neering, medicine, surgery, agriculture, manufacture and commerce, education or any other science of any nature or description."

Applications for grants-in-aid are receivable on forms which will be supplied upon request by the chairman of the committee, and will be considered by the committee of award on March 1, June 1 and October 1.

It is stipulated that title to equipment purchased outright from a grant from the Permanent Science Fund resides in the fund, such purchased equipment being subject to reassignment by the committee upon termination of research in the particular field of endeavor in support of which a grant is made.

It is further a condition of grants made by the academy from the Permanent Science Fund that they are not for financial support of work the results of which comprise partial fulfillment of requirements for an academic degree.

It is a policy of the committee not to approve requests for general permanent equipment for institutions.

Communications should be addressed to John W. M. Bunker, *Chairman,* Permanent Science Fund Committee, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.

### THE COMMONWEALTH FUND AND MEDICAL RESEARCH

ACCORDING to the official summary of the twenty-fifth annual report of the Commonwealth Fund for the year ending September 30, 1943, the fund has contributed directly to undergraduate and graduate teaching in medicine by subsidizing departments of preventive medicine and psychiatry at medical schools, by offering advanced fellowships to instructors chosen by their department heads as potential leaders in medical education and by financing interschool visits by outstanding medical teachers. It has just begun a six-year schedule of grants to the Long Island College of Medicine for the development of its department of psychiatry.

Medical research has taken more and more of the fund's income. Of the $4,000,000 appropriated for this purpose in 25 years, nearly a tenth was distributed in the fiscal year ended October 30, 1943, when aid was given to 41 investigations at 11 university schools of medicine and 8 other institutions of similar scientific standing. War medicine plays a large part in current research. Studies of kidney and respiratory function, long aided by the fund because of their physiological importance, have made important contributions to the understanding of shock, now a crucial military problem, and grants have been made specifically for work of military significance in aviation medicine and the control of infectious disease. The three grants made this year for work not previously supported included one to the University of Pennsylvania, for a study by Dr. Max B. Lurie of physiological factors responsible for differences in susceptibility to tuberculosis; one to Washington University, for a study by Dr. W. Barry Wood, Jr., of recovery factors in certain types of pneumonia; and one to the New Jersey Agricultural Experiment Station for Dr. Selman A. Waksman's investigation of new substances derived from molds or fungi which, like penicillin, might be useful in the control of disease agents.

For the past two years fellowships have been offered to Latin-American physicians and public health workers for postgraduate study in the United States. Under this plan three men from the Argentine Republic, two each from Brazil, Uruguay and Venezuela, and one each from Chile, Colombia, the Dominican Republic, Ecuador, Haiti and Honduras hold appointments for the current academic year. Awards are made with the cooperation of the Pan American Sanitary Bureau. According to the report, these Latin-American fellows "are well-trained, energetic, eager to improve themselves, and almost without exception are either holding or preparing to hold positions of responsibility in public health and clinical medicine."

## SCIENTIFIC NOTES AND NEWS

THE Charles P. Daly Medal of the American Geographical Society of New York has been awarded to Sir Halford John Mackinder, the English geographer and statesman, and the Cullum Geographical Medal to Arthur Robert Hinks, secretary of the Royal Geographical Society, London. Presentation of the medals will be made in London later in the winter. Sir Halford served as reader in and professor of geography at the University of London from 1900 to 1925 and as member of Parliament and chairman of the Imperial Economic Committee from 1926 to 1931. Mr. Hinks has been secretary of the Royal Geographical Society since 1915. Honorary corresponding memberships in the society have been awarded to Dr. Christovam Leite de Castro, secretary-general of the National Council of Geography of the Brazilian Institute of Geography and Statistics, and to Señor Manuel Medina, chief of the Geographical Office of the Ministry of Agriculture and Development of Mexico.

WILLIAM H. MCAVOY, chief test pilot of the National Advisory Committee for Aeronautics, has been

chosen as the recipient of the Octave Chanute Award for 1943 of the Institute of Aeronautical Sciences, in recognition of "continuous service in the flight-testing of experimental airplanes under hazardous conditions imposed in aeronautical research." The presentation will be made on January 24 at the honors night dinner of the institute at the Hotel Waldorf-Astoria.

