of acting dean of the School of Veterinary Medicine. He indicated that he had called Dr. Allam on the advice of Dr. Isadore S. Ravdin, acting vice president for medical affairs. (Dr. Allam commented later that he concluded there were at least three actors in Philadelphia, an acting president, an acting vice president, and an acting dean.)

Dr. Allam accepted the position. Upon his return to the Veterinary School the first person he encountered was Miss Edna Tuteur, who for many years had run the "front office" of the School. Upon hearing the news she responded by saying "you had better get that in writing!" This was accomplished in a memorandum from Mr. DuBarry, and Dr. Mark Whittier Allam became acting dean; in February 1953 he was appointed the eighth dean of the School of Veterinary Medicine.

Immediately after receiving his appointment as acting dean Dr. Allam called the faculty together. He recalls that after reading Mr. DuBarry's memorandum to the faculty there was "no clapping of hands or spontaneous wishes for success." He was realistic enough to appreciate that his appointment "did not sit too well with some of the older members of the faculty" who felt that he was too young and lacked
academic experience. It was true that he had been at the School for only seven years and prior to this had been in practice. However, during his few years on the faculty he had risen to the rank of professor of veterinary surgery and chairman of the department, and had obviously impressed the University Administration with his foresight, vigor, and qualities of leadership.

It did not take Dean Allam long to pinpoint two areas in need of immediate attention: the faculty and the physical plant. He reasoned that it would be difficult to attract high caliber faculty as long as facilities were shopworn and unsuitable for work. On the other hand, in order to obtain funds for renovation and construction of new buildings it would be necessary to develop a faculty with an established scientific reputation.

Having received an answer to this question, the dean then asked if all of those present would remain at the School and assist him with the task ahead. All answered in the affirmative. This meeting marked the beginning of the resurgence of the School of Veterinary Medicine. There was now a small core of faculty who would work with a progressive new dean toward the goal of developing an outstanding institution of veterinary medical science. In subsequent years many others would join in this effort.

A Momentous Decision

Recognizing the need for some quick and decisive action, Dr. Allam resorted to a technique that was to become a hallmark of his administration. One evening in the autumn of 1953, he asked a small group of faculty to meet with him in the quiet, comfortable surroundings of his home. These surroundings were conducive to the flow of good, informal, and uninterrupted conversation. At this particular meeting a momentous decision was made by the small group. Present were Dr. David Detweiler, Dr. Donald Lee, Dr. John McGrath, Dr. Charles Raker, and Dr. John Martin. The question posed by the dean was simple, direct, and startling: should the School continue or should it be recommended to the Trustees of the University that it be phased out? This question led to a frank discussion concerning the serious state of affairs at the School and what had to be done if the School was to continue. It soon became apparent that those present were in favor of an all-out effort, not only to continue the School, but to develop a program that would launch it on the road to excellence.

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Groundwork

Some planning began immediately. While the problems were complex, they fell under one of three headings: (1) expansion of the faculty with a search for individuals having advanced training in various disciplines; (2) appropriation of sufficient operating funds; and (3) implementation of a carefully conceived plan of physical development.

If it was first necessary to lay some groundwork. During Dr. Kelser's few years as dean, the relationship of the Veterinary School to the University had already begun to improve but there was still much to be
done; in 1952 the School could not be considered a strong member of the academic health community. When Dr. Allam first came to the School as an assistant professor in 1945, he spent many hours at the Harrison Department of Experimental Surgery in the Medical School in order to perfect his surgical techniques. During this time he formed some close friendships with a number of individuals who were leaders in medical affairs. These included Dr. I.S. Ravdin, Dr. Robert Dripps, and Dr. A. Newton Richards. These relationships and others were to become very important when the Veterinary School embarked on its program of revitalization. Other faculty members were now encouraged to form an association with their counterparts in the Medical School and gradually a healthy, productive atmosphere developed. The ties to the Medical School were enriched when younger members of the veterinary faculty began to take courses in the Graduate School of Medicine. The voice of the Veterinary School, muted for many years in University affairs, was now being heard at various levels.

One of the outstanding contributions of Dr. Allam’s twenty-one years as dean was the steering of the Veterinary School into the mainstream of University affairs. This improved relationship lead to concerned assistance with the development program, fostering of the concept of “one medicine,” the development of clinical specialties, and a remarkable improvement in the level of research.

One of the new dean’s first visitors was Dr. J. Alexander Webb, an alumnus, class of 1902. Dr. Webb, vice president of Abbotts Dairies, had always displayed a keen interest in the affairs of the School. He informed the dean that the School suffered greatly from lack of support from the agricultural community. Many segments of the agricultural industry knew little or nothing about the Veterinary School. At Dr. Webb’s suggestion the dean became a member of various organizations such as the Poultry Federation, the Aberdeen Angus and Guernsey Associations, the Pennsylvania Farmers Association, and the Council on Farm Organizations. When Dr. Allam began to attend meetings of these and other groups, it became apparent that Dr. Webb was right; the Veterinary School was held in low esteem. The situation was so serious that one group, the Pennsylvania Dairy Association, had passed a resolution recommending that the Veterinary School be moved to Pennsylvania State University. Dr. Allam persevered, attended endless meetings across the Commonwealth, and arranged for the School to exhibit at the annual Pennsylvania State Farm Show. Gradually, the tide began to change and important agricultural groups became supporters of the School. This, in turn, led to an improved relationship with the state government.

Lastly, there was a need to create a broad base of support in the private sector, including the alumni, industry, and foundations. The School emerged from its shell and developed a well-conceived outreach program in all of these areas. Alumni were invited to participate in a variety of decisions about the future of the School, and Dean Allam formed lasting friendships with a number of influential individuals in various walks of life who supported the School in many ways.

Development of New Bolton Center

The history of New Bolton Center dates back to 1937 when Mr. Effingham B. Morris gave the University a farm located in Bucks County, Pennsylvania, which was known as Bolton Farm. By the 1950s the area adjacent to Bolton Farm was becoming heavily urbanized and it was no longer profitable to operate it. Its title reverted to the heirs of Mr. Morris who sold it and the proceeds were used to purchase the site now known as New Bolton Center. The official announcement of the purchase was made by Dean Raymond Kelser in February 1952. The land acquired at this time was approximately 220 acres located in southern Chester County, about 32 miles from Philadelphia. At this time the property contained a manor house, a farm manager’s home, a dairy barn, and some implement buildings. The land had
originally been granted to Mr. Caleb Pusey by William Penn and had remained in the Pusey family until 1939. At that time it was sold to Mr. J.B.D. Edge, Sr., the father of Mrs. William B. Weisbrod who has been one of New Bolton Center’s good neighbors. In turn, Mrs. Weisbrod sold the tract to Mr. Charles A. Higgins, president of the Hercules Powder Company. It was Mr. Higgins who sold the farm to the University.

When New Bolton Center was acquired, Mr. Harold Stassen was president of the University. He was not overly enthusiastic about owning the farm, believing that it was in an area of declining livestock population and that at best it could serve the School for only five years. However, the newly appointed dean, Dr. Allam, was able to persuade the trustees that the property was vital to the future development of the School of Veterinary Medicine. The official dedication of New Bolton Center did not take place until October 16, 1954 and was presided over by Dr. Gaylord P. Harnwell, who had succeeded Mr. Stassen as president of the University. In the ensuing years Dr. Harnwell and his wife, Mollie, became very attached to the Center and, in recognition of their interest, an attractive body of water located there is now known as Harnwell Pond.

Soon after New Bolton Center became part of the Veterinary School, plans were begun to develop it as the rural campus. Inherent in this planning was the concept that New Bolton Center should fully embrace the three major functions of the School: education, research, and service. Over the years the Center has attained an international reputation in all of these areas, and now encompasses over 1,000 acres with more than seventy buildings. It is noteworthy that, with the exception of the Comparative Leukemia Studies Unit, all of the buildings at the Center were constructed with private funds.

The original planning committee for New Bolton Center was chaired by Dr. John Beck, professor of medicine. This committee urged that, even though funds were scarce, some clinical and research facilities be developed immediately. Enough money was on hand to construct two cement buildings with a total of 5,000 square feet of space. These buildings were completed in 1953 and became the headquarters of clinical work and research. The buildings contained an examination room, a surgery and recovery stall, a pharmacy, a diagnostic laboratory, and four research laboratories. (This structure is still standing and is occupied primarily by the Section on Nutrition.) The construction of these buildings was a small but very important step in the development of the rural campus. The presence of research laboratories aided in attracting some funds and additional faculty. Also, it was now possible to move the Field Service Unit, under the direction of Dr. William Boucher, from Media, Pennsylvania, and thus initiate a clinical teaching program at the new campus. An ambulance was purchased to transport large animals and this enhanced the early reputation of the Center as a facility for health care of farm animals and horses.

In 1953 Dean Allam announced the formation of a new Department of Preventative Medicine and Hygiene with its headquarters at New Bolton Center. Dr. Raymond Pagan headed this new unit. Also, in January 1953, a poultry diagnostic laboratory was opened under the direction of Dr. F. George Sperling, and in January 1954, Dr. Charles Hollister was appointed as director of clinics at New Bolton Center.
It was apparent that New Bolton Center could not function effectively as a second campus until some major hospital and teaching facilities, including student housing, were provided. An architect was engaged to provide renderings for these facilities and when these were supplied there was a bill for $7,000. Money was so scarce there was none available to meet this expense, but fortunately the School now had some staunch friends within the University Administration, and Mr. John Moore, vice president for business, arranged for payment. It is somewhat ironic that these architectural plans were not those which were used for development for New Bolton Center. However, they did provide a “talking-point” for fund raising efforts.

In 1958 a major program was undertaken to obtain funds for a large animal hospital and a dormitory complex. One million dollars was raised from private sources to construct clinical facilities and funds from alumni provided a dormitory complex. The original hospital facility consisted of examining and treatment rooms, surgical units, x-ray facilities, clinical laboratories, and faculty and administrative offices. The dormitory complex provided student housing, a cafeteria and meeting rooms. The hospital was dedicated in the fall of 1964 and the dormitory building in February 1965. This important step was not without problems. Initially an appeal was made to alumni under a plan in which they would become shareholders in the dormitory complex for a three-year period. The response was swift but, after building commenced, it was apparent that the structure would not meet federal standards for residency. Additional funds were urgently needed. A second appeal was made to alumni, this time for more substantial gifts. The response was heart-warming; a total of $380,000 was contributed. This generosity was not only essential for the construction of the building, but was solid evidence that the alumni believed in the School’s future. A major contributor to the effort was the Vansant family who requested that the residency portion of the structure be named in memory of Dr. Joseph Vansant, a member of the class of 1902. Accordingly, it was dedicated on August 6, 1966 as the Joseph Vansant Dormitory.

New Bolton Center was now able to provide general clinical services and an instructional program covering farm animals and horses. However, there was still an urgent need to have stables and barns for animals requiring hospitalization. In the construction of the clinical facilities, the individual who gave most terms of interest and money was Mr. Lawrence B. Sheppard, president of Hannover Shoes and Chairman of Hannover Shoe Farms. Now, once again, Mr. Sheppard responded to a need. He generously offered to buy materials and to send his tradesmen to construct stables and barns, provided that the School would supply housing for the workers. This was done and building was begun with the understanding that, since this was non-union labor, the work would be suspended if the unions objected. All went well until two and a-half stables and one barn had been erected. Then the unions began to picket New Bolton Center and work was halted. At this point the University provided $41,000 and the buildings were completed with union labor.

The new buildings were important steps in the “brick-and-mortar phase” of New Bolton Center’s development. It now remained to generate sufficient clinical material to provide a full teaching program. In 1957 the Council on Education
of the American Veterinary Medical Association had informed the Veterinary School that it must significantly increase its patient load of farm animals if accreditation was to continue. At that time the patient load was only one and one-half farm animals per day. The clinics at New Bolton Center were operating on a strict referral basis and it became apparent that practitioners in the area were not interested in referring cases. In answer to the directive from the Council on Education, the Advisory Board of the Veterinary School (now known as the Board of Overseers) met and recommended that the clinics begin to accept cases directly from owners. A meeting was held at New Bolton Center to inform practitioners of this change in policy and to discuss its implications. Dr. Gerry Schnelle, a member of the Advisory Board and an alumnus (V’26), presented the situation for the School. A difficult two years followed. Some practitioners were highly incensed and encouraged their clients to protest this action in letters to the School and to the University Trustees. Dean Allam spent many hours visiting with disgruntled veterinarians and animal owners. A particularly acrimonious meeting took place at the DuPont Hotel in Wilmington, Delaware, at which members of the New Castle and Chester County Veterinary Associations were present. Dr. Benjamin Price, an alumnus (V’08) and a highly respected practitioner from West Chester, Pennsylvania, spoke eloquently of the need for the new approach adopted by the School and was treated roughly by the audience. Despite all of this unfortunate activity, the School continued to see animals on a direct practice basis and finally the problem subsided. Through it all the School emphasized that the referral method had been tried and was not effective in generating sufficient clinical material. It was maintained that the School’s entry into practice would not seriously affect a practitioner’s livelihood and, in fact, might aid in the building of a practice. In time this theory proved true and eventually nearly all of those who opposed the plan became friends and supporters of the School. In turn, the School was able to generate sufficient clinical material to support its educational program and other needs.

The development of New Bolton Center now moved into a phase in which emphasis was on construction of units for research and special purposes. The Comparative Leukemia Studies Unit, under the direction of Dr. Robert Marshak, was begun in 1963 through a grant from the National Institutes of Health. In 1969 the Georgia and Philip Hofmann Research Center for Animal Reproduction was dedicated, followed, in 1971, by the Alarik Myrin Memorial Research Building, and in 1975 by the C. Mahlon Kline Orthopedic and Rehabilitation Center. All of these facilities...
were vitally important in attracting research funds and outstanding faculty members.

One of the most attractive features of New Bolton Center is the Allam House. When the Center was purchased in 1952 this was known as the Manor House. Part of its structure dates back to 1710 when the Swedish-type log cabin was the prevailing form of architecture in Chester County; it is now the oldest architectural structure owned by the University. The original portion of the house has been maintained and is known as the "1710 Log Room." Stone additions were made between 1725 and 1730, and at later dates. Mr. Charles Higgins, who owned the property when it was purchased in 1952, had employed a restoration architect to remodel and enlarge the house which is now constructed of Chester County fieldstone. When acquired by the University, the house was of very sound construction but required some refurbishing of the interior. For this purpose a Ladies Committee was formed to raise funds and supervise redecoration of the structure. Among those who served on this committee were Mrs. Henry B. DuPont, chairlady, Mrs. Gaylord Harwell, wife of the University president, Mrs. John West, and Mrs. Joseph Walker. A sum of $9,000 was raised and, with Mrs. Walker in charge of decorating, the interior was painted and furniture added. In 1966 the structure was named Allam House in honor of dean Mark W. Allam and a plaque was installed citing Dr. Allam as a "Gentleman, Scholar and Surgeon." Allam House is used to provide housing for visiting scientists, and as a site for numerous seminars of both a professional and non-professional nature and for social events.

In May 1980, the Allam House Fund was established through the generosity of David George Jones and Marion Dilley Jones. This gift, commemorated by a plaque, is to assist in maintainance of Allam House. Mr. Jones is a graduate of the Wharton School (1924).

Since the inception of New Bolton Center the faculty has been encouraged to become actively engaged in community affairs and to contribute to the cultural, scientific, and social growth of the surrounding community. Many of the faculty now belong to various service clubs, school boards, youth organizations, and art centers. In addition, the rural campus has developed some close relationships with nearby Lincoln University, the Stroud Water Research Center, and the internationally famous Longwood Gardens.
New Bolton Center serves as a focal point for Continuing Education Courses on horses and farm animals. The facilities are made available to many groups including the Future Farmers of America, 4-H Clubs, vocational agriculture organizations, and pony and farrier clubs. The Center is frequently used for social functions by various University groups and by students of the Veterinary School. In the spring of each year an open house is held. This event, attended by over 3,000 people is especially popular with school children.

With the closing of Bolton Farm, sixty head of purebred Guernsey cattle were moved to New Bolton Center along with various pieces of equipment. Mr. Leroy Bruce, farm manager at Bolton Farm, assumed the same position at New Bolton Center. One of the first actions at the new facility was the planting of fifteen acres of corn; since that time much of the feed for animals at New Bolton Center has been grown on the property.

The development of New Bolton Center was a spectacular phase in the history of the School of Veterinary Medicine and provided an essential rural campus. As this was going on, there were some major changes on the Philadelphia campus which were just as vital to the renaissance of the School.

One of the first renovation projects in Philadelphia came about through an unusual financial arrangement. In 1956 the University made $40,000 available to the Veterinary School to refurbish the reception area, business offices, and clinical examining rooms of the Veterinary Hospital. These areas were in bad condition and the money available would not go far unless used very carefully. An arrangement was made with the contractor to perform the work on a time-and-material basis with the money remaining when the work was finished. The work was completed and each of the parties received $1,500, an unusual arrangement for that time, and an unheard-of today. This was good evidence that the Veterinary School was on the move and that it would seek all avenues of approach to get the job done.

The quadrangle, which was the basic building of the School, was essentially the same in 1952 as when it was completed in 1913. A third floor had been added to the north wing in 1947 but generally the building was in disrepair and antiquated. At this time some new veterinary schools were opening and the older ones were modernizing their facilities. If the School of Veterinary Medicine at Penn was to attract new faculty and research funds a better physical plant, was a prerequisite.

In 1959 a Faculty Study Group reported on plans to develop a new building for teaching and basic science research in Philadelphia. The plans were presented to the state government and in 1962 the Pennsylvania State General Assembly, through its General State Authority, provided a 2.2 million dollar loan to construct the facility. At the same time $500,000 in federal funds were made available. The availability of this money marked two turning points for the School of Veterinary Medicine. First, the funds from the state meant that the legislature was now committed to retaining a veterinary school at the University of Pennsylvania. Dr. Allam recalls that at this time the supporters for establishing a school at Pennsylvania State University "backed off." He also points out that the members of the state legislature were greatly impressed by the amount of organizational detail provided by the faculty in support of a new facility. Secondly, receipt of the federal funds was contingent upon the school agreeing to gradually increase its enrollment to one hundred per class. The laboratories, classrooms, and other facilities in the quadrangle had been originally developed to accommodate a maximum of fifty students. The increased enrollment required some renovation of old areas and the provision of larger teaching facilities in the new building. Lastly, completion of the new structure in 1963 meant that the Veterinary School was now in a position to attract faculty in the basic
was sciences and to markedly expand its research program.

In 1974 the new structure was dedicated as the Gladys Hall Rosenthal Basic Science Building in recognition of the generous, concerned support of Mr. Alfred Rosenthal. Until his death in 1979, Mr. Rosenthal remained a great friend to the Veterinary School and his wife, Gladys, continues that support. The Rosenthal Building contains research laboratories for pathology, microbiology, virology, immunology, biochemistry, and parasitology, along with faculty and administrative offices, and the C.J. Marshall Memorial Library. When it was completed in 1963, the basement was left vacant. Later the School of Veterinary Medicine received one million dollars from the University development fund to equip a multi-discipline laboratory. This facility located in the basement was vital to the School’s plans for a new core-elective type of curriculum and to accommodate the enlarged student body.

The movement of all facilities for horses and farm animals to New Bolton Center resulted in a marked improvement in the services provided for these animals and in the clinical teaching program. The situation in the Small Animal Hospital during these years continued to be less than desirable despite efforts to make some improvements. The basic problem here was that the facilities were outmoded both for clinical service and teaching. Except for the renovations made in the reception area, business office, and examining rooms during 1956-1958, the hospital was essentially the same as it had been in 1907. In 1966 a reorganization was undertaken and a new pharmacy was established under the direction of Dr. Marvin J. Silverman, a registered pharmacist. A hospital formulary was prepared and standard procedures implemented for purchasing and charging for drugs. In addition, two wards were renovated for housing animals used for teaching research and a plan put in effect for controlling cage allotments and budgeting for the care of these animals. An important step at this time was the appointment of Mr. William Stutzman as building supervisor. Under his direction essential maintenance in the hospital was significantly improved. Mrs. Lawrence B. Shepherd who, with her husband, had aided so
much in the development of New Bolton Center, provided funds for constructing and equipping four new examination rooms, bringing the total number to ten such rooms. At this same time plans were developed for further improvements in the waiting room and business office. All of these changes helped, but the fact remained that they were stop-gap improvements and what was really needed was a new hospital building. This would not come until 1981.

Some indication of the growth of the School in this period can be gleaned from budgetary figures for 1970-1971. During this year the appropriation from the Commonwealth had increased to $1,458,999, and $2,995,254 was available in federal funds primarily for research. An additional $124,000 was received from industry and from contracts with the Commonwealth and the World Health Organization, and the hospitals in Philadelphia and New Bolton Center generated incomes totalling $394,377.

During these years the faculty worked as a cohesive unit with definite goals in mind. Most importantly it was not fettered with the constraints of the past, and was willing to embark upon new, and often unchartered courses. Artificial barriers that had existed between departments and between basic and clinical sciences were minimized and were replaced by a spirit of cooperation at all levels. In a real sense, the School was on a frontier where there were always new and exciting challenges to which the faculty responded with vigorous, productive activity.

The result was a remarkable rebuilding of the foundations of the School. This included a departmental reorganization, a revolutionary restructuring of the curriculum, a major change in admission policies, the institution of an honor system, the appointment of associate deans, the participation of students on some committees, and the institution of new methods for evaluating and grading students. A formal declaration of Policies and Procedures was published in 1964, resulting in the establishment of standing committees to govern such functions as appointments and promotions, faculty and student rights and responsibilities, admissions, education and evaluation of students, and the library. An Executive Committee was initiated to work with the dean in establishing policy, and an annual schedule for faculty meetings was established.

The turbulent, and sometimes violent, expression of student unrest in the 1960s did not manifest itself, as such, in the Veterinary School. The dean and the faculty, recognizing the need for increased student participation in School affairs, made provisions. A Student-Faculty Committee was formed in 1962. This committee consisted of the dean, associate dean, department chairmen, and three student members from each of the four classes. It functioned as a liaison between faculty and students and provided a channel for students to voice their concerns. It also provided a mechanism for the development of student research projects under the sponsorship of faculty members. In 1970 the Student-Faculty Committee was phased out and a formal Student Government was established. Also, at this time, students became members of certain standing com-

Organization and Policies

This period was marked by a decentralization in the administrative structure of the School, with the faculty and student body assuming more active roles in many major functions of the School. This change was going on in all of the schools in the University and at many campuses across the nation; at the Veterinary School it was nurtured by the attitude of the dean. Dr. Allam adopted a flexible, progressive approach and often sought help and advice from faculty and students. He never hesitated to develop a new program or appoint a new committee when he saw the need for one. In some cases these moves were based on expediency and were short-lived, but they all served the purpose of providing a structure for increased faculty and student participation.
committees including the Admissions Committee, the Committee on Committees, the Education Committee, and the Library Committee. A student report issued as a part of the Student-Faculty Committee Report in 1970 indicated that throughout the 1960s there had been increased student involvement in the affairs of the School. The beginning of this activity was actually in 1959 when student class presidents were invited to attend a historic Faculty Retreat in Atlantic City. It was at this time that a foundation was laid for a new curriculum.

