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The Enduring Legacy of Sir Henry Wellcome—Pharmaceutical Entrepreneur, Philanthropist, and Collector *Extraordinaire*

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The life of Sir Henry Solomon Wellcome (1853-1936), American-born pharmacist, entrepreneur, and philanthropist, is discussed. With partner Silas M. Burroughs, Wellcome cofounded the pharmaceutical firm of Burroughs Wellcome & Co. (later changed to the Wellcome Foundation Ltd.) in London in 1880. After his partner's death, Wellcome led his company to worldwide prominence in the pharmaceutical industry, also establishing institutions for research in physiology, chemistry, tropical medicine, and other areas. Keenly interested in travel, archaeology, and the history of medicine, Wellcome amassed a huge collection of medical artifacts, many of which can still be seen at the Wellcome Museum of the History of Medicine, London. Upon his death, Wellcome's will established the Wellcome Trust, which remains the largest general medical research charity in the UK.

Americans are quite familiar with the foundations created by such figures as Ford, Rockefeller, Carnegie, Sloan, and more recently by Hughes and MacArthur. However, we tend to be rather provincial about our knowledge of foreign foundations. Most countries have several outstanding philanthropic organizations that support research. Not the least of these is the Wellcome Trust.

I had shared my compatriots' ignorance of this organization. And I was particularly intrigued to learn quite recently that the partners behind this organization were not only born in the US but had in fact begun their careers at our own Philadelphia College of Pharmacy and Science about a century ago.

My fascination culminated in a visit to the Wellcome Museum of the History of Medicine, which forms an integral part of the Science Museum in London. This visit preceded a talk delivered to the Biological Council of the UK, a coordinating organization for more than 100 professional biology societies. The venue was the Royal Entomological Society in Queen's Gate—just a short walk from the museum.

Some years ago we discussed the extensive and intriguing art collection of Philadelphian Albert C. Barnes (1872-1951).¹ A controversial figure to say the least, Barnes

amassed great wealth by manufacturing a disinfectant known as Argyrol. He used that wealth to build a collection of distinguished art, including one of the best collections of French Impressionist paintings.

Another philanthropist who combined great success in industry with a passion for collecting was Sir Henry Wellcome (1853-1936). An American-born pharmacist and entrepreneur, he built a worldwide pharmaceutical organization at the end of the last century—an organization that continues to thrive today.

Wellcome was keenly interested in archaeology and in the history of medicine. This interest was manifested in his vast, cross-cultural collection of medical literature and artifacts. Although the Wellcome collection of instruments and other objects is too large and diverse to be exhibited in its entirety, a sizable portion is on public display, providing an exceptionally detailed look at the history of science and medicine. His collection of books, manuscripts, paintings, prints, and drawings forms the nucleus of the Library of the Wellcome Institute for the History of Medicine.

Wellcome was also highly committed to using his wealth for the common good. In the words of Sir John R. Vane, the 1982

Nobel laureate in physiology or medicine, who was associated with the Wellcome company for 12 years, Wellcome believed in "the cardinal importance of scientific research as an aid to human—and animal—health."² This belief was reflected in the specific instructions in his will. It survives today in the form of the Wellcome Trust, a major source of funding for international scientific and medical research.

Early Years

Henry Solomon Wellcome was born in rural Wisconsin on August 21, 1853.³ His father was a farmer and an Adventist preacher. When Henry was eight, his family moved by wagon train from Wisconsin to Garden City, Minnesota. Midwest America was still a frontier at that time, and Indians posed a constant threat to the encroaching white settlers. Not long after Henry and his family arrived in Garden City, the neighboring tribes staged an uprising in which thousands of settlers and Indians were killed. As journalist Helen Turner notes in *Henry Wellcome: The Man, His Collection and His Legacy*, the plight of displaced American Indians inspired great sympathy in young Henry, and later in life he became an active supporter of programs promoting their welfare.⁴ (p. 5) He also wrote an account of an Indian Christian missionary settlement, *The Story of Metlakahla*, and donated all the book's profits to that community.

It All Began in Philadelphia

It was in Garden City that Wellcome had his first exposure to the pharmaceutical business, in the local drugstore owned by his uncle Jacob. He soon moved to the neighboring town of Rochester, taking a job with the pharmaceutical firm of Pool and Geisinger. There, as company historian Gilbert Macdonald notes in *Wellcome: In Pursuit of Excellence*, he was befriended by physician William Mayo, whose sons would later found the famous clinic of that name in Rochester.⁵ (p. 5) With Mayo's encouragement and assistance, Wellcome attended the Chicago College of Pharmacy, Illinois, and later the Philadelphia College of Pharmacy, from which he graduated in 1874.

