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# *News and Notes*

## 125th National Meeting of the American Chemical Society

An appeal to America's scientists to strive for greater public understanding of—and support for—free, uncommitted research was made by Louis P. Hammett, head of the Columbia University chemistry department, in an address at the American Chemical Society's 125th national meeting, held in Kansas City, Mar. 23–Apr. 1. The address, marking Columbia's bicentennial, was presented at a general session of the Society. Discussing "Rights and responsibilities in the search for knowledge," Prof. Hammett linked the nation's prospects for survival to the new weapons and other discoveries that may be expected from unprogrammed research in view of the great contributions made by such research in the past. There is no reason to suppose, Prof. Hammett said, that we can keep ahead of our potential enemies indefinitely with respect to programmed and outright developmental research, "particularly if they continue to produce technically trained men faster than we do." He pointed out that the Communist philosophy scornfully rejects exploratory research that has no specific goal, and added: "The fact that our society does admit the value of this kind of research and does support it, although somewhat feebly, is to my mind our best hope for peace and security."

Programmed research also is necessary, Prof. Hammett emphasized, but since its probable benefits are immediately apparent it wins support more easily. If government and industry are to increase their support for uncommitted research, he asserted, they must have the backing of an informed public opinion—and it is up to the scientists, who know the facts better than anyone else, to help the public develop an informed opinion.

Former President Harry S. Truman, who addressed a luncheon of the Division of Chemical Marketing and Economics, predicted that the next half-century would witness scientific developments as yet undreamed of. He expressed the wish that he could again be 20 years of age, instead of almost 70, so that he could see them. Mr. Truman praised scientists for their part in raising the world's living standard and urged them to continue studying the unknown for the benefit of mankind. He stressed the potentialities for world good in atomic energy and voiced the hope that neither the atom bomb nor the hydrogen bomb would ever again have to be used as a weapon.

Identification of a fourth abnormal form of hemoglobin in human red blood cells was among the advances reported in 697 technical papers. Harvey A. Itano of the California Institute of Technology, who received the Eli Lilly and Company Award in Biological Chemistry, announced the new hemoglobin in his award address. He and his colleagues, working under Prof. Linus Pauling, had previously traced the disease called sickle-cell anemia back to a defective hemoglobin and subsequently had identified two other abnormal forms of human hemoglobin. Their successes confirmed Prof. Pauling's theory that sickling—the occurrence of sickle-shaped red corpuscles—might result from an abnormality of the hemoglobin molecule. Prof. Pauling believes that some day such other maladies as heart disease and cancer may prove to be molecular in origin and thus susceptible to entirely new forms of treatment.

Progress in the study of the antibiotic azaserine, which is said to retard the growth of animal cancer, was described in a series of papers by chemists from the Sloan-Kettering Institute for Cancer Research; Parke, Davis and Company, and The Wellcome Research Laboratories. The antibiotic was reported to be particularly effective when used in combination with the compound 6-mercaptopurine. So far, preliminary clinical studies of azaserine in several forms of human cancer have not been impressive, according to C. Chester Stock, chief of Sloan-Kettering's experimental chemotherapy division, but researchers are hopeful that further studies will yield more encouraging results. In any event, he said, azaserine should prove a useful tool in learning more about the way cells grow.

Indications that cancer might be combated successfully through a combination of dietary control and chemotherapy were reported by James B. Allison, professor of physiology and biochemistry in Rutgers University, and associates. Studies now under way at Rutgers show that the life of a tumor-bearing animal may be prolonged through diet control, Prof. Allison said, and this may make it possible to use such chemicals as the triethylenimines to slow up, stop, or even cause regression of the cancer. Administration of T.E.P.A. (triethylenimino phosphoramide) to labora-

tory rats reduces food utilization in both normal and cancerous animals, it was stated. Daily use of T.E.P.A. in rats with experimental cancers caused the tumors—and all other tissues—to grow poorly. When the diet was supplemented with the amino acid methionine, however, the effect of T.E.P.A. on normal tissues was reduced while the tumor continued to be retarded.

A broad chemical attack is now under way against the disease-causing ameba known as *Endamoeba histolytica,* it was reported at a symposium of the Medicinal Division on the chemotherapy of amebiasis. The disease in one form or another is believed to afflict one person in every ten, according to E. C. Faust of Tulane University. He noted that although amebiasis is particularly prevalent in the tropics, its incidence rate also is high in temperate zone mental hospitals, prisons, children's homes, and rural areas. Several promising new amebicides were described.

The Medicinal Division also examined the current status of the chemical battle against helminths, or worms, in domestic animals which are costing farmers and pet owners more than $375,000,000 a year.

The curing of radiation injury in mice by means of a protective factor obtained from the nuclei of spleen cells was described by R. K. Main of the U.S. Naval Radiological Defense Laboratory, San Francisco, who termed the research "another step toward the ultimate goal of effective postirradiation treatment of radiation injury."

A new silicone molding compound that overcomes several critical limitations of present electrical insulation, and thus promises to increase the altitude and speed range of aircraft, was among the silicone developments announced at a joint symposium of the Divisions of Industrial and Engineering Chemistry and Paint, Plastics and Printing Ink Chemistry.

Advances in the fields of pesticides, synthetic detergents, synthetic liquid fuels and chemicals, and fuels for gas turbines and turbo-jet engines were surveyed by other divisions.

Registration totaled 3842 at the meeting, which as an experiment was held in two sessions. Eight divisions met from Wednesday through Saturday of the first week, and 11 other divisions from Monday through Thursday of the second week.

A highlight of the general assembly held on Saturday night of the first week was the announcement by ACS President Harry L. Fisher of the University of Southern California that the Society's Priestley Medal for 1954 had been awarded to W. Albert Noyes, Jr., chairman of the Department of Chemistry at the University of Rochester and editor of the *Journal of the American Chemical Society.* The medal will be presented at the Society's 126th national meeting in New York, Sept. 12–17.

WALTER J. MURPHY

*American Chemical Society*
*Washington 6, D.C.*

## Science News

The **75th anniversary of the U.S. Geological Survey** was observed at a meeting on Apr. 21 sponsored by the Washington Society of Engineers in cooperation with the District Council of Engineering and Architectural Societies. W. E. Wrather, director of the Survey, assisted by members of his staff, presented a program briefly describing the history, functions, and activities of the bureau.

From a small group of able scientists, the Survey has grown to an organization of more than 6600 permanent employees. Its various activities were described at the meeting by Wilmot Bradley, chief geologist; Harold J. Duncan, chief, Conservation Division; Carl S. Paulsen, chief hydraulic engineer; Gerald Fitzgerald, chief topographic engineer; and Robert L. Moravetz, chief, Publications Office.

It is significant to note that, despite the age of the Survey, the present director is only the sixth person to hold that office. Previous directors are: Clarence King, 1879–1881; John Wesley Powell, 1881–1894; Charles D. Walcott, 1894–1907; George Otis Smith, 1907–1931; and Walter C. Mendenhall, 1931–1943.

