

APPENDIX B

Grants for Basic Research

FISCAL YEAR 1957

Anthropological and Related Sciences

- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Joseph B. Birdsell, Department of Anthropology, Los Angeles, Calif.; *Microevolutionary Processes Among Australian Aborigines*; 3 years; \$9,200.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Robert F. Heizer, Department of Anthropology; *Archaeology and Prehistory of the Western Great Basin*; 2 years; \$10,100.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; F. Clark Howell, Department of Anthropology; *Prehistoric Living Site of Acheulian Man in Central Tanganyika*; 1 year; \$9,400.
- COLUMBIA UNIVERSITY, New York, N. Y.; W. D. Strong, Department of Anthropology; *Interrelations of Environment and Culture at a Stratified Archaeological Site in Western Great Plains*; 1 year; \$5,900.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Gerhardt von Bonin, Department of Anatomy, College of Medicine, Chicago, Ill.; *Encephalometry of the Australopithecines*; 1 year; \$2,300.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; William L. Straus, Jr., Laboratory of Physical Anthropology; *Studies on Primate Evolution*; 2 years; \$18,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Marvin E. Shaw, School of Industrial Management; *Interaction Effects of the Structure of a Group*; 2 years; \$8,300.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Frederick P. Thieme, Department of Anthropology; *Biochemical and Immunological Analysis of Human Skeletal Remains*; 2 years; \$10,600.
- UNIVERSITY OF OREGON, Eugene, Oreg.; Luther S. Cressman, Department of Anthropology; *Oregon Coast Prehistory: An Archaeological Study*; 1 year; \$5,800.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Carleton S. Coon, The University Museum; *The Races of the World*; 2 years; \$7,500.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Dorothy S. Thomas, Department of Sociology; *Migration Differentials*; 1 year; \$15,000.
- SMITHSONIAN INSTITUTION, Washington, D. C.; Ralph S. Solecki, Bureau of American Ethnology; *Archaeology and Human Paleontology of Shanidar Cave*; 1 year; \$1,500.
- STANFORD UNIVERSITY, Stanford, Calif.; Bernard J. Siegel, Department of Anthropology; *Disintegration Processes in a Southwest Pueblo*; 2 years; \$11,000.
- TEXAS TECHNOLOGICAL COLLEGE, Lubbock, Tex.; Fred Wendorf, Department of Anthropology; *Archaeological and Ecological Study of Late Pleistocene and Early Recent Deposits*; 1 year; \$15,500.
- UNIVERSITY OF UTAH, Salt Lake City, Utah; Gordon D. Gibson, Department of Anthropology; *Ethnology of the Southwestern Bantu*; 1 year; \$3,900.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; David A. Baerreis, Department of Sociology and Anthropology; *Interrelations of Biological and Cultural Change*; 1 year; \$15,700.

YALE UNIVERSITY, New Haven, Conn.; Edward M. Bruner, Department of Anthropology; *Batak Anthropology*; 1 year; \$3,800.

Astronomy

AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.; Kenneth L. Franklin, Department of Astronomy; *Spectrum of the Radio Frequency Radiation From Jupiter*; 1 year; \$10,000.

UNIVERSITY OF ARIZONA, Tucson, Ariz.; Edwin F. Carpenter, Stewart Observatory; *Cooperative Search for Supernovae*; 2 years; \$16,000.

ASSOCIATED UNIVERSITIES, INC., New York, N. Y.; Richard M. Emberson; *Studies Leading to the Establishment of a Radio Observatory*; 3 months; \$80,000.

UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Otto Struve, Department of Astronomy; *Evolution of Close Binary Stars*; 2 years; \$34,400.

CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; Victor M. Blanco, Department of Astronomy; *Giant M-Stars as Members of the Galactic Disk*; 1 year; \$5,650.

UNIVERSITY OF CHICAGO, Chicago, Ill.; G. Van Biesbroek, Department of Astronomy; *Astrometric Investigations*; 1 year; \$5,200.

UNIVERSITY OF CHICAGO, Chicago, Ill.; W. A. Hiltner, Department of Astronomy; *Interstellar Magnetic Field in the Vicinity of the Sun*; 2 years; \$12,300.

UNIVERSITY OF CHICAGO, Chicago, Ill.; Gerard P. Kuiper, Department of Astronomy; *Investigations Toward a Photographic Lunar Atlas*; 2 years; \$5,700.

UNIVERSITY OF CHICAGO, Chicago, Ill.; G. P. Kuiper, Department of Astronomy; *Solar System Studies*; 1 year; \$15,600.

UNIVERSITY OF CHICAGO, Chicago, Ill.; W. W. Morgan and Bengt Stromgren, Department of Astronomy; *Distribution of Interstellar Dust*; 2 years; \$18,600.

UNIVERSITY OF CINCINNATI, Cincinnati, Ohio; Paul Herget, Director, The Cincinnati Observatory; *Minor Planet Elements*; 3 years; \$14,850.

DARTMOUTH COLLEGE, Hanover, N. H.; George Z. Dimitroff, Department of Mathematics and Astronomy; *Solar Activity Related to Ionospheric Phenomena*; 2 years; \$5,800.

HARVARD UNIVERSITY, Cambridge, Mass.; T. K. Menon, Harvard College Observatory; *Radio Astronomy in the Microwave Region*; 6 months; \$25,000.

HAVERFORD COLLEGE, Haverford, Pa.; Louis C. Green, Department of Astronomy; *High Accuracy Atomic Wave Functions*; 2 years; \$5,000.

HIGH ALTITUDE OBSERVATORY OF THE UNIVERSITY OF COLORADO, Boulder, Colo.; Gordon A. Newkirk, Jr.; *Analysis of the Solar Electron Corona*; 1 year; \$10,000.

UNIVERSITY OF ILLINOIS, Urbana, Ill.; Stanley P. Wyatt, Department of Astronomy; *Orientation of Galaxies in Space*; 1 year; \$1,750.

INDIANA UNIVERSITY, Bloomington, Ill.; James Cuffey, Department of Astronomy; *Observations of Asteroids*; 2 years; \$12,400.

INDIANA UNIVERSITY, Bloomington, Ind.; Halton C. Arp, Department of Astronomy; *Photometric Study of the Small Magellanic Cloud*; 3 months; \$1,300.

INDIANA UNIVERSITY, Bloomington, Ind.; Marshal H. Wrubel, Department of Astronomy; *Astrophysical Problems*; 1 year; \$8,500.

LOWELL OBSERVATORY, Flagstaff, Ariz.; William M. Sinton, Astronomer; *Infrared Spectrum of the Planets and Moon*; 2 years; \$14,700.

UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Lawrence H. Aller, Department of Astronomy; *Early-Type Stars and Gaseous Nebulae*; 2 years; \$9,000.

UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Robert McMath, McMath-Hulbert Observatory; *Studies Leading to the Establishment of American Astronomical Observatory*; 15 months; \$545,000.

- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Robert R. McMath, McMath-Hulbert Observatory; *Studies Leading to the Establishment of an American Astronomical Observatory*; 1 year; \$60,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Willem J. Luyten, Department of Astronomy; *Purchase of "Astronomical Research Equipment"*; 1 year; \$8,000.
- MARIA MITCHELL OBSERVATORY, Nantucket, Mass.; Dorrit Hoffleit, Director; *Observations of Variable Stars*; 1 year; \$5,200.
- OHIO STATE UNIVERSITY, Columbus, Ohio.; John D. Kraus, Department of Electrical Engineering; *Background Mapping and Individual Source Studies*; 1 year; \$25,300.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Philip C. Keenan, Department of Astronomy; *An All-Mirror Cassegrain Spectrograph for Astronomical Research*; 2 years; \$17,500.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Philip C. Keenan, Department of Astronomy; *Design and Construction of a Spectrograph for Research Between 3,500 Å and 12,000 Å*; 1 year; \$12,500.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; N. E. Wagman, Director, Allegheny Observatory; *Observation of Spectroscopic Binaries*; 1 year; \$5,750.
- RENSSELAER POLYTECHNIC INSTITUTE, Troy, N. Y.; Robert Fleischer, Department of Physics; *Radio Astronomy*; 1 year; \$10,000.
- UNIVERSITY OF TEXAS, Austin, Tex.; Frank N. Edmonds, Jr., Department of Mathematics and Astronomy; *Spectrophotometric Analysis of Procyon*; 1 year; \$1,500.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; A. E. Whitford, Department of Astronomy; *A General-Purpose Spectrograph for Astronomical Research*, 2 years; \$14,000.
- YALE UNIVERSITY, New Haven, Conn.; Dirk Brouwer, Director, Yale University Observatory; *Studies Related to the Establishment of a Large Astrogaphic Telescope in the Southern Hemisphere*; 2 years; \$41,400.
- YALE UNIVERSITY, New Haven, Conn.; Morris S. Davis, Department of Astronomy; *Satellite Orbits and the Mass of Saturn*; 1 year; \$6,500.

Chemistry

- ALBION COLLEGE, Albion, Mich.; Philip R. Marshall, Department of Chemistry; *Kinetics of Gas-Solid Reactions*; 3 years; \$9,700.
- UNIVERSITY OF AKRON, Akron, Ohio; Maurice Morton, Department of Chemistry; *Mechanism of Heterogeneous Addition Polymerization*; 2 years; \$35,800.
- UNIVERSITY OF AKRON, Akron, Ohio; *Equipment Grant for High Polymer Research*.
- AMHERST COLLEGE, Amherst, Mass.; Ralph A. Beebe, Department of Chemistry; *Thermodynamics of Adsorbates on Solids*; 2 years; \$22,800.
- UNIVERSITY OF ARKANSAS, Fayetteville, Ark.; Arthur Fry, Department of Chemistry; *Use of Infrared Spectroscopy in Organic Chemistry*; 2 years; \$7,000.
- BAYLOR UNIVERSITY, Waco, Tex.; W. R. Stephens, Department of Chemistry; *Reaction Studies in Organic and Electro-Chemistry*; 1 year; \$3,800.
- BRIDGEWATER COLLEGE, Bridgewater, Va.; Lowell V. Heisey, Department of Chemistry; *Reduction of Sulfonamides and Preparation of Imides and Cyclic Hydrazides*; 1 year; \$1,000.
- BRIGHAM YOUNG UNIVERSITY, Provo, Utah; H. Smith Broadbent, Department of Chemistry; *Precision Polarimetry in Organic Chemistry*; 2 years; \$5,400.
- BRIGHAM YOUNG UNIVERSITY, Provo, Utah; J. Rex Goates, Department of Chemistry; *Energies of Mixing of Monelectrolytes*; 2 years; \$9,300.
- BRIGHAM YOUNG UNIVERSITY, Provo, Utah; H. Tracy Hall, Department of Chemistry; *Ultra High-Pressure, High-Temperature Research*; 2 years; \$25,500.

- BOSTON UNIVERSITY, Boston, Mass.; Norman N. Lichtin, Department of Chemistry; *Equilibria in Non-Aqueous Media*; 2 years; \$18,200.
- BOSTON UNIVERSITY, Boston, Mass.; J. Philip Mason, Department of Chemistry; *Studies in Phototropy Ammonia Solution*; 1 year, \$8,000.
- UNIVERSITY OF BUFFALO, Buffalo, N. Y.; Howard Tieckelmann, Department of Chemistry; *Synthesis of Analogs of the Vitamin B₁ Pyrimidine*; 3 months; \$2,800.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; Harden M. McConnell, Department of Chemistry; *Chemical Rates by Magnetic Resonance Methods*; 3 years; \$18,800.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; W. F. Giaque, Department of Chemistry; *Thermodynamic and Magnetic Properties at Low Temperatures*; 3 years; \$207,300.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Daniel Kivelson, Department of Chemistry; *Paramagnetic Resonance in Free Radicals*; 2 years; \$13,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Chester T. O'Konski, Department of Chemistry; *Molecular Polarization and Interactions*; 2 years; \$18,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Kenneth S. Pitzer, Department of Chemistry; *Nuclear Magnetic Resonance Spectra Studies in Physical Chemistry*; 2 years; \$10,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; L. J. Andrews and R. M. Keefer, Department of Chemistry, Davis, Calif.; *Steric Problems in Complex Formation and Electrophilic Substitution Reactions of Aromatic Substances*; 3 years; \$15,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Harold G. Reiber, Department of Chemistry, Davis, Calif.; *Kinetics of Organic Reactions*; 2 years; \$7,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Conway Pierce, Department of Chemistry, Riverside, Calif.; *Analytical, Organic, and Physical Chemistry*; 3 months; \$5,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; W. Conway Pierce, Department of Chemistry, Riverside, Calif.; *Mass Spectrometric Studies of Organic Reaction*; 1 year; \$9,900.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; William G. Young, Department of Chemistry, Los Angeles, Calif.; *Displacement Reactions Involving Allylic Systems*; 3 years; \$20,000.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Robert G. Parr and Frank O. Ellison, Department of Chemistry; *Electronic Structure of Molecules*; 3 years; \$40,700.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Robert T. Holmes, Department of Chemistry; *Investigation of Pentacoordinated Molecules*; 1 year; \$5,400.
- CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; *Equipment Grant for High Polymer Research*.
- CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; Peter Kovacic, Department of Chemistry and Chemical Engineering; *Reaction of Metal Halides with Aromatic Compounds*; 3 years; \$12,900.
- CASE INSTITUTE OF TECHNOLOGY, Cleveland, Ohio; Samuel H. Maron, Department of Chemistry; *Rheology of Suspensions of Spherical Particles and of Polymer Solution*; 2 years; \$34,500.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; *Equipment Grant for High Polymer Research*.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Morris S. Kharasch, Department of Chemistry; *Chemistry of Polymerization and the Chemical Properties of Polymers*; 1 year; \$59,900.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Earl A. Long, Institute for the Study of Metals; *Properties of Matter at Low Temperatures*; 3 years; \$56,500.

