Professor Emeritus of Veterinary Microbiology, Dorsey William Bruner, was a lifetime resolute and undauntable optimist, absolutely certain that he would live to age 90! But following an illness of several months, the Lachesian thread was cut short by just four months.

Born in Windber and raised in Paxtonville, Pennsylvania, in the heart of the “Dutch country”, he was as fluent in the Germanic dialect as he was in English. He attended grammar school in Paxtonville and, in 1925, was graduated from high school in nearby Middleburg.

In 1929, he completed the requirements for a B.S. degree from Albright College, and taught mathematics and biology in the Middleburg High School in 1929 and 1930.

He became fascinated by the science of bacteriology and was particularly intrigued by the scholarly reputation of William Arthur Hagan of Cornell University. Hagan was especially knowledgeable about the elusive, filament-forming acid-fast bacteria, especially *Mycobacterium tuberculosis* and *Mycobacterium paratuberculosis*. Consequently, in 1931, Dorsey was admitted to the Graduate School of Cornell University as a Ph.D. degree candidate, studying under the guidance of Dr. Hagan. The title of his thesis was “The Influence of Nutritive Conditions on Acid-fastness of Bacteria”. Acid-fastness of mycobacteria, due to high lipid concentration in the cytoplasm of mature organisms, is one of its most elusive characteristics. Dorsey Bruner found that the acid-fast determining requisite is nascent carbon. Carbon deprivation will obviate acid-fastness. Most interesting was his determination that mycobacteria, which retain acid-fastness when cultured on carbon-deficient media, are able to utilize the carbon in CO₂ of air, thus compensating for carbon deficiency in the culture medium!

Dr. William A. Hagan, who served on the faculty of the College of Veterinary Medicine since 1917, was named Dean of the College in 1932, the year after Dorsey Bruner began his graduate studies. He became so impressed by Dorsey’s personal and academic talents and scholarly attributes that he offered him an instructorship in bacteriology, and urged him to matriculate simultaneously as a candidate for the DVM degree. Consequently, Dorsey completed the requirements for the Ph.D. degree in 1933, and the Doctor of Veterinary Medicine (D.V.M.) degree in 1937.
In 1937, Dorsey W. Bruner, B.S., Ph.D., D.V.M., was appointed as a veterinary bacteriologist in the Department of Animal Pathology, Kentucky Agricultural Experiment Station, University of Kentucky in Lexington. It was there that Dorsey became a co-worker with Dr. Philip R. Edwards, a world-recognized microbiologist who had special expertise in the enteric (intestinal) disease-producing Enterobacteriaceae: notably those of the genera Salmonella, Escherichia, and Shigella; bacteria notable for causing life-threatening dysentery. His collaboration with Philip R. Edwards (and later with William H. Ewing) stimulated his abiding interest in the antigenic analysis of Salmonella species, of which more than 2000 serotypes have been isolated and classified.

Particularly impressive is that the 2000+ varieties of serologic types are in the genus Salmonella, a genus named for Daniel Elmer Salmon, the first student of James Law to qualify for a veterinary doctorate degree from Cornell University. The antigenic analysis of these serotypes is so complicated that they have been assigned complex identification codes, all appearing to be imposingly esoteric! Analysis is carried out by observing agglutination of pure cultures in specific rabbit antisera prepared against O (somatic) antigens, or floculation of cultures in specific antisera prepared against H (flagellar) antigens. Dorsey Bruner, one of a few great world authorities on antigenic analysis of Salmonella species, who carried out many of the pioneering studies in this system, is considered to be one of the scholarly giants in Salmonella epidemiology. Serological type identification undergirds the modus operandi of epidemiologists who follow epidemics, predict flow patterns, and develop strategies against devastating infectious diseases, such as intestinal infections of animals or people housed under crowded, and often unsanitary, conditions.

For accurate diagnosis of serotypes (serologic variants or varieties within Salmonella species) it is essential that reagents are prepared with scrupulous precision. Antigens must be purified, classified and monitored, and antiserums produced against them in rabbits also must be prepared and tested fastidiously. The work involved is highly sophisticated and demanding. It is in this arena of science, antigenic analysis, (genetic mapping for epidemiological purposes), that Dorsey Bruner devoted much of his professional life. In addition to his scientific achievements in serological analysis of Salmonella antigens, Dorsey described a baffling blood dyscrasia in newborn foals, which he named neonatal isoerythrolysis, a genetic disease resembling Rh isoerythrolysis (erythroblastosis fetalis, or Pfannenstiel’s syndrome) in human neonates.

From 1942-46, Dorsey served as a bacteriologist in the Fifteenth General Medical Laboratory of the Fifth American Army, stationed in Naples, Italy. He attained the rank of Major, and in addition to earning 5 battle stars (4 for Italian campaigns and one in France), he was awarded a Bronze Star medal for heroic or meritorious service in...
combat. Also, he was awarded the American Campaign Service Medal, and the European-African-Middle East Service Medal.

According to Alvin F. Sellers, V.M.D., M.S., Ph.D., Professor Emeritus of Physiology, College of Veterinary Medicine at Cornell, who served in the First Medical Laboratory (which was a field laboratory temporarily attached to the Fifteenth Medical Laboratory upon arrival from service in North Africa), Dorsey served alongside William Howell Ewing, a preeminent bacteriologist with special expertise in antigenic analysis of disease-producing genera of enteric microorganisms. Ewing, in collaboration with P.R. Edwards, devised a biochemical system for antigenic analysis and classification of enteric bacterial organisms, a refinement of the prestigious world-renowned Kauffmann-White serological system.