In 1960 Dr. John E. Martin became assistant to the dean, and in 1961 associate dean. He was succeeded by Dr. Donald G. Lee who became associate dean in 1962 and served in this capacity until 1973. In response to the need for providing supervision of the new curriculum, Dr. Donald A. Abt was appointed associate dean for curriculum in 1971, and in 1972 Dr. David S. McDevitt was appointed associate dean for student affairs.

In further moves to provide a more functional administrative structure, Miss Helen F. Jarrett (Mrs. Helen Linwood) was appointed administrative assistant to the dean in 1959, and Mr. William M. Posey became assistant to the dean in charge of development and alumni affairs. Mr. Posey remained in this position for about eighteen months and was then succeeded by Hudson B. Scattergood who filled the position for one year. In 1963 Mrs. Mary S. Wherry became business administrator and served the School faithfully and efficiently until 1979.

In 1970 the faculty departed from the time-honored grading system in which students were given grades from A to F, and instituted a pass-fail system. As part of this new system there was also a provision for students to graduate with honors. At the same time the faculty established formal guidelines for examinations. A standing committee known as the Committee on the Academic Status of Students (CASS) was designated as the body with the responsibility to recommend promotion or dismissal of students. This Committee is composed of department chairmen, laboratory heads, chiefs of clinical sections, with the associate dean as an ex-officio member.

In 1955 the Advisory Board was created. This Board, consisting of about twelve to fourteen individuals representing such fields as education, business, and agriculture, functioned to advise the dean on various policy matters and to act as an
interface between the School and the "outside world." The original chairman was Mr. Orville Bullitt who succeeded in 1956 by Dr. Charles W. Mayo. Dr. Mayo continued as chairman until 1961, when he was succeeded by Mr. Malcolm Adam, who was followed by Mr. Russell B. Jones, and Mr. J. Maxwell Moran. In 1975 the Advisory Board was replaced by the Board of Overseers.

Another advisory group was the Council on Veterinary Medical Education and Research. This group functioned from 1957 to 1965 for the purpose of advising the administration on matters of educational policy and as a liaison to foundations and other granting agencies on matters of research. The composition of the Council changed during the years of its existence; among those who served on it were Mr. Clark Davis, Mr. Homer J. Bickster, Mr. Clifford Frisnuth, Brig. General J.L. Hartman, Mr. Bertram Lippincott, Mr. William L. Medford, Dr. Benjamin Price, Dr. Richard E. Shope, Mr. George A. Weymouth, and Mr. B.H. Wilson.

Departmental Reorganization

In 1958 there was a major reorganization of the departmental structure of the School as the result of a survey conducted by the Faculty Study Group, chaired by Dr. John E. Martin. Prior to the reorganization there were eleven departments; afterward there were three.

In the eleven-department structure a number of departments had only one senior faculty person, and each department functioned as a separate entity; there was little coordination in teaching activities even among departments that shared some common elements. Further, there was duplication of equipment and lecture material, and an unwieldy budget structure.

In the new arrangement the three departments were designated as Animal Biology, Veterinary Biology, and Applied Veterinary Medical Sciences. Each department was made up of several laboratories or sections. Animal Biology, chaired by Dr. F. Harold McCutcheon, was comprised of the laboratories of anatomy, biochemistry, and physiology and pharmacology. Dr. Donald G. Lee was head of the laboratory of anatomy; Dr. James H. Jones headed the laboratory of biochemistry; and the head of the laboratory of physiology and pharmacology was Dr. David K. Detweiler. The Department of Veterinary Biology was chaired by Dr. John T. McGrath and the laboratory heads were: microbiology, Dr. Israel Live; parasitology, Dr. George L. Graham; and pathology, Dr. Evan L. Stubbs. Dr. Robert R. Marshak was chairman of the Department of Applied Veterinary Medical Sciences which was comprised of the sections of surgery, medicine, and public health. Dr. William B. Boucher was chief of the section in medicine, and Dr. Charles W. Raker was chief of the section in surgery. Initially there was no appointment for chief of the section in public health.

With this new arrangement there was an opportunity for some coordination of teaching in related disciplines and the budgetary apparatus was streamlined with each department chairman responsible for the budget in his area. Regular departmental meetings were scheduled in which matters of teaching, student grading, budgets, and research were discussed.

In 1965 the name of the Department of Applied Veterinary Medical Sciences was

Dr. F. Harold McCutcheon

Dr. James H. Jones
changed to the Department of Clinical Studies, and in 1967 the Department of Veterinary Biology became the Department of Pathobiology.

With the development of clinical specialties new sections were added to the Department of Clinical Studies. By 1973 the following sections were represented: anesthesia, cardiology, clinical laboratory medicine, clinical reproduction, dermatology, epidemiology and public health, medical genetics, medicine, neurology, nutrition, ophthalmology, radiology, surgery, and viral oncology. Each of these sections was supervised by an individual designated as chief. Other special units that were part of this Department were the Bovine Leukemia Research Center, the Endocrine Service, and the Tumor Clinic.

Dr. Donald C. Lee

Faculty Committees

With the growth of the School the need arose for a tighter, more defined set of policies and procedures. A statement of Faculty Policies and Procedures, published in 1964, defined certain faculty ranks, established a schedule for faculty meetings, described the functions and composition of standing committees, and established the procedure for new appointments and promotions. Two important committees formed at this time were the Committee of Professors, consisting of wholly affiliated members of the faculty with the rank of full professor, and the Executive Committee, made up of the vice president for medical affairs, the associate dean, chairmen of the departments, and three additional members elected annually by the Committee of Professors. The standing committees established at this time were: the Education (curriculum) Committee, the Committee on Academic Freedom and Responsibilities, the Library Committee, the Admissions Committee, and the Committee on the Academic Status of Students.

In 1970 an ad hoc committee chaired by Dr. Donald A. Abt reviewed the policies and procedures of the School. At this time, in addition to the standing committees named above, three new committees were established. These were the Sub-committee on Appointments and Promotions, the Committee on Committees, and the Committee on Students Rights and Responsibilities. An important change was the inclusion of student representation; Dr. Abt’s committee also recommended the formation of a Student Government Body and this was done at this time.

Admissions

After 1952 the trend in admission policies was to increase the requirements for admission to the Veterinary School and establish a more formal procedure for evaluating applicants. A major change occurred in 1970 when the requirement for pre-veterinary work was increased from two years of college to a minimum of three years. When this change took place, the minimum semester credit hours for admission was increased from sixty to ninety, exclusive of courses in animal science and agricultural subjects. In 1970, the makeup of the Admissions Committee was also changed. Previously, this committee consisted of five faculty members appointed by the dean, chaired by the associate dean. In 1970 the committee was formed by seven elected faculty members and three
students. The Admissions Committee now consists of eight faculty members and the associate dean for admissions, who chairs the Committee. Dr. Joseph S. Skelley now holds this position. Also on the Committee are an alumni member, appointed by the dean, a faculty member who acts as minority advocate, and four students, one from each class. On the final decision about a candidate only the faculty members and alumni member vote.

The admissions procedure begins with a computerized data base which ranks applicants according to their grade point averages; the printout also provides Graduate Record Examination scores and other information such as the colleges attended. On the basis of this, several hundred applicants are invited for interviews. Each is interviewed by a pair of Committee members. Next, the candidates' credentials are discussed by the entire Committee, which then votes to admit, reject, or to place on "hold" for further consideration. The University of Pennsylvania does not discriminate on the basis of race, color, sex, sexual or affectional preference, age, religion, national, or ethnic origin. The Admissions Committee of the School attempts to enroll a diversified class and therefore considers such factors as socioeconomic (including racial and ethnic) background, geographic origin (urban, suburban, and rural), specific interests and activities, personal traits, and academic background. In addition, special consideration is given to children of alumni, faculty and staff of the University, and to children of other veterinarians. The following are important factors considered by the Admissions Committee: academic ability, apparent familiarity with the profession and sincerity of interest, recommendations of academic counselors, GRE scores, character, personality, and general fitness and adaptability for a career in veterinary medicine. The admissions process is time consuming and emotionally charged, and the School is in great debt to those who serve on the Admissions Committee. In addition to the members of the Committee a faithful staff works nearly year-around on admissions affairs; these include Mrs. Helen Linwood, Mrs. Teresa J. Cavalieri, and Mrs. Sarah Smith.

During most of the 1950s the total number of applications received annually usually did not exceed 175. Then began a steady increase in the number of applications; for the year 1970 a total of 442 was received. The rate continued to climb to a peak of 1,280 applications in 1975. Since then there has been a steady decrease, with 868 applicants in 1980 and 683 in 1983. This decrease is part of a national trend.

For many years, beginning with a faculty resolution passed in 1932, the number of admissions was limited to about fifty per year. During the 1950s the largest number of students admitted to any entering class was fifty-seven in 1958. Starting in 1961, and continuing through this decade, the
number of admissions gradually increased from sixty-one to seventy-eight in 1969. This increase was made possible through renovation of classroom and laboratory space and especially the construction of the Rosenthal Building. Beginning in 1972, and continuing up to the present, admissions to a new class have totalled over one-hundred each year. In 1982, there were 110 students in the freshman class; this increase became possible through the construction of the multidiscipline laboratories.

The first woman admitted to the Veterinary School was Miss Connie E. Johnstone, in 1933. She did not graduate, but Dr. M. Josephine Deubler, admitted in 1934, did graduate in the class of 1938. There were two women in the class of 1939, Dr. Mary K. Amadon, and Dr. Phyllis Dingman, and one in 1940, Dr. Gwendolyn G. Bodine. From 1940 through 1972 there were 103 female graduates, with the largest number in any one year being fourteen in the class of 1972. During the same period there were 1,484 male graduates. From 1972 through 1983 the number of female graduates showed a steady increase, and after 1978 every class has had over forty women graduates.

Minority Programs

Since 1970 the Veterinary School has taken a number of positive actions to ensure that qualified minority students have an opportunity for careers in veterinary medicine.

In 1972 the School initiated the program for Student Orientation and Retention (S.O.A.R.). This program was supported by a special Health Career Opportunity Grant from the Department of Health, Education and Welfare. The School was the only veterinary school in the country to receive this grant. The general objectives of the S.O.A.R. Program were: to identify and recruit minority students who showed scholastic and vocational aptitude for a career in veterinary medicine; to provide instruction in reading and study skills at the college level; to provide training in the fundamental concepts of the sciences taught in the first year in veterinary school; to familiarize students with the diverse aspects of the veterinary profession, and to provide them the opportunity to adapt to social and scholastic environment of a health profession school.

The basic structure of the S.O.A.R. Program was a ten week summer course at the Veterinary School. During this time course trainees received lectures in subjects that they would encounter early in a veterinary medical curriculum, including cell biology, anatomy and histology, biochemistry and physiology. There were also sessions on reading and study skills, field trips to pharmaceutical companies, and farms, and scheduled time for observation in the clinics. An examination was given at the end of this period which acted as the orientation part of the S.O.A.R. Program.

For students who were not admitted to a veterinary school after participation in the Program, the retention portion of the Program offered an opportunity for work at the Veterinary School, in the multidiscipline laboratory, tutoring, and taking courses in the College of General Studies of the University of Pennsylvania.

From 1972 through 1976, sixty students participated in the S.O.A.R. Program. As of 1977, five of these students had graduated from a veterinary school; twenty were enrolled in veterinary schools and
another seven were either in medical schools or a dental school. Of the twenty-five students who enrolled in veterinary schools, fifteen were at Penn.

The S.O.A.R. Program was discontinued in 1977 for lack of financial support. The directors of this program were Dr. Dwight McNair Scott (1972 to 1976), Dr. Omar O. Barriga (1976-1977), and Dr. Colin Johnstone (1977).

Many faculty have aided in the minority program at the Veterinary School. Dean Robert R. Marshak appointed an ad-hoc Committee on Minority Students for the purpose of counseling minority students enrolled in the School. Serving on this Committee were Drs. M. Raja Iyengar, Dudley F. Johnston, and John T. McGrath. The dean also appointed Dr. Colin Johnstone as Minority Advocate to the Admissions Committee. Dr. Johnstone served admirably in this position from 1977 to 1982; the position is now occupied by Dr. Robert E. Davies. Faculty who made noteworthy contributions to the S.O.A.R. Program, in addition to the directors, were Drs. Adelaide M. Delluva, M. Raja Iyengar, Richard O. Davies, Donald G. Lee, Mark E. Haskins, Peter J. Hand, David S. McDevitt, and Professor Thomas Haviland.

The first black admitted to the Veterinary School was John B. Taylor, who graduated in 1908. Dr. Taylor distinguished himself by winning a gold medal in the 1908 Olympic Games, in London, in the 1600 meter relay. He was the first black American to compete in the Games. Six months later Dr. Taylor died of pneumonia. In 1909, the second black graduate was Cornelius Vanderbilt Lowe who was followed by Augustus M. Fisher in 1912. There was not another black graduate until 1935 when William H. Waddell graduated. The year after graduation, Dr. Waddell played a major role in the founding of the School of Veterinary Medicine at Tuskegee Institute, Alabama, and has since been active in recruitment policies for minorities in veterinary schools. After Dr. Waddell was graduated, in 1935, the next black graduate from the Veterinary School was Dr. Sidney Rucker, 1948. The first black woman to graduate from the Veterinary School was Dr. Jane Hinton in 1949. From 1949 through 1968 there were no black graduates.

From 1970 through 1982 the total number of minority students, enrolled in the Veterinary School, including Hispanics, American Indians, and Asians increased in most years. In these twelve years there were forty black students enrolled. In the same period there were twelve Hispanic students, one American Indian, and nine Asians. The largest number of minority students enrolled was in 1979, when there were nine. This represented about eight percent of the total class size, and this is significant. In 1979 the U.S. Bureau of Census Report indicated that of the 17,985 veterinarians in this country only 1.3 percent were from minority groups.

Dr. John B. Taylor (V'08) second from left, who won an Olympic Gold Medal, London 1908.
In 1949 an ROTC was founded and continued until 1957. From 1949 to 1952 it was under the direction of Major Walter T. Carll, who was followed by Major Martin A. Ross (1952-1955), and Major Robert M. Nims (1955-1957).

By 1953 senior students began spending scheduled periods of time at New Bolton Center, being housed in the manor house (later Allam House). Beginning in 1958 the entire fourth year was devoted to work in the clinics and hospitals. The addition of new courses and some rearrangement of time improved the teaching program and it was becoming evident that the faculty was moving in the direction of some profound changes. As early as 1957 a Faculty Study Group report recommended that consideration be given to the development of a multi-discipline, correlative type of teaching program. Further, the report suggested a reevaluation of such courses as pharmacy, animal industry, and milk and meat hygiene, with the possibility of dropping these from the curriculum. The report also touched on the advisability of placing greater emphasis on courses in public health, a strengthening of the courses in physical diagnosis and clinical pathology.

Roster, 1942-1943
and an integration of courses in comparative medicine. It was noted at this time that certain medical schools, such as Harvard, Western Reserve, and Johns Hopkins, had introduced a correlative type of curriculum.

The department reorganization, which took place in 1959, provided a framework for some correlation of teaching in related disciplines but there was still duplication of material and in laboratory equipment in different courses.

By 1961 some major changes had taken place in the teaching of clinical subjects. These changes reflected the concepts of Dr. Robert R. Marshak, professor of medicine and head of the Department of Applied Veterinary Science. Dr. Marshak had two main goals: first, to build a department having a major representation of individuals with advanced training in clinical specialties, and second, the development of a curriculum devoted to providing a solid background in scientific clinical medicine. Building an outstanding clinical faculty was slow work but through a careful, demanding selection of individuals for new appointments this goal gradually came about. Key appointments in the Clinical Departments at about this time were such young individuals as Drs. James W. Buchanan, Loren H. Evans, David H. Knight, William Medway, Donald F. Patterson, W. Harker Rhodes, Lionel F. Rubin, Robert M. Schwartzman, and Lawrence R. Soma.

The process of building a strong clinical department was given important impetus by an affiliation with the Graduate School of Medicine in 1955. This meant that veterinarians interested in developing clinical specialties could receive graduate training. The first veterinarian to complete this training was Dr. William McGrane (ophthalmology), and the second was Dr. W. Harker Rhodes (V'55) (radiology). By 1961 there were nine veterinarians registered in the Graduate School of Medicine, which was phased out in 1971.

As a result of judicious appointments and the availability of graduate clinical training, the following specialties were represented in clinical teaching by 1967: clinical laboratory medicine, anesthesiology, cardiology, dermatology, reproduction, orthopedics, and epidemiology and public health. A new course in veterinary history, taught by Mr. Thomas Haviland was begun in 1960. While these new subjects were being added to the curriculum, others were phased out. In 1957 the podology course was dropped, followed by botany in 1961. There had been a gradual reduction in the time devoted to courses in animal industry, and by 1965 these subjects were dropped from the curriculum entirely. Material that had been presented in the course in feeds and feeding was now incorporated in a new course known as animal nutrition in which both basic and applied aspects of animal feeding were covered. The elimination of courses in animal industry was a historic change; these had been part of the curriculum since 1884. Not only were these dropped from the veterinary medical curriculum, but after 1966 they were not given admission credit in preclinical studies.

The development of clinical specialties not only improved and modernized the curriculum but it also brought an increased communication between faculty in clinical sciences with those in basic sciences. Dr. Marshak greatly encouraged this interchange so that basic concepts were introduced into clinical teaching.

As the fund of knowledge grew some additional new subjects became part of the curriculum. The teaching of biostatistics was introduced into the course in epidemiology and public health along with a consideration of international aspects of veterinary medicine. Virology assumed a
growing importance in the course in microbiology.

In 1953 small groups of senior students spent two weeks at New Bolton Center on a rotating basis, and by 1965 this had increased to several four-week periods per year. In order to introduce clinical work earlier in the curriculum, junior students began, in 1963, to spend one hour in clinics. Clinical conferences and ward rounds became a regular part of the schedule for senior students.

Lastly, in 1963, scheduled time for independent study was set aside in the curriculum of junior students. This reflected a major shift in teaching concepts, away from the old idea that all learning was to take place only in the classroom, and toward a program of self education.

In less than twenty years the teaching of veterinary medicine at the University of Pennsylvania had undergone some profound changes. The faculty had recognized that the body of material to be learned had grown to a point where students could no longer be reasonably expected to make the necessary correlations between various disciplines. Some system was needed in which the arrangement of the curriculum provided a structure for correlation. The School was now on the brink of engaging in a daring, unprecedented venture in veterinary medical education.

Core-Elective Curriculum

In 1970 the Veterinary School embarked upon a revolutionary new core-elective curriculum. This momentous change was approved in a faculty meeting on November 10, 1969. A great deal of "blood, sweat and tears" preceded and followed this decision since an established educational program is something sacred to a faculty. Even though some considerable changes had taken place in the curriculum in the past decade it was basically a structure that was built around traditional disciplines. Also, even after approval was given to embark upon a new curriculum, there was considerable apprehension about whether it would be too complex for effective administration. There were a multitude of problems involving space assignments, contact hours, scheduling of students, record-keeping, and the formation of interdepartmental teaching units. Interestingly, one of the faculty who voted against a core-elective curriculum in 1969, because he felt it would be too cumbersome and complex to administer, was the same individual who would be most responsible for seeing that it did work! This was Dr. Donald A. Abt, now associate dean.

The decision to embark upon a core-elective type of curriculum was made at a historic three-day faculty retreat at the Haddon Hall Hotel in Atlantic City in October 1959. Following the report of the Faculty Study Group in 1957, which had strongly recommended the development of correlative teaching, other small committees of the faculty had studied the idea; thus at Atlantic City there was some general concept for the faculty to consider. After the retreat, committees began to work on details. Dr. Donald F. Patterson took a leading role in this planning, and, by 1964, a general scheme evolved. This included a four-year curriculum which would be divided into three phases: Phase I would include teaching of basic sciences; Phase II would be a correlative phase in which teaching would be done by body systems rather than by disciplines; and
Dr. Donald A. Abt

Phase III would be devoted to clinical teaching. Actually, in this plan, Phase III would be an extension of Phase II, distinguished only in that it would involve clinical subjects and training in hospital settings.

Now began the arduous task of working out specific details of such matters as elective courses, student counseling, evaluation of students, space requirements, and the difficult transition from the old to the new curriculum. This was a period of hard, diligent work by the faculty, and required some heroic decision-making.

In planning the core-elective curriculum two goals were paramount: to provide an educational program that would foster a lifetime process of self-education and one that would allow students to select courses that would most closely meet their career goals. The final plan necessitated some radical changes, and the faculty is to be commended for making personal sacrifices and being willing to depart from traditional methods of teaching and evaluating students. For example, elective offerings were to include some off-campus assignments for students. This was an unheard-of departure from a system in which all teaching and evaluation had been firmly in the hands of the faculty. It meant that the faculty was now willing to accept the evaluation of non-faculty individuals. The faculty also agreed to provide for time that could be used for independent study. This demonstrated a marked change from the old idea that students learned all that they needed to know in the classroom. Most important, the faculty agreed to give up certain “territorial rights” and to establish interdepartmental teaching areas. In the core-elective program much of the instruction would be done by teaching units made up of representatives from several departments and headed by a course organizer. In this new arrangement some courses would lose their individual identity. For example, pharmacotherapeutics would no longer be taught as an entity, its content being spread out in various core and elective courses. All of this meant that the School had come of age — that it was no longer bound to the past and henceforth was committed to a future that would lead it to a position of a world leader in veterinary medical education.

When the faculty gave final approval of the new program there was an immediate need for an individual who would “mastermind” the complex curriculum with its myriad details. Dr. Donald Abt was selected for this, and even though he had originally voted against the new curriculum, he now applied all of his energies to making it work. In 1970 Dr. Abt was appointed associate dean for curriculum and began the monumental task of tying all the loose ends together into a cohesive whole. Dr. Abt brought his excellent knowledge of computer technology to bear on the problems and today much of the success of the core-elective curriculum is based upon a computerized data system.

In his present position as associate dean, Dr. Abt still spends considerable time in supervising the curriculum, aided by Mr. Robert Pollock and Mrs. Velma Goode.

