"It must never be forgotten that the whole purpose of our policy is to save countless millions from death and suffering. This must be balanced against the possible future hazards associated with nuclear tests."

The preceding statements appeared in the May *Newsletter* of the Society for Social Responsibility in Science, which ended its report by observing:

"Shortly after this [exchange], it was announced that the British H-bomb tests at Christmas Island in the Pacific had unexpectedly been cancelled after the first of three scheduled blasts. The reason was not stated."

## Jane Coffin Childs Memorial Fund for Medical Research

The Jane Coffin Childs Memorial Fund for Medical Research of New Haven, Connecticut, has announced appropriations totaling $312,779.93 in support of research and fellowships in cancer for the year 1 July 1957–30 June 1958. This brings to slightly over $4 million the total distributed by the fund since its establishment in 1937, when it represented the largest capital investment ever dedicated to the search for the causes of cancer. (Now, 20 years later, $4 million is approximately the sum spent in one year by a single institution, the Sloan-Kettering Institute for Cancer Research; the National Cancer Institute, which for 1958 received an appropriation of $56,402,000, allocated to research grants alone $22,675,000.)

Support is given for research in both the basic and clinical sciences; for postdoctoral fellowships providing advanced research training; for conferences, meetings of national and international societies concerned with cancer research. Among publications to the support of which the fund has contributed since it helped to establish them are the journal *Cancer Research* and the *Atlas of Tumor Pathology.*

Appropriations are voted by the fund's Board of Managers on recommendation of the fund's Board of Scientific Advisers. Directed by M. C. Winternitz, this board includes Edward A. Doisy, Charles B. Huggins, John J. Morton, Thomas Francis, Jr., Richard E. Shope, C. N. H. Long, William U. Gardner; and Levin L. Waters, assistant director. R. G. Harrison, Rudolph J. Anderson, S. Bayne-Jones, and Peyton Ross, members of the original board in 1937, now serve in an honorary capacity.

England, France, Austria, Japan, and Sweden are represented on the list of grants active in 1958. Bengt E. G. V. Sylven, associate professor of experimental cancer research at the Karolinska Institute in Stockholm, received a first grant ($30,000 for 3 years) to develop cytochemical methods to be applied to the problem of how proteolytic enzymes in malignant cells affect surrounding tissues. Jacques Monod, director of the department of cellular biochemistry at the Pasteur Institute, received a fifth grant (totaling $29,400 since 1954) for studies of specific enzymes involved in the selective penetration of certain organic molecules into bacterial cells. Monod has been invited to summarize this work at Harvard University, where he is to give the Dunham lectures this fall. Grants made to the Institute of Cancer Research in London's Royal Cancer Hospital, beginning 1938, when the late Sir Ernest Kennaway, at that time director of the institute, visited the Fund in New Haven, totaled $73,500 in 1958.

American investigators supported by the fund's grants in 1958 were working chiefly in university and medical school departments of the basic and clinical sciences. Six, however, were located outside the schools in nonprofit research institutes, three of which were devoted entirely to cancer.

First grants were made to ten investigators for periods ranging from 1 to 3 years. The other 16 grants active in 1958 represented renewals, some for the tenth to the fourteenth time, bringing support to some of these individuals and groups for twenty consecutive years. These include grants since 1938 for the study of the role of viruses in the genesis of cancer by the late Francisco Duran-Reynals at Yale University's medical school. Among several long-term programs currently supported on the basis of 5-year grants ($25,000 a year) is that of Charles B. Huggins and his associates at the Ben May Laboratory of Cancer Research, University of Chicago.

Biochemical approaches outnumber all others in the work of both investigators and fellows supported by the fund, with especial concern shown for the chemical reactions in normal and neoplastic cells and tissues and with particular interest in protein and nucleoprotein metabolism. Tumor and other viruses, immunological mechanisms, and steroid hormones are being investigated. Studies of steroid hormones range from synthesis in normal tissues to investigation of their role in the metabolism and growth of tumor cells, from use in experimental induction of tumors to use in the treatment of cancer in man.