THE Bailey K. Ashford Award was presented at the Cincinnati meeting of the American Society of Tropical Medicine to Norman H. Topping, passed assistant surgeon of the U. S. Public Health Service, National Institute of Health, Bethesda, Md., in recognition of his "outstanding work in the field of tropical medicine." In 1941 he went to La Paz, Bolivia, to study the effects of a typhus vaccine developed at the Rocky Mountain laboratory of the U. S. Public Health Service at Hamilton, Mont.

ERNEST B. BABCOCK, professor of genetics at the University of California at Berkeley, and Dr. William H. Chandler, professor of horticulture at the University of California at Los Angeles, have been named faculty research lecturers for 1944. They will lecture on the subject of their researches during charter week from March 19 to 25.

A HUNDRED and twenty letters from professional associates and friends from all over the country were bound and presented on December 20 to Dr. Oswald Schreiner, at a meeting in his honor at the station of the Bureau of Plant Industry of the U. S. Department of Agriculture at Beltsville, Md. Dr. Schreiner, who joined the Bureau of Soils in 1903 and became later chief of investigations in soil fertility, retired on December 31 after serving for forty years.

THE award of the League of Fraternal and Benevolent Organizations of the Jewish Education Committee of New York was made at a luncheon given on January 9 to Dr. Arthur H. Compton, professor of physics at the University of Chicago, for his "effective promotion of justice, amity, understanding and cooperation among the peoples of all creeds in our beloved land and in other lands." Dr. Compton, who was unable to be present at the luncheon, sent a telegram accepting the award.

THE University of Delaware recently conferred upon Thomas Hamilton Chilton, of the E. I. du Pont de Nemours and Company, the honorary degree of doctor of science in recognition of "his distinguished achievements in the province of chemical engineering and his invaluable personal contribution to the welfare of that institution."

RESULTS of the election of officers of the Genetics Society of America for the year 1944, carried out by postal-card ballot in the absence of an annual meeting, are announced as follows: *President,* Professor A. H. Sturtevant, California Institute of Technology; *Vice-president,* Dr. B. P. Kaufmann, Carnegie Institution, Cold Spring Harbor; *Secretary-treasurer* (for a term of three years), Professor L. H. Snyder, the Ohio State University. The executive committee of the society for 1944 will include Professors E. W. Lindstrom, the Iowa State College, and M. M. Rhoades, Columbia University, presidents in 1942 and 1943.

THE officers for 1944 of the American Society for Horticultural Science are: *President,* Dr. Warren P. Tufts, University of California, Davis; *Vice-president,* Dr. Warren B. Mack, Pennsylvania State College, and *Secretary-Treasurer,* Dr. H. B. Tukey, Experiment Station, Geneva, N. Y.

DR. WALTER B. CANNON, emeritus professor of physiology at Harvard University, has been elected president of the newly founded American-Soviet Medical Society. Dr. Henry E. Sigerist, director of the Institute of the History of Medicine, the Johns Hopkins University, has been appointed editor of its journal, *The American Review of Soviet Medicine.*

OFFICERS elected for 1944 by the American Association of Textile Technologists are Lieutenant William F. Macia, *President;* Carl I. Taber, *First Vice-president;* Pierre Sillan, *Second Vice-president;* Ralph Gutekunst, *Treasurer,* and Bernice S. Bronner, *Secretary.*

DR. FERDINAND J. M. SICHEL has been promoted to an associate professorship of physiology at the College of Medicine of the University of Vermont.

DR. R. MENDEZ, instructor in pharmacotherapy at the Harvard Medical School, has been appointed assistant professor of pharmacology at the Loyola University School of Medicine, Chicago. He will assist Dr. A. S. Marrozzi, who is chairman of the department of pharmacology.

DR. J. A. SHELLENBERGER has resigned his position as technical adviser to the Corporacion para la Promocion del Intercambio, S. A., at Buenos Aires, which is sponsored by the Government of Argentina, to accept an appointment as professor of milling industry at the Kansas State College. He expects to return to this country late in February.

*Nature* reports that the title of professor of technical optics in the University of London has been conferred on Dr. L. C. Martin in respect of the post held by him at the Imperial College of Science and Technology.

GEORGE I. QUIMBY, JR., assistant curator of North American ethnology at the Chicago Natural History

Museum, has been promoted to be curator of exhibits in the department of anthropology.