When the new curriculum was started, in 1970, the “core” portion constituted approximately sixty-five percent of the total. In the new curriculum the core section occupied the entire first year, about three-quarters of the second year, a small portion of the third year, and about one-half of the fourth year of study. Beginning in the second year and continuing through the third and fourth years electives were offered.
Graduate Program

Although veterinarians were accepted for graduate work in the Graduate School of Arts and Sciences as early as 1934, it was not until 1950 that graduate courses were formally listed in the Bulletin of the Veterinary School. At this time some members of the Veterinary School faculty received joint appointments in the Graduate School of Arts and Sciences, Division of Biological and Medical Sciences of the University of Pennsylvania. In 1950, graduate work was offered in veterinary bacteriology, virology and immunology, and in biochemistry, parasitology, pathology, physiology, and pharmacology. Students engaged in graduate studies in these basic sciences were registered in the Graduate School of Arts and Sciences. Beginning in 1955 veterinarians could also take graduate work in the Graduate School of Medicine which offered studies in various clinical disciplines. The Graduate School of Medicine, which was phased out in 1971, offered a Masters Degree in Veterinary Medical Science.

In 1965 graduate offerings in the basic sciences were expanded to include anatomy, and in 1971 graduate work in Comparative Medical Sciences was begun, to provide training for veterinarians whose field of specialization requires multidisciplinary education related to a clinical area. Studies in Comparative Medical Sciences lead to either a Ph.D. or a Masters Degree.

By 1973 the Veterinary School was offering graduate work in a variety of areas including Anatomy, Biochemistry, Biology, Biophysics, Comparative Medical Sciences, Immunology, Microbiology, Molecular Biology, Parasitology, Pathology, Pharmacology, Physiology, and Psychology. With the strengthening of the Veterinary School faculty through the addition of a number of individuals with advanced degrees, many members of the faculty became members of the graduate groups responsible for studies in these particular areas.

The growth of graduate work provided the means for the Veterinary School to attract bright young people. Some of these left after completing their graduate work, but a number of them remained, and today play important roles on the Veterinary School faculty. During its existence, the Graduate School of Medicine made an outstanding contribution to the strengthening of the clinical areas in the School.

Veterinary Medical Scientist Training Program

The Veterinary School has a distinguished reputation as a major supplier of academic scientists and faculty for other veterinary schools as well as for medical schools and universities. This activity of the school has been recognized, and enhanced, by the awarding of a training grant from the National Institutes of Health for a V.M.D./Ph.D. training program. The program was begun in 1969 and was then, and still is, the only such program at any veterinary school. This is a very prestigious grant; about twenty medical schools, including the University of Pennsylvania,
The Seven Year Combined Course

Since 1951, the University of Pennsylvania has offered a seven-year combined course for students who are able to earn seven-eighths of the course requirements for graduation in three years in the Faculty of Arts and Sciences of the University of Pennsylvania, and who are admitted to the School of Veterinary Medicine. Under this program students are able to earn two degrees in a seven-year period. Upon recommendation of the dean of the Faculty of Arts and Sciences, and contingent upon acceptance as a student in the Veterinary School, a student may take his/her senior year work during the first year in the Veterinary School. Upon satisfactory completion of the first year of work in the Veterinary School the student will receive the degree of bachelor of arts.

Continuing Education

During 1952-1973 there was no formal program of continuing education but the Veterinary School did offer the opportunity for practitioners to be exposed to new information in clinical areas. Although the faculty was generally overextended it presented, each year, a series of four day courses in such fields as general surgery, orthopedic surgery, dermatology, and cardiology. As new clinical specialties were developed they were added to the roster of short courses. The Annual Conference for Veterinarians, started in 1900, has been continued each year, and has provided an outstanding group of speakers. In addition this was a period of time in which many of the members of the faculty "went on the road", speaking at numerous local association meetings throughout Pennsylvania and other states.
The Teachers

As has been the case since the inception of the School the educational program continued to be a cornerstone for the School of Veterinary Medicine. This was due primarily to a dedicated teaching effort on the part of a severely understaffed faculty. In the early part of the period, 1952-1973, most departments were so small that it was difficult for faculty to find any time for research, so full was their teaching schedule. With the passage of time, the growth of the faculty and the reorganization of the curriculum provided some relief for research and other scholarly activities for most disciplines. As the faculty grew in strength there was an increased participation in teaching graduate courses both in the Graduate School of Arts and Sciences, and also in the Graduate School of Medicine. The attraction of faculty from other institutions and especially individuals with advanced training brought to the teaching effort a diversity and at the same time a depth that had not been present previously.

Gradually the approach to teaching changed from the old didactic style to one in which students were encouraged, and in fact required, to make correlations between material presented in different disciplines and to engage more in self education. The library was more fully utilized as a teaching resource.

The heavy teaching load in anatomy was carried by a few individuals. From 1952 to 1970 Dr. Donald G. Lee was in charge of teaching gross anatomy, microscopic anatomy, developmental anatomy, and applied anatomy. Until 1959 he was assisted, at various times, by Drs. Robert F. Way, John H. Graves, J. Ellis Crowshaw, and Mr. Thomas N. Haviland; there were never more than three on the teaching staff at any one time. Beginning in 1959 some important additions were made to the anatomy faculty. These were Dr. William C.D. Hare (1959), Dr. Isidore Gersh (1963), Dr. Peter J. Hand (1965), Dr. Adrian R. Morrison (1967), and Dr. David S. McDevitt (1969). Others who taught for brief periods were Dr. Donald Abt, and Dr. J.W. Saunders.

Animal industry was an important part of the curriculum from 1952 until 1965, when it was dropped. The course had several components: breeds and market types of livestock, stock judging, feeds and feeding, poultry husbandry, and genetics. The time allowed in the curriculum was gradually reduced until it was phased out in 1965. Following this time prospective students could take animal husbandry courses in their preparatory studies, but this was not an admission requirement. Dr. Thomas DeMott was in charge of this course and was assisted by Dr. Phineas W. Whiting, Milton D. Stoudt, Ralph Hillman, and Mr. George F. Shaw.

From 1952 until 1962 biochemistry was taught primarily by Drs. James H. Jones and Frederick Leaver. Beginning in 1963 the staff began to grow with the addition of Drs. Robert E. Davies, Dennis F. Cain, and Dwight B. McNair Scott. In 1965 Dr. M. Raja Iyengar joined the faculty followed by Drs. David Kritchevsky and Irwin L. Shapiro in 1967, and Drs. Vincent J. Cristofalo, Adelaide M. Dellaqua, and Robert J. Rutman in 1969.

In 1952 botany was taught by Dr. Walter Stockhein who as succeeded in 1953 by Dr. Edgar T. Wherry, followed by Drs. Alex Schreif in 1956. In 1961 botany was dropped from the curriculum; the material pertaining to poisonous plants was incorporated in the courses in pharmacology and medicine.

Mr. George P. Williams III, and Mr. Alphonse R. Romeika, both lawyers, were
primarily responsible for teaching the course in jurisprudence. They were assisted by a number of individuals, including Dr. Raymond C. Snyder, Roger S. Maloney, and James T. O'Connor.

Dr. John D. Beck was in charge of the course in medicine from 1952 until he resigned in 1957. During these years the course consisted of clinical orientation, physical diagnosis, poultry diseases, infectious and non-infectious diseases of the various systems, diseases of small animals, and the history of veterinary medicine. In addition, there was instruction in the clinics and hospital. During these five years the teaching staff was small considering the amount of instruction required and the fact that most individuals spent considerable time seeing cases in the clinics and hospital. Assisting Dr. Beck were Drs. Evan L. Stubbs, Frantisek Kral, James H. Mark, William B. Boucher, Walter E. LaGrange, Raymond C. Snyder, Joseph F. Skelley, Charles W. Raker, Charles Hollister, Lawrence H. Taylor, John R. Francella, and Clarence A. Woodhouse.

In 1957 Dr. Robert R. Marshak succeeded Dr. Beck as professor of medicine and chairman of the department of medicine. Almost immediately the department began to grow. Many of those appointed to the faculty in medicine had special training or were engaged in graduate training after their appointment. A number of those who joined the faculty prior to 1973 have remained and have assumed key positions. These include Drs. William Medway, Donald F. Patterson, Robert M. Schwartzman, James W. Buchanan, Joan O'Brien, Elaine P. Hammel, Richard C. Bartholomew, Charles Ramberg, Gustavo D. Aguirre, Kenneth C. Bovee, Benjamin G. Brackett, Robert M. Kenney, David H. Knight, Richard A. McFeely, Lionel F. Rubin, Lawrence R. Soma, Alan M. Kiide, Sheldon A. Steinberg, Wilbur B. Amand, and George C. Farnbach.

Two individuals had established themselves only to have their promising careers cut short by their death. These were Dr. Edward T. Siegel, professor of medicine and chief of the endocrine service and James M. Murphy, research professor.

There were numerous other individuals, many with training in a clinical specialty, who taught some phase of the medicine course, or who were present for a few years before going elsewhere. Among these were Drs. Alfred M. Merritt, Henry W. Kulp, Barton L. Gledhill, G. Patrick Mayer, Guy E. Morse, Edwin D. Tuckerman, Stanley N. Wampler, G. Frederick Fregin, H. Lincoln Easterbrooks, Ray M. Dutcher, Edward P. Larkin, Erkki J. Rajakoski, Richard E.W. Halliwell, J. Deaver Alexander, George R. Fisher III, Richard A. Huesner, Alfred Kissileff, and Robert C. Dreisbach.

Dr. Raymond A. Kelser was in charge of teaching microbiology in 1952. Upon his death, in the same year, this responsibility was taken over by Dr. Israel Live. Others involved in teaching at this time were Drs. Miklos Dreguss, David W. Crisman, Charles E. Mootz, Louise S. Lombard, and Mr. George Jaggard. Included in this course were general bacteriology, immunology and virology, milk hygiene, meat hygiene, and poultry inspection. In 1953 Miss Anna C. Nichols joined the staff and served until 1967. Dr. Geoffrey Rake, an outstanding virologist, was appointed in 1955, along with William F. McLimans; Dr. Rake died in 1959, and Dr. McLimans resigned in 1960. Other additions to the staff who remained for only a few years were Drs. Alfred M. Wallbank and James E. Prier. Beginning with the appointment of Dr. Benjamin Wolf in 1958, a nucleus of the present group teaching microbiology began to assemble. Others appointed
before 1973 were Drs. Leonard J. Bello, Wesley C. Wilcox, and William C. Lawrence. By 1970 the course had been refined, with milk hygiene, meat hygiene, and poultry inspection being dropped and more emphasis being placed on immunology and virology.

From 1952 until 1963 parasitology was taught by Drs. Harry M. Martin and George L. Graham. In 1963 Dr. Martin retired and in 1965 Dr. Graham was joined by Dr. E.J. Lawson Soulsby who assumed chief responsibility for teaching parasitology. In 1967 Dr. David J. Moreth was appointed and in 1971 Drs. Gene B. Solomon and Meir Yoeli became part of the teaching group in parasitology.

The group teaching pathology grew considerably from 1952 to 1973. In 1952 Dr. Evan L. Stubbs was in charge assisted by Drs. Harry M. Martin, Baldwin Lucke, Morton McCutcheon, John W. Mills, M. Josephine Deubler, and John T. McGrath. From 1952 to 1960 major additions to the staff were Drs. F. George Sperling, Dale R. Coman, Klaus Hubben, George A. Elliot, Warner F. Sheldon, and Leon Z. Saunders. Of these, all except Dr. Saunders left prior to 1973. During the period 1960 to 1973 the staff in pathology continued to grow with the following major appointments: Drs. Samuel K. Chacko, David C. Dodd, Jen Hwang, Alan M. Kelly, Donald F. Kelly, Wayne H. Riser, Jeffie Roszel, James R. Rooney, and Wilfried T. Weber.

In 1952 Dr. F. Harold McCutcheon was in charge of teaching physiology, pharmacology, pharmacy, and pharmacotherapeutics. The group involved in teaching these subjects included Drs. David K. Detweiler, Frank E. Lentz, Monica Reynolds, John E. Martin, and Harry N. Blumner. In 1953 Dr. Richard Houpt was appointed to the department. Dr. Lentz retired in 1953 and was replaced by Dr. Marvin J. Silverman who taught pharmacy and supervised the Hospital Pharmacy. In 1958 Dr. Silverman was transferred to the Department of Applied Veterinary Sciences. Two important additions to the department in 1960 and 1961 were Dr. John Biggers and Dr. David S. Kronfeld. Dr. Biggers was on a part-time basis and left in 1967; Dr. Kronfeld later moved to the Department of Applied Veterinary Sciences. In 1963 Dr. Martin left and Drs. Richard O. Davies and Karl L. Gabriel joined the group. From 1967 to 1973 there were a number of major additions, including Drs. Ralph L. Brinster, E. Neil Moore, Carl A. Ritter, Julius Melbin, Morley R. Kae, Benjamin G. Brackett, Morton Cross, Patricia Cross, and Joseph Spear.

The department of surgery, obstetrics, and radiology was headed by Dr. Mark W. Allam in 1952. Others who taught these subjects were Drs. Roger J. Maloney, Edwin A. Churchhill, James T. O'Connor, Arthur V. Bartenslager, Jacques Jenny, and Robert S. Brodey. In 1954 Dr. Charles W. Raker joined the department and in 1957 he became head. From 1956 to 1973 there was considerable growth; the following were major appointments: Drs. W. Harker Rhodes, Robert M. Kenney, Charles F. Reid, Colin E. Harvey, David M. Nunemaker, Dudley F. Johnston, Darryl Biery, James W. Buchanan, Loren Evans, and Lincoln J. Parkes.

A course in preventative medicine and hygiene was started in 1954 and continued until 1956. Those who taught were Drs. Raymond Fagan, James R. Lecce, Sadamoto Sakasegawa, and Shyamal K. Sinha.

In 1963 a course in veterinary epidemiology and public health was initiated under the direction of Dr. Daniel Cohen. He was assisted by various faculty of the Departments of Applied Veterinary Science and Animal Biology. In 1969 the course became known as epidemiology, biostatistics, and public health, and was taught by Dr. Cohen along with Drs. Donald A. Abt, Florence S. Lief, John S. Reif, David W. Crisman, Bernard Gabriel, and Donald W. Webert. In 1971 Drs. Martin Kaplan and Tadeusz J. Wiktors joined the staff.

Professor Thomas Haviland taught a course in the history of veterinary medicine beginning in 1961 until 1971. Professor Haviland was also director of the School Museum.

In 1952 field service was operated from Philadelphia, Media, Pennsylvania, and from Bolton Farm in Bucks County, Pennsylvania. Beginning in 1953 this service was transferred to New Bolton Center. Dr. John D. Beck was supervisor of field service until 1957 when he was succeeded by Dr.
Robert R. Marshak. From the time New Bolton Center was developed, field service visited farms, on call, in the neighborhood of the Center, under the direction of Dr. William B. Boucher. He was assisted by various members of the clinical staff.

Research

As the number of faculty with advanced training increased there was a great upsurge in the research effort and in the character of research. The growth of research depended in large part upon the attraction of funds, which in turn was dependent upon individuals who could attract grants. Immediately following World War II there was a marked increase in the availability of federal and private funds for biomedical research. In the beginning of this era the Veterinary School was not yet in a position to attract such monies, but by the middle 1950s there were individuals with established reputations on the faculty and sizable research funds began to appear. The first major grant to be received at the Veterinary School was awarded to Dr. David K. Detweiler for work in comparative cardiology in 1960; this was a one million dollar grant for a ten year period and was awarded by the National Institutes of Health.

The following few statistics reveal the remarkable growth in research at the Veterinary School. In 1951 there were three major research projects with a total funding of $24,000, by 1955 there were forty projects, and by 1961 there were fifty-one research studies funded by a total of $540,000. In 1961 about eighty-five percent of the faculty was engaged in some research effort. In his Annual Report for 1964, Dean Mark W. Allam indicated that in one decade the research effort had grown by an amazing 2200 percent!

The increase in research was not solely due to the ability of faculty to attract funds. One important change that aided in the effort was an arrangement of teaching responsibilities so that most basic science faculty had one semester free for research. With the growth of the clinical faculty more research time became available for these individuals as well.

Another important aspect in the forging of a major research effort, especially in the clinical area, was the development of cooperative efforts between individuals in the basic sciences and those in clinical fields. This meant that clinical problems could receive more in-depth attention. One important feature to come about from the cooperative effort was the development of Clinco-Pathologic Conferences. The results of these conferences were published regularly in the AVMA Journal.

The development of a close relationship between the Veterinary School, the Graduate School of Arts and Sciences and the Graduate School of Medicine added great impetus to the research program. A number of individuals on the faculty received joint appointments in the Veterinary School and on one, or both of the graduate faculties. As a result of this arrangement and other opportunities, the School was able to attract many bright young people who sought advanced training. Some of the older faculty aided greatly in assuring that young individuals had the opportunity to engage in graduate work; they were willing to assume some of the more routine duties, thus making time available to the young people. Dr. Sheldon Steinberg, now professor of neurology, recalls that this was one of the most rewarding experiences of his early years on the faculty—the fact that senior faculty offered him help and support. Noteworthy in this regard were individuals like Dr. William B. Boucher and Dr. Evan L. Stubbs. The School was also able to obtain a number of training grants in such areas as the Comparative Cardiovascular Studies Unit and the Interdisciplinary Cancer Research Unit.

The most important stimulus to the research effort was the aims established by Dean Allam and the heads of departments. Soon after he became dean, Dr. Allam established research in all areas as having the highest of priorities in the resurgence of the School. The development program, supervised by Dean Allam, including construction of the Rosenthal Building on the Philadelphia campus and the evolvement of the Bolton Center campus, had as one of its important cornerstones the provision
Dr. Robert E. Davies and various colleagues, including Drs. Dennis F. Cain and Adelaide M. Delluva, were engaged in the comprehensive study of the biochemical energetics of muscular contraction, including biochemical changes during the development of muscular dystrophies. Independently, Dr. Cain was conducting studies on the biosynthesis of protein and ribonucleic acid in a search for a simpler, more controlled *in vitro* system in which to examine the effects of pharmacologic agents and electrical stimulation on these two parameters. Dr. James H. Jones was continuing his work on vitamins, and especially on the effects of thiamine deficiency on the metabolism of the brain and liver. Dr. M. Raja Iyengar initiated research on the structure-function relationship of contractile proteins in different types of muscles, and Dr. David Kritchevsky was engaged in an investigation of the metabolism of cholesterol. Dr. Dwight McNair Scott was investigating the regulation of the early steps in glucose metabolism, and Dr. Irwin Shapiro was involved in work on lipid metabolism.

In the area of reproductive physiology, Dr. Benjamin G. Brackett was conducting basic studies on *in vitro* fertilization, Dr. Ralph L. Brinster was studying the biochemistry and physiology of mammalian embryos from ovulation to implantation, and Dr. John Biggers was investigating growth and early development of the mammalian embryo in organ culture.

Both Dr. F. Harold McCutcheon and Dr. Richard O. Davies were studying basic aspects of respiration, while Dr. T. Richard Houpt was investigating nitrogen conservation cycles dependent upon alimentary canal microorganisms in ruminants and other herbivores. The mammary circulatory changes at the time of parturition were the subject of research by Dr. Monica Reynolds, while Drs. David S. Kronfeld and
Fiora R. Raggi were investigating basic aspects of ketosis and disturbances of fat carbohydrate metabolism in cows and sheep. Dr. Kronfeld was also collaborating with Drs. G. Patrick Mayer and Charles F. Ramberg in studies on parturient paresis and related disturbances of calcium and magnesium metabolism in cattle.

In pharmacology Dr. Carl A. Ritter was investigating testosterone-activated alterations in the redox state of the prostate and seminal vesicles, and Dr. Karl L. Gabriel was studying the actions of various drugs in domestic animals. Dr. Edward T. Siegel was engaged in research on various aspects of steroid endocrinology in animals.

The anatomy faculty was busy in a variety of basic research endeavors, especially in the field of neuroanatomy. Dr. Peter J. Hand was studying the anatomical organization of the dorsal column medial lemniscal system in the cat, and Dr. Adrian

R. Morrison was investigating mechanisms underlying sleep in the cat, especially the stage of sleep homologous with periods of human sleep associated with the occurrence of vivid dreams. Dr. Everett H. Heath was studying the comparative cytology of the pars anterior of the hypophysis in domestic animals. The doctors Gersh, Isidore, and Eileen, were engaged in studies on the formation and secretion of collagen in connective tissue cells, and on the relation of genetic material to chromosome structure, respectively. Dr. William C.D. Hare was a part of the research effort on bovine leukemia and was conducting cytogenetic studies associated with congenital abnormalities and cancer and on culture methods for leukocytes. Professor Thomas Haviland had a primary interest in veterinary history and was also studying the cause of the aberrant direction of the nutrient canal in the dog radius.
Research in the Department of Veterinary Biology (Pathobiology)

In the laboratory of microbiology Dr. Israel Live was investigating serological methods of identifying staphylococci organisms and was especially interested in the possible interrelationship of staphylococcal infections between animals and man. Along with Dr. Benjamin Wolf, Dr. Live was also engaged in work on the isolation and characterization of soluble antigens of Brucella abortus. Independently Dr. Wolf was conducting research on the ability of the normal thymus to potentiate the secondary antibody response in vitro. The elucidation of factors controlling quantitative and qualitative aspects of RNA synthesis in cultured mammalian cells was the focus of research by Dr. Leonard J. Bello. Dr. William C. Lawrence was involved in a study on the biochemical analysis of IBR virus infection, and Dr. Wesley C. Wilcox was investigating protein synthesis in vaccina-infected mammalian cells.

In the laboratory of parasitology Dr. E.J. Lawson Soulsby was involved in research on the in vitro production of protective antigens in Ascaris suum infection, and Dr. Edward L. Jeska was investigating the role of somatic antigens in acquired immunity in helminth infections. Dr. George L. Graham was analysing data relative to the biology of various species of Strongyloides and Dr. Victor Varela-Diaz was examining the immune response in young sheep to gastrointestinal parasitism. Other studies included an investigation of the antigenic complexity of various stages of the life cycle of the pig roundworm, Ascaris suum, by Dr. Jeffrey F. Williams, and an examination of cytophilic antibodies in helminth immunity by Dr. Terence J. Hayes. Dr. David J. Morseth was conducting studies on the adhesion of various leucocyte cells on the body surface of nematode larva, and in vitro cytological studies on granuloma formation in helminth infections. Stephen R. Syik studied the in vitro cultivation of the migrating stages of Ascaris lumbricoides to investigate the physiological processes associated with hatching and molting.

