Government finance it directly. If steps can be taken to cause adequate funds to flow into university channels from private sources, this will be far superior to an attempt to modify the government method of support of research in order to overcome these objections. There will still remain the larger projects that need the Government's attention; it might be better to keep the government activities in that sphere. Some industrial funds have been supporting research in a manner that has been very effective; on the other hand, some industrially sponsored research in universities should probably not have been put in a university at all. I do not mean that industrial activities in this area are better or worse than those of government; I mean simply that the best of the industrially sponsored activities are excellent and should serve as models for further expansion.

The foundations, of course, have had considerable experience in handling the support of research with a minimum of restriction. The tradition of a foundation is to say "once we have made you a grant, you go ahead and spend it as you see fit."

On the industrial side the Du Pont Company, to mention one, has been making some general grants in chemistry in recent years that are completely unrestricted with regard to the manner of expenditure. In other words, the funds can be incorporated with other departmental funds and used in whatever fashion seems appropriate and necessary. A relatively moderate addition to the number of general grants of this type would alleviate many of the difficulties involved with government projects and, in fact, would alleviate the need for the smaller government projects.

I hesitate, without more study than I have been able to give, to mention a dollar sum, but it seems to me that this could be estimated relatively easily by looking at the total magnitude of small grants from all such agencies as the NSF. I believe about $20 million per year goes into relatively small grants in the natural sciences. This is a very small proportion of corporate profits. If industry were to distribute this sum in an unrestricted fashion, and if the sum were divided on some reasonable basis among the various universities, the investigators in the smaller, less expensive types of work would be free from the necessity of applying for special funds and from all the concern and possible restrictions that I have mentioned.

This is a challenge that American industry ought to consider very seriously. Does not the solution to this problem lie in this line and at an expense that would not look large from the point of view of the entire scope of American industry. I might also comment that funds that are made available to universities on this broader basis are, I am sure, used very much more efficiently. Once a research grant has been broken down into small units as a matter of direct negotiation with the Government, there is an obligation, either to spend it within the bounds of that original project or to allow it to revert. If the money came to the university on a broader basis, the plants for expenditure could be rearranged if new needs arose and new developments occurred. This would yield a much more flexible basis that would provide much greater efficiency of utilization. I have estimated, as a matter of fact, that the $10,000 per year which the Du Pont Company gives the chemistry department of the University of California is more important for research purposes than $20,000 to $30,000 in the small grants that are tied to specific subjects of investigation and cause various difficulties in their use.

The natural effect of all government aid to research has certainly been helpful. I do not know what the universities would have done in this period had these government funds not been available. I think the administration by various government agencies has been excellent. My critical comment is strictly about the system that breaks down the funds into very small units that are tied closely to particular subjects of investigation. I hope that both government and industry can contribute to improved methods in the near future.

News and Notes

Pacific Division 1955 Meeting

The Pacific Division of the AAAS will hold its 36th annual meeting at the California Institute of Technology, Pasadena, 20–25 June. The Division includes members in California, Oregon, Washington, Idaho, Montana, Utah, Nevada, British Columbia, and Hawaii.

Twenty-six scientific groups will have sessions in the following fields:

Astronomy: *Astronomical Society of the Pacific,* contributed papers, 21, 22 June.

Chemistry: *American Chemical Society,* Southern California Section, symposium on "Free radicals," 21 June.

General: *Federation of American Scientists,* Los Angeles Branch, symposium on "International exchange of scientific personnel and ideas," 23 June. *Southern California Academy of Sciences,* contributed papers, 21 June.

Geography: *Association of Pacific Coast Geographers,* contributed papers, 20, 21 June; field trip, 22 June.

Geology: *Geological Society of America,* Cordilleran Section, symposium in two parts: (i) "Trace elements in igneous and sedimentary rocks and in deep sea sediments," (ii) "Metamorphic problems," 23 June.

Mathematics: *American Statistical Association,* symposia on "Quality control," "Applications of electronic computers," and "California's population: a study in dynamics," 23 June. *National Science Foundation,* symposium on "The theory of numbers," 22, 23, 24 June. *Bio-*

metric Society, Pacific Northwest Division, symposia on "Genetics," "Psychometrics," and "Ecology," 22, 23, 24 June.