As Turner notes, upon his graduation Wellcome faced a choice between making money fast in the rapidly expanding West, or remaining in the East to learn more about business methods. He chose the latter course and took a position with the New York pharmaceutical firm of Caswell Hazard & Co.⁴ (p. 6) He also joined the American Pharmaceutical Association and became an active member, reading several papers at meetings and generally increasing his visibility in the profession. In 1876 he accepted a position as a salesman with the leading pharmaceutical firm of McKesson & Robbins. This job, promoting the company's new line of gelatin-coated pills, allowed him to travel widely. He made a number of trips to remote regions of Central and South America, where he studied the therapeutic properties of medicinal plants.³

Enter Silas M. Burroughs

In 1879 Wellcome, by then well known in the pharmaceutical industry, received an offer from a fellow alumnus of the Philadelphia College of Pharmacy—Silas M. Burroughs. Burroughs had been sent to London the year before as an agent for the Philadelphia firm of John Wyeth & Brother, and he invited Wellcome to join him in England to form a partnership. Both men knew that the opportunity was ripe for the introduction of "compressed medicine" into the UK. In England at that time, as Macdonald notes, it was still "the day of the potion, the pestle and the pill," and there was a vast potential market for the new compressed-drug technology that had been developed in the US.⁵ (p. 8)

Although Wellcome, who had other options to consider, did not immediately act on the offer, he left his employment with McKesson & Robbins and went to England with the agreement that he could act as sole agent for their products in the UK and all other countries outside the US.⁵ (p. 7) The terms of his agreement permitted him to associate with partners, and in September 1880 Wellcome and Burroughs signed a deed of partnership, establishing the firm of Burroughs Wellcome & Co.⁴ (p. 8)

Both men worked tirelessly for their new venture. As Macdonald notes, each pos-



Sir Henry Wellcome

sessed strong, if different, personalities. Wellcome was a frugal man, a perfectionist who could be immovably obstinate once he had made up his mind. Burroughs, who was outgoing and deeply interested in the social and economic problems of the day, was extremely dedicated to the welfare of company employees. He was one of the first employers in the UK, for example, to introduce an eight-hour day. He also encouraged the staff to take up outside pursuits, such as music and literature, and set up an education plan enabling employees to attend a technical institute near the company's plant in Dartford. As Macdonald notes, Burroughs's enlightened, committed attitude toward employee welfare was considerably ahead of its time.⁵ (p. 19)

Unfortunately, relations between Wellcome and Burroughs grew sour and increasingly contentious in the course of their 15-year partnership. Turner notes that the problem, in all likelihood, was jealousy, with senior partner Burroughs attempting to thwart Wellcome's insistence on complete control of the business.⁴ (p. 12) In any event, Burroughs died of pleurisy in 1895 in his 49th year, leaving Wellcome in sole charge of the company. However, it is important to point out that Burroughs played a major role in the success of the firm. In the first 15 years of a new venture, patterns are established that have effects for generations. While Wellcome is the principal sci-

entific character in our story, Burroughs deserves to be remembered for the management style he pioneered.

The Wellcome Foundation Ltd.

As the nineteenth century ended, Burroughs Wellcome & Co. gained prominence in the pharmaceutical industry. The firm marketed a variety of compressed drugs and other products under the trademark "Tabloid" (a term coined by Wellcome). Wellcome displayed a genius for promotion and publicity, designing elaborate displays for trade shows and cultivating relationships with physicians and pharmacists. The company supplied quinine and other medicines in tabloid form to missionaries and explorers, including the African explorer H.M. Stanley.³ (Later the company would furnish medical supplies to, among others, aviator Charles Lindbergh and astronauts on the Apollo moon missions.) In 1924, with the company prospering in the UK and abroad, Wellcome consolidated his various enterprises into one private company, which he named the Wellcome Foundation Ltd.

The US branch of the organization, Burroughs Wellcome Co. (as it's still known today) was founded in New York City in 1906 and later moved to Tuckahoe, New York. In 1970 the company relocated to North Carolina, with manufacturing facilities in Greenville and research and corporate headquarters in Research Triangle Park.