In the Fifteenth General Medical Laboratory of the Fifth Army during World War II, the rapid and accurate diagnosis of bacteria responsible for gastroenteritis among military personnel was extremely important and urgent. Dysentery caused by Salmonella and Shigella bacteria was a major problem in the military theater. Dr. Sellers stated that Dorsey Bruner was the key bacteriologist for antigenic analysis (diagnosis) of Salmonella species, and Bill Ewing was the key microbiologist for antigenic analysis of Shigella species.

Dorsey Bruner returned to the University of Kentucky in 1946, upon his discharge from the army. He transferred as a retired officer to the Veterinary Corps, U.S. Army Reserves, and attained the rank of Lieutenant Colonel.

On August 25, 1940, Dorsey married Beatrice D.E. Christman. She was the daughter of an Ithaca optometrist. “Bea” had been a student of Dorsey’s at Cornell and was 6 years younger than Bea. Their marriage extended over a period of 49 years, until Bea’s death in 1991. They had no children but were very fond of their nieces and nephews. Further, throughout his teaching career, all sophomore veterinary students were invited in small groups to the Bruner home for dinner.

Dorsey Bruner’s life style was that of a legendary traditionalist. Every Thursday night he would prepare dinner, often employing Pennsylvania-Dutch recipes. And frequently on Saturday night, he and his wife, Bea, would dine at local restaurants. She would choose the restaurant on one Saturday; Dorsey the next. They played bridge often, but never on an evening where a major sports event was scheduled on the Cornell Campus (or on television)! Dorsey and Bea were enthusiastic gardeners and both enjoyed hiking and international travelling.

In 1949, Dorsey W. Bruner, B.S., Ph.D., D.V.M., was recruited by his mentor, William A. Hagan, to fill a vacant position at Cornell University for teaching bacteriology in the veterinary curriculum. He served as Professor of
Bacteriology in the Department of Pathology and Bacteriology from 1949-65, teaching veterinary students and graduate students and continuing his research and publishing on antigenic analysis of Salmonella species.

In 1965, Dorsey was named chairman of a newly formed Department of Microbiology (which also embraced the Veterinary Virus Research Institute). This department was split off from the Department of Pathology primarily because of the growth and expansion of microbiology and immunology. Dorsey continued to serve as chairman until his retirement on June 30, 1972. He was especially appreciated for his astute qualities as an administrator of an excellent but diverse department, and admired for his patience, no-nonsense determination, and sense of urgency. In the sweep of time, D.W. Bruner taught bacteriology at Cornell from 1931-37, and then again from 1949-72, for a total of 29 years of dedicated service.

Dorsey Bruner served as co-author of the second through the fourth editions, and then principal author for the fifth and sixth editions of *Hagan's Infectious Diseases of Domestic Animals*, a classic textbook for students and practitioners of veterinary medicine. To honor his participation in six editions of this magnificent textbook, the seventh and eighth editions have included his name in the revised title, *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. Also, he authored or co-authored over 140 scientific papers that were published in highly reputable peer-reviewed journals.

*The Cornell Veterinarian*, a professional journal issued quarterly, was published continuously for 82 years; between 1911 and January 1994. Although called “The Cornell Veterinarian”, its Board of Directors published the journal independently of Cornell University, despite the fact that most of the directors were Cornell faculty members. Dorsey Bruner was editor for 20 years, from 1951 to June 1972.

Dorsey was an avid enthusiast for all competitive sports. He played baseball during his public school and collegiate student years. And while serving on the faculty of the Veterinary College during his graduate student days, he played on a faculty baseball team with W.A. Hagan, Peter Olafson, Alexander Zeissig, and other Cornell academic giants.

The prestigious, Twelfth International Veterinary Congress Prize, awarded by the American Veterinary Medical Association (AVMA), was established in 1936. It is awarded annually to a member of the AVMA upon selection of the AVMA Executive Board, in recognition of outstanding service by one who has contributed to international understanding of veterinary medicine. Nominated by Professor of Microbiology and Chairman of the Department of Microbiology, James H. Gillespie (Dorsey Bruner’s successor) in 1972, and endorsed in writing by every member
of the department, Dorsey W. Bruner was commended to the executive board, and by acclamation was awarded the prize in 1972.

Dorsey received a citation for outstanding work in science from Albright College in 1949. He is listed in *Who's Who in America, American Men of Science*, and *Who’s Who in Science*.

Dorsey served as Chairman of the Bacteriology and Mycology Study Section, National Institutes of Health, between 1962-66, and as a member of the Training Grant Committee in the same organization, 1968-72. He was a Charter Diplomate of the American College of Veterinary Microbiologists, a Diplomate of the American Board of Microbiologists, a member of the American Society of Microbiologists, and of the Society for Experimental Biology and Medicine. Further, he held memberships in the American Association for the Advancement of Science, the American Veterinary Medical Association, the New York State Veterinary Medical Society, and also the Societies of Pi Gamma Mu, Sigma Xi, Phi Zeta, and Phi Kappa Phi.

Dorsey retired on June 30, 1972 and was named Professor Emeritus of Microbiology by the Trustees of Cornell University. His independent, orderly, visionary, and well-disciplined life style, and his tenacious, critical attention to detail, especially in the laboratory, have left preeminent imprints, particularly in his graduate students and colleagues who probe the mysteries of the silent, invisible world of the microbes, which, according to Dr. Paul De Kruif “occupies that hazy borderland between life and lifelessness”.

*Roger J. Avery, S. Gordon Campbell, James H. Gillespie, George C. Poppensiek*