Meteorology: *American Meteorological Society,* contributed papers, 21, 22, 23 June.

Physics: *Section B. AAAS,* symposium on "Cosmic rays and high-energy particles," 21 June.

Psychology: *Western Psychological Association,* symposium on "Psychological and biological effects of stress," 24 June.

Biology: *American Nature Study Society,* contributed papers, 21, 22 June; field trip, 23 June. *American Phytopathological Society,* contributed papers, 22, 23 June; symposium, 23 June; field trip, 24 June. *American Society for Horticultural Science,* contributed papers, 21, 22, 23 June; symposia, 22, 23 June; field trip, 24 June. *American Society of Limnology and Oceanography,* contributed papers, 22, 23 June. *American Society of Plant Physiologists,* contributed papers, 21, 22, 23 June; symposia with *Botanical Society of America,* "Photosynthesis," 22 June "Active absorption by cells," 23 June. *Botanical Society of America,* contributed papers, 21, 22, 23 June. *Cooper Ornithological Society,* contributed papers, 22 June. *Ecological Society of America,* contributed papers, 21, 23, 24 June; symposium, 22 June; field trips, 23, 24 June. *Herpetologists League,* contributed papers, 21 June. *Pacific Northwest Bird and Mammal Society,* contributed papers, 22 June. *Society of American Bacteriologists,* contributed papers, 24 June. *Society for Experimental Biology and Medicine,* contributed papers, 21 June. *Society of Systematic Zoology,* contributed papers, 20 June. *Western Society of Naturalists,* symposium, 23 June.

Visitors are urged to complete registration on the opening day, 20 June. Caltech will hold open house on the first afternoon of the meetings to welcome visitors and display its research facilities. Thirty-three commercial exhibits, grouped around a central refreshment area, will also be open.

Excursions on the various days of the meeting will go to Southern California points of scientific interest: the Mount Wilson and Palomar Observatories; the Los Angeles State and County Arboretum, Arcadia; Rancho Santa Ana Botanic Garden at Claremont; and the Henry E. Huntington Memorial Library, Art Gallery, and Botanic Gardens in San Marino.

A special feature of the meeting will be three invitational lectures dealing with "Ideas: their genesis, support, and communication." On Tuesday, 21 June, Linus Pauling, chairman of the division of chemistry and chemical engineering at Caltech and 1954 Nobel laureate in chemistry, will speak on "The genesis of ideas." On the following evening Dean Rusk, president of the Rockefeller Foundation, will consider "The support of ideas." Finally, on Thursday evening, Will Burtin, designer and visual researcher, will analyze "The communication of ideas." All three lectures will be delivered at 8 P.M. in Sexson Auditorium, Pasadena City College. The general public is cordially invited to attend.

Housing reservations should be sent directly to the hotel desired, accompanied by a deposit for one night's lodging. Accommodations are available at: Huntington-Sheraton Hotel (10-min drive from the campus), double or triple rooms $4.50 per person per night; Constance Hotel (walking distance from campus), double room $3.50 per person per night, single room $5; Green Hotel (10-min drive from the campus), double room $3.25 per person per night, triple room $3; Caltech Student Houses (men only, no private baths), single room $3.50 per person per night, double room $3.50, triple room $3, small double (bunks) $2.75; for motels, write to California Motel Association, 2131 East Colorado Street, Pasadena.

A campus lounge and social center and a trip to TV City, Los Angeles, are being planned for women guests. Information about things to do and see in Southern California will be available at the registration desk.

Further information may be had by inquiry to AAAS Convention Office, California Institute of Technology, Pasadena.

Science News

The U.S. Atomic Energy Commission has invited state governors to send representatives to a **conference to discuss the health and safety** aspects of regulations applicable to users of source, special nuclear, and by-product materials. The commission announced in April that it has approved three proposed regulations under the Atomic Energy Act of 1954 that cover production and utilization facility licensing, special nuclear material licensing, and the safeguarding of restricted data. In the preparation of the proposed licensing regulations, the commission gave extensive consideration to health and safety aspects of licensing, such as the qualifications of the applicant to engage safely in the proposed activities, the adequacy of his equipment, and the suitability of the location at which he proposes to engage in the activities for which he seeks a license.