As a part of its 5-yr **Coral Atoll Project,** which is supported by funds from the Office of Naval Research, the Pacific Science Board of the National Research Council will send a team to Kapingamarangi, Caroline Islands, in June. Members of the team will be: Edwin D. McKee, U.S. Geological Survey, Denver; Cadet Hand, University of California, Berkeley, marine; William A. Niering, Connecticut College, land ecologist; Robert R. Harry, George Vanderbilt Foundation, ichthyologist; Harold J. Wiens, Yale University, geographer; W. Jan Newhouse, University of Hawaii, algologist.

The coral atoll program, which is largely in the field of basic research and involves essentially an ecological approach to the study of environmental factors affecting life on coral atolls, is the principal activity under the Scientific Investigations in Micronesia program of the Board.

The case of a man who has been fighting **fluoridation** of his city's drinking water since December, 1951, is still pending on the docket of the U.S. Supreme Court. C. Leon de Aryan of San Diego holds that fluoridation violates the 4th and 10th amendments to the Constitution. Last November the California Supreme Court decided against him. Opponents of fluoridation will have an opportunity to voice their opinions in Washington, May 25–28, when hearings are scheduled for the Wier bill (HR 2341), which is to "protect the public health from the dangers of fluoridation of water."

Beginning with its April issue, *The Journal of Dental Medicine* will carry summaries of its articles in **Interlingua.** The *Journal* is the official organ of The American Academy of Dental Medicine and is under the editorship of Irving Yudkoff of New York.

A **"Proposal for a municipal laboratory center"** has been submitted to the Mayor of the City of New York by the New York Academy of Medicine. Embodied in this proposal is the recommendation:

"That there be established a Municipal Laboratory Center comprising the Public Health Research Institute, the Bureau of Laboratories of the Department of Health, the Air Pollution Control Laboratory, the contemplated Institute of Forensic Medicine, and possibly other laboratories whose work may be related. These units need not necessarily be housed in one building; instead, they could be separately located near each other."

Two studies of the **sickle-cell trait,** reported in the *British Medical Journal* for Feb. 6, 1954, have done much to clarify the perplexingly high incidence among Negroes of this hereditary blood condition, which in the homozygous condition produces a very serious anemia. According to genetic theory, even if the heterozygous condition is neutral, natural selection would be expected to reduce the frequency of the detrimental gene to a level in equilibrium with the mutation rate replenishing it in the population. Some geneticists have consequently postulated a very high mutation rate to account for the persistence of the gene among Negroes in Africa and N. America, although that explanation would require the corollary that in other racial groups the normal allele of the sickle-cell gene is not highly mutable but is quite stable.

A study made by Henry Foy, Athena Kondi, G. L. Timms, W. Brass, and Fardil Bushra of the presence of the sickle-cell trait in 7 tribes and subtribes of Kenya and the Southern Sudan shows that the frequency is extraordinarily variable. It was found to range from 0 to 40 percent. Even within subtribes, e.g., those of the Nyika of Kenya, it was not uniform, but ranged from 10 to 35 percent. Although these rates are based on relatively small samples, the differences are statistically highly significant. Of possible explanations for this variability, the authors suggest that genetic drift, that is, the effect in very small populations of random fluctuations in the transmission of genes from generation to generation, is the most likely.

A different explanation would seem to follow from the work of A. C. Allison, who found initially that in 290 Ganda children in East Africa infection with malarial parasites was 27.9 percent in the 43 children with sickling blood cells, but 45.7 percent in the 247 nonsicklers. He followed up this interesting observation by experimental infections of sicklers and nonsicklers. In some cases infection was by injection of the live parasites of tertian malaria, in others by being bitten by infected mosquitoes, and in the majority of cases by both routes. Out of 15 adult Luo natives without sickling, and a similar number of sicklers, all of whom were followed for 20 to 40 days before any infections that developed were stopped by chemotherapy, all but one of the nonsicklers became infected, whereas only 2 of the sicklers ever showed any signs of parasites and then only mildly and sporadically. It therefore seems quite certain that individuals with the sickle-cell trait are to a considerable degree more immune to tertian malaria than are nonsicklers. Selection in areas where malaria is endemic would thus tend to strike an equilibrium between the adverse effects of malaria and the adverse effects of sickle-cell anemia. This of course would not exclude in addition the operation of genetic drift, because of the small size of the mating groups in the African populations—B.G.

**Project SQUID,** a cooperative venture in science which has been proceeding quietly for 8 yr, is a joint effort on the part of the Army, the Navy and the Air Force to foster basic research in those fields that relate to jet propulsion of aircraft. With funds provided by the Office of Naval Research, the Office of Scientific Research of the Air Force, and the Office of Ordnance Research of the Army, SQUID has been harvesting new knowledge in heat transfer, fluid mechanics, and combustion. Universities having subcontracts on Project SQUID have encouraged graduate students to participate in the program. As a result, approximately 350 student years of graduate employment training have been provided.

The administrative structure of Project SQUID is somewhat unique. It comprises a prime contract between the Office of Naval Research and Princeton University. Princeton, in turn, lets subcontracts with other university and corporate laboratories. Altogether there are three companies, eleven universities, and one government laboratory in the program. In terms of high government finance, SQUID operates with a minuscule budget. Moreover, it imposes no hardware commitments upon its participants. Its efforts are directed largely at the pursuit of basic information. Nevertheless, in addition to over 200 technical reports and publications, it has given birth to important practical developments that are now contemplated for operations use.

On Mar. 17–19 SQUID personnel from all over the country met in Princeton to report their progress for the preceding year and to exchange ideas that will make tomorrow's planes and missiles outperform today's models.

The main text of the report of a committee of the American Statistical Association, appointed in 1950 to review the **statistical methods employed by A. C. Kinsey, W. B. Pomeroy, and C. E. Martin** in their *Sexual Behavior in the Human Male,* has been published in the December, 1953, issue of the *Journal of the American Statistical Association.* The authors of the report, William G. Cochran of Johns Hopkins University, Frederick Mosteller of Harvard University, and John W. Tukey of Princeton University, hold that in investigating their very complex problem, Kinsey and his colleagues handled some aspects admirably and failed to handle others adequately. Their over-all impression of the work is favorable. In comparison with other leading sex studies, "the statistical and methodological aspects of KPM's work are outstand-

ing. . . ." In making their interpretations, however, not only were these in part based on the tabulated and statistically analyzed data, but also in part on data or experience that were not presented; and the interpretations therefore sometimes appear to be unsubstantiated assertions. "Many of KPM's findings are subject to question because of a possible bias in the constitution of the sample. This is not a criticism of their work (although it is a criticism of some of their interpretations)." The committee adds that many of the Kinsey findings are subject to question because of possible inaccuracies of memory and report, as in all such studies. No one has proposed any way to avoid this, but it must always be kept in mind that this is *reported* behavior. The committee feels that the Kinsey group received too little statistical help, partly because of wartime conditions; and the present need for additional aid of this kind remains great. The sort of assistance they require is of a type that "perhaps not more than twenty statisticians in the world possess."

