

to stimulate student interest in graduate study and improve the qualifications of the grantee. In general these are made on a yearly basis. They provide summer salaries for the principal investigator, stipends for students during the school year and summer months, and modest amounts for supplies and equipment. These grants seldom exceed \$3000 per year.

3) Unsolicited and unrestricted grants made to outstanding scientists at educational institutions in recognition of past accomplishments in fundamental research in the petroleum field. Each grant provides \$50,000 to enable scientists at or approaching the peak of their productivity to pursue, without restriction and without time limitation, their quest for new knowledge. Nominations for these awards may be submitted to the program administrator of the Petroleum Research Fund.

4) Grants to provide for exchange of scientists and scientific students between American and foreign nonprofit scientific and educational institutions. To date these awards have been made only to scientists with faculty status or to senior members of educational and scientific organizations. The awards provide all or part of the faculty member's salary and travel expenses for a period (3 to 15 months) of advanced study and research abroad.

5) Grants to teachers in undergraduate departments designed to allow them to obtain, at an institution of higher learning in the United States, a year of advanced study in any of the sciences basic to the petroleum field. The grants made to date have covered a full year's study.

6) Grants to outstanding recent recipients of a doctor's degree for a year of postdoctoral research in the petroleum field. Since 1954 eight such fellowships have been approved and administered through the National Research Council as part of its regular postdoctoral fellowship program.

A 19-man advisory board of The Petroleum Research Fund meets three times annually to consider proposals and policy matters. September 15 and December 15 are the next deadlines for consideration of proposals for programs to start in June or September 1960. Requests for further information about these grants and awards should be addressed to: Program Administrator, The Petroleum Research Fund, American Chemical Society, 1155 16th St., NW, Washington 6, D.C.

New Journals

Archives of Oral Biology, J. B. MacDonald, Boston, regional Ed. Pergamon, 4-5 Fitzroy Square, London W.1. Bimonthly. Individual subscribers, \$10; others, \$17.

Development Biology, vol. 1, No. 1, Apr. 1959. M. V. Edds, Jr., Ed. Academic Press, 111 5th Ave., New York 3. vol. 1 (6 issues, 1959), \$14.

Experimental Neurology, vol. 1, No. 1, Apr. 1959. William F. Windle, Ed. Academic Press, 111 5th Ave., New York 3. vol. 1 (6 issues, 1959), \$16.

International Atomic Energy Agency Bulletin, vol. 1, No. 1, Apr. 1959. International Atomic Energy Agency, Kärntnering 11, Vienna 1, Austria.

International Journal of Radiation Biology and related studies in Physics, Chemistry and Medicine, vol. 1, No. 1, Jan. 1959. W. M. Dale, Ed. Academic Press, 111 Fifth Avenue, New York 3.

Journal of Biochemical and Microbiological Technology and Engineering, vol. 1, No. 1, Feb. 1959. E. M. Crook, Ed. Interscience, 250 Fifth Avenue, New York 1. Quarterly. \$15.

Journal of the Faculty of Medicine—Baghdad, vol. 1, (new series), No. 1, Jan. 1959. F. S. Nashat, Ed. College of Medicine, University of Baghdad, Baghdad, Iraq. Quarterly. \$4.

Journal of Medicinal and Pharmaceutical Chemistry, vol. 1, No. 1, Feb. 1959. Arnold H. Beckett, Ed. Interscience, 250 5th Ave., New York 1. Bimonthly. \$15.

Journal of Molecular Biology, vol. 1, No. 1, Apr. 1959. J. C. Kendrew, Ed. Academic Press, 111 5th Ave., New York 3. Bimonthly. \$14.

Numerische Mathematik, vol. 1, No. 1, Jan. 1959. F. L. Bauer, Ed. Springer, Heidelberger Platz 3, Berlin-Wilmersdorf.

Soviet Physics—Solid State, (Fizika Tverdogo Tela), vol. 1, No. 1, Jan. 1959. (Order from American Institute of Physics, 335 E. 45th St., New York 17.) \$55; for libraries of nonprofit institutions, \$25.