The commission is preparing regulations to establish the standards that it will require licensees to observe. These rules will prescribe maximum permissible limits of radiation exposure and will establish requirements concerning radiation monitoring, radioactive waste disposal, and related matters.

The Swedish Government intends to propose, probably in collaboration with other countries, a United Nations study of the immediate and long-range biological **effects on man of nuclear explosions.** In a statement to the Riksdag in early May, Foreign Minister Osten Undén referred to the study that is under way in the United States. He observed that the problems involved require an international investigation under U.N. auspices.

A **National Selective Service Scientific Advisory Group** has been established within the Selective Service System to advise the agency's director regarding scientific problems that confront him. Members of the new group are Leonard Carmichael, secretary, the Smithsonian Institution, chairman; A. V. Astin, director, National Bureau of Standards; Detlev W. Bronk, president, National Academy of Sciences and National

Research Council; Carlton S. Dargusch, Committee on Specialized Personnel, Office of Defense Mobilization; Jerome C. Hunsaker, chairman, National Advisory Committee for Aeronautics; Francis W. Reichelderfer, chief, U.S. Weather Bureau; Lewis L. Strauss, chairman, U.S. Atomic Energy Commission; Alan Waterman, director, National Science Foundation.

A new scientific and technical **documentation center** established by the Egyptian Government and UNESCO in the National Research Council office in Egypt is being guided by three experts who performed a similar service for Mexico. Augusto Perez-Victoria, Spanish scientist who headed UNESCO's mission to Mexico, is chief of the new center. Cosby Brinkley, an American who organized the Mexican microfilm service, and Julio Garrido of Spain, formerly editor of the bulletin of the Mexico center, are carrying similar responsibilities in Egypt. These men are among some two dozen UNESCO technical-assistance workers who have already completed missions in other countries and are on their second or third assignments.

The Mexico City center is now in the hands of an all-Mexican staff trained at the center through UNESCO technical-assistance fellowships. This staff abstracts material from 2000 scientific periodicals each month; its information services are used by scientists and manufacturers throughout Latin America.

Canada, Japan, and the United States will join forces this August to conduct an oceanographic **survey of the North Pacific Ocean** from North America to Japan and from the Tropic of Cancer almost to the Bering Strait. Plans for Operation NORPAC, as the program is called, were announced by Roger R. Revelle, director of the University of California's Scripps Institution of Oceanography, during the recent annual meeting of the American Geophysical Union.

The results are to serve as a background for studies of fisheries problems of all three countries, and to provide data for exhaustive research in the various fields of oceanography: physical, biological, chemical, meteorologic, and geologic. The ocean area to be covered comprises more than 10 million square miles, or about one-sixteenth of the earth's surface. At least 20 fully equipped oceanographic research vessels will be engaged in a simultaneous survey of the region. They will sail a total of about 70,000 mi.

In terms of ships, manpower, and area covered, this will be the largest oceanographic program ever conducted. And in none of the previous large oceanographic cruises have the measurements been taken in a short enough time to avoid inclusion of seasonal changes in the ocean currents in the measurements. Previous cruises have covered large areas but have required more than a year to complete.

NORPAC has been more than a year in the making. Three United States agencies are involved: the California Cooperative Oceanic Fisheries Investigations, using the vessels of the Scripps Institution and the South Pacific Fishery Investigations of the U.S. Fish and Wildlife Service; the department of Oceanography of the University of Washington; and the Hawaii-based Pacific Oceanic Fisheries Investigations of the U.S. Fish and Wildlife Service. The Canadian agency is the Pacific Oceanographic Group, Nanaimo, B.C. The cooperating Japanese agencies are the Nagasaki Marine Observatory, the Kobe Marine Observatory, the Hakodate Marine Observatory, the Japanese Hydrographic Office, the University of Hokkaido, the Tokai Regional Fisheries Research Laboratory, the University of Fisheries, Toyko, and the Central Meteorological Observatory.