The committee recommends that the Kinsey group should seriously consider a probability sampling program, at least in the form of a small pilot study. Numerous other suggestions were made, such as the expansion of "methodological checks of their sampling program, a further study of their refusal rate, some modification of their methods of analyses, further comparisons of reported vs. observed behavior, and stricter interpretations of their data." Some of these recommendations are stated by Kinsey's group to have been utilized already in the book on sexual behavior in the human female. [Others obviously were not, in particular the recommendation to include at least a small probability sample.]

In comparison with nine other leading sex studies, "KPM's work is outstandingly good. . . . Their interviewing ranks with the best, they have more and better checks, their geographic and social class representation is broader and better, their volunteer nonprobability sample problem is the same, they have used more varied and searching methods of analysis, [and] only two of the nine studies (Davis and Farris) were more careful about generalization and warned the reader more thoroughly about its dangers." As to the four major controversial findings of the Kinsey group, namely, (1) the high general rate of sexual activity, including homosexuality, (2) the slight change from the older to the younger generations (3) the strong relation between activity and socio-economic class, and (4) relations between activity and *changes* of socio-economic class—all of which were set forth as well-established conclusions—the committee warns that "all are subject to unknown allowances for (*a*) difference between reported and actual behavior, [and] (*b*) nonprobability sampling involving volunteering. While their findings may be substantially correct, it is hard to set any bounds within which the truth is statistically assured to lie. . . . The same difficulties are present in many sociological investigations."—B.G.

More than 24,000 specimens of plants, including some hitherto unknown to science, have just been brought back to the Smithsonian Institution by A. C. Smith, a curator of the U. S. National Museum, after a 9-mo collection **trip in the Fiji Islands.** This was Dr. Smith's third trip to Fiji, and during it he concentrated on four of the larger islands, Viti Levu, Ovalau, Ngau, and Taveuni, in an effort to obtain representative collections from previously neglected areas. Fiji is of especial interest to botanists because it appears to represent the eastern rim of an ancient land mass that presumably extended westward from Fiji to Indo-Malaysian regions. This so-called Melanesian continent is supposed to have been disrupted approximately 10 or 20 million years ago, since which time its present remnants have been isolated from one another. These modern archipelagoes, including not only Fiji but also the New Hebrides, the Solomons, and New Caledonia, are in effect refuges where a great number of distinct species have evolved. New Guinea was apparently the center from which much of the plant life spread eastward.

At least one Fijian plant, the degeneria, suggests that portions of the Melanesian region have been above the sea since the first flowering plants appeared on earth, conceivably more than 100 million years ago. The degeneria is a tall forest tree with beautiful white flowers, first discovered by Dr. Smith 20 yr ago and since discovered in many parts of Fiji. In many respects it is among the most primitive extant flowering plants suggesting, but differing from, the magnolia family, itself a supposedly primitive group. Another striking Fijian plant is the tangimauthia, a climbing vine with beautiful red, white, and blue inflorescences, known only on the summits of two islands. While collecting this rarity, Dr. Smith found growing with it a new and equally spectacular plant of the same genus, technically known as Medinilla.

## Scientists in the News

**George A. Boyd** has resigned as professor of biophysics at the University of Tennessee and as senior scientist for the Oak Ridge Institute of Nuclear Studies to accept directorship of the Arizona Research Laboratories, Phoenix, Ariz. This is a new industrial research laboratory that has grown out of the 22-yr-old Arizona Testing Laboratories. It is a division of Claude E. McLean & Son Laboratories, Inc., and will conduct arid zone research.

**Karl T. Compton,** chairman of the corporation of the Massachusetts Institute of Technology, has been elected chairman of a 12-member New England committee that will study the use of atomic energy for peacetime purposes in the northeastern part of the country. The committee was named by Gov. John Davis Lodge of Connecticut in his capacity as chairman of the New England Governors Conference.

**Kenneth B. M. Crooks,** formerly professor of biology at the Hampton Institute and since 1941 headmaster of Happy Grove College, Jamaica, is serving

during a year's leave of absence as a professor of zoology at the State College in Fort Valley, Ga.

**Ira V. Hiscock,** professor of public health at Yale University School of Medicine, has received the 1954 Shattuck Award of the Massachusetts Public Health Association for outstanding contributions to the field of public health. He has also received the 1954 Medal of the Connecticut Division of the American Cancer Society and, in addition, has been elected president of the Association of Schools of Public Health of the United States and Canada.

**John Oliver La Gorce,** vice president and associate editor of the National Geographic Society and a member of the organization's staff for nearly 49 yr, has been elected president and editor. He was nominated by the man he succeeds, **Gilbert Grosvenor,** who is retiring after more than 55 yr of service. Dr. Grosvenor's resignation was accepted only on the condition that he become chairman of the Board of Trustees, and he was elected unanimously to that position.

The Society has also announced that **Melville Bell Grosvenor,** Dr. Grosvenor's son and long the senior assistant editor, has been elected vice president and associate editor. Thomas W. McKnew is secretary of the Society, and Robert V. Fleming, president of the Riggs National Bank, is treasurer.

**John R. Pellam,** chief of the Cryogenic Physics Section of the National Bureau of Standards, has been appointed professor of physics at the California Institute of Technology, effective July 1.

On May 1, **William G. Pollard,** physicist and director of the Oak Ridge Institute of Nuclear Studies, was ordained as an Episcopal priest. Dr. Pollard plans to continue in his present post.

The following awards were made at the 125th national meeting of the American Chemical Society in Kansas City, Mar. 24–Apr. 1:

**John D. Roberts** of California Institute of Technology, the ACS Award in Pure Chemistry.

**Donald V. Josephson** of Pennsylvania State University, the Borden Award in the Chemistry of Milk.

**G. Frederick Smith** of University of Illinois, the Fisher Award in Analytical Chemistry.

**A. R. Penfold** of Sydney Technological Museum, the Fritzsche Award.

**Betty Sullivan** of Russell Miller Milling Company, Minneapolis, the Garvan Medal.

**Harry N. Holmes** professor emeritus of Oberlin College, the Kendall Company Award in Colloid Chemistry.

**Harvey A. Itano** of California Institute of Technology, the Eli Lilly Award in Biological Chemistry.

**Alton Meister** of National Cancer Institute, the Paul-Lewis Laboratories Award in Enzyme Chemistry.

**Arthur Lien** of Standard Oil (Ind.), the Precision Scientific Company Award in Petroleum Chemistry.

**Raymond E. Kirk** of Polytechnic Institute of Brooklyn, the Scientific Apparatus Makers Award in Chemical Education.

**Homer L. Shantz,** internationally known plant geographer, has received the Outstanding Achievement Award for 1953 of the Association of American Geographers. Dr. Shantz, retired chief of the wildlife management division of the U.S. Department of Agricultural and now living in Santa Barbara, Calif., was cited "for his contribution to geographic understanding of vegetation types in relation to soil and agriculture, especially in the United States and Africa." He is best known as the author of the Agriculture Department's map of vegetation types in the United States, regarded by botanists and geographers as a monumental work.

