A BRIEF HISTORY

of the

GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

University of California, San Francisco, Calif.

"The George Williams Hooper Foundation shall be conducted and maintained in San Francisco, California, and shall be managed as a department of the University of California. The net income of the endowment fund shall be expended in the maintenance and conduct of said School of Medical Research, which shall conduct and carry on investigations in the sciences and arts of hygiene, medicine, and surgery; also in the nature and causes of disease and in the methods of its prevention and treatment, and shall disseminate gratuitously all knowledge so acquired."

So stated the Declaration of Trust, in the outline of purpose, at the birth of the George Williams Hooper Foundation for Medical Research in 1913. On Commencement Day, May 14, of that year, in memory of her husband, a pioneer citizen of San Francisco, Mrs. Sophronia Hooper transferred to the Regents of the University of California certain valuable property in Humboldt County to serve as a Foundation for the "Institute of Medical Research". The formal opening of the Foundation was celebrated a year later on March 7, 1914. The addresses delivered at this occasion have been published in the University of California Chronicle, 1914, Vol. 16, pp. 159-169. In November 1922, at her death, an additional endowment was received from the estate of Mrs. Hooper. At that time, in the United States, the Hooper Foundation would be the only medical research institute associated with a university.

When the Foundation was established, it comprised the only research facilities on the San Francisco campus of the University of California, and according to the trust agreement of the Regents with Mrs. Hooper,
it was entrusted with the obligation of organized research and training, but was relieved of teaching obligations. The Director reported directly to the President of the University, and for ten years had a Board of Trustees of eminent scientists and deans from Eastern medical schools. The President of the University served as chairman. The Board met yearly and advised regarding the budget. This original design of administration was in part lifted from the Rockefeller Foundation and some of the same people served on both Boards of Directors.

Dr. George H. Whipple came from the Johns Hopkins University to be the first Director (1914-1921), and he tells of the difficulties he had obtaining materials to renovate the building and for equipment and supplies. By then, World War I made it impossible to get certain laboratory equipment and chemical dyes, for these were mostly made in Germany at that time. Therefore some equipment was "borrowed" from his department of Bacteriology in Berkeley.

As the first Director Dr. Whipple granted his surgeon friends, who had worked with him at Johns Hopkins Medical School, the use of some animal house facilities provided they would purchase their own dogs, rabbits, and rats. No research was conducted until the director had been thoroughly acquainted with the project, its ultimate purpose, and the capabilities of the clinician. In order to protect the reputation of the Hooper Foundation, no paper based on this research was read or published without the approval of the director. A few clinicians participated as junior investigators on research projects of the Foundation. By 1915 there was a staff of nine and eight volunteer and special workers. The first year's work resulted in 21 published papers.
In 1921 Dr. Whipple was offered, and he accepted, the deanship of the newly created School of Medicine at the University of Rochester, and Dr. K. F. Meyer became Acting Director of the Foundation from 1921 until 1924. He was full Director from 1924 to his so-called retirement in 1954, but continued directing until 1959, when Dr. J. R. Audy was named as Director, and he served in this capacity until his death in 1974. Dr. Meyer remained Director Emeritus from 1959 until his death, also in 1974. Dr. Julius Schachter was Assistant Director from 1972 to 1977 and Acting Director from 1977 to 1979. Dr. Nicholas Petrakis served as Acting Director in 1974, 1976, and 1980, and Dr. William Reinhart was Acting Director in fiscal year 1981-82. In 1982 Dr. J. Michael Bishop accepted the Directorship.

Dr. Meyer continued to enlarge the original Hooper policy, as set by Dr. Whipple, by inviting qualified house officers and junior clinicians to participate in the development of urgently needed techniques in some research fields. Since the Foundation had a very limited income, clinicians who were anxious to pursue their own research ideas -- for example, as early as 1921 the study of poliomyelitis on primates -- still had to purchase their own animals and pay for animal care. After the Director had reviewed and accepted the proposed project, he selected a supervisor from his permanent staff so that the work could be executed and brought to a satisfactory conclusion. In 1920 it became increasingly evident that the clinicians or practitioners of medicine not trained in the science and art of experimental medicine were submitting proposals characterized by great inherent difficulties. Some required instrumentation with which they were not familiar, nor could these proposers devote the time required to learn the skill of conducting investigations. This was resolved in either of two ways: (1) The proposal was thoroughly discussed and
analyzed, the expense and time were appraised, and a detailed plan of action
was prepared by the director. In most cases the applicant then realized
his limitations and withdrew the application. Or (2) he established a
fellowship at his own expense and paid for the research. Under the super-
vision of the director or one of his associates, the research plans of the
clinician were developed and in several instances completed to the satis-
faction of the parties concerned. If the study met the Hooper standards, it
was credited to the Foundation, published and included in the collected
reprints. These are now in the History Library at UCSF and the K. F. Meyer
Archive in the Bancroft History Library of the University of California in
Berkeley.