J. VICTOR SKIFF has been appointed to the post of Deputy Conservation Commissioner of New York State to succeed John L. Halpin, who is resigning from the department as of January 31.

R. A. BOYER, of the Ford Laboratory at Dearborn, Mich., has become director of scientific research with The Drackett Company, Cincinnati, Ohio. He is continuing his work on soybean fiber.

BASIL A. PLUSNIN has been appointed forester of the 8,000-acre forest of Yale University in Tolland and Windham Counties, Connecticut.

PROFESSOR ORA S. DUFFENDACK, since 1922 a member of the faculty of the University of Michigan, has resigned to accept a position in private industry with the North American Philips Company of New York City. He will organize and direct a new research staff and laboratory for which he will be given a free hand in selecting both research fields and staff members. He will sit in on the board of directors of the company. For the past two years he has been chief of a research section of the National Defense Research Committee in the Randall Physics Laboratory of the university. He expects to continue to supervise this work.

DR. CARL L. A. SCHMIDT, dean of the College of Pharmacy of the University of California, has leave of absence for the last half of the present academic year to enable him to complete researches in biochemistry in which he is engaged. Dr. Troy C. Daniels, assistant dean and professor of pharmaceutical chemistry, has been appointed acting dean.

DR. LEO L. CARRICK, dean of the School of Chemical Technology, North Dakota Agricultural College, has been appointed consulting chemical engineer and director of the research on red lead being carried out by the Lead Industries Association of New York City.

DR. OSCAR NEUMANN, formerly ornithologist of the Berlin Museum, said to have been one of the last Jewish refugees to be able to escape from Germany, is now working at the Chicago Natural History Museum.

DR. WILLIAM DUNCAN STRONG, professor of anthropology at Columbia University and director of the Ethnographic Board of the Smithsonian Institution, gave an address on January 20 before the Washington Academy of Sciences entitled "Recent Anthropological Research in Latin America." This was the forty-sixth annual meeting of the academy.

IT is announced that the American Medical Association will hold its annual meeting from June 12 to 16 in Chicago. The House of Delegates will meet in the Palmer House, where the scientific exhibit and the opening general meeting will also be held. The registration bureau and the technical exhibits will be in the Hotel Stevens, and the meetings of the various sections will be assigned to these hotels and in addition to the Hotel Sherman and the Morrison Hotel.

AN appraisal of the estate of Edward S. Harkness, who died in 1940, shows that he left $54,000,000 more to be divided among educational, charitable and religious organizations, some of which he helped to establish. He had given away in his lifetime more than $120,000,000. Mr. Harkness left his residuary estate in trust for the benefit of his widow, Mary Stillman Harkness. Upon her death the charities will share the principal of her trust. One half will go to the Commonwealth Fund, a foundation established in 1918 by Mrs. Stephen S. Harkness.

ACCORDING to the will of Edgar Palmer, who died last January, Palmer Square, now three-quarters completed, which consists of the Princeton Inn, a theater and several other buildings, is bequeathed to Princeton University. He also gave a laboratory valued at $750,000 in addition to the $1,000,000 Palmer Stadium. His will carries a provision that should his daughter die leaving no children, $1,000,000 of the $2,000,000 left in trust for her should go to the trustees of the university.

ALBERT H. SCHMIDT, of Detroit, has given to the Board of Education of Wayne University the sum of $10,000 to assist in establishing an agricultural school at a farm now owned by the board near Novi, Mich., to be known as the Albert H. Schmidt Foundation. The project is to be developed and conducted by Wayne University. He has indicated that it is his intention ultimately to leave substantially his entire estate to further the project. In addition to providing educational opportunities for boys from 14 to 18 years of age, the school will provide a research center in the natural and physical sciences related to the development of agriculture. Although the new institution will be supported in part by revenues derived from the students, it is expected that a major part of its income will be obtained from the sale of farm produce, from funds to be provided by Mr. Schmidt and from other resources which the Board of Education may use for the development of the school. It is anticipated that the produce of the farm will be used in the cafeterias of the Detroit Public Schools.

