

BERNARD BECKER (1920-2013) THE MAN, THE SCIENTIST, THE PHYSICIAN: His life and his contribution to the Diagnosis and Treatment of GLAUCOMA

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INTRODUCTION:

Bernard Becker (1920-2013) was a giant of Ophthalmology, a tireless and meticulous scientist dedicated to the research, diagnosis, and treatment of glaucoma. In this presentation, we unfold his scientific route in every field of Ophthalmology. With his work and insight, he established himself as the most severe specialist in glaucoma during the 20th century. He loved the ophthalmologic heritage and rare books, and he founded and became famous for the library that brings his name: Bernard Becker Medical Library Collections



EDUCATION AND CAREER

Bernard Becker (August 21, 1920 – August 28, 2013) He was born in Brooklyn, New York City. By the age of 3, Bernard Becker could read and do math — long division and multiplication in his head. He was astonished the other children could not do the same. He was so far advanced in elementary school that he received a double promotion in grade, and from that point he was always the youngest in his class, but still ranked No. 1 academically in high school, university, medical school and residency. At the age of 17, he entered Princeton University on a full tuition scholarship, but lacking money for food and books, he tutored fellow students to earn the necessary money.

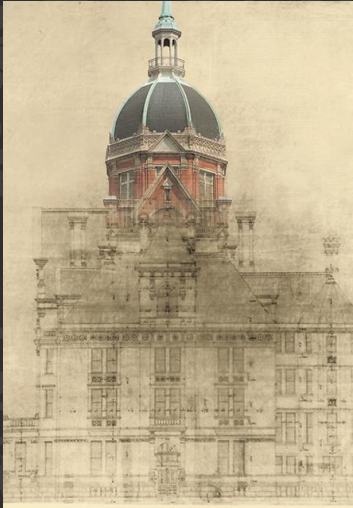
Albert Einstein asked him to tutor his nephew. After Princeton, Dr. Becker attended Harvard Medical School and, for residency, Johns Hopkins Wilmer Institute. At the end of his third year of residency, he married Janet, who remained his wife for 63 years, until his death. He was interested in biochemistry and research, but he also served in the US Army Medical Corps as a psychiatrist before completing his ophthalmology training at John Hopkins University (1945). In his oral story says: "...They made me a psychiatrist in three months at NYU. They needed psychiatrists behind the front lines for the invasion of Japan, to rehabilitate people immediately and send them right back...."

In New Haven, he had the chance to spend evenings and weekends at Yale working in a laboratory and he was much interested in the new specialty of enzyme histochemistry. This combined concepts of enzymes and biochemistry with histology.

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While working at Yale, he met the most outstanding histochemist following a lecture he was invited to give, and his name was Jonas Friedenwald. He invited him to John Hopkins after his discharge from the military. Jonas Friedenwald was a famous ophthalmic and general pathologist.

In 1953 he was recruited as full-time chair of the department of ophthalmology, becoming the youngest chair at Washington University School of Medicine. When he joined the department, there was no formal residency training. The residents were required to read DukeElder's textbook and examine the patients primarily with a pen light. Many of his students and residents and junior faculty became leaders in every field of Ophthalmology, nationally and internationally.



Johns Hopkins Hospital, Baltimore, Maryland (early design)



The "Christus Consolator" or "The Divine Healer" statue is located in the lobby of the domed Billings Administration Building at The Johns Hopkins Hospital.



Jonas Stein Friedenwald, 1964, Oil on canvas
By Leonard M. Bahr ,46 x 32.5 in

Friedenwald (1897-1955), an ophthalmologist at Johns Hopkins, was born in Baltimore and became the third generation in the Friedenwald family line of ophthalmologists. He graduated with distinction from Johns Hopkins University in 1916, finished medical school at the Johns Hopkins University School of Medicine in 1920, and spent a year as an intern at The Johns Hopkins Hospital. Friedenwald next earned a master's degree in ophthalmic pathology at Harvard University and served a year on the staff of the outpatient clinic at the Hospital of the University of Pennsylvania.

BERNARD BECKER MEDICAL LIBRARY

Established in 1911, Bernard Becker Medical Library is one of the oldest and most comprehensive medical libraries. Becker's contributions to the School of Medicine extend far beyond the Department of Ophthalmology. In addition to playing a major role in advancing the physical facilities, clinical activities and scientific programs of the School of Medicine, Becker championed the cause of the School of Medicine's library and played a major role in the design and construction of the current library building, completed in 1989. The library was renamed in his honor in May 1995. The Bernard Becker Collection in Ophthalmology and Optics, one of the finest collections of rare books on ophthalmology and the visual sciences, which was personally acquired by Becker, is a major component of the library's internationally recognized rare book collections.