Tetrahedron Letters, No. 1, Mar. 1959. H. Stephen, Ed. Pergamon, 122 E. 55th St., New York 22. \$20; free to individual subscribers to *Tetrahedron*.

Egyptian Journal of Botany, vol. 1, No. 1, 1958. Egyptian Science Association, Tager Building, 1, Sh. Elhamy, Kasr El Doubara, Cairo. Half yearly. \$3.

The Nucleus, vol. 1, No. 1, June 1958. Arun Kumar Sharma, Ed. Cytogenetics Laboratory, Department of Botany, Uni-

versity of Calcutta, Calcutta 19. Half yearly. \$10.50.

Turkish Journal of Pediatrics, vol. 1, Nos. 1 and 2, July-Aug. 1958. Ihsan Dogramaci, Ed. Research Institute of Child Health, Hacettepe Parki, Ankara.

Scientists in the News

VERN O. KNUDSEN, physicist and vice chancellor of the University of California, Los Angeles, has been named chancellor of the university, effective 1 September. He succeeds RAYMOND B. ALLEN, who resigned.

IRVING WOLFF, vice president for research of the Radio Corporation of America Laboratories, will be awarded an Elliott Cresson Medal by the Franklin Institute, Philadelphia, on 21 October.

GEORGE E. ROTH, director of the Dominion X-ray and Radium Laboratory, New Zealand, has been appointed director of the International Atomic Energy Agency's Division of Isotopes. He succeeds YOSHIO FUJIOKA of Japan.

MORTON HAMERMESH, associate director of the physics division at Argonne National Laboratory, has been appointed director of the division. He succeeds LOUIS A. TURNER, who recently became deputy director of the Laboratory.

Lt. Col. JOHN P. RANSOM, bacteriologist with the Army Research Office, Arlington, Va., has been appointed bacteriologist at the Walter Reed Army Institute of Research, Washington, D.C., in the division of immunology.

GERARD F. MULDER, senior scientific adviser at the Pasadena, Calif., branch office of the Office of Naval Research, has been appointed associate program director for astronomy in the Division of Mathematical, Physical, and Engineering Sciences of the National Science Foundation, Washington, D.C.

DUNCAN HOLADAY, associate professor of anesthesiology at Columbia University College of Physicians and Surgeons, has been appointed professor of surgery and head of the section of anesthesia in the department of surgery at the University of Chicago.

KLAUS FLOREY, chemist, has been appointed director of the section of analytical and physical chemistry at the Squibb Institute for Medical Research.

The following have been appointed to serve 3-year terms on the selection committee for the senior research fellowship program of the National Institutes of Health, Bethesda, Md.

HOWARD C. HOPPS, chairman of the pathology department and pathologist-in-chief of medical branch hospitals at the University of Texas. ELI D. GOLDSMITH, professor of histology and research coordinator at New York University College of Dentistry and professor of histology at the Graduate School of Arts and Sciences. ANTONIO CIOCCO, head of the department of biostatistics at the University of Pittsburgh's Graduate School of Public Health. JOHN B. GRAHAM, professor of pathology at the University of North Carolina. KIMBALL C. ATWOOD, associate professor in the department of obstetrics and gynecology of the University of Chicago.

HOLGAR HYDEN of the Histological Institute, Faculty of Medicine, University of Göteborg, Sweden, will spend two months in the spring of 1960 at the Lerner Marine Laboratory, Bimini, Bahamas, on a Lerner research fellowship.

JOHN W. CROWLEY, JR., has retired as director of aeronautical and space research for the National Aeronautics and Space Administration after 38 years as a research scientist. Crowley received his B.S. degree in mechanical engineering from the Massachusetts Institute of Technology in 1920 and joined the staff of the National Advisory Committee for Aeronautics at the Langley (Va.) Aeronautical Laboratory, in 1921. He served there until 1945 and was, successively, junior aeronautical engineer, head of the flight research section, chief of the aerodynamics division, head of the research department, and acting engineer in charge of the laboratory. In 1945 he was transferred to the Washington headquarters as acting director of aeronautical research, and 2 years later he was appointed associate director for research.