Relevance to cancer is more broadly assessed in the award of postdoctoral fellowships, in which the primary emphasis is placed on providing training and research opportunities to promising candidates who intend to devote themselves to research. Such fellowships, given for 1 year and in some instances renewed for a second, have taken American and foreign students in a wide range of disciplines to major laboratories in the United States, England, France, Belgium, and the Scandinavian countries. The fellowship program has also made its modest contribution to academic medicine since its inception 15 years ago. Now, when the medical schools have for several years suffered from critical shortages of full-time instructors, past fellows of the Jane Coffin Childs Fund are conducting their research as full-time members of 12 university and medical school departments of the basic and clinical sciences; two are directing coordinated teaching programs in cancer; six others are engaged in full-time research outside the schools in nonprofit research institutes.

Applications for research grants and fellowships are reviewed by the Board of Scientific Advisers three times a year at the offices of the Jane Coffin Childs Memorial Fund for Medical Research, 333 Cedar St., New Haven 11, Conn.

## International Unit of Enzyme Activity

The Committee on Biological Chemistry of the Division of Chemistry and Chemical Technology, National Academy of Sciences–National Research Council, has undertaken a program of supplying to investigators information regarding commercially available biochemical reagents. As part of the effort to obtain appropriate data for the description of commercially available enzymes, the Subcommittee on Enzymes of the Committee on Biological Chemistry has searched for a suitable general unit to express the activity of enzyme preparations. Such a unit, universally adopted, would permit easy, direct comparison of data obtained in different laboratories. To further this purpose, it was felt desirable that such a unit (i) should not be based on the use of a particular instrument, (ii) should eliminate as much as possible the use of high numbers and decimal points.

After consideration of various possibilities, it was decided to define a unit as 1 μmole of substrate utilized per minute under specified conditions of *p*H and temperature control, and the specific activity as micromoles per minute per milligram of protein—that is, units per milligram of protein. The latter represents 1/100 the activity value given for many enzymes in the literature expressed as moles of a substrate utilized per 100,000 grams of protein. It is in the range 1 to 1000 for the majority of enzymes commonly used.

The above-mentioned unit cannot be used readily in the description of pro-

teases and other enzymes which act on large molecular substrates that possess numerous linkages susceptible to cleavage. However, in some instances—for example, the phosphorylases—the assay of enzyme activity can be given in terms of micromoles of product. In other instances—for example, for proteases—synthetic substrates of low molecular weight are available and are being used by an increasing number of investigators.

The proposed unit has been found acceptable to a number of enzymologists who have been consulted. Several commercial firms concerned with the production and sale of enzymes both in the United States and in Europe concur in the proposal and are now using this unit in their description sheets.

The purpose of this statement is to stimulate a wider use of this enzyme unit where it is suitable, and to invite comments and suggestions regarding other problems in the evaluation of commercially available enzyme preparations. Please write to Efraim Racker, Chairman, Subcommittee on Enzymes of the Committee on Biological Chemistry, National Academy of Sciences–National Research Council, Washington, D.C.

## Manual for Isotope Users

An expert panel has completed the first phase of its task of assisting the International Atomic Energy Agency in drawing up health and safety recommendations to govern the packaging, transport, use, and disposal of radioisotopes. At its first series of meetings, which ended 6 June in Vienna, the panel unanimously approved recommendations for a draft "Manual of Safe Practices." A final draft will be considered at another session of the specialists late in August, and the resulting text will be put before the second general conference of IAEA in the latter part of September.

At a later time, the group will take up the task of establishing international standards in this field for adoption by international and national authorities. The panel is made up of ten members, one from each of the ten countries. Gunnar Randers of Norway is chairman, and Forrest Western is the United States representative.

## Science Equipment Library

Hofstra College has announced formation of a central library of scientific and engineering equipment for loan to neighboring colleges and high schools for educating future scientists. The equipment pool, believed to be the first of its kind, will make available expensive apparatus that relatively few institutions can afford.