By 1924 Wellcome had overseen the founding of several facilities in England devoted to research. These included the Physiological Research Laboratories, Kent, founded in 1894, which performed investigations in bacteriology, pharmacology, and veterinary medicine, among other areas. There were also the Chemical Research Laboratories, London (1896), which, in the words of a 1933 Wellcome publication, were established to perform research "particularly in connexion with organic, organo-metallic, and synthetic medicaments."⁶ (p. 9) Henry Wellcome also took a deep interest in tropical diseases. During a visit to the Sudan in 1900, he witnessed firsthand the effects of malaria, cattle dis-

ease, and other tropical ailments and the concurrent famine among the populace. He immediately set about establishing a tropical research laboratory at the Gordon Memorial College in Khartoum. This facility eventually included a fully equipped floating laboratory on the river Nile.⁶ (p. 11) In 1920 the Entomological Field Laboratories were established in Surrey to investigate mosquitoes and other insect pests.⁶ (p. 9) They were a subsidiary of the Wellcome Bureau of Scientific Research, which had been founded in London in 1913.

By the end of the 1920s Wellcome was increasingly spending time on his various interests. One of these was archaeology. At one site in the Sudan, known as Jebel Moya, Wellcome had spent the better part of four years between 1910 and 1914 organizing and supporting an army of native laborers that eventually numbered 3,000. The effort unearthed significant artifacts dating from 1000 to 400 BC.⁴ (p. 24)

Wellcome had always been intensely interested in anthropology and archaeology—beginning with his boyhood observations of the American Indians—and he had always collected objects. As Turner notes, even before Wellcome arrived in England in 1880 he had amassed a museum-quality collection of anthropological objects possessing, as he put it, “strong medical significance.”⁴ (p. 38) While his early collecting may have been for his own interest and amusement, by 1900 Wellcome was increasing his collection with a more serious goal in mind: a museum of the history of medicine. He traveled extensively in Europe in the years preceding World War I, adding to his collection. He had married Gwendoline Syrie Barnardo in 1901, but the constant travel to places she “detested” in search of curios was apparently one factor in the couple’s 1910 separation and eventual divorce. Wellcome was granted custody of the couple’s son Mounteney (1903-1987).⁴ (p. 30-1) Despite Wellcome’s hopes, his son did not follow him into the business.

The failure of his marriage strongly affected Wellcome, who, although he had friends and enjoyed social engagements, was by most accounts a remote man towards the end of his life. “Henry Wellcome... was cu-

riously lonely,” observed a close associate following Wellcome’s death. “It may be doubted whether anyone knew him with sufficient intimacy to do more than speculate as to his real feelings and motives.”⁴ (p. 28) According to Ghislaine M. Skinner, Wellcome Museum of the History of Medicine, Wellcome seldom committed his thoughts to paper. He also exerted tight control over every aspect of his museum venture, particularly in the wording of advertisements, notices, and publications.⁷ This authoritarian approach was apparently typical of his management style. As Turner notes, one of his favorite sayings was, “Never tell anyone what you propose to do until you have done it.” Those people still living who remember Wellcome, when asked for personal reminiscences about him, have surprisingly little to say.⁴ (p. 32) While he may have lacked for a family and close friends, Wellcome took great satisfaction in work, in travel, and in his many interests, including the formation of his museum.

In 1913, after years of preparation, Wellcome opened his collection of medical artifacts as the Wellcome Historical Medical Museum in London. Over the years the collection grew and expanded. As D.C. Watts, Guy’s Hospital Medical School, London, points out, by the time of Wellcome’s death in 1936 the “truly incredible” collection included 10,000 microscopic slides, more than 40,000 surgical instruments dating back to Roman times, over 7,000 coins and medals of medical interest—in all over 125,000 objects.⁸ The collection eventually included dioramas and exhibits depicting significant events in the history of medicine.

