QUOTATIONS

ANIMAL EXPERIMENTATION

IN an address at the eighty-sixth anniversary of the New York Academy of Medicine Dr. Walter B. Cannon, of Harvard, renewed the plea of physicians and surgeons for unhampered animal experimentation "as a means of solving the riddles of such diseases as infantile paralysis, cancer and the degenerative diseases." That it should be necessary to present again the benefits that have accrued from studies made on animals from the time of Harvey down is evidence enough that the spirit of science is not yet abroad so far as medicine is concerned. It is a pity that Dr. Cannon should find it necessary, in view of the bills annually introduced in Legislatures by well-meaning sentimentalists, to review once more the achievements of experimenters who have made it possible to stamp out epidemics.

Historians and sociologists are not sure that we are happier than the ancient Greeks, who knew nothing of automobiles, electric lamps and airplanes; but they are sure that science, by the aid of animal experimentation, has made it possible for us to live in crowded communities without peril to ourselves through contagious diseases. When Dr. Cannon reminds us that bubonic plague caused the death of over sixty millions in the fourteenth century, and that certain cities—Trapani is an example—were completely depopulated, we have reason to bless the names of Pasteur, Koch and their disciples who experimented on animals to test theories and preventives. The fight against disease is not even half won. Medicine is baffled by the filterable viruses—collections of organisms which are so small that they cannot be seen in a microscope, but which are responsible for maladies that are as baffling to-day as they were centuries ago. To combat these, as we have successfully combated typhoid, diphtheria, tuberculosis and others, the research scientists must have a free hand.

Dr. Cannon appeals to the public "to sustain medical investigators in their endeavors" and not to leave the struggle with legislators to physicians alone. He sets himself apart from others who have struggled under the handicaps imposed by pleading for freedom of research in the name not of science but of humanity. It has become a social duty to report contagious disease. Those in whom the spirit of progress lies will agree with Dr. Cannon that it is also a social duty not to interfere with legitimate animal experimentation.—*The New York Times.*

REPORTS

WORK OF THE ROCKEFELLER FOUNDATION

THE annual report of the Rockefeller Foundation has been issued and the information service has issued an abstract of the contents.

During the year 1931, the foundation appropriated a total of $18,737,967.90. This sum was distributed among the five fields in which the Rockefeller Foundation's interests lie—the humanities, public health, medical, social and natural sciences. The increasing world-wide interest in social and economic problems was reflected in the appropriations voted for the social sciences. These totaled $5,805,275—a larger sum than was appropriated in any other field of foundation activity during the year. In the field of public health, the report announces the final working out and limited application of an immunizing vaccine for yellow fever, which now insures, for the first time, greater safety for those scientists who, in field and laboratory, are engaged in the dangerous task of fighting that disease.

Except to a limited extent in the field of public health, the Rockefeller Foundation is not an operating or research agency. It gives assistance, both directly and through training of personnel, to universities and other agencies, chiefly national in scope, which carry on research of a fundamental character. In addition, in the field of public health, it cooperates with governments in the development of general public health activities and in the study and control of certain diseases.

The Rockefeller Foundation's program is directed primarily toward the advancement of knowledge. In the field of the social sciences it has attempted, through grants to universities and other organizations, to assist those men who are engaged in research on the more fundamental aspects of social and economic phenomena.

The foundation regards the development of institutional centers of research and training as the most important single element in its program in the social sciences. During 1931, a total of $2,165,000 was divided approximately equally between the United States and other countries, for the further development of such centers. Among the institutions aided were the University of Chicago, Fisk University, the Brookings Institution, the London School of Economics and Political Science, the American University of Beirut and Nankai University.

The foundation also continued its support of the varied activities of the Social Science Research Council, through appropriations amounting to $798,750 during 1931. The council is an organization of American scholars, representing all the social sciences,

and devoted to the planning, correlation and promotion of research. The foundation makes two types of appropriations to the council, one for its varied research activities, the other for its function as an administrative agent in the award of grants-in-aid of individual research and fellowships to American scholars. During 1931, 95 fellowships were awarded by the council to American students, for study at home and abroad. In addition, the foundation awarded directly 133 fellowships in the social sciences, to foreigners, mostly European, of whom 65 studied in the United States.