This plan encouraged the department of surgery to procure re-
search funds from private sources and to establish within the new animal
quarters of the Foundation, a division of experimental surgery and experi-
mental physiology, which were financially and administratively independent
from the Foundation and its director. However, a close liaison and tech-
nical or consultative assistance continued until 1961. The director of
the Hooper Foundation has always had the support of the clinical faculty
of the School of Medicine with respect to his responsibility and authority
in all research within the Foundation. In this he had the fullest support
of the President of the University. This gave assurance that only competent
workers would use the facilities of the Hooper Foundation and therefore
would not jeopardize the reputation of the organization. Under no circum-
stance did the staff of the medical school encroach on the Foundation by
demanding research facilities or funds from the limited budget. In emer-
gencies, the members of the Hooper staff gladly provided assistance for
short term investigations.
In 1960 the selection of the Hooper Foundation by the National Institutes of Health as an International Center for Medical Research and Training changed the chain of authority and procedure under which research was conducted. One of the primary concerns and functions of this institute was the maintenance and further development of collaborative efforts in investigations and research in those areas of medical science and public health with which it was most preoccupied. The Hooper Foundation now had the status of an "institute", this being somewhat comparable administratively to a "department" or unit of the Medical School, and provided a mechanism for State support of research in public health problems as well. The chain of authority then came from the President of the University, through the Provost, to the Dean of the Medical School, on to the Director of the Hooper Foundation, and from him to the various divisions, sections, and individuals therein. Projects might or might not be screened by a committee of one sort or another, but in any event had to be approved by the Director. While, as stated, collaborative effort was a principal concern and aim of the Hooper, nevertheless it was not an institute which merely furnished space, equipment and materials to enable research workers of other departments to pursue projects of their special interest. Such workers could well pursue a project in the Hooper, using its facilities, but as a part of and in collaboration with the Hooper research program -- this, as previously indicated, with the approval of the director.

A description of the original Hooper facilities, written in 1928, states that the Foundation occupied its own three storied building, 130 feet long, among the group of buildings comprising the Medical School in San Francisco, on a magnificent site on Parnassus Avenue overlooking Golden Gate Park and the Bay. In the building itself were 24 well equipped laboratories, large and small, in which investigations were carried on by 24 staff members, with about 15 technical assistants and other workers.
THE ORIGINAL HOOPER BUILDING, San Francisco
In addition, there were several large incubators occupying a single room each, large built-in ice boxes, a culture media department, library, photographer's studio, and a director's and secretaries' offices. Adjacent to the main building was a large two storied building, 180 feet long, in which the experimental animals and fowls were housed. This was well lighted, steam and electrically heated, and maintained under rigidly enforced sanitary conditions. Runways out-of-doors were also provided for the animals in fine weather. The menacing increase in infantile paralysis, sleeping sickness, and undulant fever made it necessary to equip a separate department for about 150 monkeys with a special caretaker. The experimental use of animals was under the direct supervision of the director and maintained in strict accordance with the State laws governing such matters.

A further description of the old building, written in 1967 when it was about to be torn down, is as follows:

"As it was taken down - by hand (no iron ball) - it was interesting to note the workmanship that went into the old structure. The roof was made of sheets of copper, the cupola was of metal, made in 4 parts, and carefully welded. The studdings were not 2 x 4, but heavy 3 x 18 inches, placed on edge. The walls were 3 red bricks wide with a facing of yellow brick similar to the other three buildings then on campus (the medical, pharmacy, and dental colleges). The building stood to the rear of these three and was to have been occupied by a veterinary college, but this never happened. No one remembers what the new building, a very modern one for 1898, was used for before 1914, but by then the third floor stored hospital beds and mattresses." The heavy cement building foundation still stands behind Health Sciences, West, as it could not be demolished without endangering the new building. In 1967
the new quarters for the Hooper Foundation were ready on the 15th and 16th floors of Health Sciences, West and the move to the new location was completed in the spring.