Presentation of the award was made on Apr. 14 at a dinner climaxing the AAG's 50th anniversary meeting in Philadelphia. In addition, citations for meritorious contributions to the field of geography were awarded to:

**James W. Watson** of Ottawa, director of the geographic branch of the Canadian Department of Mines and Technical Surveys, "for distinguished services in the establishment of a geographic office in the Canadian Government and for original contributions to the historical geography of settlement in Ontario."

**Raymond E. Murphy,** professor of economic geography at Clark University, "for outstanding success in bringing to *Economic Geography* (as its editor) broad professional support and a high degree of editorial excellence."

**Francis J. Marschner,** agricultural economist of the U.S. Department of Agriculture, "for contributions to our knowledge of land utilization and particularly for his fundamental land-use map of the United States."

**William S. Stone,** director of the graduate school at Walter Reed Medical Center in Washington, has been named director of medical research and education at the University of Maryland. He will be in charge of both the School of Medicine and University Hospital in Baltimore. H. Boyd Wylie continues as dean of the School of Medicine and George H. Buck continues as director of the hospital.

**Horace W. Stunkard,** chairman of the graduate and undergraduate divisions of biology at the University Heights campus of New York University, will retire in September. **Charles H. Willey,** professor of biology, succeeds him as head of undergraduate biology. **Harry A. Charipper,** chairman of the Department of Biology on the Washington Square campus, will continue in that post and in addition will direct the graduate departments of biology for both campuses.

Dr. Stunkard plans to continue his experimental studies into the life cycles of parasitic flatworms, especially those found in the bloodstream. Among his

works in this field was his investigation during World War II of the life history of schistosomiasis, a blood disease occurring primarily in the Far East. Serving as consultant to the Office of Scientific Research and Development, he studied thousands of snails and found a species capable of harboring the larval stages of the flatworm that causes the disease. In another project extending over several years, Dr. Stunkard was the first to identify the salt-water form of a cercarial parasite responsible for the dermatitis experienced by bathers and known commonly as "swimmer's itch." His research into the life history and development of the parasitic worm Cryptocotyle lingua, which attacks the intestine, brought him the A. Cressy Morrison prize for research of the New York Academy of Sciences in 1929. In all, Dr. Stunkard has experimented on the complicated life cycles, successive larval stages, and methods of transmission from one host to another of 14 parasitic organisms, 10 trematodes, and 4 cestodes. He has directed graduate students at NYU in tracing the cycles of 19 more parasites.

Dr. Stunkard was educated at Coe College, Cedar Rapids, and received his M.S. and Ph.D. degrees from the University of Illinois. He taught at Illinois before joining NYU as a biology instructor in 1916. Coe College presented the honorary doctor of science degree to him in 1937. On occasional leaves from NYU, Dr. Stunkard has conducted research in marine biology and tropical diseases in England, France, and Germany. He is a member of 18 scientific societies and is author of 144 scientific papers and reviews. Earlier this year he retired as editor of the *Journal of Parasitology,* a post he held for 10 yr. He is a vice president of the AAAS and chairman of Section F—Zoological Sciences; he is president of the Society for Systematic Zoology and past president of the American Society of Parasitologists, the American Microscopical Society, and the New York Society for Tropical Medicine.

**Thomas H. Weller,** virologist and parasitologist and a leading investigator in the field of poliomyelitis, has been made Richard Pearson Strong professor of tropical public health at the Harvard School of Public Health. Dr. Weller is the first incumbent in the first endowed professorial chair at the School. Endowment funds for the professorship were raised by friends and colleagues of the late Dr. Strong, a professor of tropical medicine at Harvard and a pioneer in tropical research, and included a gift of 1,000,000 francs from the Belgian Government and a gift of 1000 pesos from a group of health officials and employees of the government of the Republic of the Philippines.

**Edwin A. Wiggin,** formerly chief of the Technical Developments Branch of the Atomic Energy Commission's Isotopes Division in Oak Ridge, has been named manager of technical information of the Atomic Industrial Forum, Inc., New York. Mr. Wiggin will supervise the Forum's dissemination of technical information and will oversee the Forum's library, which was recently designated by the AEC as the first off-project depository of industrial information.

**William F. Windle,** previously scientific director of the Baxter Laboratories, Morton Grove, Ill., is now chief of the Laboratory of Neuroanatomical Sciences of the National Institute of Neurological Diseases and Blindness, U.S. Department of Health, Education, and Welfare.

**Hideki Yukawa,** 1949 Nobel prize winner in physics and professor at Columbia University, has resigned, effective in June, to return to the University of Kyoto, Japan, where a research institute has been named for him.

## Education

The Harvard Medical School and the Peter Bent Brigham Hospital have announced the opening of the **Biophysics Research Laboratory of the Department of Medicine at the Peter Bent Brigham Hospital.** The chief interest of the laboratory is the study of the "trace elements" in biology and medicine. The laboratory is equipped for work in biophysics, biochemistry, and physical chemistry. Among the facilities for instrumental analysis, spectrographic equipment is emphasized. Biochemical and biophysical approaches will be combined wherever possible. Training facilities are provided for pre- and postdoctoral students in the natural sciences and medicine. The laboratory, which has been constructed over a period of 3 yr, has a floor area of about 8000 ft$^2$. It is staffed by Bert L. Vallee and his associates—Frederick L. Hoch, Marvin Margoshes, and Ralph E. Theirs.

The **Colorado School of Mines,** Golden, is offering two summer field courses—one at Wild Horse Park in geology, June 1–July 10; and one at Aspen in mining geology, Aug. 3–Sept. 11.

This summer the University of Texas will open an **Institute for Advanced Engineering** that will offer practicing engineers opportunities for short-course briefings on professional advances which have taken place since they were graduated. The College of Engineering will conduct the Institute with the cooperation of the Division of Extension. Three courses will be offered, each lasting 3 wk: "Advanced experimental stress analysis," June 14–July 2; "New developments in communication theory," Aug. 16–Sept. 3; and "Composition and properties of oil well drilling fluids," Aug. 26–Sept. 15.

The Institute plans to offer courses in various fields throughout the year when demand justifies. Studies will emphasize mathematical and scientific theories leading to new discoveries and the implications and applications of such theories in engineering and applied science. Fields in which courses may be conducted include petroleum production and refining, chemical synthesis, radar and other electronics, nuclear reactions, structural and building technology ap-

plied to warmer climates, aeronautical and engineering mechanics theories involving supersonic stresses, and solar energy.