- UNIVERSITY OF CINCINNATI, Cincinnati, Ohio; Milton Orchin, Department of Chemistry; *Infrared Spectrophotometric Studies of Inorganic and Organic Systems*; 2 years; \$7,000.
- UNIVERSITY OF CINCINNATI, Cincinnati, Ohio; Milton Orchin, Department of Chemistry; *Mechanism of Selenium-Catalyzed Dehydrogenations*; 2 years; \$13,300.
- COLUMBIA UNIVERSITY, New York, N. Y.; Cheves Walling, Department of Chemistry; *Free Radical Reactions*; 3 years; \$38,300.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Alfred T. Blomquist, Department of Chemistry; *Molecular Rearrangements in Medium-sized Carbocycles*; 2 years; \$15,500.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Peter J. Debye, Department of Chemistry; *Polymers in Strong Electrical Fields and Porous Media Flows*; 1 year; \$58,200.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Paul J. Flory, Department of Chemistry; *Properties of Polymers and Their Solutions*; 1 year; \$53,900.
- CORNELL UNIVERSITY, Ithaca, N. Y.; A. W. Laubengayer, Department of Chemistry; *Synthesis and Characterization of Inorganic Polymers*; 3 years; \$33,800.
- CORNELL UNIVERSITY, Ithaca, N. Y.; F. A. Long, Department of Chemistry; *Nuclear Magnetic Resonance Studies in Physical and Organic Chemistry*; 1 year; \$15,000.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Jerrold Meinwald, Department of Chemistry; *Interaction of Carbonyl Groups With Electrophilic Centers*; 2 years; \$12,600.
- UNIVERSITY OF DENVER, Denver, Colo.; Earl A. Engle, Department of Chemistry; *Mandelic Acid Precipitation of Zirconium*; 3 months; \$2,200.
- EMORY UNIVERSITY, Emory University, Ga.; Leon Mandell, Department of Chemistry; *Total Synthesis of Nootkatin and Related Tropolones*; 2 years; \$9,000.
- FLORIDA STATE UNIVERSITY, Tallahassee, Fla.; Karl Dittmer, Department of Chemistry; *Kinetic and Equilibrium Studies With Nuclear Magnetic Resonance Spectroscopy*; 2 years; \$15,000.
- FLORIDA STATE UNIVERSITY, Tallahassee, Fla.; WERNER HERZ, Department of Chemistry; *Sesquiterpene Chemistry*; 3 years; \$18,300.
- FLORIDA STATE UNIVERSITY, Tallahassee, Fla.; H. M. Walborsky, Department of Chemistry; *Cyclopropylcarbinyl Rearrangement*; 3 years; \$15,700.
- UNIVERSITY OF FLORIDA, Gainesville, Fla.; William H. Cramer, Department of Electrical Engineering; *Collisions of Positive Ions With Gases*; 2 years; \$14,500.
- GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, Ga.; Earling Grovenstein, Jr., Department of Chemistry; *Fractionation of Hydrogen Isotopes During Electrophilic Aromatic Halogenation*; 2 years; \$16,000.
- GRINNELL COLLEGE, Grinnell, Iowa; Joseph D. Danforth, Department of Chemistry; *Oxide and Acid Catalysts*; 2 years; \$5,400.
- HARVARD UNIVERSITY, Cambridge, Mass.; William Klemperer, Department of Chemistry; *Infrared Spectroscopy at High Temperatures*; 1 year; \$5,300.
- HARVARD UNIVERSITY, Cambridge, Mass.; Frederick C. Uhle, Department of Pharmacology; *Chemistry of Indole Compounds*; 2 years; \$14,900.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; L. F. Audrieth, Department of Chemistry; *Phosphorus-Nitrogen Compounds and Their Derivatives*; 3 years; \$16,200.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Elias J. Corey, Department of Chemistry; *Total Synthesis of Pentacyclic Triterpenes*; 2 years; \$17,600.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Carl S. Marvel, Department of Chemistry; *Synthesis and Relation Between Structure and Properties of High Polymers*; 2 years; \$62,800.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Frederick T. Wall, Department of Chemistry; *Mechanics of Coiling Type Polymer Molecules*; 2 years; \$34,700.
- INDIANA UNIVERSITY, Bloomington, Ind.; Harry G. Day, Department of Chemistry; *Kinetic Studies by Mass Spectrometry*; 1 year; \$8,900.

- INDIANA UNIVERSITY, Bloomington, Ind.; Frank T. Gucker, Department of Chemistry; *Light Scattering by Aerosols and Gases*; 3 years; \$37,900.
- INDIANA UNIVERSITY, Bloomington, Ind.; Walter J. Moore, Department of Chemistry; *Chemical Reactions of Ionic Beams*; 2 years; \$30,300.
- STATE UNIVERSITY OF IOWA, Iowa City, Iowa; Ralph L. Shriner; Department of Chemistry; *Spectrophotometric Studies of Reactions and Properties of Selected Organic Compounds*; 1 year; \$7,300.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Paul H. Emmett, Department of Chemistry; *Role of Ions in Catalytic Hydrogenations*; 2 years; \$20,000.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; John W. Gryder, Department of Chemistry; *Chemistry of the Condensed Phosphates*; 3 years; \$21,300.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Alex Mickon, Department of Chemistry; *Photosensitized Oxidation of Olefins*; 3 years; \$19,200.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Dean W. Robinson, Department of Chemistry; *Far Infrared Spectra of Disiloxane and Derivatives*; 3 years; \$15,800.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Emil H. White, Department of Chemistry; *Deamination of Aliphatic Amines*; 2 years; \$13,100.
- KANSAS STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE, Manhattan, Kans.; Thomas D. O'Brien, Department of Chemistry; *Spectrophotometric Studies in Organic Chemistry*; 1 year; \$5,600.
- KANSAS STATE COLLEGE, Manhattan, Kans.; Scott Searles, Jr., Department of Chemistry; *Oxetanes and Oxetenes*; 2 years; \$14,300.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; Arthur W. Davidson, Department of Chemistry; *Analytical, Inorganic, Organic, and Physical Chemistry*; 3 months; \$5,900.
- KENTUCKY RESEARCH FOUNDATION, Lexington, Ky.; Lyle R. Dawson, Department of Chemistry, University of Kentucky; *X-ray Structure of Organic Molecular Crystals and Rare Earth Salts*; 2 years; \$9,000.
- KENTUCKY RESEARCH FOUNDATION, Lexington, Ky.; Paul G. Sears, Department of Chemistry; *Conductances of Multivalent Electrolytes*; 1 year; \$5,200.
- LONG BEACH STATE COLLEGE, Long Beach, Calif.; Robert B. Henderson, Department of Chemistry; *Organic Chemistry*; 3 months; \$6,000.
- LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE, Baton Rouge, La.; Hulen B. Williams, Department of Chemistry; *X-ray Absorption, Diffraction, and Fluorescence*; 2 years; \$6,000.
- UNIVERSITY OF LOUISVILLE, Louisville, Ky.; R. H. Wiley, Department of Chemistry; *Ultraviolet Absorption and Other Spectrophotometric Studies*; 2 years; \$8,000.
- LUTHER COLLEGE, Luther, Iowa; George E. Knudson, Department of Chemistry; *Reactions of Dithionite With Metal Ions*; 2 years; \$4,600.
- UNIVERSITY OF MARYLAND, College Park, Md.; George M. Brown, Department of Chemistry; *X-ray Analysis of Organic Crystal Structures*; 3 years; \$27,300.
- UNIVERSITY OF MARYLAND, College Park, Md.; Ellis R. Lippincott, Department of Chemistry; *Spectroscopic Study of Inorganic Salts in Non-Aqueous Inorganic Solvents*; 3 years; \$21,400.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; *Equipment Grant for High Polymer Research*.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; F. Albert Cotton, Department of Chemistry; *Kinetic and Spectral Studies of Complex Ions*; 2 years; \$8,400.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Avery A. Morton; *Polymerization and Polymers Produced by Organoalkala Metal Reagents*; 1 year; \$57,600.