The foundation also made appropriations toward specific programs of research in such subjects as economic stabilization, international relations, anthropology, community organization and planning and social technology, among them a comprehensive study of unemployment by the Tri-City Employment Stabilization Committee of St. Paul, Minneapolis and Duluth, which operates in conjunction with the University of Minnesota.

For the promotion of international relations, support was continued to the Institute of Pacific Relations, which endeavors to bring about a truer and more sympathetic understanding of the problems of the Pacific. Grants in anthropology showed a special emphasis on African studies. Funds were appropriated to one school of public administration and to two schools of social work.

In the field of the humanities the largest single gift was made to Oxford University, to which the foundation appropriated $2,300,000 for the development of the Bodleian and other university libraries at Oxford. Because of the extent and quality of its collections, particularly in humanistic subjects, the Bodleian ranks among the great libraries of the world. The plans, which include the erection of new buildings as well as the reconditioning of old buildings and a thorough reorganization of the present facilities, will, it is hoped, provide for two centuries of new growth.

Aid was continued to humanistic research in several American universities, and to the American Council of Learned Societies for its function as a national representative of American humanistic research and as an administrative agency for the foundation in the award of grants-in-aid of research and fellowships to American scholars. The foundation also made appropriations toward the cost of archeological excavations at Jerash in Transjordan, Dura-Europos in Syria, and Ur of the Chaldees in Iraq, and for the erection of a museum on the island of Lesbos.

In the field of the natural sciences, the foundation, during 1931, supported centers of research and definite research programs and provided funds for general research and for fellowships. New projects, for which appropriations were made in 1931, fall within the domains of oceanography, marine biology, general biology, geophysics, astrophysics, astronomy, chemistry and physics. Institutions with which the foundation cooperated are located in Western Samoa, Bermuda, the United Kingdom, Germany, Hungary, Poland, Switzerland, Norway, Sweden and the United States.

The foundation continued its contributions toward paleontological research in China. In 1931, there was published an official description of the prehistoric skull discovered in the course of research in 1929 and designated as *Sinanthropus pekinensis*.

The foundation has maintained an active interest in the subject of oceanography. In 1931, payments were made on an appropriation of two and one half million dollars for the development of the Woods Hole Oceanographic Institution, which, both at Woods Hole and on board its reesarch ship, the *Atlantis,* is conducting an extensive program of oceanographic studies. Grants were also made to the Marine Biological Laboratory at Plymouth, England, and to the Bermuda Biological Station, for oceanographic studies, and to the Hungarian Biological Research Institute for research on Lake Balaton, one of the largest fresh-water lakes in Europe.

In connection with a concerted effort to gather facts which will lead to a better understanding of the earth and its atmosphere, the foundation is cooperating in studies of the aurora. One station for such research is at Fairbanks, Alaska; another is at Tromsö, Norway.

Continuing its fellowship program in the natural sciences, the Rockefeller Foundation during 1931 provided funds enabling 347 young men and women to continue advanced study in their chosen fields. Of these grants, 152 were administered directly by the foundation, principally for Europeans, and 195 by the National Research Council, for Americans.

The Rockefeller Foundation has, for many years, maintained active programs in the fields of medical science and public health. In medical science, for a number of years preceding 1929, attention was given chiefly to the support of medical institutions, and an extensive program of surveys of medical education and aid to influential medical centers was carried out. Since 1929, interest has centered in the development and fostering of research. Recent undertakings have been aimed directly at the advancement of knowledge through aid to clinical and laboratory investigations or assistance in the provision of more fully trained teaching personnel.