The **Institute of Silicate Research** at the University of Toledo was dedicated on May 15. The laboratories include a two-story furnace hall for high-temperature work and facilties for research in physical chemistry, colloid chemistry, x-rays, microphotography, microscopy, refractometry, interferometry, and so on. Considerable equipment from other departments of the university also is available for use.

The institute is a unique center for basic research and for the education of pure scientists and research engineers. It is supported by the university and five nationally known firms—the Libbey-Owens-Ford Co., Owens-Corning Fiberglas Corp., Owens-Illinois Glass Co., Pittsburgh Plate Glass Co., and Columbia-Southern Chemical Corp. Wilhelm Eitel is director of the institute, which has been in the process of development for nearly 2 yr.

A 4-yr program in **medical technology** has been inaugurated by Elmira College, Elmira, N.Y., in conjunction with the Arnot-Ogden Memorial Hospital. Following 3 yr of basic training at the college and 12 mo of instruction at the hospital, a student will be granted a B.S. degree by Elmira; then, upon successful completion of an examination offered by the Registry of Medical Technologists, he will be issued a certificate in Medical Technology by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

A **new soil-testing laboratory** in Marianna, Ark., the Eastern Arkansas Branch Laboratory of the Cotton Branch Experiment Station, Fayetteville, will be formally dedicated on June 10. Assistant Secretary of Agriculture J. Earl Coke and Governor Francis Cherry will participate in the ceremony. The laboratory will serve the farmers in 26 counties of eastern Arkansas; the remaining counties will continue to use the Main Laboratory. The new branch will be under the supervision of Richard Maples, a member of the Agronomy Department who was formerly stationed at Fayetteville.

Formal acceptance of the Columbus Cancer Clinic as a part of the Cancer Wing of University Hospital has been voted by the Board of Trustees of the **Ohio State University.** Facilities and functions of the Clinic, including the General Populace Clinics, will be moved gradually to their new location on the first floor in the north wing of University Hospital. Completion of the shift is expected by Sept. 1.

Last year the nation's 79 medical schools operated at an estimated deficit of $10,000,000, said A. C. Furstenberg, dean of the University of Michigan Medical School, in the Edward and Susan Lowe Fellowship Lecture given in Grand Rapids recently. In the past 10 yr, teaching budgets have increased 94 percent; administration, 116 percent; and plant operation, 45 percent. And although tuition fees have risen 165 percent since 1940, they still provide only one-fifth of the total **costs of a medical education.**

It has reached the point of a national crisis, the dean stated, and he added that "Unless support is forthcoming from some source, many medical schools will be forced to lower their standards of training or close their doors entirely."

Industrial applications of atomic energy will be covered in a 2-wk short course at Purdue University, from July 12–23. Similar in objectives to instruction offered by the Oak Ridge Institute of Nuclear Studies, this will be the first intensive short course offered by any university. It is designed to aid in meeting an acute shortage of trained personnel in the field of **radiochemistry.**

William H. Johnston, of the Chemistry Department, will be in charge of the course; during the war he worked on the plutonium bomb. He will be assisted by George Goldsmith of the Physics Department, who is associated with Karl Lark-Horovitz in the extensive solid-state research program which has made major contributions to the recent development of the transistor.

The course will cover the basic principles of radiochemistry, the design of experiments, instrumentation, and applications to industry. Among those participating as instructors will be James R. Arnold of the Institute of Nuclear Studies at the University of Chicago; Joseph Kennedy, head of the Chemistry Department at Washington University, who during the war was director of the Chemical Division at Los Alamos; and representatives of the Atomic Energy Commission.

## Grants, Fellowships, and Awards

The **American Heart Association** has announced that the **Howard W. Blakeslee Award** for outstanding scientific reporting in the field of heart and blood vessel diseases will be divided into several awards to cover specific categories of newspapers, periodicals, radio, and television, instead of the single award established last year. The exact number of awards and the categories from which the winners will be selected by the judges are to be determined at a later date.

It was decided to increase the number of awards because of the general excellence of the entries in the major areas of mass communication. The awards will provide a minimum of $500 for each category to be selected by the judges, rather than the original single honorarium of $1000. Additional funds for this purpose have been made possible through the generosity of Frank N. Isbey, a member of the Association's Board of Directors. His contribution supplements funds already made available by the Eva and Irving Hexter Foundation of Cleveland and the Robert Z. Greene Foundation of New York. The Blakeslee Award was established last year in memory of Howard W. Blakeslee, the late science editor of the Associated

Press and founder of the National Association of Science Writers, who died of heart disease.

To assist scientists in carrying out part of their research program in Bermuda, a generous grant covering a period of 5 yr has been made to the **Bermuda Biological Station** by the National Science Foundation. These funds, which are immediately available, will be awarded mainly to pay for research space, living expenses, or special collecting facilities required at the station. Applications for aid in purchasing equipment or for necessary travel expenses may also be considered in relation to such a program.

A booklet describing the particular advantages and facilities of the Bermuda Biological Station, as well as application forms for the fellowships, are available from the director, Dr. William H. Sutcliffe, Jr., Bermuda Biological Station, St. George's West, Bermuda. *Application should be made as soon as possible.*

The **Department of Microbiology of the Tulane University School of Medicine** will have available one or two graduate assistantships paying approximately $1000–$2000 for the next academic year. The assistantships, which are intended for students working toward the Ph.D. degree, will involve participation in the research programs of the department. Candidates should have a good background in chemistry.

*The deadline for filing applications is June 30.* Further information may be obtained from the Chairman, Department of Microbiology, Tulane University, New Orleans 18, La.

**Eli Lilly and Company,** Indianapolis, has recently awarded the following research grants:

California Institute of Technology. H. Borsook, Kerchoff Laboratories. Synthesis of a variety of fructosyl compounds.

University of California. I. L. Chaikoff, School of Medicine. Mechanisms of insulin's action.

Duke University. F. L. Engel, School of Medicine. Carbohydrate metabolism.

Florida State University. H. M. Walborsky, Dept. of Chemistry. Total synthesis of carbohydrates.

Johns Hopkins University. F. B. Bang, Dept. of Parasitology. Chemotherapy of schistosomiasis.

Johns Hopkins University. S. R. M. Reynolds and R. TeLinde, Dept. of Gynecology. Physiological conditions in and pharmacological responses of the nongravid human cervix uteri.

Massachusetts Institute of Technology. G. Buchi, Dept. of Chemistry. Chemical structure of aconite alkaloids.

Purdue University. C. L. Porter, Dept. of Biological Sciences. Antibacterial and antiviral activities of certain microorganisms.

St. Louis College of Pharmacy and Allied Sciences. A. G. Zupko, Dept. of Pharmacology. Anhydrotic and antisialogogue effects of "Elorine Sulfate."

