

Florence Barbara Seibert papers, 1920-1977
1920-1977
Mss.B.Se41

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Summary Information

Repository	American Philosophical Society
Creator	Seibert, Florence Barbara, 1897-
Title	Florence Barbara Seibert papers, 1920-1977
Date [inclusive]	1920-1977
Call number	Mss.B.Se41
Extent	4.0 Linear feet Ca. 5000 items
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Location	LH-B-23-9
Language	English
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Abstract	<p>This collection contains correspondence and reports and documents Florence Seibert's work at Yale University, under Lafayette Benedict Mendel; at the University of Chicago, under H. Gideon Wells; and at the Henry Phipps Institute at the University of Pennsylvania, 1932-1959. There are cancer research folders concerning her later work at the Mound Park Hospital Foundation and the Bay Pines V. A. Center, in St. Petersburg, Florida. There are also substantial amounts on Goucher College (her alma mater); Lilly Research Laboratories; Merck, Sharpe & Dohme; and Parke, Davis & Company.</p>

Background note

Florence Barbara Seibert is a biochemist and has spent her professional life researching the chemistry and immunology of tuberculosis and cancer, as well as conducting pioneering work on pyrogens.

Administrative Information

Publication Information

American Philosophical Society

Provenance

Acquisition Information

Presented by Florence Barbara Seibert, 1976, 1977; accessioned 01/05/1976 (1976 387ms). See in-house shelf list for additional accession numbers and dates.

Indexing Terms

Corporate Name(s)

- Goucher College.
- Lilly Research Laboratories.
- Merck Sharp & Dohme.
- Mound Park Hospital Foundation.
- Parke, Davis & Company.
- University of Chicago.
- University of Pennsylvania.
- Woman's Medical College of Pennsylvania.
- Yale University.

Personal Name(s)

- Affronti, Lewis F., 1928-
- Anderson, Rudolph John , 1879-1961
- Baldwin, R. W. (Robert William), 1927-
- Cohn, Edwin Joseph, 1892-1953
- Diller, Irene Corey, 1900-
- Dunbar, Frank P.
- Eagle, Harry, 1905-

- Heidelberger, Michael, 1888-1991
- Horsfall, Frank Lappin, Jr., 1906-1971
- Landsteiner, Karl, 1868-1943
- Long, Esmond R., (Esmond Ray), 1890-
- Mendel, Lafayette B., (Lafayette Benedict), 1872-1935
- Opie, Eugene L., (Eugene Lindsay), 1873-1971
- Palmer, Carroll Edwards, 1903-1972
- Pedersen, Kai Oluf, 1901-
- Sabin, Florence Rena, 1871-1953
- Sumner, James B., (James Batcheller), 1887-1955
- Svedberg, Theodor, b. 1884
- Tiselius, Arne, 1902-
- Watson, Dennis Wallace, 1914-
- Wells, Harry Gideon, 1875-1943
- Williams, John Warren, 1898-1988
- Winzler, Richard J., 1914-1972

Subject(s)

- Biochemistry.
- Immunology
- Medical sciences.
- Pyrogens.
- Tuberculosis.
- Women scientists.

Other Descriptive Information

The papers of Florence Barbara Seibert -- correspondence, reports, and manuscripts -- afford an opportunity to learn a great deal about Seibert's work on the tubercle bacillus at the Phipps Institute of the University of Pennsylvania (1932-1959). Her fundamental studies, which combined theories and techniques of protein chemistry, microbiology, and immunology established an international standard for diagnosis of tuberculosis and led to methods for a safe use of intravenous medication and blood transfusions. The collection also contains material on Seibert's later interest in cancer research at the Veterans' Administration Hospital in St. Petersburg, Florida. Taken together, these two research programs document interesting aspects of basic biochemical research within a medical context.

Because of its clinical relevance, Seibert's research on the tubercle bacillus was of immense interest to pharmaceutical houses. Her papers are therefore a valuable source on the cooperation between academic biochemists and the drug industries.

The Seibert Papers are also an important source on the history of women in science. A graduate of Goucher College (1920), Seibert received her doctorate from Yale in 1924 under Lafayette B. Mendel.

She then joined H. G. Wells at the biochemistry department at the University of Chicago, where she worked until her move to the Phipps Institute in 1932. A recipient of several prestigious awards and fellowships, Seibert has been rather atypical as a woman scientist of the 1920s and 1930s in terms of recognition (though she did not attain full professorship until 1955, long after her accomplishments had established her as a leading expert in her held). A highly productive scientist, she was well connected within the international community of biochemists. She was also committed to the cause of women in science and communicated with other women working in the life sciences. The correspondence reflects her secure place in the main-stream of biochemistry, as well as her special position as a woman in science.

Author	Format	Date	Language
American Association of University Women	Correspondence (2 folders)	1943, 1972	English
American Chemical Society (<i>Includes material on Seibert's Garvan Gold Medal.</i>)	Correspondence (4 folders)	1942-1977	English
Anderson, Rudolph John, 1879-1961	Correspondence (10 items)	1934-1950	English
Cohn, Edwin J. (Edwin Joseph), 1892-1953 (<i>Scientific correspondence.</i>)	Correspondence (2 folders)	1934-1947	English
Diller, Irene Corey, 1900-1988 (<i>Scientific and personal communications.</i>)	Correspondence (11 folders)	1954-1973	English
Edwards, Lydia B.	Correspondence (9 folders)	1942-1972	English
Goucher College	Records (6 folders)	1914-1976	English