A specialist in the field of aerodynamics, Crowley has served on the President's Scientific Research Board, the President's Special Board of Inquiry on Air Safety, the guided missile committee of the Department of Defense

Research and Development Board, and the President's Airport Board.

On 30 June, at a dinner in his honor, Crowley was presented with the NASA Distinguished Service Medal for outstanding leadership in aeronautical science. He is the first recipient of the award. He is succeeded by IRA H. ABBOTT, former deputy director of aeronautical and space research for NASA.

HARRY J. GOETT, of the National Aeronautics and Space Administration's Ames Research Center, has been appointed director of the agency's new Goddard Space Flight Center, effective 1 September.

ROBERT B. AITCHISON, consulting engineer with Linde Co., a division of Union Carbide Corp., will be awarded a John Price Wetherill Medal by the Franklin Institute, on 21 October.

ROBERT W. NEATHERY, director of museum education at the Franklin Institute, Philadelphia, has been appointed director of the institute's museum.

MIGUEL A. XAVIER, former assistant manager of the Advanced Systems Planning Division of Cook Electric Company, Chicago, has been appointed chief engineer of Century Electronics and Instruments, Inc., Tulsa, Okla.

DAVID D. KECK, acting director of the New York Botanical Garden, has been appointed program director for systematic biology in the Division of Biological and Medical Sciences of the National Science Foundation.

NORMAN H. MACKWORTH, psychologist with the Defence Research Medical Laboratories, Toronto, Canada, will join the professional staff of Dunlap and Associates, Inc., Stamford, Conn., on 1 January 1960.

Recent Deaths

MOACYR E. ALVARO, São Paulo, Brazil; 59; professor of ophthalmology at the Paulista School of Medicine; founder and former president of the Pan American Association of Ophthalmology; 19 July.

GEORGE F. CAHILL, New York; 69; former head of the department of

urology at the College of Physicians and Surgeons of Columbia University; 24 July.

DWIGHT E. CLARK, Chicago, Ill.; 49; chairman of the department of surgery at the University of Chicago; noted for his research on the use of radioactive iodine for the treatment of cancer and other diseases of the thyroid gland; 24 July.

CARL L. DAVIS, Baltimore, Md.; 81; former professor of anatomy at the University of Maryland School of Medicine; 13 July.

WILLIAM B. DUNNING, Englewood, N.J.; 85; a founder and professor of dentistry emeritus of the Columbia School of Dental and Oral Surgery, now part of the Columbia-Presbyterian Medical Center; 21 July.

R. B. H. GRADWOHL; 82; founder and first president of the American Academy of Forensic Sciences; editor of *Clinical Tropical Medicine* and of *Laboratory Digest*; 9 May.

FRANZ R. MOEWUS, Miami, Fla.; 51; botanist with the Applied Research Laboratories, Hialeah, Fla.; a native of Germany, he lectured on genetics and plant physiology at the University of Heidelberg from 1941 to 1951; 30 May.

CLIFFORD C. NESSELRODE, Kansas City, Kan.; 80; a founder of the American Cancer Society and its president in 1948; former president of the Kansas Medical Society; 18 July.

BERNARD SAMUELS, New York; 80; professor emeritus of ophthalmology at Cornell University Medical College; helped establish the Institute of Ophthalmology of the Americas at the New York Eye and Ear Infirmary in 1956; coauthor with Adalbert Fuchs of *Clinical Pathology of the Eye*; 26 July.

ARTHUR STEINDLER, Iowa City, Iowa; 81; distinguished service professor emeritus of orthopedic surgery at the State University of Iowa; 21 July.

GEORGE TARTIKOFF, New York; 45; clinical instructor in obstetrics and gynecology at the College of Medicine, State University of New York, Downstate Medical Center, Brooklyn; 22 July.

EDWARD F. WATSON, Port Chester, N.Y.; 66; retired assistant director of telegraph, signaling, and special systems development of the Bell Telephone Laboratories, New York; holder of 65 patents; 23 July.

Erratum: In the news article, "More seismic research asked to improve atomic test detection" [*Science* 130, 26 (3 July 1959)], the second figure in column 2 of Table 1 should have been 1500, not 20-100.