Vanderbilt University. A. D. Bass, Dept. of Pharmacology. Effect of alloxan diabetes on liver nucleic acids.

McGill University, Montreal. K. I. Melville, Dept. of Pharmacology. Possible significance of nutritional and hormonal factors in affecting responsiveness of coronary circulation to drugs; *in vitro* effects of various types of coronary drugs on the metabolism of surviving coronary arterial strips.

Royal Victoria Hospital, Montreal. B. Rose, University Clinic. Antibodies related to sensitivity phenomena.

University College of the West Indies, Jamaica. C. H. Hassall, Dept. of Chemistry. Hypoglycin A and B.

**Two graduate assistantships in pharmacognosy** are available at the University of Pittsburgh School of Pharmacy beginning with the fall term. Each assistantship involves 10 mo of service during which the recipient will be expected to engage in part-time teaching. Graduate students in pharmacognosy will supplement their training in that field with elective courses in plant physiology, plant chemistry, plant anatomy, or related fields. Applicants interested in study of allergenic plants will have an excellent opportunity to follow this specialty.

Graduate courses leading to the M.S. degree in either pharmacognosy or pharmacology and to the Ph.D. degree in pharmacy are being offered. Interested persons should communicate with the Dean, University of Pittsburgh School of Pharmacy, Pittsburgh 19, Pa.

The **Institute of Air Flight Structures at Columbia University** is offering Daniel and Florence Guggenheim fellowships, in amounts up to $2000, for graduate study in the field of air flight structures for sonic and supersonic planes and rockets. Applicants are not required to have a degree in aeronautical engineering, but are expected to have a bachelor's degree in some branch of engineering or physical science from an accredited institution. Fellowships are renewable.

After 2 yr of graduate study as a Guggenheim fellow, students have essentially completed their course of work and are ready to become members of one of the research teams active at the Institute. They may write their doctoral thesis on the subject of this research. Principal faculty members assigned to the Institute, which is in the School of Engineering, are Hans H. Bleich, director; Lee Arnold; Alfred M. Freudenthal; and Bruno A. Boley.

The **National Science Foundation** has awarded 79 1-yr postdoctoral fellowships for advanced study and research in the natural sciences for the academic year 1954–55. These postdoctoral fellowship recipients were selected from 461 applicants and are in addition to the 657 predoctoral fellowships announced earlier. Last year, 42 postdoctoral fellows were selected from 368 applicants and for the academic year 1951–52, 55 fellows were selected from 292 applicants. Of the current awards, 36 are in the life sciences, 15 in chemistry, 13 in physics and astronomy, 12 in mathematics, 2 in the earth sciences, and 1 in engineering.

*Alabama*

J. C. O'Kelley, Tuscaloosa; Iowa State Coll., Bot.

*Arizona*

W. V. F. Brooks, Tucson; U. of Minnesota, Chem.

*California*

R. C. Blanchfield, S. Pasadena; Princeton U., Math. Sci.
M. J. Cohen, Los Angeles; U. of California, Zool.
J. W. Durham, Berkeley; U. of California, Earth Sci.
R. E. Glick, Sherman Oaks; U. of California, Chem.
D. L. Glusker, Santa Monica; Oxford U., Chem.
R. F. Heck, Los Angeles; U. of California, Chem.
J. A. Ibers, Pasadena; California Inst. of Tech., Chem.
L. F. Jaffe, Pacific Grove; Hopkins Marine Station, Bot.
J. A. Lockhart, Los Angeles; U. of California, Bot.
P. C. Martin, Los Angeles; Harvard U., Phys.
L. Ordin, Berkeley; U. of California, Bot.
D. D. Perkins, Stanford; Columbia U., Gen.
D. M. Prescott, Berkeley; U. of California, Zool.
E. Reich, Santa Monica; U. of California, Math. Sci.

W. G. Sly, Lakeside; California Inst. of Tech., Chem.
M. D. Van Dyke, Los Altos; California Inst. of Tech., Eng.

*Colorado*

J. L. Westley, Denver; U. of Chicago, Gen.

*Connecticut*

H. M. Dintzis, New Haven; Yale U., Biochem.
W. S. Hillman, Westport; Yale U., Bot.
W. C. G. Ortel, New Haven; Yale U., Phys.
F. M. Richards, Wilton; Harvard U., Biochem.
I. Tessman, New Haven; Yale U., Phys.

*District of Columbia*

F. S. Ham, Washington, D. C.; Harvard U., Phys.

*Florida*

E. F. Cox, Bradenton; California Inst. of Tech., Chem.

*Illinois*

V. R. Dorjahn, Evanston; Northwestern U., Anthrop.
W. E. M. Lands, Urbana; U. of Illinois, Biochem.
R. W. Lichtwardt, Champaign; U. of Illinois, Bot.
E. R. Rich, Chicago; U. of Chicago, Gen. Biol.
J. G. Wegener, Chicago; U. of Chicago, Psych.

*Indiana*

W. M. Huebsch, South Bend; U. of Notre Dame, Math. Sci.

*Iowa*

W. H. Orgell, Hubbard; U. of California, Bot.

*Maryland*

H. L. Plaine, Baltimore; Johns Hopkins U., Gen.

*Massachusetts*

P. S. Chen, Jr., S. Lancaster; U. of Rochester, Med. Sci.
T. Delevoryas, Chicopee Falls; U. of Illinois, Bot.
W. B. Hawkins, Jr., Springfield; Princeton U., Phys.
M. Karplus, W. Newton; Oxford U., Chem.
H. W. Kendall, Sharon; M.I.T., Phys.
J. H. Luft, Boston; Peter Bent Brigham Hospital, Zool.
D. M. Maynard, Jr., W. Newton; U. of California, Zool.
J. C. Moore, Belmont; Princeton U., Math. Sci.
B. B. Stowe, Cambridge; Harvard U., Bot.
L. Wilets, Auburn; Inst. for Theoretical Physics, Copenhagen, Phys.

*Michigan*

E. Weiss, Ann Arbor; M.I.T., Math. Sci.

*Minnesota*

G. E. Baxter, Minneapolis; U. of Minnesota, Math. Sci.
D. T. Lykken, Minneapolis; U. of Minnesota; Psych.

*Missouri*

S. G. Bradley, Springfield; Northwestern U., Microbiol.
K. L. Rinehart, Jr., Chillocothe; U. of California, Chem.

*Nebraska*

M. F. Ruchte, Lincoln; U. of Wisconsin, Math. Sci.

*New Jersey*

G. L. Bate, Bergenfield; Columbia U., Earth Sci.
G. S. Bernstein, Trenton; U. of Delaware, Biochem.
D. A. Buchsbaum, Princeton; Columbia U., Math. Sci.
V. L. Shapiro, New Brunswick; Inst. for Advanced Study, Math. Sci.