In the 1920s, when botulism in canned vegetables and sardines became a threat to the canning industry and public health, research projects were begun in the Hooper to develop safe canning methods, and a laboratory was ultimately set up. In 1938 a special laboratory for plague research was donated by the Rosenberg Foundation and in 1942 a four story, air conditioned, fireproof building, with elevator and all modern facilities to house animals such as mice, monkeys, etc., was erected adjacent to the laboratory building. It was known as Research Building No. 1 and was donated by the University of California to the George Williams Hooper Foundation. A brief outline of some of the work carried out in the Hooper laboratories over the years is as follows:

BOTULISM: Canning procedures were developed that have prevented botulism from being a major public health problem and that work has given us the security of knowing that the canned foods we eat are safe.

PLAGUE: This work elucidated the wild rodent reservoir for plague (which still exists today), and a vaccine was developed which protected U.S. servicemen from acquiring plague when they were engaged in combat in endemic zones. For example, in Viet Nam civilians suffered from thousands of cases of plague, while our men were spared.

PSITTACOSIS (parrot fever): It was discovered how widespread this infection was and its importance as a public health problem in the poultry industry. Methods were developed for control-
ling it that have resulted in only sporadic cases occurring in the country, rather than the epidemics that were previously observed.

BRUCELLOSIS: This infection of cattle, which is an important cause of cattle abortions and can be transmitted to man through infected milk, was also a subject of the research in the Hooper laboratories. Those efforts were aimed at providing safe milk, and development of vaccines to eradicate the infection in cattle.

WESTERN EQUINE ENCEPHALITIS: This disease, known as a form of sleeping sickness, was a problem in the United States and the causative agent was isolated and it was established that it was a mosquito-borne disease and methods of control of this infection were developed.

MUSSEL POISONING: This form of paralytic shellfish poisoning is a public health problem of significance on the West coast of the United States and it was the Hooper laboratory that elucidated the cause and temporal appearance of this disease, and led to the establishment of the quarantines currently in effect.

The early budgets were meager. Fifty thousand dollars per annum were voted to be available for the total Hooper budget in 1913, to be expended through the "customary mechanism of the University". The financial request for the new animal house in 1914 was $1,050, exclusive of heat, light, and equipment. Monies were "tied up in the forests of
Humboldt County", according to Dr. Meyer, but in spite of this handicap the Hooper became a prestigious research institute in the United States, and in fact, in the world. In "Notes for President Sproul", written by Dr. Meyer about 1940 (Appendix I, his oral biography "Medical Research and Public Health") he stated: "We should strive, in future years, to develop the Hooper Foundation for Medical Research to serve the Pacific Coast and the West, as the Rockefeller Foundation now serves the Atlantic Coast and the East. Among other things, we should encourage the dependence of all public health agencies in the surrounding cities and throughout the State to look toward the Hooper Foundation for the solution of research problems. We should naturally seek to train health officers, a personnel for preventive medicine, county health officers, experts in industrial and mental hygiene, city health officers, and epidemiologists for the protection of Western civilization".

When Federal funds became available, grants from various sources (USPHS, Army, National Institutes of Health, etc.) were sought and received. Students from all over the world came to do post graduate work in the Hooper Foundation laboratories under the guidance and counsel of Dr. Meyer and his staff, and many returned to their native lands to work for the betterment of public health and the eradication of infectious diseases, especially in the zoonoses.

It can truthfully be said that the Hooper Foundation, for the major portion of its existence, was embodied in K. F. Meyer and his life's work was surely embedded in it. Throughout that long duet he never waivered from nor diminished the high professional standards to complete integrity he demanded in the scientific accomplishments of all who worked and studied within the Hooper walls. As with a pebble dropped into a pool, waves of
the best in basic medical research emanated into all aspects of medical
science and public health everywhere. This was the substance and the aura
created and maintained for the Hooper Foundation by K. F. Meyer throughout
his lifetime, and which shall be felt for years to come in those areas.
Certainly the original charge outlined in the purpose of the Declaration
of Trust has more than been fulfilled, and the Hooper Foundation and its
purpose can truly be considered another gem in the crown of illustrious
achievements of the University of California.

Marion Lewis Meyer
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