But Wellcome’s collection was not confined to medical objects. As Skinner notes, by the 1930s the collection encompassed more than one million objects and included weapons, model ships, fabrics, furniture, statuary, and a variety of antiquities from throughout the world. At one time the collection’s annual expenditures on acquisitions exceeded those of the British Museum.⁷ The entire collection was so large and diverse, in fact, that much of it remained warehoused over the years, unseen by the public. By 1983, however, after an exten-

sive six-year program of cataloging and evaluation, most of the nonmedical items had been dispersed, either to their places of origin or to appropriate museums.⁹

The Wellcome Historical Medical Museum occupied various spaces in its history, moving to the Wellcome Building on Euston Road, London, in 1932. In 1972 the Wellcome Trustees decided it would be best to transfer the collection to a national museum. Appropriate arrangements were made with the Science Museum. Today, the Wellcome Museum of the History of Medicine occupies two galleries at the Science Museum and, as Watts notes, constitutes "the largest and most comprehensive display devoted to the history of medicine anywhere in the world."⁸

Remaining at the Euston Road site is a separate collection, the Wellcome Museum of Medical Science, a facility for researchers and medical historians. As noted by A.J. Duggan, Wellcome Museum, the vast collection of slides, X rays, instruments, specimens, and other objects serves as a valuable resource for students and researchers, particularly in tropical medicine.¹⁰ In fact, the museum was recently renamed the Wellcome Tropical Institute Museum and is in the process of relocating to new quarters across from the Wellcome Building. The museum's displays are being redesigned and specially prepared so that they can be loaned for use in developing countries.

The Wellcome Building also houses the Library of the Wellcome Institute for the History of Medicine. As writer Charlotte Gray points out in the *Canadian Medical Association Journal*, the library is one of the largest of its kind in the world, containing over 400,000 books, 10,000 western and oriental manuscripts, 100,000 letters of medical and scientific interest, and a variety of other documents.¹¹

As Turner notes, Henry Wellcome devoted the last 25 years of his life to amassing his collection with one ambition in mind: the establishment of a Museum of Man.⁴ (p. 2) Unfortunately, he never lived to see his plan fully realized. He died in London in 1936 at the age of 82. He had become a British citizen in 1910 and in 1932 was knighted for his contributions to science and the empire.

The Modern Era

With typical foresight, Wellcome made very specific arrangements in his will for the continuation of his business enterprises, including the museum and research facilities. He created the Wellcome Trust, directing that a board of trustees be empowered as sole shareholders of the foundation. Wellcome's will stipulated that company funds be directed to the advancement of research "which may conduce to the improvement of the physical conditions of mankind," including medicine, surgery, chemistry, physiology, and pharmacy.⁴ (p. 79)

In the half-century since Wellcome died, the Wellcome Trust has become the largest general medical research charity in the UK. The trust's budget for 1985-1986, for example, was in excess of £30 million.¹² (p. 3)

During the 1970s and 1980s, concerned that the trust's assets consisted solely of a holding of shares in a single company, the trustees began seeking ways to diversify.¹² (p. 21) In 1986, the year the Wellcome Trust celebrated its 50th anniversary, the privately held company went public for the first time, offering roughly 25 percent of its stock for sale. The trust now holds 75 percent of the shares in a publicly quoted company and uses dividends to support fellowships, lectureships, and research in a variety of subject areas. These include epidemiology, mental health and neurosciences, tropical medicine and infectious diseases, veterinary medicine, vision research, physiology, pharmacology, and other areas. In the US, the Burroughs Wellcome Fund, established in 1955, has provided approximately \$25 million in grants, fellowships, and awards for the advancement of medical knowledge, particularly research and teaching in clinical pharmacology.¹³

Over the years many researchers associated with the Wellcome Foundation have produced highly cited work and have been featured in our essays. Vane, for example, who wrote about his work in prostaglandins in a 1980 *Citation Classic*[®] commentary,¹⁴ was discussed in the essay on the 1982 Nobel Prizes.¹⁵ He was also mentioned in a 1981 essay on aspirin¹⁶ and in our 1978 se-

ries on the 300 most-cited authors, 1961-1976.¹⁷ Another researcher, Sir James W. Black, well known for his work with beta blockers, was also affiliated at one time with the Wellcome company. Black's work appeared in our 1974 study of highly cited articles in medical and clinical journals.¹⁸ He was also featured in a 1982 essay on recipients of the John Scott Award.¹⁹

The Wellcome company remains a highly visible and profitable concern. For example, the company recently introduced AZT (trade name Retrovir). This drug has shown promise in the treatment of AIDS, although there has been some controversy regarding its side effects and distribution.²⁰ The Wellcome company has also had spectacular

commercial success with acyclovir (Zovirax), a treatment for genital and other forms of herpes.²¹

More than a century after he founded the company, the goals that Henry Wellcome worked for during his lifetime—putting research to work in the service of humanity and educating the public about the history of science and medicine—remain important goals of the Wellcome Trust.

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