*New York*

L. N. Cooper, Great Neck; Columbia U., Phys.
G. F. Endres, Brooklyn; Polytechnic Inst. of Brooklyn, Chem.
G. Felsenfeld, New York; California Inst. of Tech., Chem.
R. C. Lewontin, Flushing; Columbia U., Gen.
A. P. Mattuck, Brooklyn; Princeton U., Math. Sci.
A. Roberts, Rochester; U. of Rochester, Phys.
D. Rogers, Buffalo; Oregon State Coll., Biochem.

*Ohio*

G. E. Briggs, Briggsdale; U. of Wisconsin, Psych.
K. T. Brown, Yellow Springs; U. of Chicago, Psych.
J. B. Hendrickson, Toledo; Harvard U., Chem.
K. G. Henize, Cincinnati; U. of Michigan, Astron.
C. H. Southwick, Wooster, U. of Wisconsin, Zool.

*Oklahoma*

W. C. Hamilton, Stillwater; California Inst. of Tech., Chem.

*Pennsylvania*

L. N. Castor, Jr., Philadelphia; U. of Pennsylvania, Zool.
J. Feldman, Philadelphia; Columbia U., Math. Sci.
W. L. Fite, Jenkintown; Harvard U., Phys.

*Texas*

G. L. Webster, Cedar Valley; Harvard U., Bot.

*Washington*

B. A. Campbell, Seattle; Yale U., Psych.

*Wisconsin*

W. L. Culberson, Madison; U. of Wisconsin, Bot.
C. W. Curtis, Madison; Yale U., Math. Sci.
J. F. Horning, Milwaukee; U. of Wisconsin, Chem.
R. E. Ireland, Madison; U. of Wisconsin, Chem.
W. E. Johnson, Osseo; U. of Wisconsin, Zool.
M. Tinkham, Ripon; M.I.T., Phys.

*Wyoming*

R. E. Cutkosky, Cheyenne; Carnegie Inst. of Tech., Phys.

The **National Research Council of Canada** has granted 236 scholarships for 1954–55, with a total value of $283,200. These scholarships include 75 bursaries of $800 each, 103 studentships of $1100 each, and 21 fellowships of $1400 each. All of these are to be held in Canada.

Special scholarships for study abroad include 20 $1900 awards that are to be held in the following countries: 10 in the United States, 8 in the United Kingdom, 1 in France, and 1 in Sweden.

Seventeen overseas postdoctorate fellowships at $2500 each have been granted for work in the following countries: 12 in the United Kingdom, 2 in Sweden, and 1 each in Denmark, in France, and in the Netherlands.

The **Theobald Smith Award** of $1000 and a bronze medal, which has been given yearly since 1937 (except for a lapse during the war years) by Eli Lilly and Company of Indianapolis, under the auspices of the AAAS, will be presented at the Association's 121st Meeting in Berkeley, Dec. 26–31.

Nominations for the award may be made by Fellows of the AAAS and should be sent *before Sept. 1* to the Secretary of the Section of Medical Sciences, Dr. Allan D. Bass, Department of Pharmacology, Vanderbilt University School of Medicine, Nashville 5, Tenn. Nominations should be accompanied by six copies of a statement giving full information concerning the nominee's personality, training, and research work.

The prize is given for "demonstrated research in the field of the medical sciences, taking into consideration independence of thought and originality." Any U.S. citizen who was less than 35 yr of age on Jan. 1, 1954, is eligible. The research is not to be judged in comparison with the work of more mature and experienced investigators. The vice president of Section N and four Fellows will form the committee of award.

Two new fellowships in biochemistry have recently been established at **Yale University School of Medicine.** Through the generosity of two alumni, it has been possible to establish the Lafayette B. Mendel Fellowship in Biochemistry, for exceptionally promising first-year graduate students. The first award will be made this

spring. In addition, the Lalor Fellowship in Biochemistry, for predoctoral graduate students, has been made possible by a gift from the Lalor Foundation.

## Meetings and Elections

The **37th Annual Conference and Exhibition of The Chemical Institute of Canada** will be held in Toronto, June 21–23. Some 1200 delegates are expected to attend. A special feature will be a symposium on the chemical engineer in Canada.

The **Association of American Geographers** has elected the following officers: pres., Joseph A. Russell, Department of Geography, University of Illinois; v. pres., Louis O. Quam, Office of Naval Research; sec., Burton W. Adkinson, Reference Department, Library of Congress.

The spring meeting of the **Committee for the Scientific Study of Religion** was held in New York on Apr. 10. Featured on the program was a panel discussion on the subject "What do we know about the relation between religious beliefs, behavior patterns, and attitudes to behavior in secular activities?" Participants were Charles Y. Glock and Horace Friess of Columbia, Richard V. McCann of Harvard, Arthur L. Swift, Jr., of Union Seminary, and Robert Knapp of Wesleyan and the Ford Foundation.

The date for the fall meeting at Harvard University was set for Nov. 6. The program is to be divided between reports on empirical investigations and presentations concerning theories and techniques. Those who have papers of not over 20 min to propose should send two copies of a 300-word abstract to Prof. Richard B. McCann, 48 Mt. Auburn St., Cambridge 38, Mass., *before Sept. 30.*

Scholars having research projects in the field of the scientific study of religion to be endorsed by the Committee should send 10 copies of a description not exceeding 1000 words, together with a curriculum vitae, to Mr. Ralph Burhoe, American Academy of Arts and Sciences, 28 Newbury St., Boston, at least 6 wk before the deadline set for the call for papers for any particular meeting. If approved by the Executive Committee and its advisors, the proposer will be asked to supply mimeographed copies of his proposal to be circulated among the membership; he will also be asked to appear at the meeting to defend his project. At this time the membership will vote on the question of approval. The fee to cover expenses will be $10, payable with the initial submission of material. For further information about the Committee, write the secretary, Dean W. H. Clark, Hartford School of Religious Education, Hartford 5, Conn.

Forty-four outstanding researchers recently participated in a 2-day conference on **"6-Mercaptopurine"** that was held under the auspices of the New York Academy of Sciences. In organizing the conference, the cochairman, George H. Hitchings of the Wellcome Research Laboratories, Tuckahoe, N.Y., and C. P. Rhoads of the Memorial Hospital Center for Cancer and Allied Diseases, New York, brought together the leading scientists in the various laboratories and hospitals in this country and from France and the Argentine to bring up to date the work that has been done with 6-Mercaptopurine and the results obtained in its use.

Recent studies of drug effects on mental disorders, latest progress in the chemical attack on hardening of the arteries, and the role of pituitary hormones in the body are three of the topics to be discussed at the **4th National Medicinal Chemistry Symposium,** to be sponsored by the American Chemical Society's Division of Medicinal Chemistry at Syracuse University, June 17–19. Amel R. Menotti of Bristol Laboratories, Inc., Syracuse, is chairman of the symposium and Thomas P. Carney of Eli Lilly & Company, Indianapolis, is program chairman. Charles F. Kettering, dean of American automotive engineers and inventor of the first successful electric self-starter, will present the main address at the symposium banquet June 17.