Joseph L. Reid, Jr., oceanographer at Scripps who has worked as coordinator of the various plans, stated:

> The most significant feature of the program is that for the first time we will be able to view the entire North Pacific current pattern without any disturbances due to seasonal changes, which have made our previous pictures so difficult to understand.

The 16 May issue of *Time* contains an article on **Lee A. DuBridge,** president of California Institute of Technology. The article points out that

> The tradition of "pure" science is a foreign one that had to be transplanted from Europe and virtually forced on American soil. Even today the nation spends, through the Government, $2 billion a year on science, but only one dollar in 20 goes to pure science. The U.S. has more than 850,000 scientists and engineers, but only about 3% are engaged in fundamental research. The reason for the imbalance is that 1) such research seems dreamy and impractical, and 2) there are tremendous demands for scientists to work in technological fields, both military and commercial. Pure science, explains DuBridge, is "not the development of new devices or techniques. It is not the discovery of new cures for diseases. It is not the development of new weapons for war." Pure science is "simply knowledge."

The article discusses the breakdown of barriers between disciplines and quotes a C.I.T. alumnus as having said:

> When I was an undergraduate, I majored in biology. But, of course, Caltech's biology is really biochemistry. Now everybody knows that chemistry is only a branch of physics, but it took me until my senior year to realize that physics is a branch of philosophy.

The article then describes DuBridge's observation that it is tragic that the goals of science are so little understood, that science is regarded either as in a mysterious category of its own or merely as a producer of bombs and security risks.

> You would think that the fate of the world rested on the outcome of some sort of race between scientists, on the one hand, and all the historians, philosophers, writers, economists, poets, preachers and political and social scientists on the other, with the implication that if science wins, the human race will be blasted to oblivion. . . . Are science and engineer-

ing just the tools for man's amusement and for his ultimate destruction? Let us say, rather—and more truthfully—that they are his . . . tools in his eternal struggle to achieve his highest . . . spiritual ends.

Work on the new **Pacific Research Laboratory** at Chicago Natural History Museum is nearing completion. The laboratory, which will be a center for Pacific anthropological research, already contains some 10,000 ethnographic specimens from Polynesia, Micronesia, Melanesia, Australia, Indonesia, the Malay Peninsula, Madagascar, and the Philippines. It will include a storeroom, workroom, and poison room and will make available for research and reference one of the world's most important collections in its field. The material included has been accumulating since as far back as the 1890's.

Cooperating institutions, in addition to the Natural History Museum, include the Wenner-Gren Foundation for Anthropological Research in New York; the Philippine Studies Program that is financed by the Carnegie Corporation of New York and conducted by the University of Chicago; and the Newberry Library (Ayers Collection) of Chicago. Evett D. Hester is in charge of the project.

The Department of Defense and the Atomic Energy Commission announced on 17 May that the **underwater explosion** of a small nuclear device in the eastern Pacific Ocean had been successfully completed by Joint Task Force 7. The indications are that the test involved no health hazard to mainland or island inhabitants or to consumers of fish. The Scripps Institution of Oceanography participated in the test, for which it had conducted extensive preliminary studies. The explosion was scheduled in order to obtain information that is essential to the development of tactics for antisubmarine warfare.

Scientists in the News

The 1955 Hoblitzelle agricultural awards for outstanding research contributions to American farming have been won by two scientists of the U.S. Department of Agriculture and one from the Texas Agricultural Experiment Station. These awards, established by the Hoblitzelle Foundation, are administered by the Texas Research Foundation of Renner, Tex.

Sterling R. Olsen, USDA soil scientist, who is stationed at Fort Collins, Colo., and who works with the Colorado Agricultural Experiment Station, has won the $5000 Hoblitzelle National Award in Agricultural Sciences for development of a new, reliable method for estimating the amount of soil phosphorus available to plants. The test is based on use of a water solution of ordinary baking soda to dissolve the phosphorus from a soil sample. It can help farmers avoid applications of phosphate fertilizer when they are not needed, or tell them how much to apply when lack of phosphate limits crop production. Especially valuable for use on neutral and alkaline soils common in the West, the baking soda test is more dependable for a much wider range of soil types than previous methods for estimating available soil phosphorus. It has been adopted by soil-testing laboratories in a number of states and in Turkey, India, and other countries.

