15/5/27
Liberal Arts and Sciences
William C. Rose Papers, 1923-1962, 1966

Tape Transcript
March 10, 1966 - one reel - 3 3/4 speed

1-3 Identification of tape.

4-24 Youth. Birth, April 4, 1887 at Greenville, S.C. Son of a Presbyterian minister. Moved to North Carolina at age 4. Educated in private schools. Father's education and private instruction of his son.

25-35 Davidson College. Interest in Chemistry stimulated by his sister's copy of Ira Remsen's chemistry textbook. Graduation in 1907.

36-89 Yale University. Specialization in biochemistry under Prof. Lafayette B. Mendel, a pioneer in biochemistry. Mendel followed Russell H. Chittenden, director of the Sheffield Scientific School. Ph.D. in 1911 in biochemistry. Yale was preeminent in biochemistry. Chittenden had been trained by Dr. Samuel Johnson at the Yale Agricultural Experiment Station. He went to Strasburg and later to Heidelberg, where he worked under Prof. Kuhne. At Yale, he formed the first American department of biochemistry. Mendel was his outstanding student. Mendel studied at Freiburg and Breslau. Each year about 12 were taking graduate work in biochemistry at Yale. Assistantship in Mendel's laboratory at $300 a year. Mendel secured simple analytical jobs for Mr. Rose. In 1908, Mr. Rose served as an analytical chemist at the Middleton State Hospital for the Insane, where he analyzed coal and water.

90-105 University of Pennsylvania. Appointment as instructor in the Department of Biochemistry under Dr. A.E. Taylor. Taylor had studied under Emil Fischer at Berlin. Dr. Taylor suggested that Dr. Rose Study in Germany. Pennsylvania paid his salary from February to August, 1913, while he studied under Dr. Franz Knoop at Freiburg.

106-116 University of Texas. Appointment as associate professor of Biological Chemistry, where biochemistry was being organized in the College of Medicine at Galveston. Dr. Taylor insisted that Dr. Rose accept the offer.

117-159 University of Illinois. Visit to Illinois. Not favorably impressed by Dean K.C. Babcock, but Prof. Samuel W. Parr and other chemists persuaded him to accept an appointment as successor to Dr. H.B. Lewis who had gone to Michigan. Favorably impressed by the University and the Chemistry Department's reputation as one of the top two or three in the country. Dr. Noyes was primarily responsible for the reputation at that time.

160-196 Biochemistry. In 1936, the divisional name was changed from physiological chemistry to biochemistry. Biochemistry is usually in the College of Medicine.

1942-45, Acting head of Chemistry Department. Preferred teaching and research to

administration.

1953, Research professorship freed Dr. Rose from divisional administrative duties.

1955, Retirement. Celebration at a symposium

197-252 Seminars and Students. In Mendel's two-hour seminar, each graduate student gave a weekly 10-12 minute talk. Center of teaching activity. Dr. Rose sought to duplicate the procedure at Illinois. Students read and reported on papers in biochemistry. Grading systems. Guided discussion by students. Wendell Griffith and Edward Doisy were Lewis' students. Wendell M. Stanley was Adams' student. Du Vigneaud had graduate courses in biochemistry.

253-259 Hektoen lecturer.

260-307 Amino Acids. Identification and isolation of threonine. Which amino acids were necessary for life? Which could be synthesized by the animal organism? Feeding purified amino acids to animals. Prof. Rose's experiments involved the most complete diets. All known amino acids were used. Isolation of the unknown amino acid required three years of hard labor. The acid was identified and named threonine. Isoleucine tended to complicate the problem of analyzing the proteid. Rats were used in the experiments as the acids were expensive to prepare, and human beings required too much.

308-318 At Illinois, the department has an organic manufactures unit. Students worked in production of rare chemicals for the staff and for sale.

319-337 Journal of Biological Chemistry. Threonine article (1936). Threonine and seven other amino acids were necessary for man. Laboratory animals also require histidine and arginine.

338-353 Analysis of chemical reactions brought about by the animal body.
Alpha-keto analogues could replace some amino acids

354-369 Pepsin and creatine. Pepsin work at Yale, Middletown Hospital. Creatine-creatinine metabolism was Dr. Rose's graduate thesis topic at Yale and he worked on it for a number of years thereafter.

370-429 Honors and Awards.

1936- Membership in the National Academy of Sciences. Amino acids work was probably responsible.
1938- Hektoen Lecturer
1947- Grocery Manufacturer's Award
1949- Osborne-Mendel Award, first recipient
1952- Willard Gibbs Medal of the American Chemical Society
1957- Charles F. Spencer Award of the Nutrition Foundation. $1,000 awards to an interesting group.

Honorary degrees
1947- Davidson
1947- Yale

1956- Chicago
1962- Illinois
1939-41, President of American Society of Biological Chemists
1945-46, " " " Institute of Nutrition
1959- , Fellow " " " " "

430-442 World War I. World War I, teaching medical students in Texas. Texas refused to release him for army nutrition work

443-485 World War II.
1942-45, Served as acting head of Chemistry Department
1944-49, Consultant to Public Health Service, Army and Navy
1942-46, Consultant to Food and Nutrition Board of the National Research Council. Food for civilian population

National Advisory Health Council of the Public Health Service reviewed requests for grants

486-547 Research Support. Shift to federal support. Ease of securing funds. Ca. 1925, trip to New York begging for help from foundations. A year later, representatives of the Rockefeller Foundation offered about $1200 if the University would supply $1,800. Rockefeller Foundation grants continued for many years. Kinley provided the initial university contribution. Foundation support "was absolutely indispensable." Work on human use of amino acids was supported by the Nutrition Foundation. Later grants by the Army.

548-561 Department of Chemistry. Noyes, Adams, Rodebush, Marvel, Bailar and Clark

562-684 John R. Young. John R. Young, pioneer Pennsylvania biochemist. Location of 1805 manuscript. Work on frogs preceded work by Dr. Alexander Beaumont. 1918- Dr. Howard A. Kelly of Johns Hopkins investigated Young. Used the work of Young in class lectures at Illinois. Young disagreed with Dr. Benjamin Rush. Publication of the Young story.

685-712 Students. Most graduate students went into research or teaching in biochemistry. Pre-medical students took the undergraduate course. Students came from many other departments.

713-761 Presidents. Neighbors were Chase, Daniels, Willard, Stoddard and Henry. Willards made the first social call on the Roses. Close friends. President's House.

762-779 Graduate College. Dean Ridenour secured more graduate funds and made more effort to get them.

780-818 Textbooks. Biochemistry texts. At Yale, translation of Hammarsteen's text used at Upsaala. A later text was by Dr. Phillip B. Hawk of Yale and Illinois. Texts repeated lectures of graduate faculty and gradually became less useful as the field changed rapidly.