Certain aspects of the digestive process will be discussed at the opening session at which Alfred Burger, chairman of the Division, will preside. Robert R. Burtner of G. D. Searle & Company will explain the chemistry involved in a study of the problem, and Joseph Webb of the Upjohn Company will report on the action of drugs and natural factors.

Chemical substances that attack atherosclerosis will be described by Robert Shipley of Eli Lilly & Company, and the parts played in atherosclerosis by cholesterol and lipoprotein will be discussed by R. Gordon Gould of the University of California and Douglas Surgenor of the Harvard Medical School. J. O Lampen of E. R. Squibb and Sons will be chairman.

Alkaloids will be the topic of the session conducted by Chester Cavallito of the Irwin-Neisler Company. Dr. Cavallito will survey the importance of alkaloids in medicinal chemistry, Bernhard Witkop of the National Institute of Arthritis and Metabolic Diseases will describe modern methods for certain studies of alkaloids, and Leo Marion of the National Research Council of Canada will discuss the formation of alkaloids in living organisms.

Vincent du Vigneaud of the Cornell University Medical College, leader of the team of chemists that synthesized the pituitary hormone oxytocin last year, will report on this work and the activities of hormones produced by the posterior section of the pituitary gland. Oxytocin, an important factor in childbirth and lactation, is the first polypeptide hormone to be produced synthetically. Others to speak at this session are James Sprague of Sharp & Dohme, who will preside, and Klaus Hofmann of the University of Pittsburgh School of Medicine.

A panel discussion will be conducted on "Mechanism of drug action," under the guidance of Bernard Brodie of the National Institutes of Health. Mental health will be considered at the session on Saturday

morning under the chairmanship of Dr. Carney. Edward Evarts of the National Institute of Mental Health will speak on the effect of drugs on mental disorders, and I. Arthur Mirsky of the University of Pittsburgh School of Medicine will discuss various related aspects of mental health.

The **National Science Foundation** has recently appointed an **Advisory Panel for Radio Astronomy,** consisting of: M. A. Tuve, Carnegie Institution of Washington, chairman; B. J. Bok, Harvard College Observatory; J. L. Greenstein, California Institute of Technology; J. P. Hagen, Naval Research Laboratory; J. D. Kraus, Ohio State University; R. Minkowski, Mount Wilson and Palomar Observatories; and E. M. Purcell, Harvard University.

The 64th annual meeting of the **Nebraska Academy of Sciences** was held Apr. 23–24, at Omaha, in conjunction with the centennial celebration of the city of Omaha. The host schools were the Creighton University, the University of Nebraska College of Medicine, and the University of Omaha. This year the Chemistry, Physics and Engineering Section was divided and the new Engineering Section was established.

More than 300 were registered and 85 papers were presented in the 7 sections of the Senior Academy. In addition 8 papers were read in the Collegiate Section and 32 papers or demonstrations were given in the Junior Academy. Two papers were presented by members of the University of Nebraska faculty to interest the high school students in careers in science: "New horizons in microbiology" by Carl E. Georgi, professor of bacteriology; "What is there to physics?" by Theodore Jorgensen, Jr., professor of physics. Some 150 high school students registered for the Junior Academy program.

"Fungi and man," the past-presidential address, was presented at the annual banquet by W. W. Ray, chairman of the Department of Botany, University of Nebraska. The evening lecture, "The place of geology in science and life," was given by W. Twenhofel, consulting geologist of Orlando, Fla. Two outstanding symposia were presented: "Paleoecology" in the Earth Science Section, and "Scale of values" in the History and Philosophy of Science Section.

Officers for the coming year are pres., H. M. Cox, Univ. of Nebraska; v. pres., Paul Stageman, Univ. of Omaha; sec., C. B. Schultz, Univ. of Nebraska; corres. sec., Mary Louise Hanson, Univ. of Nebraska; treas., C. E. Rosenquist, Univ. of Nebraska.

The **Summer and Pacific General Meeting of the American Institute of Electrical Engineers** will take place on June 21–25 in Los Angeles, where 250 papers will be presented in 55 sessions. Bradley Cozzens of Los Angeles, general chairman, expects some 2000 participants. Of especial interest to the West Coast will be symposiums on aircraft, computers, atomic energy, mining and metal industry, heat pumps, and power generation.

Elgin B. Robertson, president, will preside and will present the 1953 Lamme Gold Medal to Frank A. Cowan, executive of the American Telephone and Telegraph Co. who is being honored "for his outstanding contributions to long-distance communication and the development of modulating and transmission measuring apparatus of original design and application."

Among the luncheon speakers will be Lee A. DuBridge, president of California Institute of Technology, Lee De Forest, and Walker L. Cisler, president of the Detroit Edison Company.

## Miscellaneous

Biographies of some 75,000 scientists will appear in the next revision of ***American Men of Science,*** an increase of about 50 percent over the previous (1949) edition. This is the greatest increase since this biographical directory was founded in 1906. The size of the volume has passed the limits of standard bookbinding machinery, from 3000 to 4500 pages, so that the new (ninth) edition will appear in three parts. Part I, devoted to the physical sciences, will be ready in Nov. 1954. Parts II and III, on the biological and the social sciences will follow.

The Corps of Engineers' Research and Development Laboratories, Fort Belvoir, Va., need several specialists in the field of **electric power generation** to carry on their program of developing improved equipment for the Armed Forces. Applicants must hold a degree in electrical engineering or have considerable practical experience. Salaries range from $3410 to $7040, commensurate with experience. Those interested should apply to Mr. Walter H. Spinks, Chief, Administrative Dept., ERDL, Fort Belvoir.

A. MacRae & Co., Limited, of Bombay, India, published the first issue of the ***Journal of the Indian Medical Profession*** on Apr. 15. In his letter of announcement, N. J. Hamilton, managing director, commented that guest editorials for the new journal would be welcomed.

The **Naval Research Laboratory,** Washington, D.C., has professional vacancies in the physical sciences and in engineering. Inquiries should be addressed to W. G. Torpey, Code 1817, Naval Research Laboratory, Washington 25.

***Science in Alaska, 1951,*** the proceedings of the 2nd Alaskan Science Conference, is now available for $3.00 from Dr. Troy L. Péwé, Secretary, Alaska Division, AAAS, Box 4004, College, Alaska.

The **UNESCO Technical Assistance Program** has announced the following science vacancies: anthropologist, sociologist, ecologist, and hydrologist. Salaries range from $6000 to $8400 a year, tax free. The first three posts are in Brazil, and the last in Mexico. For information address: Technical Assistance Unit, UNESCO, United Nations, New York 17.