Joseph C. Stephens, USDA plant breeder stationed at Chillicothe, Tex., and **J. Roy Quinby,** superintendent of the Texas Agricultural Experiment Station at Chillicothe, jointly received the $5000 Hoblitzelle Achievement Award for Advancement of Texas Rural Life for their development of a practical method for commercial production of hybrid sorghum seed. Their work in providing a genetic method—use of male-sterile plants—for commercial production of hybrid sorghum seed makes it possible for farmers to increase grain-sorghum yields 30 to 40 percent. Farmers of Texas and nearby states will be growing hybrid sorghums in 1956, and yield increases equal to those attained with hybrid corn are expected. Quinby and Stephens have worked together in sorghum research at the Chillicothe station for 30 years.

Wyland F. Leadbetter has been appointed associate clinical professor of surgery at the Harvard Medical School and chief of the urological service at Massachusetts General Hospital. He is also surgeon and chief of urology at Mt. Auburn Hospital, Cambridge, and attending urologist for the West Roxbury Veterans Administration Hospital. He was formerly professor of urology at Tufts College Medical School and had served as assistant in genitourinary surgery at the Harvard Medical School from 1946 to 1952.

E. R. Piore, until recently chief scientist and deputy chief of the Office of Naval Research, Washington, D.C., has been elected vice president of the Avco Manufacturing Corp. (New York) and chairman of its Committee on Advanced Scientific Research. He will coordinate the activities of Avco's recently announced team of scientists in nuclear energy, advanced electronics, guided missiles, and other fields. Current research projects for the group include work on an intercontinental missile and part of the continental air defense program as well as programs related to the corporation's civilian products.

Robert S. Alexander, associate professor of physiology at the Medical College of the University of Georgia, has been appointed chairman of the department of physiology at Albany Medical College, effective 1 July. A specialist in pulmonary and circulatory function, Alexander plans to amplify this area of experimentation at Albany as well as to continue the studies already in progress. He succeeds **Harold C. Wiggers,** who has been serving in a double capacity since his appointment as dean in 1953, and who is withdrawing as department chairman because of his increasingly heavy administrative responsibilities.

Willis Avery Wood of the department of dairy sciences, University of Illinois, received the Eli Lilly award on 11 May during the annual meeting of the Society of American Bacteriologists in New York. He

was honored for his extensive investigations of the carbohydrate metabolism of the bacterium, *Pseudomonas fluorescens*. This organism lacks a complete glycolytic system; glucose is metabolized oxidatively by way of gluconic and ketogluconic acids. Wood succeeded in separating and characterizing a number of the enzymes involved in the oxidative metabolism of glucose.

Norris W. Rakestraw of the Scripps Institution of Oceanography, La Jolla, Calif., for the past 15 years editor of the *Journal of Chemical Education,* will retire from his editorship on 1 Sept. to devote more time to research. He will be succeeded by **William F. Kieffer,** professor of chemistry at the College of Wooster (Ohio), who is now an associate editor. The American Chemical Society's Division of Chemical Education publishes the journal.

Ludwig von Sallmann, professor of ophthalmology at the College of Physicians and Surgeons, Columbia University, and attending ophthalmologist at the New York Presbyterian Hospital, will join the National Institute of Neurological Diseases and Blindness, U.S. Public Health Service, on 1 Aug. as visiting scientist. He will direct and expand the eye research program at the Clinical Center and will continue his studies on ocular neurophysiology and ocular pharmacology. He is now recruiting a research staff for these and other investigations.

Georg von Békésy of the Psycho-Acoustic Laboratory, Harvard University, has received the 1955 Howard Crosby Warren medal for outstanding research in psychology. At the presentation that took place during the recent annual meeting of the Society of Experimental Psychologists, he was cited for "a program of research, imaginatively conceived and rigorously executed, that has made an outstanding contribution to the psychology of hearing."