- MELLON INSTITUTE OF INDUSTRIAL RESEARCH, Pittsburgh, Pa.; *Equipment Grant for High Polymer Research.*
- MELLON INSTITUTE OF INDUSTRIAL RESEARCH, Pittsburgh, Pa.; Hershel Markovitz; *Physical Properties and Molecular Parameters of Polymers*; 1 year; \$43,500.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; J. L. Dye, C. H. Brubaker and R. Birdwhistell, Department of Chemistry; *Properties of High-Charge Type Electrolytes in Aqueous Solution*; 2 years; \$24,000.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; Harold Hart, Department of Chemistry; *Abstraction of Hydrogens From Alicyclic Compounds*; 2 years; \$10,100.
- MILLIKIN UNIVERSITY, Decatur, Ill.; Carl Weatherbee, Department of Chemistry; *Mannich Type Condensations*; 2 years; \$4,900.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; *Equipment Grant for High Polymer Research.*
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; I. M. Kolthoff, Department of Chemistry; *Kinetics and Mechanism of Emulsion Polymerization*; 1 year; \$59,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; I. M. Kolthoff, Department of Chemistry; *Polarography at the Rotated Dropping Mercury Electrode*; 2 years; \$18,200.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; William N. Lipscomb, Department of Chemistry; *X-ray Structure Studies at Helium Temperatures*; 3 years; \$52,500.
- UNIVERSITY OF MISSISSIPPI, University, Miss.; Lewis Nobles, Department of Chemistry; *The Mannich Reaction*; 3 years; \$6,900.
- MOUNT HOLYOKE COLLEGE, South Hadley, Mass.; Lucy W. Pickett, Department of Chemistry; *Research in Organic Reactions by Infrared Spectroscopy*; 2 years; \$7,000.
- NATIONAL BUREAU OF STANDARDS, Washington, D. C.; Herbert Leaderman and George T. Furukawa; *Rheology and Thermodynamics of Polymers*; 1 year; \$37,700.
- UNIVERSITY OF NEBRASKA, Lincoln, Nebr.; Henry E. Baumgarten, Department of Chemistry; *Reactions of Amines*; 2 years; \$13,800.
- UNIVERSITY OF NEW HAMPSHIRE, Durham, N. H.; Harold A. Iddles, Department of Chemistry; *Visible and Ultraviolet Spectrophoto-Chemical Studies*; 1 year; \$7,500.
- NEW MEXICO HIGHLANDS UNIVERSITY, Las Vegas, N. Mex.; E. Gerald Meyer, Department of Chemistry; *Research on N-Heterocyclic Compounds and Inorganic Complex Ions*; 1 year; \$6,000.
- UNIVERSITY OF NEW MEXICO, Albuquerque, N. Mex.; J. I. Riebsomer, Department of Chemistry; *Synthesis of Polycyclic, Heterocyclic and Asymmetric Compounds*; 1 year; \$3,800.
- NEWARK COLLEGE OF ENGINEERING, Newark, N. J.; James A. Bradley, Department of Chemistry; *Sulfonation of Aromatic Compounds With Halides of Non-Metals*; 3 months; \$2,000.
- RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany, N. Y.; Michael Szwarc, Department of Chemistry, College of Forestry, Syracuse, N. Y.; *Polymerizations Initiated by Electron-Transfer to Monomer*; 2 years; \$30,800.
- NEW YORK UNIVERSITY, New York, N. Y.; John E. Vance, Department of Chemistry; *Infrared Spectrophotometry in Organic Chemistry*; 2 years; \$7,000.
- UNIVERSITY OF NORTH CAROLINA, Chapel Hill, N. C.; Arthur Roe, Department of Chemistry; *Broad Range Spectrophotometric Investigation in Physical Chemistry*; 2 years; \$8,000.
- UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; G. F. D'Alelio, Department of Chemistry; *Vapor Phase Chromatography*; 2 years; \$1,000.