In the laboratory of pathology Dr. Allan M. Kelley was conducting basic studies designed to provide a better understanding of the synaptic area of the nervous system. Dr. John T. McGrath was involved in several projects. One was a clinicopathological study of syringomyelia in Weimeraner dogs. In association with Drs. Alan M. Kelly, Sheldon A. Steinberg, and William Medway, Dr. McGrath was also studying some inborn errors of metabolism in dogs, especially in central nervous system lipoidosis simulating Tay-Sachs disease of man, and peracute necrotic myelopathy relating to vitamin B12 deficiency. Dr. Donald F. Kelly was investigating the pathology of extranasal lesions in porcine inclusion body rhinitis, and in cooperation with Dr. Robert S. Brodey, was conducting a retrospective survey of canine thyroid tumors. Dr. Klaus Hubben was doing pathological and histochemical studies on bovine mastitis, and Dr. Robert M. Sauer was interested in developing new contrast media for use in canine myelography. Dr. Wilfried T. Weber conducted studies to measure the effects of various stimulants (e.g. phytohemaglutnin) on the in vitro culture of peripheral blood lymphocytes, and also did chromosome studies on benign and malignant canine neoplasms. Dr. David C. Dodd was intimately involved with the research on bovine leukemia, and was especially interested in the cytological picture of lymph nodes and the thoracic lymph duct at various stages of the disease. Other research included an investigation of the pathogenic, histochemical, and histological changes in various cardiovascular diseases in the dog and pig by Dr. Samuel K. Chacko, a study of blood
cellular changes in mice developing induced cervical neoplasms by Dr. Jeffie F. Roszel, and an examination of skeletal changes of the hip joints associated with canine hip dysplasia by Dr. Wayne H. Riser. Dr. Roszel was also doing a comparative study of circulating endothelial cells in normal dogs, dogs with endothelial proliferative lesions and dogs with cancer. Dr. Evan I. Stubbs, in cooperation with Dr. Alfred M. Wallbank, was continuing his extensive studies on chicken sarcoma strain 13 virus-induced avian cancer.

Research in the Department of Clinical Studies

The department of clinical studies had a very active and broad research effort. Dr. E.T. Siegel began his studies on synthetic and metabolic pathways of adrenal steroids in animals. Dr. Donald A. Abt was supervising a major field study on over forty herds of dairy cattle as a part of the bovine leukemia research project. He had introduced modern processing methods, using digital computers, to correlate hematological findings with epidemiological, cytogenetic, and genetic aspects of the disease. Dr. Robert R. Marshak was also heavily involved in work on bovine leukemia, including field studies, genetic studies, and various procedures for transmission of the disease. Dr. William Medway was conducting a number of projects including studies of disease of marine mammals, anemias in dogs and cats, malabsorption in Siamese cats, and urinary mucopolysaccharides in dogs. Dr. Joan O’Brien had begun her work on respiratory disease of dogs and cats, and Dr. Charles W. Raker was doing research on the histologic and micro-angiographic picture of flexor tendons and suspensory ligaments in various stages of tendonitis. In radiology, Dr. Charles Reid was engaged in developing radioactive isotopes for use in diagnostic tests for small animals, and in the perfection of diagnostic x-ray equipment for large animals. Dr. Robert S. Brodey had several projects underway including studies on the possible viral etiology of feline lymphosarcoma with asparaginase, and investigation of the biological behavior of canine mammary neoplasms, and a survey of the clinicopathologic features of canine thyroid neoplasms. In ophthalmology, Drs. Seth Koch and Lionel F. Rubin were investigating the genetic aspects of pannus in German shepherd dogs.

In the area of epidemiology and public health, Drs. Daniel Cohen and Florence F. Lief were studying the epidemiology of equine respiratory disease. Dr. Cohen was also working on the development of a reliable serologic test for equine infectious anemia, and Dr. Lief was surveying respiratory viruses in animals that might have counterparts in man. Dr. Lief’s laboratory served as the reference laboratory for the World Health Organization Animal Influenza Program. Dr. John S. Reif was attempting to establish the dog as an indicator for air pollution effects by determining the distribution of chronic pulmonary diseases in canine populations. With Dr. Cohen and Dr. William Snider, Dr. Reif was also investigating the prevalence of tuberculosis in high risk canine populations.

Dr. Robert S. Brodey
One of the major accomplishments during this period of time was the development of special facilities for basic and applied research. These facilities have served as a focus to attract outstanding individuals, on an international basis, who are leaders in sophisticated and highly specialized areas of research. The result has been some important breakthroughs in a number of areas involving health and disease in animals and especially in comparative medicine. Through these special units teaching of veterinary students, continuing education, and consultation service to practitioners has been elevated to new and exciting levels. Likewise, the Hospitals are able to offer many additional specialty services.

**Comparative Cardiovascular Studies Unit**

Although the Comparative Cardiovascular Studies Unit (CCSU) did not begin until 1960, the seed for its development was planted eighteen years previously. In 1942 Dr. David K. Detweiler began his studies on cardiovascular disease in animals. At that time this was almost a virgin field, except for work that had been done in Europe. There was little of significance in the English literature and the prevailing opinion amongst clinicians was that heart disease in animals was uncommon and of little importance. Dr. Detweiler recalls that as a student he was taught that digitalis was ineffective in animals; subsequent work showed that the reason for this opinion was that a proper oral dose-regimen had not been established for the various species.

Initially, Dr. Detweiler’s work revolved about the use of the electrocardiogram, and physical examination, primarily of dogs and horses in the clinics of the Large and Small Animal Hospital. The electrocardiograph used at that time was a battery-operated machine that had been donated to the School by an appreciative client; for a number of years it had resided in a closet and was used only sporadically by the clinical staff. During these early years Dr. Detweiler began to establish relationships with physicians who specialized in cardiology. Dr. Martin H. Wendkos was especially helpful; he invited Dr. Detweiler to attend his evening cardiology clinic at Philadelphia General Hospital. It was here that Dr. Detweiler received training in the then current methods of clinical cardiology.

By 1952 Dr. Detweiler had accumulated enough information to publish, in the *Veterinary Extension Quarterly*, a review of seven years experience with cardiovascular disease in the Small Animal Hospital of the Veterinary School. By this time it was apparent that heart disease was not uncommon in dogs and that it offered a fertile area of investigation. Up until 1954, Dr. Detweiler depended largely upon being alerted by clinicians that there was a case for study in the clinic. He realized that under these conditions he was missing important clinical material and to obviate this problem he created a Heart Station in 1954. This was located in a stall area of the Large Animal Hospital next to the x-ray unit. The initiation of a Heart Station led to an immediate increase in the number of animals examined for heart disease since there was now a central location to which patients could be referred.

In the years 1955-1956 Dr. Detweiler was granted a Guggenheim Fellowship to study at the Veterinary Physiological Institute at
the University of Zurich Switzerland. One of the main objects of this study was to develop refined techniques for electrocardiography in horses, and this was done in collaboration with Professor Heinrich Spörri. An even more important aspect of Dr. Detweiler’s year in Europe was that, while there, he conceived the idea of undertaking a large scale epidemiological study of cardiovascular disease in dogs. It was this study which would lead to the development of the CCSU.

Upon returning to the United States Dr. Detweiler prepared a grant request for an epidemiological study on 5,000 dogs. This was funded by the National Institutes of Health (N.I.H.) and as a result Dr. Detweiler was able to obtain some equipment and hire a few individuals to work on the study. Among those who formed this initial group were Dr. Donald F. Patterson, who did clinical work, Dr. Klaus Hubben, in pathology, and Mr. William Schnarr, who provided invaluable technical assistance. Another important addition to the group was Dr. Robert P. Botts, an epidemiologist, who was assigned temporarily to the project by the United States Public Health Service. The epidemiological study contributed the first definitive data on heart disease in dogs in this country. This information provided two historic breakthroughs: It formed the basis of establishing a new specialty in veterinary medicine, cardiology, and it supplied the impetus for conducting detailed comparative work. In the epidemiologic study a total of 4831 dogs were examined, and the prevalence of heart disease was found to be about 10/1000 cases. Not to be overlooked in its importance was the fact that through this study Dr. Detweiler and his colleagues applied the first systematic approach for diagnosing cardiac disease in dogs using a combination of diagnostic methods — electrocardiography, auscultation, fluoroscopy, and radiography.

Primarily as a result of the epidemiological study and the fact that Dr. Detweiler had now established an international reputation in veterinary cardiology a major grant was obtained, in 1960, to establish the CCSU. This was a one million dollar grant from N.I.H., to extend over a ten-year period. One important aspect of this grant, the largest ever received by the Veterinary School up to this time, was the fact that N.I.H. was willing to make a long term commitment to a comparative cardiovascular study at a veterinary school. Veterinary cardiology had come of age.

Under the terms of this grant the administration and the work done in the CCSU would be under the direct supervision of Dr. Detweiler. The three general areas of activity of the CCSU were designated to be: research, especially in the comparative aspects of heart disease; training; and as a center for collecting and disbursing information. The CCSU was designated as an international training center by the World Health Organization.

One of the very important findings of the epidemiological study was that the forms of congenital heart disease detected in dogs were anatomically and clinically similar to those known to exist in man, and had a prevalence rate of about 5.6/1,000 dogs in the clinical population.

Dr. Hans-Ruedi Lugnibuhl, from the Veterinary School, Berne, Switzerland joined the CCSU as pathologist in 1962. His meticulous morphological studies helped establish the role of medial smooth muscle cells in the genesis of atherosclerosis and arteriosclerosis and contributed crucial information on the comparative aspects of cerebrovascular disease. Having distinguished himself as a research pathologist he was invited to head the Institute for
Animal Pathology, University of Berne in 1968, a position which he presently occupies.

One of the first research efforts of the CCSU was a study on the inheritance of heart disease in dogs. This work has been carried out by Dr. Patterson and was initiated when analysis of the records of the epidemiological study indicated that the five most common cardiac anomalies in dogs were not randomly distributed amongst pure breeds. For example, the incidence of patent ductus arteriosus was found to be highest in poodles, and the following conditions were most prevalent in the species indicated: pulmonic stenosis (beagles), subaortic stenosis (Newfoundlands), persistent right aortic arch (German shepherds), and Tetrology of Fallot (Keeshound). It was apparent that congenital cardiac defects in dogs deserved intensive study and there was a need for an individual expertly trained in genetics. From 1964 to 1966 Dr. Patterson studied genetics at Johns Hopkins University, and while there continued to conduct studies on dog families in a number of breeds that have an unusually high frequency of a particular defect. Subsequent studies by Dr. Patterson involving experimental matings of dogs donated to the project have substantiated the validity of the earlier observations in the epidemiological study: the offspring of matings between dogs with congenital cardiac defects were affected with the same type of defect in a high frequency. Continued work by Dr. Patterson and his colleagues showed for the first time in any species genetic determinants. This finding led to a series of grants to further delineate the mode of inheritance and an investigation of the effects of genetic defects on the embryologic development of the heart. This work was done in collaboration with Dr. James W. Buchanan, Dr. David H. Knight, Julius Melbin, E. Neil Moore, and Fred Fregin. Mr. William Schnarr who was with the unit at its inception has obtained a masters degree in pathopaleontology and is presently working on a Ph.D. degree.

An important and unique aspect of the training program was the fact that individuals who came to the CCSU were able to study in the Graduate School of Medicine (GSM) where they could obtain an M.Sc. or D.Sc. degree. Those who studied in the GSM were exposed to specialists in the Hospital of the University of Pennsylvania (HUP) and the Medical School, while at the same time they were associated with the vibrant research program and the abundance of clinical material available in the CCSU. A total of fifty-seven fellows and preceptees had trained in the CCSU by 1976. Of these, several individuals have gone on to assume important positions elsewhere. Dr. Wolfgang von Engelhardt is now chief of

The training program of the CCSU has paid huge dividends. Not only has it provided other institutions and agencies with a body of veterinary cardiologists, but several individuals who either trained in the program, or became associated with it at its outset, have remained at the Veterinary School where they have assumed important roles in the research, teaching and clinical service programs. Noteworthy are Drs. James W. Buchanan, David H. Knight, Julius Melbin, E. Neil Moore, and Fred Fregin. Mr. William Schnarr who was with the unit at its inception has obtained a masters degree in pathopaleontology and is presently working on a Ph.D. degree.

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the Institute of Physiology at the Veterinary School, Hannover, West Germany; Dr. E.W. Fisher is chief of Veterinary Physiology, University of Glasgow, and Dr. Med. Vet., F.K. Bohn has become the leading private practitioner of veterinary cardiology in West Germany. Dr. Klaus Hubben is now director of Safety Evaluation for Stuart Pharmaceuticals, Division of ICI American Inc., Wilmington, Delaware, and Dr. Robert L. Pyle is Chairman, Department of Medicine, Department of Veterinary Medicine, Virginia Polytechnic Institute.

Drs. E. Neil Moore and Joseph F. Spear have done some brilliant work in the field of electrophysiology, and in particular have studied and defined the sites in the heart which contribute to arrhythmias and conduction disturbances. Physicians from HUP, trained under Drs. Moore and Spear, have now perfected techniques for surgical excision of these sites, thus correcting serious arrhythmias in man. Dr. Moore, in association with Dr. John P. Boineau formerly of Duke University Medical School, and now director of cardiology, Medical College of Georgia, conducted research which led to a better understanding and a method of surgical correction of the arrhythmia seen in the Wolf-Parkinson-White (WPW) syndrome in man. Dr. Julius Melbin works in the field of hemodynamics, in which he is attempting to solve problems associated with the mathematical expression of blood flow that have been controversial for the past 150 years. Before coming to the veterinary school and receiving his V.M.D. degree and then an M.Sc. degree in cardiology and a Ph.D. degree in biomedical engineering, Dr. Melbin had trained as an engineer. The scope of Dr. Melbin's work deals in a general way with blood flow and the coupling of the heart with the vascular system and how these two are interrelated. Some of the complex equations developed by him were beyond anyone's knowledge when he began his work. One particular area of investigation by Dr. Melbin involves the study of how blood vessel design affects hemodynamics, especially in the pulmonary trunk which has a conelike shape. Dr. Melbin is investigating how this situation affects hemodynamic control without any energetic needs at all.

Dr. Detweiler along with Dr. Buchanan and Dr. Knight has been primarily interested in acquired cardiovascular disease. In recent years Dr. Detweiler has concentrated especially on electrocardiography in the dog and cardiovascular toxicology. Today, Drs. Buchanan and Knight are responsible for the clinical program in cardiology in the Veterinary Hospital of the University of Pennsylvania (VHUP) and operate the Heart Station. Dr. Knight is chief of the section of cardiology and Dr. Buchanan functions as the cardiac surgeon. Dr. Buchanan was the first to develop the field of cardiac surgery in veterinary medicine. Dr. Knight made pioneering studies on the hemodynamic and anatomical effects of heart worm infestation on the heart and pulmonary circulation in the dog.

Other work that originated in the CCSU involved a study of the pathological characteristics of vascular disease in dogs and swine and investigations on the effects of exercise on the cardiovascular system of the horse. Dr. Fregin, who worked at New Bolton Center, conducted research on the cardiovascular response to exercise in the horse and found that some unique adjustments occur in this animal. Dr. Fregin, who also operated the Heart Station at the rural campus, left the faculty in 1981.

The overall program of research and clinical work on dogs conducted by various individuals of the CCSU staff has resulted in a comprehensive understanding of heart disease in this animal. It is now known that a triad of pathological lesions are responsible: valvular fibrosis, intramural coronary aterial sclerosis, and foci of diffusely distributed necrosis. The pathogenesis of
heart disease in the dog usually involves valvular lesions starting early in life, leading to mitral insufficiency in the middle years and finally congestive heart failure in the aged dog.

Once the CCSU was fully in operation it soon became a repository for information about comparative cardiovascular disease. Dr. Detweiler is a voracious reader, and he and his colleagues began immediately to put together a reprint file and other information in an easily retrievable form. For some years a librarian, whose salary was paid by NIH, was on hand to manage the great bulk of material, and answer queries from investigators around the world. The CCSU did become an international information center on comparative cardiovascular disease.

Funding for the CCSU lasted for about seventeen years. Since the end of the umbrella-type funding by NIH, each investigator has developed his/her individual grant proposals; there has been no central funding nor use of common facilities. Actually today the term CCSU is used primarily in a historical sense but it still functions as a source of information.

The impact of this pioneering work and the development of the CCSU on veterinary and comparative cardiology is so great that it is difficult to measure. There is no doubt that the unit became the world leader in comparative cardiology and that the work of the past forty years led to the development of an entirely new specialty in veterinary medicine. In 1942 there were no veterinarians who were board certified in cardiology; today there are over thirty who have this specialty certification in the American College of Veterinary Internal Medicine (subspecialty, cardiology). Research reports from individuals in the CCSU are published in the most prestigious journals on an international basis. The contributions of the CCSU in the area of congenital heart disease are unique in the annals of cardiology; it is safe to say that no other institution in the world has made an equal contribution.

Beyond its impact on veterinary and comparative cardiology the CCSU has played a very important role in the renaissance of the Veterinary School in the past two decades. Through the development of this unit world-wide attention was focused on the Veterinary School as an institution dedicated to forging an outstanding research program. It is reasonable to say that the CCSU attracted not only individuals to cardiology but that it was also responsible for attracting good people to other programs. Internally, it is also acceptable to speculate that the CCSU, through its success, stimulated faculty members to intensify their research efforts.

Dr. Detweiler recruited an exceptional group of individuals to staff the CCSU and many have contributed to its success. Through his great personal efforts Dr. Detweiler has truly earned the accolade, "Father of Veterinary Cardiology".

Since its inception in 1969, the Georgia and Philip Hofmann Research Center has a history of outstanding contributions to our understanding of reproductive function and disease in animals. The Center, located at New Bolton Center, was created through the interest of Mr. and Mrs. Hofmann in providing a facility devoted to research on the reproductive system of animals. Mr. Hofmann, a graduate of the Wharton School in 1930, was chairman of the board and chief executive officer of Johnson and Johnson when the Center was created. In addition to his long interest in the breeding of horses and in fox hunting, he also has an international reputation in coaching. He has served as director of the U.S. Equestrian Team and the American Horse Shows and was the founder of the United States Combined Training Association. He has continued to support and maintain a keen interest in the Hofmann Research Center and serves as a member of the Board of Overseers of the School of Veterinary
Dedication of the Georgia and Philip Hofmann Research Center for Animal Reproduction. Left to right: Dean Mark W. Allan; Dr. Gaylord Harnwell, president, University of Pennsylvania; Mrs. Hofmann; Mr. Hofmann.

Medicine. In 1971 the University of Pennsylvania conferred on Mr. Hofmann the honorary degree, Doctor of Laws.

The present facilities of the Hofmann Research Center include stables and barns for horses and farm animals, a general-purpose laboratory, offices, a breeding shed, and paddocks. Additional laboratory and office space is provided in the Alarik Myrin Memorial Research Building.

Creation of the Hofmann Research Center attracted faculty with advanced training in the area of reproductive function and disease to the Veterinary School. Those people who are part of the Center are members of the section of reproduction and participate in the teaching and clinical service functions of this section. The result has been a decided upgrading in the teaching of courses in reproductive function and disease. Members of the Hofmann Research Center also contribute to the Continuing Education Program, offer consultation service to breeding farms and practitioners, and provide specialized services to the George D. Widener Hospital at New Bolton Center. Since its inception, the Center has offered residencies and programs for doctoral candidates and postdoctoral training.

Dr. Robert M. Kenney has been associated with the Hofmann Center from its inception. He is presently director of the Center, and chief, section of reproductive studies. Dr. Richard McFeely has also been a member of the Hofmann Center since 1969. Others who have played major roles are Drs. Barton L. Gledhill, Venkataseshu Ganjam, Benjamin G. Brackett, Marolo C. Garcia, John P. Hurtgen, Paul Stryzemienski, and Daniel Bousquet.

Research at the Hofmann Center is conducted from a broad base and involves both basic and clinical studies. The Center provided the first comprehensive system for prognosing fertility in stallions and has been a leader in the development of semen extenders for use in artificial insemination in horses. An endometrial biopsy which is the best single test for estimating fertility in the mare, was developed at the Center along with research on factors responsible for imparting uterine resistance to infection. The Hofmann Center has also conducted extensive research on progesterone metabolism in the mare and has investigated the role of estradiol and progesterone in controlling growth and activity of the endometrium.

The endocrine laboratory, currently under the direction of Dr. Marolo C. Garcia, is concerned with the problem of improving assay techniques for reproductive steroid hormones and provides service to the George D. Widener Hospital and to practitioners. The laboratory is investigating the role of pituitary hormone in ovarian and testicular function and has broadened its scope of activity to include an investigation of thyroid and adrenal hormones in exercise tolerance in horses.

Dr. John P. Hurtgen is investigating the role of prostaglandin in the mare including a field study of its use in inducing estrus in mares. Dr. Hurtgen is also studying the role of abnormal acrosomes on the sperm of stallions and is involved in investigating infertility in swine.

The cytogenetics laboratory, under the direction of Dr. Richard A. McFeely is examining chromosome disorders leading to abnormal development of the embryo or various developmental abnormalities that appear in the adult animal.

Dr. Paul Stryzemienski, a postdoctoral trainee, is investigating uterine infections to determine the role of the uterus in the phagocytosis of bacteria which invade this organ. The work is concerned with identi-
fying factors that confer uterine resistance, in some cases, while resulting in infection in others.

A major research effort of the Hofmann Center is the studies of Dr. Benjamin G. Brackett on *in vitro* fertilization. This involves basic work on the mechanisms of sperm capacitation, that is, the ability of sperm to enter eggs. Following much basic work, Dr. Brackett and his group were able to produce the world's first test-tube calf. This animal, a bull calf named "Virgil," was born on June 9, 1981. Dr. Brackett is also involved in work on molecular control of sperm maturation.

Dr. Robert M. Kenney and other members of the staff have conducted studies on the Bowhead whale in order to characterize its reproductive function. Dr. Kenney is also involved in work on wild horses of some western states in cooperation with Eastern Montana State College. This study is directed at developing methods of halting sperm production during the breeding season as a deterrent to the overpopulation of these animals.

Comparative Leukemia Studies Unit

The work on bovine leukemia and the eventual development of the Comparative Leukemia Studies Unit began in the late 1950s with the interest of Dr. Robert R. Marshak on bovine leukemia. The initial work involved field studies in dairy cattle herds in which leukemia (lymphosarcoma) had occurred. Throughout the 1960s some extensive field studies were carried out, a herd of Jersey cattle with a very high incidence of leukemia was purchased and housed at New Bolton Center and a grant was obtained from the National Institutes of Health to construct and equip laboratories, barns and other facilities for a major research effort. The work during this first decade made major contributions to our understanding of bovine leukemia and pointed the way to further studies. However, it was not until the 1970s that there were some major breakthroughs related to the etiology and pathogenesis of this disease and for this reason the entire project will be discussed in the next chapter.

Research at Palo Alto, Mexico

One of the first major research ventures to develop after Dr. Allam became dean was a collaborative project in Mexico. A joint effort of the School of Veterinary Medicine and the Ministry of Agriculture and Husbandry, Mexico, this project was involved in research on anaplasmosis in cattle. It was formulated through the efforts of Dr. Allam and Dr. Geoffrey Rake, recently appointed as research professor of microbiology in veterinary medicine. The work was supported by a three-year grant from the E.R. Squibb and Sons Division of the Mathieson Chemical Corporation. Funds for travel were provided by the Foreign Operations Administration of the U.S. Government. The work was begun in 1954 followed by a three-year extension in 1957.