M. Michael Sigel has been appointed associate professor of bacteriology at the University of Miami School of Medicine. He was formerly head of the diagnostic unit of the virus and rickettsia section, Communicable Disease Center, U.S. Public Health Service, Montgomery, Ala.

T. P. Nash, Jr., who joined the University of Tennessee College of Medicine in 1915, is retiring on 1 July as chief of the division of chemistry to devote full time to his duties as dean of the School of Biological Sciences. He will retain his title as professor of chemistry. His successor as chief of the division will be **John L. Wood,** head of the department of biochemistry.

George W. Corner, vice president of the National Academy of Sciences, has been elected a foreign member of the Royal Society of London. He is director of the department of embryology at the Carnegie Institution of Washington and professor of embryology in the Johns Hopkins Medical School, where his laboratory is located.

Elvin F. Frolik, chairman of the department of agronomy at the University of Nebraska, has been appointed associate director of the Agricultural Experiment Stations. He succeeds **M. L. Baker,** who is now in Turkey as dean of the Nebraska delegation and chief adviser of the university's cooperative program with that country. **F. D. Keim** has been named as temporary chairman of the agronomy department.

Nelson Marshall, visiting investigator at the Bingham Oceanographic Laboratory of Yale University, has been named dean of the College of Liberal Arts of Alfred University. His previous service includes both academic administration and marine biological research and teaching.

Meetings

In cooperation with the University of Wisconsin Summer Session, the **National Science Teachers Association** is presenting its 1955 Science Conference in Madison, 29 June–1 July. The theme of the conference is "Keeping up to date with the content and methods of teaching science." Information on accommodations may be obtained by writing to the University Housing Bureau, 434 Sterling Court.

The Woods Hole Oceanographic Institution has announced a series of six **lectures in physical oceanography** to be given by Gifford C. Ewing of the Scripps Institution of Oceanography, La Jolla, Calif. The lectures will be held beginning 5 July and thereafter every Monday, Wednesday, and Friday at 3 P.M., in the lounge of the institution's laboratory at Woods Hole, Mass.

The lectures will be in the form of vectored group discussions aimed at exploring the usefulness of aerial reconnaissance in the synoptic description of physical processes that take place in the upper mixed layer of the ocean. By consideration of the similarity between this layer and the atmosphere close to the ground, an attempt will be made to relate observed surface patterns to the composition and movement of the underlying water masses, using techniques familiar to meteorology. The method will be applied to studies of upwelling and subsidence, the formation and dissipation of frontal surfaces and convergences, to jets, surface and internal waves, wake streams, tidal flow in channels, wind currents, and turbidity flows. Practical consideration will be given to the advantages and limitations of several types of aircraft and to some operational, observational, and instrumental problems.

The fall meeting of the **Committee for the Scientific Study of Religion** will be held in Emerson Hall, Harvard University, on 5 Nov. The principal theme of the sessions will be as follows. To what extent do the canons of science in regard to conceptual structure and empirical evidence allow definitions of religion which render religion a subject for scientific

study without removing it from its historical context and function? One session of the meeting will be open to papers on miscellaneous themes. Anyone wishing to present a paper should send an abstract to the program committee chairman, Dr. R. V. McCann, Andover Hall, Cambridge 38, Mass., *before 1 Sept.*

Plans for the 1955 **East Coast Conference on Aeronautical and Navigational Electronics,** to be held 31 Oct.–1 Nov., have been announced jointly by the Baltimore, Md., section of the Institute of Radio Engineers and the Institute of Radio Engineers Professional Group on Aeronautical and Navigational Electronics. The conference will be held in the Lord Baltimore Hotel, Baltimore. The technical portion of the meeting will be devoted to the general field of aeronautical and navigational electronics. Interested persons are cordially invited to submit papers for consideration; 150-word abstracts should be sent *no later than 1 July* to Mr. Norman Caplan, Bendix Radio Division of Bendix Aviation Corp., Towson 4, Md.