- NORTHEASTERN UNIVERSITY, Boston, Mass.; Arthur A. Vernon, Department of Chemistry; *Research in Reaction Mechanisms by Infrared Spectroscopy*; 2 years; \$7,000.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; A. S. Hussey and R. L. Burwell, Department of Chemistry; *Summer Research for Chemistry Teachers*; 3 months; \$4,100.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Daryle H. Busch, Department of Chemistry; *Thermodynamics and Electron Transfers of Complex Inorganic Optical Isomers*; 2 years; \$13,900.
- OHIO STATE UNIVERSITY, Columbus, Ohio; William MacNevin, Department of Chemistry; *Platinum Group Metal Versenates*; 3 years; \$15,500.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Melvin S. Newman, Department of Chemistry; *Non-Planar-Aromatic Polycyclic Hydrocarbons*; 3 years; \$30,000.
- OHIO WESLEYAN UNIVERSITY, Delaware, Ohio; Thomas S. Oey, Department of Chemistry; *Phase Study: Quaternary Salt System*; 2 years; \$5,300.
- OHIO UNIVERSITY, Athens, Ohio; Lawrence P. Eblin, Department of Chemistry; *Infrared Absorption Studies on Simple Molecules*; 2 years; \$7,000.
- UNIVERSITY OF OKLAHOMA, Norman, Okla.; Bernard O. Heston, Department of Chemistry; *Infrared Spectrophotometric Applications in Organic Synthesis*; 1 year; \$3,800.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; J. G. Aston and J. J. Fritz, Department of Chemistry; *Low Temperature Research in Chemistry*; 2 years; \$30,000.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; A. Witt Hutchison, Department of Chemistry; *Ultraviolet Spectrophotometric Research*; 2 years; \$8,000.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Henry S. Frank, Department of Chemistry; *Infrared Studies in Physical Chemistry*; 2 years; \$7,000.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Henry S. Frank and T. H. Dunkelberger, Department of Chemistry; *Relation of Structure to Properties in Liquid Solutions*; 3 years; \$35,000.
- POLYTECHNIC INSTITUTE OF BROOKLYN, Brooklyn, N. Y.; H. P. Gregor, Department of Chemistry; *Ion Selective and Ion Specific Membranes*; 2 years; \$21,700.
- POLYTECHNIC INSTITUTE OF BROOKLYN, Brooklyn, N. Y.; R. A. Marcus, Department of Chemistry; *Theoretical Study of Electron Transfer Systems*; 2 years; \$18,300.
- POMONA COLLEGE, Claremont, Calif.; Corwin Hansch, Department of Chemistry; *The Dehydrocyclization Reaction*; 2 years; \$11,300.
- POMONA COLLEGE, Claremont, Calif.; Corwin Hansch, Department of Chemistry; *Organic and Physical Chemistry*; 3 months; \$6,000.
- PRINCETON UNIVERSITY, Princeton, N. J.; Robert N. Pease, Department of Chemistry; *Application of Nuclear Magnetic Resonance Spectroscopy to Catalysis and Organic Syntheses*; 2 years; \$10,000.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind., W. W. Brandt, Department of Chemistry; *Spectrofluorimetric Analysis With Monochromatic Excitation*; 3 years; \$17,000.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; William E. Truce, Department of Chemistry; *Electronic and Steric Effects of the Sulfonyl Group in Organic Compounds*; 2 years; \$10,200.
- PURDUE UNIVERSITY, Lafayette, Ind.; Herbert C. Brown, Department of Chemistry; *Chemical Effects of Steric Strains*; 2 years; \$23,000.
- REED COLLEGE, Portland, Oreg.; Arthur F. Scott, Department of Chemistry; *Chemical Determination of Atomic Weights*; 5 years; \$17,400.

- RENSSELAER POLYTECHNIC INSTITUTE, Troy, N. Y.; Sydney Ross, Department of Chemistry; *Adsorption of Vapors on Solids*; 2 years; \$13,400.
- RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Albany, N. Y.; Conrad Schuerch, Department of Chemistry, College of Forestry, Syracuse, N. Y.; *Stereoisomerism of Vinyl Polymers*; 2 years; \$11,800.
- UNIVERSITY OF ROCHESTER, Rochester, N. Y.; V. Boeckelheide, Department of Chemistry; *Amine Oxides*; 3 years; \$19,700.
- UNIVERSITY OF ROCHESTER, Rochester, N. Y.; Frank P. Buff, Department of Chemistry; *Molecular Theory of Fluids*; 3 years; \$19,000.
- ST. LAWRENCE UNIVERSITY, Canton, N. Y.; Paul E. Merritt, Department of Chemistry; *Infrared Adsorption Studies on Pyrroles Polypeptides and Cis-Trans Isomerism*; 1 year; \$1,700.
- SAINT JOSEPH COLLEGE, Emmitsburg, Md.; Louis W. Clark Department of Chemistry; *Thermal Decomposition of Organic Acids*; 2 years; \$9,300.
- ST. EDWARD'S UNIVERSITY, Austin, Tex.; Raymond Fleck, Department of Chemistry; *Stereochemistry of Addition of Halogen to Substituted Maleate Ion*; 2 years; \$3,000.
- UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, Calif.; Karol J. Mysels, Department of Chemistry; *Electrodifffusion Method for Rapid Ionic Reactions*; 3 years; \$21,000.
- UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, Calif.; James C. Warf, Department of Chemistry; *Perbromates and Arsenic (V) Chloride*; 1 year; \$4,200.
- UNIVERSITY OF SOUTH CAROLINA, Columbia, S. C.; H. W. Davis, Department of Chemistry; *Solution Chemistry and Kinetics of Organic Reactions*; 3 months; \$4,600.
- UNIVERSITY OF SOUTH CAROLINA, Columbia, S. C.; H. W. Davis, Department of Chemistry; *Reactivities of Free Radicals in Solution*; 2 years; \$1,000.
- UNIVERSITY OF SOUTH DAKOTA, Vermillion, S. Dak.; Charles R. Estee, Department of Chemistry; *Perkin-Elmer, Model 12-C Single Beam Infrared Spectrophotometer for Basic Research*.
- STANFORD UNIVERSITY, Stanford, Calif.; William A. Bonner, Department of Chemistry; *Influence of Substituents on Rates of Equilibration of 1, 2, 2-Triaryethyl Carbonium Ions*; 3 years; \$19,000.
- STANFORD UNIVERSITY, Stanford, Calif.; Harry S. Mosher, Department of Chemistry and Chemical Engineering; *Mechanism of Decomposition of Primary Hydroperoxides and Related Peroxides*; 2 years; \$17,100.
- STANFORD UNIVERSITY, Stanford, Calif.; George S. Parks, Department of Chemistry and Chemical Engineering; *Broad Range Spectrophotometric Studies in Inorganic and Organic Chemistry*; 2 years, \$8,000.
- SYRACUSE UNIVERSITY, Syracuse, N. Y.; Thomas H. Walnut, Department of Chemistry; *Structure of Infrared Bands of Molecular Crystals*; 2 years; \$21,300.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; C. A. Buehler, Department of Chemistry; *Kinetic and Equilibrium Studies by Use of Ultraviolet Spectroscopy*; 2 years; \$8,000.
- UNIVERSITY OF TEXAS, Austin, Tex.; Philip S. Bailey, Department of Chemistry; *Mechanism of the Ozonolysis Reaction*; 2 years; \$15,000.
- TUFTS UNIVERSITY, Medford, Mass.; M. Kent Wilson, Department of Chemistry; *High Resolution Spectra of Isotopically Pure Compounds*; 3 years; \$48,400.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; Robert E. Lutz, Department of Chemistry; *Stereochemistry and Effectiveness of Conjugation in Chalcones and Related Systems*; 3 years; \$20,300.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; Paul N. Schatz, Department of Chemistry; *Absolute Infrared Intensity Studies*; 3 years; \$17,700.