The research was performed at the Institute of Livestock Research, Palo Alto, about fifteen kilometers from Mexico City. Originally built by the Mexican government, with aid from the United States, to study foot and mouth disease, the Institute consisted of laboratories and barns with good isolation facilities. Since the School of Veterinary Medicine did not have suitable isolation facilities, this location offered the opportunity of engaging in research on infectious diseases. In return, Mexico would gain the expertise of American scientists and an opportunity to send some individuals to this country for postgraduate training. In the initial proposal it was hoped that various faculty members would go to Mexico, in addition to Dean Allam and Dr. Rake, to participate...
in the research. This never materialized, but Dr. Evan L. Stubbs did visit the Palo Alto laboratories and also toured facilities involved in research on poultry.

The work was under the direct supervision of the Executive Committee of the Veterinary School with Dr. Rake acting as chairman of the scientific committee. The director of the Institute at Palo Alto was Dr. Fernando Camargo. In formulating this project it was stipulated that members of the scientific staff would receive appointments on the faculty of the Veterinary School. Accordingly, Dr. Carlos Espana, who was the principle investigator, was appointed as research associate of microbiology in veterinary medicine; in 1958 he was promoted to research assistant professor.

The program was dedicated on November 17, 1954 with Dr. Gaylord P. Harwell, president of the University of Pennsylvania, delivering an address. The official name for that portion of the Institute used for this research was the Squibb-Mathieson Laboratory for Veterinary Research of the Ministry of Agriculture and Husbandry of Mexico and the University of Pennsylvania.

The primary aim of the research was to conduct basic studies on anaplasmosis including cultivation of the etiological agent (*Anaplasma marginale*), concentration and purification of anaplasma, electron microscope studies of anaplasma, the development of serologic methods of diagnosis of the disease, and the development of a more standardized complement fixation test. The work was the source of some problems, primarily involving certain wishes and policies of the Mexican Department of Agriculture, but resulted in some significant new information. One of the major contributions was the development of a very good antigen which markedly improved the complement fixation test. Other important aspects were the discovery that the anaplasma organism did not multiply in the red blood cells, and the development of the refined tissue culture technique.

Dr. Rake died suddenly in 1958 and at that time Dean Allam took over supervision of the research. The work was discontinued in 1960.
Interdisciplinary Cancer Research Unit

With the growing research program in the Veterinary School research space was desperately needed by 1960. At about this time space in a building located at Twenty-fifth and Locust Streets in Philadelphia, became available. This building, known as the Lippincott Building, had been given to the University; the lower floors were being used by the University Printing Service, but the fifth and sixth floors were unused except for storage. A plan was conceived to use this space for interdisciplinary research on cancer, with the Veterinary School being responsible for administration of the work. A grant request was made to the National Institutes of Health. This was successful and a sum of $750,000 was appropriated to renovate and equip 41,000 square feet of space in the Lippincott Building. Dr. I.S. Ravdin who was vice president for Medical Affairs was supportive of the project and was of great assistance in obtaining the grant.

Renovations and equipping of the fifth and sixth floors of the building were completed and on September 25, 1963 the facility was dedicated as the Interdisciplinary Cancer Research Unit (ICRU), with Dean Mark W. Allam designated as director, and Dr. Theodore H. Ingalls, Professor of Preventive Medicine and Epidemiology in the Medical School, as co-principal investigator. The fifth floor provided some excellent laboratory space while the sixth floor was primarily for housing animals.

The concept of an interdisciplinary unit for cancer research was an excellent one. The basic idea involved bringing together about fifteen individual research projects then going on in various disciplines in the University. However, except for the brilliant work of Dr. Ralph Brinster on gene regulation and the genetic basis of development there was little definitive research by the unit. At this time Dr. Brinster's group is still located in the Lippincott Building but it will soon move to the Veterinary School Building. In the early days of the Lippincott facility Dr. John Biggers along with Dr. Ralph Gwatkin carried out some basic work in reproductive physiology in the King Ranch Laboratory for Reproductive Physiology. Some of the laboratory space was also effectively used for hematological studies on bovine leukemia, and for the Monell Chemical Senses Center.

Leptospirosis Research

During the years 1963 through 1966 the Veterinary School was involved in an epidemiological survey of leptospirosis in Nicaragua. This study was carried out in conjunction with the Ministry of Agriculture of the Republic of Nicaragua. The principals from the Veterinary School involved in the research were Drs. Lawrence G. Clark, Victor M. Varela-Diaz, C.R. Sulzer, Robert R. Marshak, and Charles J. Hollister. Dr. Clark spent most of the three years involved in the study in Nicaragua; Dr. Sulzer was from the United States Public Health Service, Communicable Disease Center, Atlanta, Georgia.

In addition to isolating serotypes of leptospira found in various areas of Nicaragua, one of the goals of the work was to determine whether the abundant wildlife population acted as a reservoir for the organism. This did not prove to be the case; cattle were found to be the principal reservoir for those serotypes which are of greater clinical importance to cattle populations.
The James MacMillan Murphy Research Laboratory

This laboratory building, located at New Bolton Center, was named in memory of Dr. James M. Murphy (V'35) who did some outstanding research on bovine mastitis. Dr. Murphy died in 1961 and the laboratory was dedicated on June 1, 1962. The work on mastitis, begun by Dr. Murphy, was continued by Dr. Guy E. Morse up until the late 1970s but the building was also used by Dr. William Donawick for his transplantation research and was later used as a microbiology laboratory, under Dr. Charles E. Benson. The building itself has an interesting history. It was built through funds from the Medical School which planned to use it as an animal care facility. Investigators at the Medical School objected to the problem of traveling to New Bolton Center, and it was never used for its intended purpose. Subsequently, Dr. I.S. Ravdin, vice-president for Medical Affairs in the University, on a visit to New Bolton Center expressed dismay that the building was standing vacant and immediately made arrangements to transfer it to the Veterinary School. Naturally, Dean Allam accepted it with open arms!

Monell Chemical Senses Center

In 1968 the Ambrose Monell Foundation provided funds to establish the nation's first scientific institute devoted exclusively to basic and clinical research on taste and olfaction. The Center was originally established as a division of the University of Pennsylvania. In 1978 it was reorganized as a separate legal entity with a prescribed relationship with the University. Dr. Morely R. Kare is director of the Center and has an appointment as professor of physiology on the Veterinary School faculty. Other members of the center have appointments on various faculties in the University. Until 1971 the Center was located at the Lippincott Building, Twenty-fifth, and Locust Streets, Philadelphia. In 1971 it moved to its present location at 3500 Market Street.

The Monell Chemical Senses Center conducts a broad based program of research involving such studies as chemical communication in marine and terrestrial organisms, biochemical mechanisms of taste and olfaction, significance of human odors, age related changes in taste and odor perception, mechanisms of vertebrate taste reception and the immunogenetics of chemoceptive identification.
Cooperative Poultry Diagnostic Laboratory

While not strictly a research unit, the Poultry Diagnostic Laboratory does conduct research on poultry diseases. This was one of the first units to begin functioning at New Bolton Center, and it was the first laboratory of its kind in the state of Pennsylvania. The Laboratory is supported, in part, by the Pennsylvania Department of Agriculture. It was dedicated in January, 1953. The first director was Dr. E. George Sperling (V'43), and the original laboratory was located in the barn at New Bolton Center. In 1963 the Laboratory moved to the newly constructed buildings in the New Bolton Center hospital complex. Dr. Sperling left in 1966 and the direction of the Laboratory was assumed by Dr. Jen Hwang who remained at the Laboratory until 1976. Dr. Robert J. Eckroade became director in 1977 and under him the facility has become the busiest Poultry Diagnostic Laboratory in the Commonwealth.

The primary function of the Poultry Diagnostic Laboratory is to provide diagnostic service to area poultry owners, cooperatives, and veterinarians. In addition, the Laboratory conducts some research and provides an educational service, teaching veterinary students and sponsoring education programs for the public. Dr. Eckroade and his staff are available to consult on disease outbreaks or management problems. The primary thrust of the service provided by the Laboratory is to prevent disease.

Dr. Robert J. Eckroade
Alarick Myrin Memorial Research Building

This facility, named in honor of its principal donor, Mr. Alarick Myrin, was dedicated in 1972. Mr. Myrin had a vital interest in education and conservation. The building contains research laboratories and the Jean Austin DuPont Library. Also located here is the Moran Surgical Suite, named for Mr. and Mrs. J. Maxwell Moran.

Research space in the building is assigned to investigators on the basis of need. The facility has played a vital part in the research program at New Bolton Center, particularly in the fields of pathology, studies on function and disease of the reproductive system and cytogenetics.

The Dean

Mark Whittier Allam, V.M.D., was the eighth dean of the School of Veterinary Medicine, serving from 1952 to 1973. As a student, he was admitted to the Veterinary School directly from high school and received his degree in 1932. From 1932 until 1945 he conducted a general practice in Media, Pennsylvania. While in practice during the years 1936 to 1938, he participated in the Auditor Course in the Surgical Laboratory of the Graduate School of Medicine of the University of Pennsylvania. From 1943 to 1945 he was a part-time instructor of veterinary surgery. In 1951 he became professor and chairman of the Department of Surgery. Dr. Allam retained the appointment as professor of surgery until 1976 when he retired and became emeritus professor. During the years 1946 to 1952 he was a member of the Harrison Department of Surgical Research in the School of Medicine. From 1963 until 1973 he served as director of the Interdisciplinary Cancer Research Unit and from 1955 until 1971 he was a member of the Board of Managers of the Wistar Institute of Anatomy and Biology.

The events leading to Dr. Allam’s appointment as acting dean in 1952, and 1953 have already been described. After leaving the Dean’s Office in 1973 he served for four years as assistant vice president for Health Affairs in the University.

Dr. Allam was active in a number of professional societies. In 1956 he was vice president of the American Veterinary Medical Association, and from 1963 until 1967 was a member of the Board of Directors of the A.V.M.A. He is a diplomate of the American College of Veterinary Surgeons and served as chairman of the Board of Regents of this association in 1966-1967. In 1948 he was national president of the veterinary medical honor society, Phi Zeta. Dr. Allam served as a member of the advisory board of the Bureau of Medicine, Food and Drug Administration (1964-1969) and fulfilled the same function on the Bureau of Veterinary Medicine from 1968-1970. He is a member of the Pennsylvania Veterinary Medical Association, the Keystone Veterinary Medical Association, the Philadelphia County Medical Society, and the New York Academy of Sciences, and has held membership in a number of other groups including the College of Physicians of Philadelphia, the American Public Health Association, the Pennsylvania Public Health Association, the Sigma Xi Society, the Research Workers of North America, and the American Association of Veterinary Medical Colleges which he served as president in 1966-1967.

Dr. Allam has always had an active interest in the Veterinary Medical Alumni Society and served as its president in 1943. He has been a member of many civic organizations including the Board of Education in Media, Pennsylvania, the Rotary International, the Media Historic Preservation Society, the Pennsylvania Citizens Council, and the Pennsylvania Health Council. He has a keen interest in the Philadelphia Society for Promoting Agriculture and served as its president from 1962 to 1966. Other agricultural associations of which he has been a member are the American Guernsey Breeders Association, the Pennsylvania Poultry Federation, and the Pennsylvania Angus Breeders. He has served as a
member of the Board of Directors of the Philadelphia Zoological Society.

Dr. Allam's contributions to the profession and to veterinary medical education have been recognized in a number of ways. In 1957 he was named Veterinarian of the Year by the American Animal Hospital Association. The Pennsylvania State Veterinary Medical Association honored Dr. Allam on two occasions; in 1964 he was Veterinarian of the Year, and in 1977 received the Distinguished Veterinarian Award. In 1969 he received the American Veterinary Medical Association Award, and in 1971 the Philadelphia Society for Promoting Agriculture awarded him its Bronze Medal. In 1974 he was the recipient of the Alumni Award of Merit of the General Alumni Society of the University of Pennsylvania, and in 1982 he received a citation from the Veterinary Medical Alumni Society. The Quaker City Farmers named him Man of the Year in 1977, and in 1978 he received the Gold Medal Award of the American Safari Club in Philadelphia.

The American College of Veterinary Surgeons has honored Dr. Allam by establishing an annual Mark Allam Lecture which is delivered at the annual meeting of the group. In 1981 an endowed chair known as the Mark Whittier and Lila Griswold Allam Professorship of Surgery was created in the Veterinary School. Most recently Dr. Allam was elected as an Honorary Associate of the Royal College of Veterinary Surgeons. Dr. Allam's induction into this prestigious body took place on June 7, 1983 in London, England.

In his term as dean of the school of Veterinary Medicine Dr. Allam leaves an astonishing legacy. Actually, his ledger of accomplishments begins prior to his deanship; when he was appointed to a full-time faculty position in 1945, Dr. Allam introduced aseptic surgery in the Veterinary Hospital. This was the first step in a series of changes that would bring the surgery department into the world of modern surgery.

Many of the great advancements in the Veterinary School during the period 1952 to 1973 have already been described. From this record it is obvious that Mark Allam is a man of action, and an individual who can motivate others to give their very best. He has great pride in his profession and in his Alma Mater and he carried the message of the School's aims, aspirations, and accomplishments to the far corners of this country and to the world.

In reviewing Dr. Allam's years as dean there are many personal attributes which one can look to as being vital to his accomplishments, but the following stand out. He was noted as a fund-raiser for the School, especially in the private sector. Like most engaged in this work, his success depended in large part on the development of friendships. What is unique about Mark Allam is that these friendships have endured and ripened over the years, largely because of his efforts to keep them green.

A second outstanding trait of Dr. Allam was his delegation of responsibility to younger faculty members. He sought and benefited from the counsel of senior faculty, but from the very outset he delegated important roles to younger faculty who he recognized as the leaders of the future. This practice reaped huge dividends.

Dr. Allam was a man who was not afraid to make some mistakes in his drive to bring the School to a level of excellence among all of the veterinary schools of the world. He candidly recognized that an occasional mistake was the price to be paid for progress.

Dr. Allam was a firm but considerate administrator. When he issued a directive there was little question about his meaning, and in most instances he was able to motivate individuals to respond.

When Dr. Allam became dean, the Veterinary School was badly in need of a strong leader who would, through his own example, inspire others to a feeling of confidence, enthusiasm, and desire. He supplied these ingredients, and the School is in great debt to him.

Since his retirement Dr. Allam has continued to serve the Veterinary School in a tireless fashion; his counsel and his assistance in a variety of matters are often sought, and he never fails to respond in his characteristic enthusiastic manner.

It is a mark of the man that Dr. Allam credits his wife, Lila, as being a major influence in his successes. Lila Allam has played an important role in innumerable social and professional events that have contributed greatly to the growth of the School.
At the time Dr. Mark W. Allam became acting dean, in 1952, there were forty-one individuals with professorial rank on the faculty, including three emeritus professors and one visiting professor. The number of individuals holding professorial rank remained essentially unchanged until 1960 when it reached fifty. Following this there was an increase each year so that by 1973 there were 127 members in the professorial ranks. Beginning in 1953 some individuals were appointed as research professors; these were primarily part-time appointments and recognized the individual’s achievements in certain fields of research, but these faculty also contributed importantly to the teaching program. There was also a gradual increase in the number of visiting professors who gave short series of lectures in their particular specialty. Later the term “visiting” was largely replaced by the designation “adjunct”. These part-time faculty made major contributions to educational, research, and service functions of the School without adding substantially to expenditures for faculty salaries. By 1973 there were eighteen individuals with adjunct or visiting appointments at the professorial level or as associates.

While the growth of the faculty in numbers and in depth of training was essential to the renaissance of the School, an equally important contribution was the fact that the faculty during these years worked as a cohesive group with certain goals always in mind. In his 1964 report to the Veterinary Medical Alumni Society Dean Allam stated that the great progress which the School was making was mainly due to a unification of purpose demonstrated by a relatively small number of young, energetic faculty members.

Beginning in 1961 with the appointment of Dr. Wilfried Weber, there was a gradual increase in research fellows. These individuals were supported individually by grants from such agencies as the American Cancer Society, The Pennsylvania Plan, the V.M.D.—Ph.D. program, the United States Public Health Service, and the National Science Foundation, or from departmental funds arising from grants from various sources. By 1973 there were forty-six research fellow appointments on the faculty. Many of these individuals remained on the faculty and achieved major appointments.

In 1969 Dr. Charles W. Baker was appointed to the first endowed chair in the Veterinary School when he became the Lawrence Baker Sheppard Professor of Surgery. In 1969 Dr. David Kritchevsky became Wistar Professor of Biochemistry, and in 1971 Dr. Robert E. Davies received the prestigious appointment as Benjamin Franklin Professor of Molecular Biology.

A major trend during this period was the recruitment of faculty from other institutions. By 1973, eighty-seven faculty members with professorial rank came from schools other than the Veterinary School. The inbreeding policy, so apparent in earlier years, had been broken.

J. Deaver Alexander, M.D., a member of the Medical School faculty, was appointed to the Veterinary School faculty in 1958 as associate in veterinary medicine. In 1960 his title was changed to associate in comparative medicine and he served in this capacity until 1971. Dr. Alexander taught courses in medicine and became a great friend of the Veterinary School. His advice and counsel were often sought and he was a strong voice in the development of comparative medicine in the Veterinary School. Although he is no longer on the faculty he remains close to the School.

Arthur V. Bartenslager, V.M.D., a graduate in the class of 1937, joined the faculty in 1948 in a part-time position as assistant professor of veterinary surgery and obstetrics. In 1963 he became associate professor of animal reproduction. Dr. Bartenslager, who conducted a practice in which he specialized in fertility and obstetrical problems in cattle, brought the wisdom of some years of practical experience to the teaching of reproductive medicine and obstetrics. He was a good teacher and served the School faithfully until he left the faculty in 1982.

John D. Beck, V.M.D., graduated from the Veterinary School in 1930, and was appointed instructor in medicine in the same
year. He was a protégé of Dr. C.J. Marshall, professor of medicine, and upon Dr. Marshall's death in 1938, Dr. Beck assumed the professorship. In the summer of 1931 Dr. Beck went to Europe and studied at the Veterinary School at Hannover, Germany, and in 1934 he was granted a one-year leave of absence for study and travel in Europe. Dr. Beck served as professor of medicine from 1939 to 1957. His primary interest was in farm animals and in addition to his work in the clinic he directed field service activities. Dr. Beck was not strongly oriented to research and during his years as professor of medicine there was little investigative work in farm animal medicine. It is true that for most of his years as professor of medicine the department was seriously understaffed and was hard pressed simply to provide clinical and teaching functions. Dr. Beck had a burning interest in psychological problems and made a close study of people. He often drew some interesting connections between psychological problems of animal owners and various diseases in their animals. Dr. Beck is of a whimsical nature and has a sly sense of humor. During his twenty-seven years on the faculty he earned the love of many students and colleagues. In 1957 Dr. Beck resigned to become director of the margaret m. caspary center for veterinary research and chief of the ellin prince speyer hospital for animals in New York City. He now lives in retirement near frederick, Maryland.

John d. bigger, B.Sc., Ph.D., F.R.C.V.S., F.R.S.S., was appointed king ranch research professor of reproductive physiology in 1963 and served in this appointment until 1967. Dr. Bigger's primary area of research was the study of growth and early development of the mammalian embryo.

Harry N. Blummer, V.M.D., joined the faculty in 1945 as assistant instructor in physiology. In 1948 he became instructor in physiology and pharmacology and served in this capacity until 1953. This was a period in which the department of physiology and pharmacology was undergoing considerable change and Dr. Blummer aided greatly in laboratory instruction.

William B. Boucher, V.M.D., graduated from the School of Veterinary Medicine in 1940 and immediately joined the faculty as assistant instructor in veterinary medicine. He remained on the faculty continuously until his retirement in December 1981. Dr. Boucher was professor of medicine at the time of his retirement, having achieved this appointment in 1967. He is nowemeritus professor of medicine and continues to reside at New Bolton Center where he spent the last thirty years of his career. Dr. Boucher's work was devoted almost entirely to teaching medicine and to clinical service in the large animal hospital and field service. He served as chief of medical service, New Bolton Center, from 1967 until 1979. Above all else, Dr. Boucher was an outstanding teacher who earned great respect and love from his students. Beginning in 1940 and continuing until 1968, he was in charge of field services and provided many memorable moments for students on clinical calls to farms. He was especially astute in physical examination and diagnostic procedures. Dr. Boucher's teaching abilities were recognized in 1968 when he received the norden teaching award and in 1981 when he was the recipient of the prestigious christian and mary linback award for distinguished...
Teaching from the University of Pennsylvania. In 1979 the Pennsylvania Veterinary Medical Association selected him as Distinguished Veterinarian. Over and above his contributions as a teacher/clinician, Dr. Boucher, his wife, Doris, and their children are best remembered by hundreds of students for their hospitality. The Boucher home was always open to students, interns, and residents especially on holidays provided a “home away from home”.

Robert S. Brodey, D.V.M., M.Med.Sc., was born in Toronto, Canada and received his veterinary degree from the Ontario Veterinary College in 1951. He joined the faculty of the Veterinary School in the same year as assistant instructor in veterinary surgery. Dr. Brodey attended the Graduate School of Medicine and was awarded the M.Med.Sc. degree in 1957. In 1959 he was advanced to assistant professor and in January of 1963 left to go to the School of Veterinary Medicine, University of California at Davis, where he was appointed associate professor of veterinary surgery. It was not long before Dr. Brodey, in his correspondence, was expressing a strong desire to return to Penn. He did so in September 1963, and was appointed associate professor. In 1968, Dr. Brodey became professor and head of the Tumor Clinic.

Dr. Brodey established an international reputation in the field of clinical oncology in the dog and cat and also did some outstanding work on the etiology and epidemiology of feline leukemia and on the pathogenesis of pulmonary osteoarthropathy in the dog. He was in great demand as a speaker at short courses, symposia, and scientific meetings in the United States and foreign countries. Dr. Brodey authored approximately 110 scientific papers and wrote chapters in seven textbooks. He was a member of the American College of Veterinary Surgeons.

Dr. Brodey was killed in an automobile accident in Canada in 1979. The esteem with which he was held as a member of the faculty, and as a person is best described in eulogies delivered at a memorial service in September, 1979. Dean Robert R. Marshak reflected that he “often thought of Bob Brodey as the faculty’s conscience — our still small voice within”. Dr. Marshak stated that this perception was based on “Bob’s remarkable probity and moral soundness and on his impassioned commitment to social justice, to environmental concerns, and to the struggle to understand and control cancer.” Dr. Marshak referred to Dr. Brodey’s “wonderful, earthy sense of humor” and pointed out that he had a “remarkable passion for nature.” Dr. W. Harker Rhodes, a student and later a faculty colleague, recalled that in his first exposure to Dr. Brodey he recognized him as “something different...he conveyed an uncommon sense of enthusiasm, an aura of commitment, and an impatience with indifference”. Dr. Rhodes pointed out that Dr. Brodey seemed “blessed with boundless energy and enthusiasm, for his causes,” and that he “voiced strong concern for the hazards to plant and animal life long before they became popular issues”.