A $25,000 grant from the Esso Education Foundation is financing the beginning of the new library. The grant to Hofstra is part of a special 3-year program under which the Esso Education Foundation will disburse $1.5 million in grants to improve science and engineering education throughout the United States. The program was initiated last summer when the Standard Oil Company (New Jersey) awarded the special fund to the foundation in observance of the company's 75th anniversary.

## Fertility Research Laboratory

A fertility research laboratory has been established at the Margaret Sanger Research Bureau, 17 West 16th St., New York, for the purpose of studying the physiology of reproduction and evaluating methods for the control of conception. Special studies on sperm migration, the time required for the sperm to enter the cervix, and other reproductive processes are already under way. More than 70 products that are being used for contraceptive purposes have already been studied and evaluated in the bureau's laboratories. The results will serve as a guide to planned parenthood centers as well as to the consumer on the effectiveness of the various chemical products now on the market.

The work is under the direction of Abraham Stone, director of the bureau, and John MacLeod of Cornell University. Aquiles J. Sobrero has been appointed assistant medical director in charge of research.

## News Briefs

India is preparing the first map of Nepal at the request of the Nepalese Government. Indian aircraft are engaged in an aerial survey that already has covered several thousand square miles of Nepal's total area of 54,000 square miles. The project is to be completed by the end of this year.

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The International Commission on Zoological Nomenclature has new headquarters. All friends and correspondents of the commission, and all members of the forthcoming Colloquium on Zoological Nomenclature, are asked to note that correspondence and inquiries should in future be addressed to Mr. R. V. Melville, Assistant Secretary, International Commission on Zoological Nomenclature, 119 Parkway, Gloucester Gate, London, N.W. 1, England.

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The U.S. Department of Agriculture has assured officials of Colorado, Kansas, Oklahoma, New Mexico, and Texas that it is intensifying cooperative work with these states to halt an outbreak of grasshoppers, now developing as the most serious insect threat of recent years. Under existing state-USDA agreements, the Federal Government will bear one-third of the cost of insecticide treatments needed on rangelands, roadsides, and idle land to prevent further invasion of cropland by the grasshoppers.

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A report that appeared recently in the Chinese Communists' official organ *Jenmin Jihpao* (*People's Daily*), says that most of the provinces in the People's Republic of China are making preparations to set up more research institutes and branches of the Chinese Academy of Sciences as centers for local scientific work. Shensi and Chekiang are provinces where such centers have been established in the last 2 months. Four other branches have been established in the cities of Lanchow, Wuhan, Canton, and Sinkiang, and offices have been opened in Shanghai, Nanking, and Kunming.

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Fifty-five percent of the $480 million paid out by the Metropolitan Life Insurance Company last year in death claims was for diseases of the heart and arteries, and about 20 percent for cancer. Together these causes of death accounted for somewhat more than $3 of each $4 paid in claims to beneficiaries. Twenty years ago they accounted for only 52.7 percent of the total.

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A new reactor at the Atomic Energy Commission's Oak Ridge National Laboratory was successfully operated on 29 May at its design power level of 20,000 kilowatts of heat. The reactor, designated the Oak Ridge Research Reactor, has the highest power level of the six reactors in operation at the laboratory. The reactor represents a major engineering advance over previous research reactors of the materials-testing reactor type, since it achieved extremely high neutron fluxes at only a fraction of the cost of previous reactors of this class. The ORR is a prototype for similar reactors that are being built in various parts of the world.

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Tulane University has contracted with the International Cooperation Administration to extend its consultant services to the seven medical schools in Colombia for 3 more years. Under the program five Tulane consultants have each spent 3 months in Colombia discussing mutual problems with their Colombian colleagues. Opportunities have also been extended to Colombian medical doctors interested in academic medicine to come to the United States on fellowships for advanced study, particularly in the basic sciences.