- WAYNE STATE UNIVERSITY, Detroit, Mich.; George H. Coleman, Department of Chemistry; *Nuclear Magnetic Resonance Spectra in Structure Determination*; 2 years; \$15,000.
- WAYNE STATE UNIVERSITY, Detroit, Mich.; Carl Djerassi, Department of Chemistry; *Structure Determination of a Naturally Occurring Insecticide*; 2 years; \$15,000.
- WAYNE STATE UNIVERSITY, Detroit, Mich.; Calvin L. Stevens, Department of Chemistry; *Analytical, Inorganic, Organic, and Physical Chemistry*; 3 months; \$6,900.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Arthur C. Wahl, Department of Chemistry; *Kinetics of Oxidation-Reduction Reactions*; 2 years; \$6,900.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; S. I. Weissman, Department of Chemistry; *Studies at Low Temperatures*; 1 year; \$21,000.
- STATE COLLEGE OF WASHINGTON, Pullman, Wash.; Grant G. Smith, Department of Chemistry; *Rearrangement of Alpha-Ketones and Ester Hydrolysis*; 2 years; \$8,500.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; Paul C. Cross, Department of Chemistry; *Nuclear Magnetic Resonance Applications in Organic Chemistry Research*; 2 years; \$15,000.
- WEST VIRGINIA UNIVERSITY, Morgantown, W. Va.; James B. Hickman, Department of Chemistry; *Binary Liquid Mixtures of Non-Electrolytes*; 2 years; \$8,500.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; C. F. Curtiss, Department of Chemistry; *Extension of Kinetic Theory of Gases*; 3 years; \$22,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; John D. Ferry, Department of Chemistry; *Mechanical Properties and Polymer Structure*; 3 years; \$35,900.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Daniel L. Leussing, Department of Chemistry; *Reactions of Sulfhydryl Compounds with Metal Ions*; 2 years; \$8,100.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Eugene E. Van Tamelen, Department of Chemistry; *Structure and Syntheses of Alkaloids*; 3 years; \$20,000.
- UNIVERSITY OF WYOMING, Laramie, Wyo.; E. R. Schierz, Department of Chemistry; *Investigation of Selected Reaction Mechanisms and the Constitution of Natural Products by Infrared Spectroscopy*; 2 years; \$7,000.
- YALE UNIVERSITY, New Haven, Conn.; Benton B. Owen, Department of Chemistry; *Dielectric Constant of Water at High Pressures*; 1 year; \$2,700.

Developmental Biology

- ALBION COLLEGE, Albion, Mich.; William J. Gilbert, Department of Biology; *Morphogenesis in the Bryophyta*; 1 year; \$1,700.
- UNIVERSITY OF BRITISH COLUMBIA, Vancouver, Canada; John Sanjean, Department of Zoology; *Identity of Neurons in Thoracic Ganglia of *Periplaneta Americana* (L.)*; 1 year; \$5,000.
- UNIVERSITY OF BUFFALO, Buffalo, N. Y.; John V. Slater, Department of Biology; *Nucleo-Cytoplasmic Interactions During Intracellular Differentiation*; 2 years; \$8,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Anton Lang, Department of Botany, Los Angeles, Calif.; *Role of Gibberellin in Cell Division and Morphogenesis in Plants*; 2 years; \$13,200.
- CARLETON COLLEGE, Northfield, Minn.; Thurlo B. Thomas, Department of Biology; *The Developing Lacrimal Gland of the Rat*; 1 year; \$1,900.
- COLUMBIA UNIVERSITY, New York, N. Y.; L. C. Dunn and Dorothea Bennett, Department of Zoology; *Analysis in Vitro of the Developmental Effects of Genetic Factors at the T-Locus in the Mouse*; 2 years; \$13,500.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Perry W. Gilbert, Department of Zoology; *Morphology and Physiology of the Reproductive Tract in Elasmobranch Fishes*; 2 years; \$6,800.

- HARVARD UNIVERSITY, Cambridge, Mass.; L. R. Cleveland, Biological Laboratories; *Sexuality of Protozoa of Cryptocercus and Termites*; 2 years; \$19,500.
- HARVARD UNIVERSITY, Cambridge, Mass.; John R. Raper and George Bistis, Department of Biology; *Cellular Differentiation in Ascobolus*; 2 years; \$14,600.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; W. T. Dempster, Department of Anatomy; *Architecture and Structural Properties of Human Long Bones*; 3 years; \$22,500.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Norman E. Kemp, Department of Zoology; *Synthesis and Utilization of Yolk During Oogenesis and Embryonic Development*; 2 years; \$12,200.
- NEW YORK UNIVERSITY, New York, N. Y.; William J. Crotty, Department of Biology, Washington Square College; *Control by Visible Radiation of Development in Ferns*; 2 years; \$9,300.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Ralph O. Erickson, Department of Botany; *Cell Division and Cell Growth in Higher Plants*; 3 years; \$25,700.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Ian M. Sussex, Department of Biological Sciences; *Morphogenesis in the Shoot of Vascular Plants*; 2 years; \$13,000.
- PRINCETON UNIVERSITY, Princeton, N. J.; John T. Bonner, Department of Biology; *Differentiation in the Cellular Slime Molds*; 3 years; \$17,000.
- PRINCETON UNIVERSITY, Princeton, N. J.; William P. Jacobs, Department of Biology; *Factors Controlling Cell Differentiation in Plants*; 2 years; \$12,650.
- REED COLLEGE, Portland, Oreg.; M. T. M. Rizki, Department of Biology; *Cytophysiology of Metamorphosis in Drosophila*; 1 year; \$6,300.
- REED COLLEGE, Portland, Oreg.; M. T. M. Rizki, Department of Biology; *Cytophysiology of Metamorphosis in Drosophila*; 1 year; \$700.
- RICE INSTITUTE, Houston, Tex.; Roy V. Talmage and Allen C. Enders, Department of Biology; *Phenomena of Implantation Delay in Armadillo Blastocyst*; 3 years; \$24,600.
- ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, New York, N. Y.; Armin C. Braun; *Chemical Nature and Mode of Action of a Specific Inducer of the Male Sex Organ in Plant Species*; 2 years; \$16,000.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; Ronald C. Fraser, Department of Zoology; *Somite Formation in the Early Chick Embryo*; 2 years; \$11,500.
- TEXAS AGRICULTURAL EXPERIMENT STATION, College Station, Tex.; James N. Weaver, Department of Entomology; *Nutritional Factors in the Differentiation of the Honeybee*; 2 years; \$8,500.
- TEXAS SOUTHERN UNIVERSITY, Houston, Tex.; Alberta J. Seaton, Department of Biology; *Cytological Organization of the Egg of Placental Mammals Using Histochemical Tests*; 1 year; \$3,000.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; J. David Deck, Department of Anatomy; *Quantity of Nerves Necessary for Regeneration of Forelimbs of a Larval Amphibian*; 2 years; \$8,200.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; Morris S. McKeehan, School of Medicine; *Growth and Differentiation of the Lens Primordium*; 3 years; \$6,300.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Viktor Hamburger and Rita Levi-Montalcini, Department of Zoology; *Analysis of Nerve Growth-Promoting Agents*; 1 year; \$26,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; H. W. Mossman, Department of Anatomy; *Comparative Morphology and Physiology of the Uterine Vascular System*; 2 years; \$13,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Kenneth B. Raper, Department of Bacteriology; *Comparative Morphogenesis in Simple Slime Molds*; 3 years; \$23,500.