In August 1980, a 260-acre tract of land was dedicated to Dr. Brodey as a nature preserve; this is in Denbigh, Ontario, Canada.

Colin Burrows, B.V.Med., M.R.C.V.S., was appointed assistant instructor in surgery in 1971. From 1976 until 1978 Dr. Burrows was a Pennsylvania Plan Scholar in gastroenterology. In 1979 he was appointed assistant professor of medicine. He left the faculty in 1980.

Dennis F. Cain, B.S., M.S., Ph.D., joined the faculty in 1961 as associate in biochemistry. He became assistant professor of biochemistry in 1965 and served in this capacity until 1969. From 1967 until 1969 Dr. Cain was head of the laboratory of biochemistry. His research was in the field of the biochemistry of muscle contraction.

Edwin A. Churchill, V.M.D., graduated from the Veterinary School in 1941, and in 1946 was appointed assistant professor of veterinary surgery and obstetrics. At this time he assisted Dr. William J. Lee in the
large animal clinic and was in charge of radiology. In 1948 when Dr. Lee retired, Dr. Churchill was promoted to associate professor and assumed responsibility for the Large Animal Clinic, including radiology. Dr. Churchill left in 1959 to enter practice. His primary interest while at the School was clinical work with horses. He was an excellent teacher, and contributed significantly to the revitalization of the surgery department.

Lawrence G. Clark, B.S., D.V.M., was appointed instructor in veterinary medicine in 1961. In 1963 he became research assistant professor in veterinary medicine. Dr. Clark served in this appointment until 1967 and was primarily involved in the research on leptospirosis in Nicaragua.

David L. Coffin, V.M.D., received his veterinary degree in 1938, and joined the faculty in 1941 as assistant instructor in veterinary pathology. In 1946 he became assistant professor, and left in 1947. During these years Dr. Coffin worked primarily in the clinical diagnostic laboratory and was concerned with the development of improved diagnostic tests. He returned to the faculty in 1957 and served until 1961 as research associate professor in pathology.

Daniel Cohen, B.S., D.V.M., M.P.H., was appointed as research assistant professor of veterinary public health in 1961 and became head of the newly created section on veterinary health and preventative medicine with headquarters at New Bolton Center. In 1965 he became associate professor and in 1969 professor and chief of the Section now known as Epidemiology and Public Health. Dr. Cohen received his veterinary degree from the University of Illinois in 1955, and his masters degree from the University of Pittsburgh in 1960. While at the Veterinary School he held a joint appointment as professor of epidemiology in the Graduate School of Medicine. Dr. Cohen was a good teacher and is responsible for the early development of the Section on Epidemiology and Public Health in the Veterinary School. After leaving the School in 1971, he served for two years as a member of the Secretariat of the World Health Organization, Geneva, Switzerland, and is presently professor of Comparative Medicine, School of Medicine, Ben Gurion University of the Negev, Beer-Sheva, Israel.

Dale R. Coman, A.B., M.D., C.M., a member of the Medical School faculty, served on the Veterinary School faculty from 1948 until 1967 and made an important contribution to the teaching program. In 1948 Dr. Coman was appointed as associate professor of pathology and in 1951 he became professor of experimental pathology. He served in this position until 1965 when his appointment was changed to professor of pathology.

David W. Crisman, V.M.D., a graduate of the Class of 1937, joined the faculty in 1938 as assistant instructor in veterinary hygiene and rendered thirty years of valuable service to the School. In all of these years Dr. Crisman was part-time, having a major affiliation with Dalare Associates. In 1951 he became assistant professor in veterinary hygiene and served in this appointment until he retired in 1968. Dr. Crisman taught in the course in bacteriology, immunology, and milk hygiene. He began working at night for Dalare Associates (then known as the Dairy Laboratory) when he was still a student in the Veterinary School. In college at Penn, where he studied chemistry, he had been a member of the varsity wrestling team. Dr. Crisman, affectionately known as “Little Dave,” gives the impression of always being in a hurry and possesses a wry sense of humor.

J. Ellis Crowshaw, Jr., B.Sc., D.V.M., was appointed as instructor in veterinary anatomy in 1955. In 1958 he became associate, and contributed importantly in assisting Dr. Donald G. Lee and his small staff in teaching anatomy. Dr. Crowshaw left in 1966.

Lawrence S. Cushing, V.M.D., graduated from the Veterinary School in 1957, and joined the faculty in 1958 as instructor in veterinary medicine. In 1961 he became associate. He left in 1965 and returned to the faculty in 1975 as associate professor of surgery. In 1979 he assumed part-time duties with the appointment of adjunct associate professor of surgery. Dr. Cushing,
whose main interest was equine surgery, left the faculty in 1982.

David K. Detweiler, recognized as a world leader in comparative cardiology, received his V.M.D. degree from the University of Pennsylvania in 1942. He immediately joined the faculty as an assistant instructor in physiology and pharmacology, assisting Dr. Roger Amadon who was desperately in need of help. When Dr. Amadon suddenly resigned in 1944, Dr. Detweiler acted as head of physiology and pharmacology until 1947, when Dr. F. Harold McCutcheon arrived. During these early years in his career Dr. Detweiler carried an extremely heavy teaching load but nevertheless found time to begin to collect a series of electrocardiograms from dogs in the clinic. This was the beginning of work which would develop into a life long career in cardiology. With the retirement of Dr. Louis A. Klein in 1948, Dr. Detweiler took on the additional task of teaching pharmacotherapeutics along with Dr. John E. Martin.

In 1955-1956 Dr. Detweiler was a Guggenheim Fellow at the Veterinary-Physiologisches Institut, Universität, Zurich. In 1962 he became professor of physiology, with a joint appointment in the Graduate School of Arts and Sciences. From 1962 to 1968 he served as head of the Laboratory of Physiology and Pharmacology in the Veterinary School. From 1964 to 1970 Dr. Detweiler was professor of physiology in the Division of Graduate Medicine, University of Pennsylvania, and in 1970 he became head of the Graduate Group in Comparative Medical Science.

On three occasions Dr. Detweiler was guest lecturer in European schools, in 1963 at the Institut Für Tierpathologie, Universität München, in 1968 at the Freie Universität, Berlin, and in 1973 at the Tierärztliche Hochschule, Hannover, Germany.

In addition to his teaching activities in physiology, pharmacology, and therapeutics, Dr. Detweiler has presented numerous lectures, practicums, and short courses, taught graduate students, and has been responsible for a very active postdoctoral program in the Comparative Cardiovascular Studies Unit (CCSU).

Dr. Detweiler was one of the first of the "new breed" of faculty who appeared in the late 1940s and the 1950s and who, despite heavy teaching loads, made the necessary sacrifices to develop major areas of research. In his early career he often worked under "make-shift" conditions and with little financial support. In the 1950s he was able to obtain some small grants from the National Institutes of Health (NIH) for epidemiological studies on heart disease in dogs. In 1960 he was awarded a one-million dollar grant from NIH for a ten-year period to establish and support the CCSU. At the time this was the largest grant ever awarded to an individual at the Veterinary School. (The function of the CCSU is described elsewhere in this chapter). The creation of the CCSU established this School as the world center for comparative cardiovascular research, a position which it still holds today. The CCSU has provided training to numerous individuals in the field of comparative cardiovascular medicine.

Dr. Detweiler has participated in over eighty invited lectures, symposia, and conferences. He has contributed chapters or sections in over twenty-five textbooks, and has published over 140 original papers. He has served on many major committees in the Veterinary School and on over twelve national and international committees.

Dr. Detweiler's contributions have been recognized in many ways. As a student he was elected to Phi Zeta, the honorary veterinary fraternity. In 1960 he received the Gaines Award and Medal from the AVMA, and in 1966 was awarded the honorary degree of doctor of science by Ohio State University. In 1968 and 1969 he received the honorary degree of Dr. Med. Vet. from the Tierärztliche Hochschule, Wien, and from the Veterinary School, University of Turin respectively. In 1974 he was elected to membership in the Institute of Medicine, National Academy of Sciences, Washington, D.C. In 1982 the German speaking Group of the World Small Animal Veterinary Association established the "D.K. Detweiler Price". This will be awarded annually for outstanding scientific work in cardiovascular research, especially as applied to small animals.

Dr. Detweiler's contributions to the Veterinary School go far beyond his specific teaching and research activities. His early work came at a time when the
Veterinary School had a great need to establish a research reputation; his work also helped draw other outstanding individuals to the School and to stimulate his own colleagues to engage in research. The reputation of the School was greatly enhanced within the University, and in the veterinary and medical professions on a worldwide basis.

Dr. Detweiler has always been a very hard worker, sometimes sacrificing his personal health. He is a meticulous individual with an unusual degree of persistence, and at the same time he has the broad vision that enabled him to conceive the CCSU. In a very real sense he has devoted his life to his Alma Mater.

Thomas DeMott, V.M.D., earned his veterinary degree in 1943, and joined the faculty as instructor in veterinary medicine in 1945. From this time until 1951 he assisted in the large animal clinic, primarily in work with farm animals, and in the Field Service Unit. In 1951 he became assistant professor of animal industry and assumed responsibility for teaching courses in this area, including breeds of livestock and market types and classes, stock judging, and feeds and feeding. Dr. DeMott is a quiet, thorough individual and he was a good teacher. In addition to his dedication to teaching he had a deep interest in farming methods. In 1956 he became associate professor and remained on the faculty until 1965 when the courses in animal industry were phased out of the curriculum.

M. Josephine Deubler, V.M.D., M.S., Ph.D., known affectionately to her colleagues and friends as “Jo”, has contributed over forty-two years of faithful, unselfish service to the Veterinary School. She has performed an innumerable variety of tasks and acts as the ambassador of the School to the “dog world”. Dr. Deubler comes from a family of veterinarians including her father, Ernest C. Deubler (V’11), brother, James A. Deubler (V’43), uncle, Ezra S. Deubler (V’05) and two cousins, Leonard P. Deubler (V’38) and James. “Jo” received her V.M.D. degree in 1938, being the first woman to graduate from the Veterinary School. She was also the first woman veterinarian to earn graduate degrees in the University, receiving an M.S. degree in 1941, and a Ph.D. degree in 1944. Her doctorate thesis was on periodic ophthalmia in horses. Dr. Deubler was appointed to the faculty as an assistant in pathology in 1941 and became assistant professor of pathology in 1955, a position which she still holds. During the years 1946 to 1952 she worked with Dean Raymond A. Kelser in bacteriology, including research on feline panleukopenia and bovine keratitis. She was in charge of the clinical pathology laboratory from 1959 to 1959. Dr. Deubler has over fifteen publications to her credit. “Jo” has always been very active in the Veterinary Medical Alumni Society, serving as historian since 1949. She is involved in a number of dog clubs and is a nationally known dog show judge. Dr. Deubler has written columns for a number of publications on dogs, and writes a regular column for the Veterinary School’s newsmagazine, Bellwether. She now organizes some highly successful symposia for dog and cat owners. Dr. Deubler is a very unselfish person who frequently takes on responsibilities that others shun.

David C. Dodd, B.V.Sc., was born in Sydney, Australia, and earned his veterinary degree at the University of Sydney in 1946. After graduation he worked in the Department of Pathology and Toxicology at the Wallaceville and Ruakura Animal Research Centers, Department of Agriculture, New Zealand, and then as pathologist in the Pitman-Moore Division of the Dow Chemical Company in the United States. He joined the faculty of the Veterinary School in 1965 as assistant professor of pathology, and in 1970 became professor. Dr. Dodd worked at New Bolton Center where he spent much time as part of the research team studying bovine leukemia. He also served as pathologist to the heart transplantation research directed by Dr. William Donawick and a study on the effect of shock on the lungs of dogs, under Dr. Lawrence Soma. From 1965 until he left the faculty in 1975 Dr. Dodd was head of the Large Animal Pathology Section. He is a diplomate of the American College of Veterinary Pathology and served as editor of “Veterinary Pathology”. Dr. Dodd was a good teacher, exacting in his work, who contributed significantly to the research in which he was involved.
Raymond M. Dutcher, B.S., M.S., Ph.D., was appointed as research assistant professor of virology assigned to medicine in 1961, and in 1965 became associate professor of microbiology. In 1967 his appointment became research associate professor of microbiology and chief, Section of Viral Oncology. Dr. Dutcher worked at New Bolton Center where he was in charge of the basic research on bovine leukemia; his work focused on attempting to elucidate a viral ethiological agent for bovine leukemia. He left the faculty in 1969.

H. Lincoln Easterbrooks, D.V.M., M.S., was appointed associate professor of veterinary medicine in 1957 and served until 1960. Dr. Easterbrooks spent these years at New Bolton Center where he was primarily involved in providing clinical service for farm animals.

Carlos Espana, Ph.D., a native of Mexico, was appointed as research associate of microbiology in veterinary medicine in 1955 and became research assistant professor in 1958. He remained on the faculty until 1965. His appointment was a part of a cooperative agreement between the Veterinary School, the Squibb Division of Olin Mathieson Chemical Corporation, and the Mexican government to conduct a research program in Palo Alto, Mexico. During most of his years on the faculty Dr. Espana worked at Palo Alto on anaplasmosis research.

Ethel Espana, B.A., M.S., was appointed as research assistant instructor in microbiology in 1961 and served in this appointment until 1965. During this time Mrs. Espana was associated with the research project on anaplasmosis at Palo Alto, Mexico.

Raymond Fagan, B.A., D.V.M., M.P.H., was appointed associate professor of preventive medicine and hygiene in 1954 and left in 1957. During these years he headed the newly created Department of Preventative Medicine and Hygiene, headquarterd at New Bolton Center.

Harry C. Fegley, V.M.D., received his veterinary degree in 1954, and was appointed as associate in veterinary pathology in 1961, and served in this capacity until 1967.

Frank G. Fielder, B.V.Sc., D.V.M., joined the faculty in 1953 as assistant professor of veterinary surgery and held this position until he left in 1956. Dr. Fielder’s main duties were in radiology, in the Small Animal Hospital.

Karl L. Gabriel, A.B., V.M.D., joined the faculty in 1961 as research instructor in pharmacology; he is a graduate in the class of 1956. In 1963 Dr. Gabriel became assistant professor of pharmacology and assumed most of the teaching load in pharmacotherapeutics. He left in 1965. During his years on the faculty he conducted research on the pharmacology and use of some newer drugs.

Venkatesh K. Ganjam, B.V.Sc., M.S., Ph.D., was appointed assistant professor of animal reproduction in 1971 and served in this position until 1979. Dr. Ganjam, whose field of research is endocrinology, worked in the Georgia and Philip Hofmann Research Center for Animal Reproduction at New Bolton Center.

Eileen S. Gersh, B.A., Ph.D., was appointed research associate in anatomy in 1965. In 1969 Dr. Gersh became research assistant professor of anatomy and remained in this position until 1976. Dr. Gersh conducted research on the relation of genetic material to chromosome structure.

Isidore Gersh, B.S., Ph.D., was appointed research professor in anatomy in 1963 and served in this appointment until 1977. Dr. Gersh’s primary research interest was in the formation and secretion of collagen in connective tissue cells. In 1965 he became emeritus professor.

Barton L. Gledhill, B.S., V.M.D., F.R.C.V.S., Ph.D., a graduate of the class of 1961, went immediately to the Royal Veterinary College, Stockholm, Sweden, where he studied and conducted research until 1966. While at this institution Dr. Gledhill earned his Ph.D. degree. In 1967 he returned to the Veterinary School with
an appointment as assistant professor of clinical reproduction. In 1971 Dr. Gledhill was promoted to associate professor. His general research interest was in sperm maturation; specifically he investigated sperm structure and was involved in measuring sperm DNA. Dr. Gledhill left in 1973.

George L. Graham, A.B., M.S., Sc.D., joined the faculty in 1948 as assistant professor of parasitology and was promoted to associate professor in 1949. Until 1976 when he retired, Dr. Graham took the major responsibility for teaching parasitology along with Dr. Harry M. Martin.

John H. Graves, D.V.M., was appointed instructor in veterinary anatomy in 1950 and served in this capacity until 1955. Although he stayed only a few years he made important contributions to teaching in the severely understaffed anatomy department. Dr. Graves returned to the faculty in 1977 as adjunct professor of microbiology, a position which he presently holds.

Ralph B. Gwatkin, B.S., M.A., Ph.D., was appointed research associate in reproductive physiology in 1963. In 1965 he became assistant professor of reproductive physiology and served in this appointment until 1967. Dr. Gwatkin worked in the King Ranch Laboratory of Reproductive Physiology.


William C.D. Hare, B.Sc., Ph.D., D.V.M.S., M.R.C.V.S., was born in Edinburgh, Scotland, and received his veterinary degree from the Royal Dick School of Veterinary Studies of the University of Edinburgh in 1950. He earned his Ph.D. degree (anatomy) from the same institution in 1953 and his D.V.M.S. degree in anatomy, in 1960. Dr. Hare spent the years 1950 to 1955 as demonstrator and then lecturer in anatomy at the Royal Dick School of Veterinary Studies; from 1955 to 1958 he was associate professor of anatomy at the Ontario Veterinary College, Guelph, Canada. He joined the faculty of the Veterinary School in 1958 as associate professor of anatomy and in 1964 received a joint appointment as professor of anatomy in the Veterinary School and the Faculty of Arts and Sciences. From 1965 until 1975, when he left the faculty, he served as head of the laboratory of anatomy. Dr. Hare added great strength to the teaching of anatomy and contributed significantly to the research program on bovine leukemias in which his special interests were cytogenetics and cytology. Dr. Hare brought a great measure of careful planning and cautious decision-making to the many committees on which he served in the Veterinary School and the University. When he left the School in 1975 he had published nearly forty papers.

Mr. Thomas N. Haviland came to the Veterinary School in 1956 as instructor in anatomy and director of the Veterinary School Museum. In 1961 he became associate in anatomy and in 1973 associate professor. Mr. Haviland retired in 1976 and became emeritus associate professor of anatomy. He is a jovial individual, well liked by students and his faculty colleagues. Mr. Haviland was an expert in the preparation of anatomical specimens which aided greatly in teaching, and from 1960 until he retired he taught a course in veterinary history. Mr. Haviland also assembled a collection of various historical materials which were intended to be used in a permanent museum at the Veterinary School. Unfortunately a formal museum was never established and much of the collected material was lost.

Richard Hoey, B.S., V.M.D., graduated from the Veterinary School in 1959, and joined the faculty as assistant instructor in veterinary medicine in 1960. He was the first recipient of the Seeing Eye-Dorothy Harrison Eustis Fellowship in Dermatology. In 1961 Dr. Hoey became instructor; he left in 1963.
Charles J. Hollister, D.V.M., received his veterinary degree in 1938 from the Ontario Veterinary College, and from that time until 1954 was in general practice in Montrose, Pennsylvania. In 1954 he joined the faculty of the Veterinary School as assistant professor of veterinary medicine and director of New Bolton Center Clinics. In 1957 he became associate professor, and from the 1956 to 1958 Dr. Hollister was director of New Bolton Center. In 1959 he became business administrator at New Bolton Center and served in this capacity until his retirement in 1977. Dr. Hollister was intimately involved with the evolution of the Center from its infancy. He served for twenty years (1952-1972) on the Pennsylvania State Board of Veterinary Medical Examiners of which he was president in 1963, and he was president of the Pennsylvania Veterinary Medical Association in 1954. Dr. Hollister is an affable person who is vitally interested in community affairs. He is the author or co-author of over fifteen papers concerned primarily with clinical problems in farm animals.

T. Richard Houpt, V.M.D., M.S., Ph.D., joined the faculty in 1953 as instructor in physiology and pharmacology. In 1963 he became associate professor of physiology and remained on the faculty until 1971 when he left. Dr. Houpt was an excellent researcher and carried a major load of teaching in physiology. His research centered on basic studies of nitrogen conservation cycles dependent upon alimentary canal microorganisms in ruminants and other herbivores.

Klaus Hubben, V.M.D., M.S., who graduated from the Veterinary School in 1953, was appointed instructor in veterinary pathology in 1957. In 1960 Dr. Hubben’s appointment was changed to research instructor, and in 1961 he became assistant professor of veterinary pathology. He served in this appointment until 1969 when he left the faculty. Dr. Hubben worked for a time in the Comparative Cardiovascular Studies Unit, and then went to New Bolton Center in 1961. At New Bolton Center he was responsible for autopsy service and diagnostic pathology. He also worked in mastitis research and on studies with Strain 13 virus in poultry.

Richard A. Huebner, V.M.D., a graduate of the class of 1935, was appointed visiting associate in veterinary medicine in 1957 and served in this capacity until 1963. Dr. Huebner gave some lectures in medicine and acted as a liaison between the School and pharmaceutical industry.

Jon Hwang, D.V.M., M.S., Ph.D., was appointed associate professor of pathology and head, Poultry Diagnostic Laboratory in 1969. Dr. Hwang, whose laboratory was located at New Bolton Center, served in this position until 1976.

George Jaggar held a part-time appointment as instructor in milk hygiene from 1944 to 1959. Mr. Jaggard gave occasional lectures and assisted in laboratory instruction. He had a major interest in Dalare Associates, a laboratory in Philadelphia.

Jacques Jenny, Dr. Med.Vet., was born in Emmenda, Switzerland in 1917. In 1942 he graduated with a federal diploma in veterinary medicine from the Veterinary Faculty, University of Zurich, Switzerland. Dr. Jenny earned his doctorate degree (Dr. Med.Vet.) from the same institution in 1945. His graduate thesis was on “Comparative Pathological Anatomy of Primary Lung Carcinoma”. From 1942 to 1944 Dr. Jenny served as an assistant in anatomy in the University of Zurich Hospital, and from 1944 to 1945 he was an assistant in surgery in the Veterinary School at Alfort, France, where he studied under Professor Marcenac, at that time one of the foremost veterinary surgeons in Europe. In 1948 he came to the United States and spent six months at the Angell Memorial Hospital, Boston, Massachusetts. At that time Dr. Gerry B. Schnelle (V’26) was director at the hospital and he recommended Jacques Jenny to Dean Raymond A. Keeler of the Veterinary School. In June of 1948 he was appointed as instructor in surgery and in 1960 he became professor of orthopedic surgery. Dr. Mark W. Allam, who was professor of surgery in 1948 recalls that within fifteen minutes after Dr. Jenny first arrived at the surgery theatre he was busy in repairing a femoral fracture with an intramedullary pin. Soon after arriving he began research work at the Hospital of the
University of Pennsylvania with human surgeons working on bone grafting and hip dysplasia. He continued research on hip disorders and spent some time studying the plastic repair of hoof defects and founder in the horse before undertaking the studies which made him famous, his work on the fixation of long-bone fractures in horses. Actually, this did not commence until after 1960 but prior to that time he had performed some successful surgery on repair of smaller bones which veterinary surgeons, at that time, believed could not be done. One such case involved the famous racehorse, Swaps, which had a comminuted fracture of the left metacarpus. Dr. Jenny was a true pioneer in the field of orthopedic surgery on horses; prior to his work, surgery on the leg bones of horses was considered to be an impossibility, but by the 1960s many horses with leg fractures were being saved through his efforts. One of his great contributions was his ability to adapt the use of pins and other devices, available for humans, to horses. Another approach introduced into veterinary orthopedic surgery by Dr. Jenny was the total approach to the repair of fractures. He had an outstanding knowledge of surgical anatomy and he fully appreciated all of the pathology present at the fracture site, including soft tissue damage, muscle tension, and so on. Up until his time veterinary surgeons tended to view fractures as only two pieces of broken bone more or less connected to the animal.