The **Geophysical Society of Hawaii,** which is also the **Mid-Pacific Region of the American Geophysical Union,** plans to hold a regional meeting in Honolulu 15–17 Nov. It is anticipated that the program for this meeting, which will be held in conjunction with a national meeting of the American Meteorological Society, will deal primarily with various aspects of tropical meteorology, agricultural meteorology, meteorological forecasting, cloud physics, oceanography, hydrology, volcanology, and seismology. For information, communicate with the secretary of the Geophysical Society of Hawaii, Larry Eber, Pineapple Research Institute, Honolulu.

Education

The department of physics at **Florida State University in Tallahassee,** in addition to its regular physics major program, has introduced a new curriculum leading to the B.S. degree with a major in radiation physics. This new major is designed to provide the background for a variety of specializations. The number of prescribed courses has been kept to a minimum in order to permit the greatest possible flexibility. By appropriate choice of electives during the junior or senior year, a student may qualify to work in radiation physics, biophysics, geophysics, chemical physics, or experimental psychology; prepare for executive responsibilities in industrial management; prepare for high-school science teaching, premedicine, preengineering; or graduate with regular majors in physics, mathematics, or other sciences.

The **School of Medicine of the University of California, Los Angeles,** has been approved by the American Medical Association's Council on Medical Education and Hospitals and has been admitted to membership in the Association of American Medical Colleges.

A new **Library on Man's Place in Nature** has been established within the main scientific library of the New York University-Bellevue Medical Center. It will be concerned primarily with those aspects of the natural sciences, semantics, and philosophy that bear importantly on man, his evolution, and his significance in the cosmos. It is hoped that this library will serve as an adjunct to scientific and medical training and that it will broaden the perspectives of the present disciplines of the medical curriculum. Helen Bayne, who has been librarian of the Medical School Library since 1929, has been appointed curator of the new library and also archivist and research librarian to the Medical Center.

The affiliation of the **Forsyth Dental Infirmary for Children** and the **Harvard School of Dental Medicine** has been announced. Forsyth was one of the first institutions to be devoted exclusively to dentistry for children, and the Harvard School of Dental Medicine was the first dental school in the United States to be established under university auspices. Through this affiliation the two organizations will collaborate in the care of patients, the teaching of dentistry to graduate and undergraduate students, and the conduct of research.

The third in a series of teaching institutes sponsored by the Association of American Medical Colleges will focus on **anatomy and anthropology.** The first one, held at Atlantic City in October 1953, covered the areas of physiology, biochemistry, and pharmacology; the second one, which took place at French Lick Springs in October 1954, considered pathology, microbiology, immunology, and genetics. The objectives of the institutes are to provide an opportunity for medical educators to discuss important teaching problems, to review current experiments in medical education, to exchange philosophies and experiences, and to make any suggestions that might improve the effectiveness of medical teaching and the educational opportunities offered to medical students.

The 1955 institute will be held at the New Ocean House, Swampscott, Mass., 19–22 Oct. The annual meeting of the association will follow, 24–26 Oct. Attendance at the institute will be by invitation only and will be limited to 125 participants. One teacher from each of the 96 medical schools in the United States, Canada, and the Philippines has been nominated by a committee and invited by the AAMC, and the total group of participants will represent a balance among the disciplines and areas that will be explored.

In preparation for the institute, invitees have collected background information and opinions from their colleagues for the use of committees in planning topics for discussion. The institute will be a working conference, with participants meeting in groups of 10 to 15 for informal discussion. The planning committee for the 1955 institute is under the chairmanship of William U. Gardner, professor of anatomy at the Yale University School of Medicine.

Grants, Fellowships, and Awards

Award of 35 unclassified life science research contracts in the fields of biology, medicine, and biophysics, has been announced by the **U.S. Atomic Energy Commission.** Ten of the awards, each of which is for 1 year, are new projects: three are in the field of biology, six in the medical sciences, and one in biophysics. Twenty-five contract renewals for 1 year were awarded to allow for continuation of research already in progress: 10 of these are in biology, 14 in medical sciences, and one in biophysics.