HIS WORKS

Bernard Becker had a rich scientific life. Every ophthalmologist knows his monumental treatise 'Becker-Shaffer's Diagnosis and Therapy of Glaucomas,' and he studied, announced and published a huge number of scientific works. He discovered the drug acetazolamide and the mechanisms of glaucoma. A recipient of numerous academic awards and the author of many scientific publications, Becker's career was characterized by a steadfast devotion to excellence in biomedical research, patient care and clinical teaching.



Petrus Linceus (d. 1306). *Libro de locchio morale et spirituale vulgare*. Venice: Joannes Rubeus, 21 May 1496. (Title page illustration) Woodcut

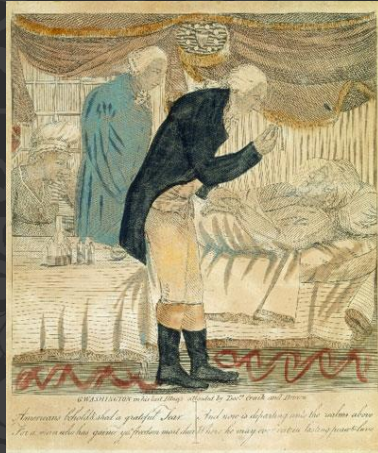


François de Aguilon. *Opticorum libri sex philosophis juxta ac mathematicis utiles*. Antwerp: Ex officina Plantiniana, apud Viduam et filios J. Moreti, 1613. (Page 195) Copperplate.

This engraving of putti demonstrating the "horopter" is from *Opticorum libri sex* (Six Books of Optics) by François de Aguilon. The illustrations throughout the book are by the great Flemish Baroque painter, Peter Paul Rubens (1577-1640).

RESULTS

Bernard Becker was a multifaceted personality. He started with chemistry and mathematics, received a scholarship to attend Harvard Medical School, and maintained his interest in chemistry. During World War II, he served in the US Army Medical Corps. Becker was interested in applying histochemistry techniques to medical research. Jonas Friedenwald invited him to join his laboratory at Johns Hopkins University, where he did his training in ophthalmology. After his residency, he went to the Washington University School of Medicine in St. Louis. He kept the Chair of Ophthalmology for 35 years and transformed the small department into a true academic center with an international reputation.



CONCLUSION

Dr. Becker was one of the world leaders in studying the pathogenesis and treatment of glaucoma. He and Dr. Robert Schaffer published a textbook on glaucoma, one of the classics of ophthalmic literature: Becker-Shaffer's Diagnosis and Therapy of the Glaucomas. Dr. Becker studied many diseases, including diabetes and thyroid disease. He studied the physiology and biochemistry of the eye and published more than 400 articles in those fields. Dr. Becker had a deep knowledge of ophthalmology and medicine. He collected rare medical books and manuscripts and donated his collection to the Washington University Medical School Library (The Bernard Becker Medical Library). He received many awards during his career, including the Friedenwald Award, the Proctor Medal, the Helen Keller Award, and the Laureate Award of the American Academy of Ophthalmology. Bernard Becker was of the founding members of the 'Classics of Ophthalmology' Editorial Advisory Board, publishing series.

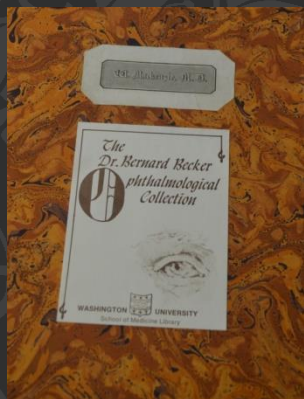
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...AND HIS WORDS ABOUT HIS BOOK COLLECTIONS

“My love for reading and delight in browsing through libraries and rare book shops have occupied large segments of my free and travel time. A natural consequence of this hobby was the modest purchase of occasional gems that intrigued and interested me. This permitted further study at home in leisure moments. When the acquired items filled all available corners of my study, and even some extra bookcases, I found it necessary to develop an alphabetical list of authors. It never occurred to me, however, that this was more than just personal fun and an exciting hobby.

As the collection grew, I began to feel rather selfish about the possession of these rare and sometimes unique books and developed the need to share the experiences they offered with others. To my surprise I found I have accumulated over 600 volumes! It seemed most appropriate to transfer them to the Medical School Library. I am very grateful to the Medical School for providing me the opportunity to share my hobby and its delights with all who are interested.”



THERE IS NO ANY FINANCIAL
INTEREST
FROM THE AUTHORS

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