Dr. Jenny's affinity for the horse went far beyond his patients; as a young man he had been a member of the Swiss Cavalry, and later he was an avid participant in fox hunting and rode in steeplechases. He and his wife, Elinor, also a veterinarian (V'49), bred horses and ponies on their farm. Dr. Jenny was in great demand as a speaker at professional meetings across the country and published over sixty scientific papers. He initiated postgraduate short courses in bone and joint surgery at the Veterinary School and was guest professor at the Mayo Clinic, Rochester, Minnesota. He established a close relationship with those in the orthopedic community of the University of Pennsylvania and at other institutions.

It was Dr. Jenny's reputation as an equine orthopedic surgeon and his vision which led to the creation of the C. Mahlon Kline Orthopedic and Rehabilitation Center at New Bolton Center. Dr. Jenny was a charter member and first president of the American College of Veterinary Surgeons. In 1963 he was honored by the American Animal Hospital Association as "Veterinarian of the Year". Dr. Jenny was an ebullient individual who always gave the impression of being in a hurry. He moved with quick strides and his eyes reflected a person of action and intensity. He was a voracious reader, an enthusiastic teacher, and an inspiring surgeon.

Dr. Jenny died on November 20, 1971. When it was realized that he had a terminal illness, plans were already underway for the development of the Kline Center but total funding was not in hand so that construction could begin. However, the University agreed to advance the date for groundbreaking ceremonies so that Dr. Jenny could attend. During the summer prior to his death, about 500 people gathered at a dinner to honor him. This was arranged by a Committee for the Friends of Jacques Jenny and was chaired by Mr. Philip B. Hofmann.

James H. Jones, Ph.D., was a devoted member of the Veterinary School faculty for forty-three years. He received his Ph.D. degree from the University of Wisconsin in 1924 and in that same year became instructor in biochemistry in the Medical School, University of Pennsylvania. As a member of the Medical School faculty he taught veterinary students from 1924 to 1947, when he became professor of biochemistry and head of the newly created department of biochemistry in the Veterinary School. When he first came to the University funds were scarce and it was not unusual for Dr. Jones to clean his own laboratory and feed his experimental animals. He was a dedicated teacher and in 1966 received the Norden Distinguished Teacher Award. Dr. Jones was an expert on proteins, nucleic acids, and vitamins, and one of his outstanding contributions was his ability to always keep abreast of new developments in his field of research. Dr. Jones was a gentle man, very reliable, and had a great love of nature. For most of his years on the faculty he had serious physical problems but he
never allowed these to impede his work. His advice was often sought by his colleagues and he served on numerous committees in the Veterinary School. Dr. Jones died on September 28, 1971.

Martin M. Kaplan, V.M.D., A.B., served as visiting professor of epidemiology and public health on three occasions, 1959-1960, 1965-1966, and 1971-1972. At these times he held a joint appointment as associate member of the Wistar Institute, University of Pennsylvania. Dr. Kaplan graduated from the Veterinary School in 1940, and earned his M.P.H. degree in 1942 from the University of Pennsylvania. From 1942 to 1945 he served as associate professor and head of the Department of Preventative Medicine and Public Health in the School of Veterinary Medicine, Middlesex University, Waltham, Massachusetts. From 1945 until 1949 he was veterinary advisor for the United Nations in Greece and Poland. In 1949 Dr. Kaplan became Chief of Veterinary Public Health for the World Health Organization in Geneva, Switzerland, and held this position until 1969 when he was appointed director of the Office of Science and Technology, Office of the Director General of the World Health Organization. Since 1976 Dr. Kaplan has served as secretary-general, Pugwash Conference on Scientific and World Affairs, Geneva, Switzerland, and London, England. Dr. Kaplan has published over 100 scientific papers. In 1964 he was named an associate member of the Royal College of Veterinary Surgeons and in 1974 was awarded the Schofield Memorial Medal by the Veterinary College, University of Ontario, Guelph, Canada.

Donald F. Kelly, M.A., Ph.D., B.V.Sc., M.R.C.V.S., was appointed assistant professor of pathology in 1967. In 1969 Dr. Kelly became associate professor. He left the faculty in 1971. Dr. Kelly carried out research on porcine inclusion body rhinitis and on thyroid tumors in dogs.

A.S. King, B.Sc. (Veterinary Science), Ph.D., M.R.C.V.S., was visiting associate professor of anatomy during the year 1960-1961. Dr. King was an exchange professor, serving at the Veterinary School while Dr. Donald G. Lea, professor of anatomy, was in England.

Frank Kral, D.V.M., was one of the most respected and inspiring faculty members. He came to the School of Veterinary Medicine from his native Czechoslovakia in 1948 and retired in 1963. Dr. Kral, known to all as "Frank", was born in Albrechtice, Czechoslovakia, in 1892. He began to study medicine but switched to veterinary medicine where he soon began a lifelong career in dermatology. In 1919 he was appointed professor at the School of Veterinary Medicine, Brno, Czechoslovakia where he became dean in 1932. In 1931 Dr. Kral published the second text ever written on skin diseases of animals, Veterinari Dermatologie. In 1948 Dr. Kral was forced to flee his native country because of his anti-communist sympathies; previous to that he had been confined to a concentration camp under Nazi rule. Soon after arriving at Penn in 1948 with an appointment as associate in veterinary medicine, he began to develop what would become a famous dermatology clinic in the Veterinary Hospital. In 1953, with Dr. Robert Novak, Dr. Kral revised his original book; this revision was titled Veterinary Dermatology. In 1964, Dr. Kral, along with Dr. Robert M. Schwartzman, revised and enlarged this text under the title Veterinary and Comparative Dermatology (Lippincott, Philadelphia, 1964). In 1968, in cooperation with Dr. Schwartzman, he compiled a beautiful color atlas of canine and feline dermatoses. Dr. Kral published numerous papers on skin disease in animals and he was in constant demand as a speaker. As he spoke at various meetings across the country his enthusiasm was contagious and interest in the field of dermatology soared.

Dr. Kral received numerous honors, among them an honorary doctorate from the University of Munich in 1962, and the Golden Diploma from the School of Veterinary Medicine, Vienna, Austria, in 1964. He was the first honorary diplomate of the American College of Veterinary Internation Medicine in 1975. Frank Kral was a very kind individual and an interesting, stimulating teacher whose accomplishments brought great credit to the Veterinary School. When he retired in
1963 he became emeritus professor of dermatology and continued to have a keen interest in his specialty until his death in 1980.

Leonard Krawitz, V.M.D., graduated from the Veterinary School in 1939 and was appointed instructor in veterinary surgery in 1955. Dr. Krawitz, a loyal alumnus of the School, served in this part-time position until 1967 and was of great assistance in a severely understaffed Small Animal Hospital.

Henry W. Kulp, V.M.D., was appointed as visiting associate in medicine in 1967 and became associate in medicine in 1969. He remained in this part-time appointment until 1971. During these years Dr. Kulp was involved in field studies on bovine leukemia.

Walter E. LaGrange, B.V.Sc., D.V.M., was appointed as assistant instructor in veterinary medicine in 1947; in 1950 he became assistant professor and served until 1957 when he resigned. Dr. LaGrange taught large animal medicine and assisted in the field service unit. He was a quiet, reserved individual, conservative in his clinical judgement, and a good teacher.

Edward P. Larkin, B.S., M.S., Ph.D., was appointed visiting associate in virology in 1963. In 1967 Dr. Larkin became research assistant professor of microbiology in medicine and served in this position until 1971. Dr. Larkin worked in the Comparative Leukemia Research Unit at New Bolton Center.

Frederick Leaver, A.B., Ph.D., joined the faculty in 1953 as instructor in biochemistry and became an assistant professor in 1955. Dr. Leaver was an exacting teacher who carried a large part of the teaching activities in biochemistry. He left the faculty in 1961.

Donald G. Lee, V.M.D., is one of the most beloved of faculty members and served the Veterinary School faithfully for forty-two years. He graduated in 1936 and after a year in a graduate fellowship in the department of biology, Virginia Polytechnic Institute, he joined the faculty as instructor in anatomy. This was at a time in which the courses in anatomy lasted for two years, and Dr. Lee and Dr. Elias T. Booth were responsible for almost the entire teaching load. Dr. Lee spent many hours in the gross anatomy laboratory and assumed the entire task of teaching histology. Dr. Lee became professor in 1951, after Dr. Booth retired, and it was not until the 1960s that there were enough faculty in the Anatomy Department to provide him with some relief from the heavy teaching schedule. In 1957 Dr. Lee received a joint appointment as professor of veterinary anatomy in the Graduate School of Medicine, and in 1962 he was appointed associate dean, in the Veterinary School. Most of his duties as associate dean were in the areas of curriculum matters and student affairs. Dr. Lee served in this position until 1973. His period as associate dean was a time in which there was a marked increase of student involvement in affairs of the School, and a revolutionary change in the curriculum.

Dr. Lee served as secretary of the faculty from 1944 until 1962 and gave of his time unselfishly to several faculty committees, notably the Admissions Committee, and the Library Committee. Most important, he devoted innumerable hours to student counseling; students viewed him as their ombudsman. His treatment of students was marked by utmost consideration; on the other hand, Dr. Lee was strict, but fair in matters of policy. He was an excellent teacher, one whose lectures were always well prepared.

In 1960 Dr. Lee spent one year at the Veterinary School of the University of Bristol, England. This was on an exchange professorship, with Dr. A.S. King coming to the Veterinary School from Bristol. In 1977 he spent six months at the Ben Gurion University of the Negev, Israel.

Dr. Lee’s major administrative and teaching duties precluded him from having much time for research. He published about twelve papers and joined with his colleague, Dr. Robert F. Way in publishing a book, *The Anatomy of the Horse* (Lippincott, 1965).

Dr. Lee was active in professional organizations, and among others was a member of the American Association of Anatomists, the American Association of
Veterinary Anatomists, and the World Association of Veterinary Anatomists.

Dr. Lee is a quiet, extremely courteous individual who in his years on the faculty showed uncommon good judgement on many thorny problems. He retired in 1979 and became emeritus professor of anatomy. Since his retirement he has maintained an active interest in the School, especially in alumni affairs.

Hansruedi Lugrinbuhl, Dr. Med. Vet. (Bern), was visiting research assistant professor of pathology from 1963 until 1965, and then was appointed assistant professor of pathology. He served in this position until 1967 when he became research associate professor of pathology. Dr. Lugrinbuhl left the faculty in 1969.

Roger J. Maloney, A.B., V.M.D., earned his veterinary degree in 1941, and in 1948 joined the faculty as assistant professor of veterinary surgery. In 1952 Dr. Maloney became associate professor. He assisted Dr. Edwin Churchill, primarily in equine surgery and in radiology. Dr. Maloney had a sharp incisive mind and possessed a photographic memory. He resigned from the faculty in 1953.

Ava Der Marderosian, M.S., Ph.D., was appointed visiting assistant professor of toxicology in 1967. In 1969 his appointment was changed to adjunct assistant professor of toxicology. In 1977 Dr. Der Marderosian was promoted to adjunct associate professor of pharmacology, a position which he now holds.

James H. Mark, V.M.D., a graduate in the Class of 1938, was appointed instructor in veterinary medicine in 1943. He became assistant professor in 1946 and in 1954 was designated head of the Small Animal Clinic. In 1956 Dr. Mark was promoted to associate professor; he left the faculty in 1959. For most of the years that he worked in the Small Animal Hospital, the facility, and the Department of Medicine, was woefully understaffed. With little help he supplied a great deal of the clinical service as well as teaching some courses in medicine. His duties left little time for clinical investigation; when he left in 1959 the Hospital staff was just beginning to grow. After leaving Dr. Mark went to the Food and Drug Administration where he carved out a fine second career for himself.

John E. Martin, V.M.D., graduated from the Veterinary School in 1942. From graduation until 1946 he served in the Veterinary Corps, U.S. Army. In 1946, Dr. Martin joined the faculty as assistant instructor in physiology and pharmacology, and in 1956 became associate professor of therapeutics; from 1961 until 1962 he was associate dean. He left in 1963 and returned briefly in 1969 and served one year as professor of therapeutics. In 1960 Dr. Martin returned to the school as special assistant to the dean, a position which he now holds. In this capacity he is editor of the Veterinary School news magazine, Bellwether, and is director of the Centennial Office as well as supervising the Student Financial Aid Program. Dr. Martin served on a number of Veterinary School and University committees, including chairing the Faculty Study Group and the Building Committee for the Rosenthal Building. His main area of research was in the pharmacological and clinical evaluation of therapeutic agents. He published twenty-five papers.

George P. Mayer, D.V.M., was appointed assistant instructor in veterinary medicine in 1963. In 1965 Dr. Mayer became instructor in medicine and in 1967 was promoted to assistant professor. Dr. Mayer became associate professor in 1969 and served in this position until 1973. His specialty was bovine medicine, especially metabolic diseases.

F. Harold McCutcheon, B.S., M.S., Ph.D., joined the faculty in 1947 as professor of physiology and head of the department of physiology and pharmacology. He held a joint appointment as professor of physiology in the Graduate School of Arts and Sciences. He came to the Veterinary School from the State College of the University of North Carolina where he was professor of zoology and physiology. Previously he taught at Duke University, and during World War II served as a Civilian Associate in the Aero-Medical
Laboratory, Wright Field, Dayton, Ohio. Dr. McCutcheon's primary research interest was in respiratory physiology in which he carried out some excellent basic studies, especially on respiratory gases. Dr. McCutcheon was impressive, reserved individual who served on numerous committees in the Veterinary School and in the University. He was meticulous and well versed in matters of academic policies and procedures. Dr. McCutcheon retired in 1969 and became emeritus professor of physiology.

John T. McGrath earned his V.M.D. degree from the University of Pennsylvania in 1943 and then served three years in the Veterinary Corps of the U.S. Army. In 1947 he was appointed as assistant instructor in pathology at the School of Veterinary Medicine, and in 1958 became professor. From 1958 to 1961 Dr. McGrath was acting chairman of the Department of Veterinary Biology (later Department of Pathobiology) and from 1961 to 1963 was chairman of this department. From 1950 to 1977 he was attending veterinarian, The Philadelphia General Hospital, and from 1972 to 1977 was an associate in pathology at this hospital. In 1953 Dr. McGrath received certification by the American College of Veterinary Pathologists. In 1961 he was selected as Veterinarian of the Year by the American Veterinary Medical Association and in 1966 received the same honor from the American Animal Hospital Association. Early in his career he spent considerable time in the hospital clinics working with clinicians to develop techniques for neurological examinations and diagnosis.

Alfred M. Merritt, D.V.M., M.S., earned his veterinary degree from the New York State Veterinary College at Cornell in 1963. He was assistant instructor in medicine, surgery and clinics in the School of Veterinary Medicine, University of California, Davis, from 1963 to 1964, and came to the Veterinary School in 1964 as instructor in medicine. During 1966 to 1969, Dr. Merritt was a postdoctoral fellow in the Graduate School of Arts and Sciences, University of Pennsylvania where he earned his masters degree (gastroenterology). In 1969 he became assistant professor of medicine, and in 1972 he was promoted to associate professor. Dr. Merritt worked primarily at New Bolton Center and taught core and elective courses in the field of gastroenterology. His general area of research is gastrointestinal physiology, and before leaving the faculty in 1978, he had published twenty-eight scientific papers. Dr. Merritt served on numerous Veterinary School committees, and among other professional organizations, is a member of the Comparative Gastroenterology Society and the American Association of Bovine Practitioners.
John W. Mills, A.B., D.V.M., M.A., was appointed as instructor in veterinary pathology in 1947 and in 1948 became assistant professor. He assisted in teaching general pathology and postmortem pathology until he resigned in 1953.

Charles E. Mootz, D.V.M., joined the faculty in 1945 as instructor in meat hygiene and served in this capacity on a part-time basis until 1955. His primary teaching responsibilities were in the course on meat inspection.

Guy E. Morse, D.V.M., joined the faculty in 1961 as associate in veterinary medicine. Dr. Morse became assistant professor in 1963. In 1967, Dr. Morse, referred to by his colleagues as "Andy," became head of the Mastitis Research Unit which was located in the James M. Murphy Laboratory. He served on the faculty until 1979.

David J. Morseth, B.A., D.V.M., Ph.D., was appointed assistant professor of parasitology in 1967. In 1969 Dr. Morseth became head of the laboratory of parasitology and served in this position until 1973 when he left the faculty.

James M. Murphy, V.M.D., graduated from the Veterinary School in 1935 and remained at the School for the next two years, as an assistant in pathology, doing research on periodic ophthalmia and mastitis. In 1937 he went to Rutgers University as associate professor of dairy husbandry, and then was appointed professor of medicine at the New York State Veterinary College, Cornell University. In 1959 he returned to the Veterinary School as research professor of veterinary medicine. In this position he was in charge of the mastitis research program, a study to which Dr. Murphy devoted his entire professional life and in which he was a nationally recognized authority. Dr. Murphy authored over forty scientific papers and for four years was editor of the venerable publication, Cornell Veterinarian. He was a member of the National Mastitis Workers Conference, and the Northeastern Mastitis Council. Dr. Murphy had the rare capacity to think both logically and imaginative-ly; his research was based on an organized, systematic, analytical approach. Dr. Murphy's career was cut short by his death in 1961 at forty-nine years of age. In his memory a laboratory building at New Bolton Center was dedicated on June 1, 1962, as the James MacMillian Murphy Research Laboratories.

Anna C. Nichols, B.S., M.S., was appointed as associate in bacteriology in 1953 and served on the faculty until 1967. Miss Nichols assisted in teaching the laboratory course in bacteriology and participated in various research projects.

James E. Prier, D.V.M., M.S., Ph.D., joined the faculty 1958 as visiting associate in veterinary medicine. In 1961 he became associate professor of virology and served in this capacity until 1965. While Dr. Prier's specialty was research in virology, he spent considerable time in the clinic where he was of great assistance to a short-handed staff.

Robert L. Pyle, V.M.D., a graduate of the Veterinary School in 1963, was appointed instructor in cardiology in 1969, and in 1973 became assistant professor of medicine. Dr. Pyle, who worked in the Comparative Cardiovascular Studies Unit, left the faculty in 1975. Dr. Pyle's research involved studies on the mode of inheritance and the effects of genetic defects on the embryologic development of the heart.

Geoffrey Rake, M.R.C.V.S., L.R.C.P., M.B., B.S., an eminent microbiologist, was appointed as research professor of microbiology in veterinary medicine in 1954. Before coming to the Veterinary School Dr. Rake had been director of the E.R. Squibb and Sons Medical Division for four years and previous to that he headed the microbiology division of the Squibb Institute for Medical Research. Dr. Rake had also served at Johns Hopkins University, the Rockefeller Institute in New York, and the University of Toronto. His primary duties at the Veterinary School involved direction of the research program at Palo Alto, Mexico. This program, dealing mainly with anaplasmosis, was a cooperative effort between the Veterinary School, the Mex-
ican government, and the Squibb Division of Olin Mathieson Chemical Corporation. Dr. Raker died suddenly in 1958 while this work was still in progress.

Charles W. Raker graduated from the Veterinary School in 1942 and spent the next eight years in practice. In 1950 he joined the faculty as assistant professor of veterinary medicine and director of clinics at Bolton Farm, in Bristol, Bucks County, Pennsylvania. With the acquisition of New Bolton Center in 1952, Dr. Raker moved to that location as director of clinics. In 1954 he was designated as head of the Large Animal Clinic and in 1956 he became associate professor and chairman of the Department of Surgery. In 1957 Dr. Raker was promoted to professor of surgery and in 1958 received an appointment as professor of comparative surgery in the Graduate School of Medicine. From 1962 until 1975 he was chief, Section of Surgery, and in 1967 was named the recipient of the first endowed chair in the Veterinary School, the Lawrence Baker Sheppard Professorship of Surgery. In 1981 Dr. Raker again became chief, Section of Large Animal Surgery, a position which he now holds.

Dr. Raker is an indefatigable worker; his attention to detail and surgical dexterity has made him one of the outstanding equine surgeons in the country. He contributed greatly to the development of New Bolton Center, especially in making it known as world center for equine surgery and medicine. Dr. Raker’s contributions to teaching have been recognized through the Norden Distinguished Teacher Award in 1965, and the prestigious Linback Award for Distinguished Teaching by the University of Pennsylvania in 1977.

Dr. Raker has been very active in professional societies, and is a charter member of the American College of Veterinary Surgeons. In 1967 he was named Veterinarian of the Year by the Pennsylvania State Veterinary Medical Association. He is in great demand as a speaker at local, national, and international meetings.

Dr. Raker was associated with Dr. Jacques Jenny in some of the pioneering works on orthopedic surgery in the horse and more recently has been involved in surgical and medical treatment of diseases of the pharynx in the horse. He has published over sixty articles, including chapters and sections in some books.

Erki J. Rajakoski, D.V.M., was appointed associate professor of clinical reproduction and chief, Section of Clinical Reproduction in 1967. In 1969 Dr. Rajakoski assumed a part-time position as visiting associate professor of animal reproduction. He left the faculty in 1970.

Herbert Ratcliffe, M.S., Sc.D., was appointed as professor of comparative pathology in 1954 and served in this position until 1963. Dr. Ratcliffe was associated with the Philadelphia Zoological Gardens and had a primary interest in nutrition for captive wild animals.

John S. Reif, D.V.M., M.Med.Sc., joined the faculty in 1969 as assistant professor of epidemiology and public health. In 1971 Dr. Reif became chief of the Section of Epidemiology and Public Health, and in 1973 he was promoted to associate professor. He left the faculty in 1979. Dr. Reif carried out research on the use of the dog as an indicator for air pollution effects by determining the distribution of chronic pulmonary diseases in canine populations.