Cancer, arteriosclerosis, heart disease, and enzyme action are some of the fields of university and hospital research supported by grants from **Lederle Laboratories Division,** American Cyanamid Co. Nineteen grants to researchers in human medicine for the current fiscal year total $108,900. In addition, Lederle has made seven grants to universities and agricultural experiment stations in the field of veterinary medicine totaling $29,831 and 12 grants in human nutrition totaling $28,200.

Louisiana State University has received from the **China Medical Board of New York** a grant of $80,000 to support for 2 years a program of fellowships that will enable teachers of tropical medicine and parasitology in U.S. medical schools to obtain practical experience in these subjects in the tropics. The program will be administered by William W. Frye, dean of the School of Medicine, and Henry E. Meleney, research professor of medicine. It has been inaugurated as a result of a recent survey of the instruction in these subjects in the medical schools and of the qualifications of the faculty members conducting the instruction. This survey indicated that the amount of time allotted to parasitology has decreased only slightly since World War II, but that tropical medicine as an entity in teaching has almost disappeared. The survey also revealed that more than half of the teachers of parasitology have had no experience in the tropics.

The localities in which fellows will receive training during the early part of the program are the San Juan de Dios Hospital, San José, Costa Rica, under the direction of Antonio Peña Chavarría, and the School of Medicine, University of Puerto Rico, San Juan, under the direction of E. Harold Hinman. Fellows will have a brief period of orientation at the School of Medicine, Louisiana State University, before proceeding to the tropics. Seventy-seven teachers from 53 schools have expressed a desire to receive fellowships in the program. It is also expected that some of the experienced teachers in these fields will participate from time to time as consultants and instructors in the tropical centers.

Not more than five fellowships will be awarded for any one period in each tropical area. The first fellowship period will be July and August 1955. Tentatively four fellowship periods are planned for each year with 1-month intervals between periods. Teachers who have expressed a desire for such a fellowship will be given an opportunity to apply for a period convenient for them. Other teachers in U.S. medical schools who are interested in this type of fellowship may secure further information from Dr. Meleney at the School of Medicine, Louisiana State University, New Orleans 12, La.

In the Laboratories

Union Carbide and Carbon Corp. is building new research laboratories at Parma, Ohio. The laboratories, which will be managed by National Carbon Co., will engage in basic, exploratory work, much of it concerned with solid-state physics, investigation and design of materials, and metallic and nonmetallic compounds of carbon as well as analogous compounds such as intermetallics and semiconductors.

Research activities will be directed toward specific end-products only to the extent that such products have their primary origins in the discovery of new and fundamental material-process applications. Robert G. Breckenridge, former chief of solid-state physics, National Bureau of Standards, and head of physics, Office of Naval Research, is head of the new plant.

Midwest Research Institute formally opened its new modern research center in Kansas City, Mo., on 9 May. Several hundred business firms and industrial leaders of the Middle West contributed the $1.25 million necessary for construction of the three-level, 80,000 ft^2 laboratory.

The purpose of the institute is to solve technical problems of business, industry, and agriculture as well as problems of general welfare. During the past 10 years, there have been more than 1500 research projects undertaken by the institute for 600 sponsors. These investigations have been concerned with cancer research, electronic computers, nutrition, ceramics, automation, smog control, and other subjects.

The first element of a proposed reactor center, a nuclear materials test reactor, is to be built by **Westinghouse Electric Corp.** at a cost of $6.5 million. The unit will be used to test reactor fuel elements and other components of atomic power plants under actual operating conditions. It is expected to be in full operation within 2 years. Westinghouse will ask approval of the Atomic Energy Commission to locate the reactor center on the company's 550-acre site near Blairsville, Pa.

The reactor will use highly enriched uranium, obtained under AEC license, as the power source, and water as moderator and coolant. It will be housed inside a vapor-tight steel shell and will have built-in safety features, thus avoiding danger to the surrounding area. The remainder of the reactor center will include a laboratory constructed near the reactor building to handle and process radioactive materials resulting from the reactor tests, general offices, and facilities for heat and power.