THE late Dr. Russell Henry Chittenden, formerly professor of physiological chemistry and director of the Sheffield Scientific School of Yale University, bequeathed his scientific library to the university and a trust fund of $3,000, the income of which is to be used for a prize to be known as the Russell H. Chittenden Prize, to be awarded at commencement to the

member of the graduating class who stands highest in his class at the Sheffield Scientific School.

GIFTS to Columbia University, aggregating $44,770, have been announced, to be used largely to finance research in medicine, chemistry and allied sciences and to support work in other fields. The larger gifts include $24,200 from the John and Mary R. Markle Foundation in support of a study of the chemotherapy of filariasis; $5,000 from the Lederle Laboratories, Inc., to be credited to the Bell gift for enzyme chemistry in the department of medicine, and $4,000 for dietary research from Swift and Company.

*Chemical and Engineering News* reports that the Howes Publishing Company has endowed an Olney Medal to be awarded by the American Association of Textile Chemists and Colorists "to afford public recognition of outstanding achievement in the field of textile chemistry" and as a testimonial to Louis Atwell Olney, president emeritus of the association and chairman of its research committee, in recognition of his lifetime of devotion and contributions to this field. The candidate receiving the award will be selected by a committee of five members of the association.

THE Library of the U. S. Department of Agriculture is now issuing a monthly Bibliography of Agriculture, which will organize all the information in current agricultural literature, regardless of the form of the publication or the language in which it was originally published. The number of titles listed each year is expected to exceed 50,000.

THE first issue of the *British Journal of Industrial Medicine* is to be published in January, 1944, under the editorship of Dr. Donald Hunter. It will appear quarterly. Its headquarters are at the British Medical Association House, Tavistock Square, London, W.C. 1. Editorial communications should be sent to Dr. Hunter at the London Hospital.

THROUGH Dr. John D. Long, of the Pan American Sanitary Bureau of Washington, who recently visited Uruguay, the Government of the United States has offered a donation of $500,000 to Uruguay for improvements in public health. Uruguay will contribute an additional fund of $100,000 for the same purpose. The work will be carried on by American and Uruguayan specialized technicians.

# DISCUSSION

## VITAMER OR ISOTEL? BOTH?

IN the issue of SCIENCE for October 29, Dr. Roger J. Williams criticized the choice of the word "vitamer" to "designate vitamin forms that can replace one another."

Rather, I believe, the word vitamer was coined to represent just what its root words mean, life-part, that part of the diet of any animal that performs the same function, regardless of the fact that quite different chemical entities may be required in different species to perform this specific effect that the vitamer under discussion is characterized for.

That is a separate purpose than that for which Dr. Williams suggests the term "isotel." An isotelic vitamin or food factor would be, according to his definition, a factor that can replace another in a given diet or nutrient media, for some specified species, or under a given set of circumstances. Evidently, we are in need of both terms to accurately express ourselves in dealing with the situation we are confronted with.

Vitamer A, accordingly, is that factor in any nutrient system that provides the vitamin A effect. It may be carotene for one species, kryptoxanthin for another, vitamin $A_1$ in salt water fish, vitamin $A_2$ for fresh. But for the human species, carotene is isotelic with vitamin A, for carotene can be converted into vitamin A in the human, thus can replace it in the diet of this specific species. Carotene, for the human species, therefore, would be isotelic with vitamin A. In the case of the cat, however, which can not make this conversion, carotene is not isotelic with vitamin A. A list of the vitamin A isotels for the cat would not include this factor.

The A vitamers for the cat are the isotelic substances that afford the nutritive effect of vitamin A for the cat. If the cat can only make use of one substance, there are then no vitamin A isotels for the species, but there always would be a vitamer A for any species that requires that vitamin in any form.

The term vitamer is just as hypothetical as the term carbohydrate or protein. A carbohydrate is that portion of the diet that supplies energy. It may be starch for the human, cellulose for the rabbit. Cellulose is not isotelic with starch for the human organism, but it is for rabbits and ruminants.

As cobalt and manganese are isotelic in their effect of activating enzymes, this term may be found representative for probably all classes of food factors, whether simple or complex. Vitamers, however, seem to be representative of the more complex food factors. Such of the vitamins as are found conjugated with proteins in foods seem to be relatively specific for species. The pellagra preventive vitamer is a good example.

ROYAL LEE

LEE FOUNDATION FOR NUTRITIONAL RESEARCH,
BROOKFIELD, WIS.