Wayne H. Riser, D.V.M., M.S., Dr.Med.Vet., received his veterinary degree from the Iowa State Veterinary College in 1932 and his masters degree (veterinary pathology) from Iowa State University in 1945. In 1973 he earned the Dr.Med.Vet. degree from the University of Bern, Switzerland. Dr. Riser practiced in Iowa and Illinois until 1960 when he accepted a research fellowship at the Armed Forces Institute of Pathology, Washington, D.C. He joined the faculty of the Veterinary School in 1962 as research assistant professor of pathology and in 1976 became research professor. Dr. Riser retired in 1980 and became emeritus research professor of pathology. During his long career Dr. Riser was very active in various professional organizations. He was a charter member and served as president of the American College of Veterinary
Pathologists (1955-1956), and was the president of the American Animal Hospital Association. In 1966 Dr. Riser was chairman of the Council on Education of the American Veterinary Medical Association and during 1966-1967 served as secretary of the Executive Committee of the Advisory Board on Veterinary Specialties of the AVMA. In 1952 he receive the Gaines Award as Veterinarian of the Year from the AVMA, and in 1956 he received the AVMA Practitioner-Research Award. In 1965 Dr. Riser was the second Sir Arnold Thieler Lecturer at the School of Veterinary Medicine, University of Pretoria, Onderstepoort, South Africa. While at the Veterinary School Dr. Riser’s primary teaching and research activities were in the field of orthopedic pathology. He has authored over 100 scientific publications, four textbooks, and has contributed chapters and sections to numerous other books. From 1949 to 1954 Dr. Riser was editor of the small animal section of the Journal of the American Veterinary Medical Association.

Alphonso R. Romeika, LL.B., a lawyer, was appointed to the faculty in 1961 as instructor in veterinary jurisprudence and continues to teach a course in jurisprudence.

Jeff Roszel, V.M.D., earned her veterinary degree in 1963 and was appointed instructor in pathology in 1967. In 1969 Dr. Roszel became assistant professor of pathology and served in this position until 1971. Dr. Roszel’s field of research was hematology.

Dr. Robert Sauer, V.M.D., was appointed as instructor in pathology in 1955 and in 1967 became associate professor. During the years 1961 to 1965 he served as interim head of the Laboratory of Pathology. Dr. Sauer was a good teacher who shared a major teaching load in pathology and did research on the development of new methods to improve laboratory techniques.

Samuel F. Scheidy, V.M.D., was an ambassador-at-large for the School of Veterinary Medicine. Of all who have served on the faculty none has been more active in professional societies on a local, national, and international level. Dr. Scheidy had an astonishing memory for people, places, and things and was frequently sought out as a source of information. He formed a great number of friendships on the worldwide scale; when visitors came to the school he was frequently called upon to act as host. Dr. Scheidy served on the Executive Board of the American Veterinary Medical Association and was president of the association from 1959 to 1960. He was a member of the Board of Trustees of the Pennsylvania Veterinary Medical Association for ten years (1943-1953), and was president from 1952 to 1953. On the local level Dr. Scheidy served on the Board of Trustees of the Keystone Veterinary Medical Association from 1943 to 1954 and was president from 1939 to 1941.

Dr. Scheidy graduated from the Veterinary School in 1929 and then served as resident in the Veterinary Hospital until 1931. Following this he was field veterinarian for dairy companies and engaged in some research on mastitis. From 1938 to 1943 he was chief resident veterinarian and instructor in veterinary medicine in the Veterinary School. During these years he was essentially responsible for patient service in the Small Animal Clinic and Hospital, a demanding, exhaustive position in which he never had adequate assistance. After 1943 he continued to serve on the faculty on a part-time basis, spending some time in the clinic, giving some lectures and serving on various committees. In 1943 Dr. Scheidy became veterinary medical director at Sharpe and Dohme, a major pharmaceutical company. He remained there until 1957 when he joined Smith, Kline and French Laboratories and was veterinary medical director until 1972; after this time he continued in a consultant capacity. From 1974 to 1980 Dr. Scheidy visited all the veterinary schools in the United States as a guest lecturer, an activity sponsored by the Animal Health Institute, Washington, D.C. From 1972 until 1982 he was a consultant to Harcum Junior College, Bryn Mawr, Pennsylvania in the Animal Technicians Training Program. Dr. Scheidy’s contributions to the profession were recognized with numerous awards and other honors, including the following: Alumni
Award of Merit, Founders Day, the University of Pennsylvania, 1965; AVMA Award, 1967; XIth International Congress Prize, presented by the AVMA, 1970; "Pennsylvania Distinguished Veterinarian of the Year", Industrial Veterinarians Association, 1979; and Founders Award, Animal Health Products Division, Smith Kline Corporation, 1979. Dr. Scheidy was a vibrant, enthusiastic individual who always saw any problem through to its completion. He provided the School with many important contacts and friendships and he was especially active in the Veterinary Medical Alumni Society. Dr. Scheidy died on November 20, 1982.

Dwight B. McNair Scott, Ph.D., was appointed assistant professor of biochemistry in 1967, and in 1969 became associate professor. Dr. Scott was promoted to professor in 1971. In 1977 he became emeritus professor. An area of her research interest was the investigation of regulatory mechanisms in glucose metabolism.

George F. Shaw, B.S., held a part-time appointment as instructor in animal industry from 1950 until 1967. Mr. Shaw, who owned a thriving hatchery in West Chester, Pennsylvania, lectured in the course on poultry disease.

Richard E. Shope, M.D., M.S., D.V.M., was visiting professor of virology from 1950 to 1955. During this time he was a member and professor at the Rockefeller Institute. Dr. Shope, who was an associate trustee of the University of Pennsylvania, was internationally known for his work on animal disease transmissible to man and for cancer research. He was a strong proponent for comparative medicine. In 1975, on the occasion of the Seventy-fifth Anniversary of the Veterinary School, Dr. Shope was awarded an honorary degree of Doctor of Science by the University of Pennsylvania.

Edward T. Siegel, V.M.D., Ph.D., brought an unusual educational background to his work. After being awarded a B.S. degree in zoology from Iowa State University in 1954 he came to the School of Veterinary Medicine and received his veterinary degree in 1958. He then went to Jefferson Medical College where he studied under Dr. Karl Paschki, an eminent endocrinologist, and received his Ph.D. degree. Following this he took postdoctoral training in steroid biochemistry, studying under Dr. Ralph I. Dorfman, one of the leading biochemists in America. In 1965 Dr. Siegel was appointed assistant professor of biochemistry in medicine, and in 1973 became professor of medicine and chief, Endocrine Service. One of Dr. Siegel’s earliest research contributions was to show the significant difference between steroid metabolism in man and dog; previously it was thought that information could be extrapolated from one to the other. Throughout his career, Dr. Siegel demonstrated an unusual ability to think clearly both in terms of abstract theory and of practical application. He was an enthusiastic teacher who established innovative treatment protocols that have now become routine. Dr. Siegel was active in the AVMA and gave numerous short courses on endocrinology across the country. During his terminal illness, while in the hospital, he revised the galley proofs of his textbook, Endocrine Diseases of the Dog (Lea & Febiger, Philadelphia, 1977). Dr. Siegel died in 1976 at the age of forty-two.

Marvin J. Silverman, B.Sc., M.Sc., D.V.M., received his veterinary degree from Middlesex University, Waltham, Massachusetts, in 1946. In 1952 he earned a B.Sc. degree, and in 1953 a M.Sc. degree from the Philadelphia College of Pharmacy. In 1953 Dr. Silverman was appointed instructor in pharmacy, and taught the course in pharmacy until it was discontinued in 1958. Dr. Silverman was responsible for establishing a modern service and dispensing pharmacy in the hospitals in Philadelphia and at New Bolton Center. In 1972 he was named chief pharmacist for the hospitals and has provided excellent service in this capacity.

Joseph F. Skelley, V.M.D., received his veterinary degree in March 1943; this was one of the classes in the accelerated program during World War II. He practiced until 1948 when he joined the faculty as assistant instructor in medicine. This was at a time when the Small Animal Hospital was seriously understaffed and Dr. Skelley
Dr. E.J. Lawson Soulsby

along with Dr. James H. Mark performed yeoman service in providing health care for companion animals. In 1965 Dr. Skelley became associate professor of medicine and from this time until 1971 he was director of the Small Animal Hospital. Dr. Skelley became chairman of the Admissions Committee in 1972 and still holds this responsible and demanding post. In 1973 he was appointed Associate Dean for Admissions and in 1975 his duties were expanded to include the Continuing Education Program. In 1983 Dr. Skelley became Associate Dean for Student Affairs, in addition to his other duties. During his years in the Small Animal Hospital, Dr. Skelley carried out research on lymphangiography and myelography and on disc disease and renal disease in dogs, and published over forty papers. He has served on many Veterinary School committees and is a member of various professional groups including the American College of Veterinary Internal Medicine, and the American Association of College Registrars, and Admissions Officials. Dr. Skelley serves on the editorial staff of the Compendium for Continuing Education, and is a contributing editor for the *Journal of Veterinary Medical Education*. Dr. Skelley who is an affable, easy-going individual, has served the School well, during his earlier years in clinical work, and more recently in his administrative duties.

*Raymond C. Snyder, V.M.D., a graduate of the class of 1933, joined the faculty in 1936 as assistant instructor in veterinary medicine and continued to serve the School until 1963. In 1950 he became instructor and remained in this position until he retired. Dr. Snyder, who for those twenty-seven years was on a part-time appointment, contributed in many ways. He assisted in the clinic, especially in those years when the Hospital was very short on staffing; he lectured in the course on jurisprudence and ethics; and he was quite active in alumni affairs. In addition, Dr. Snyder was active in professional groups, especially the Keystone Veterinary Medical Association, and the Pennsylvania Veterinary Medical Association, and often acted as an unofficial liaison between the School and these groups. The School is in debt to Dr. Snyder for his years of faithful service.*

*Ernest Jackson Lawson Soulsby, M.A., Ph.D., M.R.C.V.S., D.V.S.M., was born in Haltwistle, England. He received his M.R.C.V.S. degree from the Royal (Dick) School of Veterinary Medicine at the University of Edinburgh, Scotland, in 1948 and his D.V.S.M. degree from the same institution in 1949. In 1951 Dr. Soulsby earned his Ph.D. degree from the University of Edinburgh and in 1954 received his M.A. degree from the University of Cambridge. He spent one year in general practice in Penrith, England and then served from 1949 to 1952 as Veterinary Officer, City and Royal Burgh, Edinburgh. From 1952 to 1954 Dr. Soulsby was lecturer in clinical parasitology at the University of Bristol, England, and from 1954 to 1963 he served as university lecturer in animal pathology at the University of Cambridge. In 1964 Dr. Soulsby came to the United States and was appointed professor of parasitology at the School of Veterinary Medicine with a joint appointment in the Graduate School of Arts and Sciences. In 1966 he became chairman of the Department of Pathobiology in the Veterinary School. He served in this capacity until 1978 when he returned to England where he is presently professor of pathology and head, Department of Clinical Veterinary Medicine, at the University of Cambridge.

The appointment of Dr. Soulsby to the faculty in 1964 was an outstanding example of the effort the Veterinary School was putting forth to attract the very best individuals to fill key positions. Dr. Soulsby added great strength to the faculty not only through his scientific achievements but also through the valuable counsel he was able to give to numerous committees and other activities. He was an inspiring teacher who was able to attract a number of young people to the School for graduate training and as permanent members of the staff in parasitology. During his years at the School he became one of the world leaders in the field of the immunology of parasitic diseases. He was held in great esteem at Penn. From 1964 to 1967 Dr. Soulsby served as president of the World Association for the Advancement of Veterinary Parasitology. In 1967 he was
chairman of the Section on Immunology of Parasitic Diseases at the 18th World Veterinary Congress, Paris. From 1964 to 1975 he was a member of the Board of Agriculture of the National Science Foundation, Washington, D.C., and served in several capacities with the World Health Organization. From 1972 to 1975 Dr. Soulsby was secretary of the University Senate at the University of Pennsylvania. He served on the editorial board of numerous publications and was editor or contributing author on eleven textbooks. Dr. Soulsby’s main field of research is on the basic aspects of the immunology of parasitic diseases and he has over 130 publications to his credit.

F. George Sperling, V.M.D., earned his veterinary degree in 1943 and was immediately appointed as research associate in veterinary pathology. In 1946 he left the Veterinary School to become assistant research professor of poultry diseases at the University of Massachusetts. He remained there until 1949 when he went to the University of Maryland where he was associate professor of veterinary science until 1952. During this time he also served as director of the Diagnostic Laboratory of the Livestock Sanitary Service of the State of Maryland. In 1952 he returned to the Veterinary School as assistant professor of veterinary pathology and the first director of the newly created Poultry Diagnostic Laboratory at New Bolton Center. In 1965 Dr. Sperling left the School to become deputy director, Division of Animal Drugs, Feed and Drug Administration, Bureau of Veterinary Medicine in Washington, D.C. He served in this position until 1975 when he went to Harrisburg, Pennsylvania, to become supervisory veterinary medical officer of the U.S. Department of Agriculture. Dr. Sperling retired from this position in 1980. While at the Veterinary School he did research on brucellosis and virus tumors of poultry. Dr. Sperling has over twenty publications to his credit.

Neal D. Stock earned his D.V.M. degree at the New York State Veterinary College, Cornell University, in 1961 and then spent a one-year internship at Angell Memorial Hospital, Boston, Massachusetts. From 1962 to 1964 he was senior assistant veterinary officer in the United States Public Health Service, Bethesda, Maryland. Dr. Stock spent 1964 to 1965 as a postdoctoral trainee at the South Jersey Institute for Medical Research, Camden, New Jersey, and from 1965 to 1967 was a postdoctoral fellow in the department of virology at the same institution. In 1968 he came to the Veterinary School as a research instructor in microbiology in medicine and became part of the Comparative Leukemia Studies Unit where he worked with electron microscopy. Dr. Stock left the faculty in 1975.

Milton D. Stoudt, V.M.D., a graduate of the Veterinary School in 1933, served on the faculty on a part-time basis, from 1943 until 1955 as instructor in animal industry. Dr. Stoudt’s primary teaching responsibilities were in the course on stock judging.

John W. Switzer, B.S., D.V.M., came to the faculty in 1963 as an American Cancer Society Research Fellow, assigned to medicine. In 1965 he became a research fellow in hematology and in 1967 was appointed visiting associate in hematology. Dr. Switzer was associated with the research on bovine leukemia. He left in 1968.

John A. Tucker, B.A., M.D., joined the faculty in 1969 as associate in comparative bronchology, esophagology, and laryngeal surgery. In 1971 he became associate professor, and in 1975, adjunct professor, a position which he presently occupies.

Edwin D. Tuckerman, V.M.D., was appointed assistant professor of regulatory veterinary medicine and served in this capacity until 1973. “Ted” Tuckerman was an affable individual who, in addition to teaching, provided the School with a good liaison with regulatory agencies.

Alfred M. Wallbank, B.S., M.S., Ph.D., joined the faculty in 1960 as research assistant professor of microbiology and became assistant professor in 1965. He assisted in teaching microbiology and worked closely with Dr. Evan L. Stubbs on investigations of Strain 13 sarcoma virus in chickens. He left the faculty in 1967.
Stanley Wampler, V.M.D., received his veterinary degree in 1956, and was appointed assistant professor of radiobiology in 1967. In 1969 Dr. Wampler's appointment was changed to assistant professor of laboratory animal medicine; this was the first such position in the School of Veterinary Medicine. In 1973 Dr. Wampler's appointment was designated as assistant professor of laboratory animal medicine, and executive director, Federal Medical Resources. Dr. Wampler left the faculty in 1977.

Dr. Robert F. Way, V.M.D., graduated from the Veterinary School in 1944, and joined the faculty as an assistant instructor in veterinary anatomy in 1949. In 1950 he was promoted to assistant professor and, along with Dr. Donald G. Lee, carried a major share of the teaching load in anatomy. Dr. Way was a pleasant individual with an excellent aptitude for teaching. During his service on the faculty Dr. Way published a text, The Anatomy of the Bovine Foot: A Pictorial Approach, (Philadelphia, University Press, 1954). He left the faculty in 1956.

George P. Williams III, B.S., LLB., joined the faculty in 1947 as instructor in veterinary jurisprudence, succeeded his father who had taught the course in jurisprudence since 1917. Mr. Williams was a genial individual who, like his father, spiced his lectures with interesting legal side-light. His appointment was part-time and he remained at the School until 1961.

Ernest J. Witte, V.M.D., M.P.H., has served on the faculty during three different periods. From 1946 to 1952 he was instructor in hygiene and taught primarily in microbiology and public health courses. In 1959 Dr. Witte received a part-time appointment as visiting assistant professor of veterinary hygiene. He served in this capacity until 1963 when he left the faculty. He returned in 1969 as lecturer in epidemiology and public health, a position which he now occupies. Dr. Witte graduated from the Veterinary School in 1942 and in 1964 earned the M.P.H. degree from Columbia University, New York, New York. From 1952 until 1979 Dr. Witte held various positions in the United States Public Health Service and the Pennsylvania Department of Health, including the period 1952 to 1977 when he was chief of the Veterinary Public Health Section of the Commonwealth of Pennsylvania. At present Dr. Witte is director, Division of Epidemiology of the Pennsylvania Department of Health.

There were many individuals during this period who served on the faculty for short periods or who were on a part-time basis with adjunct or visiting types of appointments. This group, as a whole, contributed in important ways to the growing strength of the School in all areas — education, research, and service. Individually, they brought to the School particular areas of expertise not represented on the standing faculty. Before the School initiated intern and residency programs many young people were appointed at the instructor level for one or two year periods.

The following listing, by disciplines, does not include appointments as research fellows, research assistants, residents, interns or in most cases lecturers.
Anatomy

Animal Husbandry

Biochemistry

Biology

Botany

Cardiology

Dermatology

Epidemiology, Public Health

Laboratory Animal Medicine
George Bjotvedt, V.M.D., instructor in laboratory animal medicine, 1961-1963.

Laboratory Medicine

Microbiology, Virology, Hygiene


Obstetrics and Gynecology


Oncology


Ophthalmology


Parasitology


Pathology

Pharmacology


Physiology


Radiology


ROTC Program


Surgery

Virology


Activities

Seventy-Fifth Anniversary

In 1959 the Veterinary School celebrated its Seventy-fifth Anniversary with a year-long series of events. Honorary Chairmen for the celebration were Brigadier General James A. McCallam (V'17) and Dr. J. Alexander Webb (V'16).

As part of the anniversary celebration a fund raising campaign was initiated. This was known as the 75th Anniversary Development Program and was chaired by Mr. Clark W. Davis. Alumni co-chairmen were Dr. William J. Brown (V'42) and Dr. George W. Mattern (V'43).

The year began with the 75th Anniversary Banquet held at the University Museum on February 16, 1959. This event, presided over by Dr. Alfred H. Williams, chairman of the Board of Trustees, attracted over 500 people who heard an address by Dr. Leroy E. Burney, Surgeon General of the U.S. Public Health Service. As part of the banquet there was an exhibit titled “Animals in Art” planned by the staff of the University Museum.

For this year the Annual Conference of Veterinarians was moved to April. It was highly successful, and attended by over 300 veterinarians. A banquet was held at this time, also in the University Museum. Over 250 attended this function at which the General Alumni Society of the University of Pennsylvania presented Awards of Merit to General McCallam and Dr. John J. Hardenbergh (V'16). Alumni Day, in June, was held in conjunction with the General Alumni Society. Dr. Robert L. Tichurst was president of the Veterinary Medical Alumni Society in 1959. The Society had set a goal of $75,000 for alumni equity in construction of Alumni House at New Bolton Center. On Alumni Day it was announced that alumni contributions already totaled $84,000 and a new goal of $100,000 was set. (This goal was later realized).

On September 30 to October 2, a scientific meeting was held in cooperation with the Pennsylvania Veterinary Medical Association at the Bellevue Stratford Hotel in Philadelphia.

A special convocation was held by the University on October 3 to commemorate the Seventy-fifth Anniversary of the School of Veterinary Medicine. This was held at Irvine Auditorium and was presided over by Gaylord P. Harnwell, University President. At this time the honorary degree of doctor of science was conferred upon Dr. Hadleigh Marsh of the Veterinary Research Laboratory, Montana State College, Dr. Karl F. Meyer of the George Williams Hooper Foundation of the University of California Medical Center, and Dr. Richard E. Shope of the Rockefeller Institute. Dr. Shope delivered the Convocation Address. At the convocation Mr. Samuel Price Wetherill, president of the Philadelphia Society for Promoting Agriculture, presented the Veterinary School with a scroll in recognition of its anniversary.

The many events held during 1959 were highly successful, and this year marked a time when the Veterinary School was receiving heartening support from the University and from the Veterinary Medical Alumni Society.

University Senate

The University Senate was established in 1952 after two years of intensive faculty discussion. The membership of this body is made up of fully affiliated faculty members, that is, those with the rank of assistant professor or above. Since its inception, the University Senate has earned a respected and influential position in the administrative structure of the University. The Senate has a number of important functions in University life. It has primary cognizance of the question of academic freedom; as the occasions arise and at the President’s request the Senate nominates persons to serve on consultative committees for appointments to major administra-
tive posts of academic significance; whenever it becomes necessary to select a new President of the University, the Senate appoints a committee to submit a slate of candidates to the Trustees; it participates in the University Council through the Advisory Committee of the Senate; it is vested with the authority to discuss and express its view on any matter of general University interest and to make recommendations on such matters to the President and the Trustees.

The University Council was established in 1963-1964. It functions to coordinate the educational programs of the several divisions of the University and provides a conference body in which representatives of the faculty and senior administrative officers of the University may meet together to discuss and formulate for recommendation to the President general policies of the University which may affect its educational objectives. The Council consists of eighty-five members, eighteen of which come from the Senate’s Advisory Committee.

Numerous individuals of the Veterinary School faculty have occupied various important positions in the University Senate.

Meetings and Publications

As the faculty grew in numbers and diversity it became possible for the School to offer more in the way of outreach programs for the profession and the general public. As early as 1954 there was a major “Symposium on Cortisone and ACTH” which attracted an audience of over 500. During the year 1962-1963 there were seventeen symposia on such topics as “Genetics and Heart Disease”; “Central Nervous System Tumors in Animals”; “Mitral Valvular Disease”; “Metabolic Rates in Ruminants”; and “Thallium Intoxication”.

Between 1966 and 1968 the faculty of the Department of Animal Biology alone gave approximately 160 lectures at meetings in various parts of the world. In addition to lectures and participation in symposia, the faculty offered short courses for practitioners on a variety of subjects and numerous lectures and courses were presented at New Bolton Center for the lay audiences interested in particular species of animals.

Publications by the faculty in scientific journals increased dramatically. In 1967 the faculty of the Department of Pathobiology published nearly seventy papers and from 1966 to 1968 the faculty of the Department of Animal Biology accounted for approximately 270 publications.

These were golden years for the School of Veterinary Medicine. It was, indeed, a period in which the horizons were unlimited.
The awarding of honorary degrees, 75th Anniversary. Left to right: Dr. Gaylord Harwell, president, University of Pennsylvania; Dr. Richard E. Shope; Dr. Karl F. Meyer; Dr. Hadleigh Marsh.