Guggenheim Fellowship (<i>On Seibert's fellowship to Theodor Svedberg's laboratory in Uppsala.</i>)	Correspondence (2 folders)	1928-1942	English
Heidelberger, Michael	Correspondence (2 folders)	1931-1944	English
Hopkins, Frederick Gowland, Sir, 1861-1947	Correspondence (3 items)	1928-1931	English
Landsteiner, Karl, 1868-1943	Correspondence (7 items)	1934-1941	English
Eli Lilly Research Laboratories (<i>On supply of filtrates.</i>)	Correspondence (2 folders)	1934-1956	English
Long, Esmond R. (Esmond Ray), 1890-1979 (<i>Documents Seibert's work with pharmaceutical companies. Scientific and administrative correspondence.</i>)	Correspondence (18 folders)	1924-1974	English
Mendel, Lafayette B. (Lafayette Benedict), 1872-1935	Correspondence (4 folders)	1920-1934	English
Merck, Sharpe, and Dohme (<i>Informative on contracts, equipment, and production.</i>)	Correspondence (8 folders)	1926-1968	English

Parke-Davis and Company (<i>Informative on contracts, equipment, and production.</i>)	Correspondence (6 folders)	1932-1975	English
Pedersen, Kai Oluf, b. 1901	Correspondence (24 items)	1938-1975	English
Richards, Alfred N. (Alfred Newton), 1876-1966	Correspondence (7 items)	1943-1945	English
Sabin, Florence Rena, 1871-1953 (<i>Primarily scientific correspondence.</i>)	Correspondence (5 folders)	1933-1951	English
Sumner, James B. (James Batcheller), 1887-1955	Correspondence (22 items)	1937-1955	English
Svedberg, Theodor, b. 1884 (<i>Contains material on Svedberg and his laboratory, documenting the connection between Seibert's biomedical research and Svedberg's laboratory.</i>)	Correspondence (2 folders)	1932-1949	English
Tiselius, Arne, 1902-1971 (<i>Documents the technological and social aspects of Seibert's collaboration with Tiselius and his group in Uppsala. After her return to the United States, Seibert's correspondence with Tiselius enabled her to build</i>	Correspondence (5 folders)	1938-1961	English

her own electrophoresis equipment in 1939. She remained close to Tiselius and his family, and these scientific and social contacts are well documented in the Tiselius files.)

Trueblood, Emily W. Emmart (<i>Filed as "Emmart, Emily W."</i>)	Correspondence (23 items)	1944-1945	English
University of Pennsylvania	Correspondence (4 folders)	1934-1958	English
Wells, Harry Gideon, 1875-1943	Correspondence (26 items)	1923-1943	English
Williams, John Warren, 1898-1988 (<i>Seibert purchased an ultracentrifuge in 1938 and carried on extensive correspondence with Williams related to that technology, as well as about her newly acquired electrophoresis apparatus. During the war Williams engaged in the blood fractionation project (designed by Edwin J. Cohn) for preparing globulins and serum albumins. Williams'</i>	Correspondence (6 folders)	1938-1948	English

*correspondence in the
Seibert Papers further
documents interesting
aspects of that important
project.)*

Additional Biographical Notes:

When Theodor Svedberg became professor of physical chemistry at the University of Uppsala in 1912, colloid chemistry was a major new research area in the life sciences. Based on the premise that a colloidal or aggregate state was a fundamental property of living matter, especially of protoplasm, chemists, among them Svedberg, focused on physicochemical studies of bio-colloids.

The goal of analyzing the aggregate properties of colloids was partly responsible for Svedberg's design of the analytical ultracentrifuge, an enormous machine that separated colloidal solutions into components based on a differential rate of sedimentation in a force field. The ultracentrifuge, designed in the 1920s in collaboration with John W. Williams of the University of Wisconsin, was crucial in demonstrating the macromolecular theory and became a powerful sorting and weighing device in molecular research. In 1926 Svedberg was awarded the Nobel Prize for chemistry.

Until the late 1930s Svedberg's laboratory was the only place for studies requiring ultracentrifugation; it became an international center for a wide range of researches from physical chemistry to medicine. The Seibert Papers contain material on Svedberg and his laboratory, documenting the connection between Seibert's biomedical research and Svedberg's laboratory. Seibert's correspondence with the Guggenheim Foundation contains material relating to her fellowship in Uppsala.

Arne Tiselius was the protege of Theodor Svedberg at the University of Uppsala. His dissertation on the electrophoresis of colloidal proteins (1930) was an outgrowth of Svedberg's ultracentrifuge studies. It was well known since the 1900s that proteins carried different electric charges and could therefore be separated out of mixtures by applying an electromotive force. Several biochemists before Tiselius, including Karl Landsteiner, John H. Northrop, and Leonor Michaelis, had attempted to build electrophoresis apparatus, but were hindered by technical difficulties. In 1937, partly through collaborations with these men, Tiselius substantially improved on the original design, building a sensitive and reliable apparatus which quickly became indispensable to biochemical research. As a result, Tiselius' laboratory in Uppsala became in the late 1930s a world center for research and training in the intricate techniques of electrophoresis. He was awarded the Nobel Prize in chemistry in 1948.

John W. Williams' most important contribution to chemistry lay in his design and construction of laboratory apparatus. The theoretical and experimental research on the ultracentrifuge and electrophoresis facilitated major advances in almost every field in the life sciences, especially in biochemistry, immunology, and molecular biology. Beginning around 1922 at the University of Wisconsin, Williams collaborated with the Swedish chemist Theodor Svedberg (during Svedberg's visit to Wisconsin as a Rockefeller Fellow) on the first prototype of the ultracentrifuge. The mathematical theories behind the apparatus were worked out by the physicist Warren Weaver, who left Wisconsin to become the director of the Rockefeller Foundation's division of natural sciences. Williams' ultracentrifuge projects received

sizable grants from the Rockefeller Foundation, and his laboratory was the first academic center in America to house an ultracentrifuge (1937), thus becoming an important research and training center in the life sciences.