- WITTENBERG COLLEGE, Springfield, Ohio; Knut J. Norstog, Department of Biology; *Embryogenesis in the Grasses*; 3 years; \$4,500.
- YALE UNIVERSITY, New Haven, Conn.; William T. Jackson, Department of Botany; *Root-Hair Initiation and Development*; 1 year; \$3,000.
- YALE UNIVERSITY, New Haven, Conn.; J. S. Nicholas, Department of Zoology; *Experimental Analysis of Rat Development*; 2 years; \$12,300.
- YALE UNIVERSITY, New Haven, Conn.; Donald F. Poulson, Department of Zoology; *Physiological and Developmental Genetic Studies on Drosophila*; 2 years; \$18,800.

Earth Sciences

- ROY A. BAILEY, Silver Spring, Md.; *Welded Tuffs of New Zealand*; 6 Months; \$800.
- DAVID ST. CLAIR, Durham, Conn.; *Manganese Deposits of Oriente Province, Cuba*; 1 year; \$1,250.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Daniel I. Axelrod, Department of Geology, Los Angeles, Calif.; *Tertiary Floras of Nevada*; 3 years; \$15,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; C. A. Nelson, Department of Geology, Los Angeles, Calif.; *Geology of Waucoba Mountain Quadrangle*; 1 year, \$4,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Jerzy Neyman, Department of Statistics; *Randomized Cloud Seeding*; 3 years; \$36,700.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; F. J. Turner, Department of Geological Sciences; *Fabric of Experimentally Deformed Rocks*; 2 years; \$12,000.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; A. E. J. Engel and A. A. Chodos, Division of Geological Sciences; *Metamorphic Processes*; 3 years; \$25,000.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; G. J. Wasserburg, Division of Geological Science; *Argon⁴⁰-Potassium⁴⁰ Dating*; 2 years; \$19,800.
- CHICAGO NATURAL HISTORY MUSEUM, Chicago, Ill.; Sharat K. Roy, Curator of Geology; *Chondrules in Stony Meteorites*; 1 year; \$4,350.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; A. J. Frueh, Jr., Department of Geology; *Crystal Chemistry of Sulfide Minerals*; 2 years; \$11,500.
- UNIVERSITY OF CINCINNATI, Cincinnati, Ohio; L. H. Larsen, Department of Geology and Geography; *Zircon Distribution in Granites*; 1 year; \$2,250.
- COLBY COLLEGE, Waterville, Maine; P. H. Osberg, Department of Geology; *Recumbent Folds in Vermont*; 1 year; \$600.
- COLUMBIA UNIVERSITY, New York, N. Y.; Maurice Ewing, Lamont Geological Observatory; *Reduction of Magnetic Data*; 3 years; \$17,300.
- COLUMBIA UNIVERSITY, New York, N. Y.; Maurice Ewing, Director, Lamont Geological Observatory; *Earthquake Surface Waves*; 3 years; \$31,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; J. L. Kulp and P. W. Gast, Lamont Geological Observatory; *Isotope Geology of Strontium and Rubidium*; 2 years; \$19,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Arie Poldervaart, Department of Geology; *Structure and Petrogenesis of Beartooth Mountains*; 2 years; \$17,500.
- CORNELL UNIVERSITY, Ithaca, N. Y.; E. P. Wheeler 2d, Department of Geology; *Anorthosites of Northern Labrador*; 3 years; \$6,900.
- EARLHAM COLLEGE, Richmond, Ind.; Ansel N. Gooding, Department of Geology, and Murvel R. Garner, Department of Biology; *Pleistocene Geology of White-water Basin*; 3 years; \$26,500.
- INDIANA UNIVERSITY, Bloomington, Ind.; C. J. Vitaliano, Department of Geology; *Volcanic Rocks of Western Nevada*; 3 years; \$17,600.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; R. B. Montgomery, Chesapeake Bay Institute; *Analysis of Serial Oceanographic Observations*; 3 years; \$20,900.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; A. Byron Leonard, Department of Zoology; *Cenozoic Mollusca*; 2 years; \$10,000.

- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; M. J. Buerger, Department of Geology and Geophysics; *Crystal Structures in Minerals*; 2 years; \$17,500.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; R. R. Doell, Department of Geology and Geophysics; *Magnetism in Sedimentary Rocks*; 3 years; \$16,600.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; H. W. Fairbairn and G. J. F. MacDonald, Department of Geology and Geophysics; *Equilibrium Nature of Metamorphic Processes*; 3 years; \$30,500.
- UNIVERSITY OF MIAMI, Coral Gables, Fla.; F. F. Koczy, The Marine Laboratory; *Distribution of Radioactive Elements in Oceans*; 1 year; \$10,000.
- NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D. C.; R. G. Stephenson, Executive Director; *Operation of the American Geological Institute*; 1 year; \$20,000.
- UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; A. J. MacAlpin, Department of Geology; *Pleistocene Geology of Cheboygan and Emmet Counties, Michigan*; 2 years; \$3,400.
- OBERLIN COLLEGE, Oberlin, Ohio; Kathryn H. Clisby, Department of Geology and Geography; *Pollen Studies and Pleistocene Chronology of San Augustin Plains*; 1 year; \$9,150.
- OBERLIN COLLEGE, Oberlin, Ohio; Fred Foreman, Department of Geology and Geography; *Sedimentary Petrology of San Augustin Plains*; 1 year; \$2,500.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; *Kaolin Clays of South-eastern United States*; 3 years; \$21,000.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; C. W. Burnham, Department of Geology; *Trace Elements in Sulfide Ores*; 2 years; \$18,650.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; Charles L. Hosler, *Aggregation of Ice Crystals*; 3 years; \$11,000.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; M. L. Keith, Department of Geophysics and Geochemistry; *Fractionation of Stable Isotopes*; 2 years; \$14,500.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; *Exsolution in Pyroxenes*; 1 year; \$2,500.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Elizabeth K. Ralph, Department of Physics; *Half Life of Carbon 14*; 2 years; \$20,000.
- PRINCETON UNIVERSITY, Princeton, N. J.; H. D. Holland, Department of Geology; *Age Determination by Radiation Damage*; 1 year; \$9,500.
- PRINCETON UNIVERSITY, Princeton, N. J.; *Geologic Investigations of Paleolithic Man*; 2 years; \$14,500.
- PRINCETON UNIVERSITY, Princeton, N. J.; J. C. Maxwell, Department of Geological Engineering; *Tectonics of Philipsburg-Drummond Area*; 3 years; \$15,400.
- ROYAL ACADEMY OF SCIENCES, Stockholm, Sweden; B. Hultqvist, Director; *Research at the Kiruna Geophysical Observatory*; 1 year; \$25,000.
- RUTGERS UNIVERSITY, New Brunswick, N. J.; Peter E. Wolfe, Department of Geology; *Post-Miocene Arching of Middle Rocky Mountains*; 2 years; \$10,100.
- ST. LOUIS UNIVERSITY, St. Louis, Mo.; V. T. Allen, Department of Geology; *Bauxite Deposits of the United States and Europe*; 2 years; \$3,000.
- UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, Calif.; K. O. Emery and Allan Hancock, Allan Hancock Foundation for Scientific Research; *Rate of Deposition of Sediments Off Southern California*; 18 months; \$20,000.
- UNIVERSITY OF UTAH, Salt Lake City, Utah; Kenneth L. Cook and Joseph W. Berg, Jr., Department of Geophysics; *Gravity, Seismic, and Magnetic Studies in Utah and Eastern Nevada*; 2 years; \$23,000.