Among the reesarch projects sponsored was work connected with problems in virus diseases, puerperal fever, neurology, serology, biochemistry and dental

pathology, as well as studies of the common cold. Medical research was aided at such institutions as Vanderbilt University; the University College Hospital Medical School, London; the Universities of Leipzig and Szeged; the American University of Beirut in the Near East; and the Universities of Brussels, Montreal and Edinburgh.

During 1931, the foundation supported and administered directly 89 fellowships in the medical sciences and 35 in nursing. In addition, it supplied funds to the National Research Council and to the National Committee for Mental Hygiene for fellowships for Americans, and to similar organizations in other countries for fellowships for citizens of those countries. In all, the foundation provided, during 1931, a total of 353 fellowships in the medical sciences, through which it was hoped that young men and women in many countries might be aided in preparing for careers in research in the medical field.

A total of $3,096,361.75 was expended by the International Health Division of The Rockefeller Foundation during 1931.

A feature of the public health section of the report is the story of the continuation of yellow fever work. Details are also given regarding public health work in connection with malaria, hookworm infestation and other diseases. Assistance was given to field research and field work in the forty-seven countries throughout the world and the thirty-seven states in the United States where the Rockefeller Foundation is aiding government agencies in applying and carrying out various public health programs. The interest of the foundation is in field research connected with these programs and in the discovery of new methods and new knowledge in dealing with public health problems. During 1931, the foundation awarded 123 fellowships in public health. The recipients included 49 persons from the United States, 10 from China, 9 from Canada, 7 from India, 6 from Japan, and 5 from Greece. As a general conclusion, it is emphasized that, even in the present depression and often at the cost of considerable sacrifice and strenuous endeavor, public health work throughout the world is being maintained.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

SYMPOSIA AT ATLANTIC CITY

THE programs of the meetings of the American Association and associated societies at Atlantic City from Tuesday, December 27, 1932, to Saturday, December 31, 1932, are rapidly taking shape. Plans for several symposia which promise to be of historical importance have already been completed.

Especially noteworthy will be the symposium on "The Physiological Relations of the Pituitary Body," organized by Dr. John J. Abel, president of the association. The functions of the anterior lobe of the pituitary body will be discussed by Dr. Philip E. Smith, Dr. E. T. Engle and Dr. Herbert Evans. The posterior lobe will be discussed by Dr. Abel, himself, and Dr. E. M. K. Geiling. Other extremely important symposia which are being organized by Section N (Medical Sciences) are: (1) "Filterable Viruses," (2) "Filterable Virus Diseases," (3) "Tuberculosis," led by Dr. Wm. H. Park, chairman of the section, and (4) "History of Medical Science," led by Dr. Howard Karsner. Six invitation papers will be presented at sessions of the American College of Dentists. Further details of the Section N program will be given in a subsequent issue of SCIENCE.

The American Physical Society and Section B are now completing arrangements for a symposium on "Cosmic Rays." Speakers on this program will be Dr. Robert A. Millikan, Dr. Arthur H. Compton, Dr. W. F. G. Swann, Dr. Gordon L. Locher, Dr. H. V. Neher and possibly others.

Section E (Geology and Geography) of the association has organized a symposium on "Late Pleistocene and Recent Changes of Level Along the Atlantic Coast of North America." Among the speakers will be Dr. C. Wythe Cook, Dr. Charles W. Townsend, Professor Wm. Fitch Cheney, Dr. Henry B. Kummel, Professor Douglas Johnson, Mr. Thomas C. Brown and Mr. H. A. Marmer.

The American Society of Zoologists and Section F are completing the program for a symposium on "Embryonic Determination." Further details of the zoological program will be published later.

The retiring vice-presidential address by Dr. E. D. Merrill on "Crops and Civilization" will be given at a joint session of Section G (Botany), the Botanical Society of America, the American Phytopathological Society, the American Society of Plant Physiologists and the Mycological Society. Following Dr. Merrill's address there will be a "Sachs Memorial Program" commemorating the one hundredth anniversary of the birth of Julius von Sachs.

Two symposia will be included in the program of the joint meetings of the American Anthropological