- UNIVERSITY OF UTAH, Salt Lake City, Utah; L. B. Sand, Department of Mineralogy; *Phase Equilibria Relationships in the System Lime-Alumina-Silica-Water*; 2 years; \$17,700.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; W. D. Johns, Department of Geology and Geological Engineering; *Argillaceous Marine Sediments from Arctic and Sub-Arctic Regions*; 2 years; \$13,000.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; R. G. Fleagle, Department of Meteorology and Climatology; *Physics of Atmospheric Motions*; 2 years; \$12,400.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; A. E. Harrison, Department of Electrical Engineering; *Photogrammetric Surveys of Coleman Glacier*; 5 years; \$6,000.
- WAYNE STATE UNIVERSITY, Detroit, Mich.; Willard H. Parsons, Department of Geology; *Volcanic Rocks in Northern Absaroka Region*; 2 years; \$12,200.
- UNIVERSITY OF WICHITA, Wichita, Kans.; Paul Tasch, Department of Geology; *Permian Conchostracans of Kansas and Oklahoma*; 2 years; \$5,600.
- UNIVERSITY OF WICHITA, Wichita, Kans.; Paul Tasch, Department of Geology; *Fauna and Paleoecology of Maquoketa Shale of Iowa*; 1 year; \$1,000.
- WILSON COLLEGE, Chambersburg, Pa.; Jean Hough, Department of Biology; *Oligocene Mammals of North Dakota*; 1 year; \$2,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; G. P. Wollard, Department of Geology; *Crustal Structure on Selected Geologic Provinces*; 2 years; \$46,000.
- YALE UNIVERSITY, New Haven, Conn.; Alan M. Bateman and M. L. Jensen, Department of Geology; 3 years; \$20,000.

Engineering Sciences

- BROWN UNIVERSITY, Providence, R. I.; Paul S. Symonds, Department of Engineering; *Structures Under Dynamic Loading*; 1 year; \$9,000.
- BUCKNELL UNIVERSITY, Lewisburg, Pa.; Octave Levenspiel, Department of Chemical Engineering; *Vapor Collapse in Liquids*; 2 years; \$7,100.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; Donald Coles and C. B. Millikan, Department of Aeronautics; *Stability of Fluid Flow*; 2 years; \$19,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Cyril P. Atkinson, Department of Engineering; *Solution of Differential Equations of Nonlinear Mechanics by Application of Electronic Differential Analyzer*; 3 years; \$18,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; H. A. Einstein and J. W. Johnson, Department of Engineering; *Transport of Silty Sediments in an Alluvial Stream*; 3 years; \$16,400.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; H. A. Schade, Department of Engineering, Institute of Engineering Research; *Reproductions of Recorded Ocean Waves*; 1 year; \$10,800.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; O. J. M. Smith, Department of Engineering; *A Complex-Zero Signal Generator*; 1 year; \$3,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; E. G. Thomsen, Division of Engineering; *Plastic Flow of Metals in Forming Processes*; 2 years; \$17,600.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Robert A. Mathias, Department of Electrical Engineering; *Static Digital Control Systems*; 2 years; \$11,000.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Fletcher Osterle, Department of Mechanical Engineering; *Fluid Film Lubrication*; 2 years; \$12,700.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; H. L. Toor, Department of Chemical Engineering; *Transfer of Matter Across Gas-Liquid Interfaces*; 2 years; \$12,000.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; E. M. Williams, Department of Electrical Engineering; *Transient Low-Voltage Sparkover in Liquid Dielectrics*; 2 years; \$12,600.

- UNIVERSITY OF CINCINNATI, Cincinnati, Ohio.; Robert Lemlich, Department of Chemical Engineering; *Effect of Vibration on Convection Heat Transfer*; 3 years; \$7,200.
- UNIVERSITY OF CINCINNATI, Cincinnati, Ohio.; R. H. Price, Department of Chemical and Metallurgical Engineering; *Axial Mixing of Fluids Flowing Through Beds of Solid Particles*; 2 years; \$1,100.
- COLORADO STATE UNIVERSITY, Fort Collins, Colo.; Maurice L. Albertson, Department of Civil Engineering; *Equilibrium Conditions in Open Channels*; 1 year; \$2,300.
- COLORADO STATE UNIVERSITY, Fort Collins, Colo.; H. K. Liu, Department of Civil Engineering; *Analytical Study of Alluvial Channel Roughness*; 1 year; \$7,200.
- COLORADO STATE UNIVERSITY, Fort Collins, Colo.; D. F. Peterson, Jr., Department of Civil Engineering; *Open Channel Research*; 1 year; \$10,000.
- COLORADO STATE UNIVERSITY, Fort Collins, Colo.; D. F. Peterson, Department of Civil Engineering; *Hydraulics of Meanders and Spur Dikes*; 1 year, \$6,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Robert B. Gordon, Department of Mining, Metallurgical and Mineral Engineering; *Plasticity of Ionic Crystals*; 2 years; \$16,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Richard Skalak, Department of Civil Engineering and Engineering Mechanics; *Bubbles in a Vibrating Liquid*; 2 years; \$20,400.
- COLUMBIA UNIVERSITY, New York, N. Y.; L. A. Zadeh, Department of Electrical Engineering; *Theory of Sequential Machines and Automata*; 3 years; \$22,300.
- UNIVERSITY OF DETROIT, Detroit, Mich.; Leon S. Kowalczyk, Department of Chemical Engineering; *Thermal Conductivity of Organic Compounds at Their Melting Points*; 2 years; \$8,000.
- UNIVERSITY OF FLORIDA, Gainesville, Fla.; T. M. Reed, Department of Chemical Engineering; *Viscosity of Liquid Mixtures Containing a Fluorocarbon as One Component*; 2 years; \$13,900.
- GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, Ga.; Kenneth G. Picha, Department of Mechanical Engineering; *Nocturnal Radiation*; 1 year; \$4,500.
- HARVARD UNIVERSITY, Cambridge, Mass.; A. R. Lang, Division of Engineering and Applied Physics; *Imperfections in Crystals Grown From the Melt*; 2 years; \$20,900.
- HOWARD UNIVERSITY, Washington, D. C.; Walter T. Daniels, Department of Civil Engineering; *Impact Studies on Post-Tensioned Prestressed Concrete Beams*; 2 years; \$12,000.
- UNIVERSITY OF HOUSTON, Houston, Tex.; Chen-Jung Huang, Department of Chemical Engineering; *Mass Transfer Accompanied by Chemical Reaction*; 18 months; \$7,500.
- UNIVERSITY OF HOUSTON, Houston, Tex.; H. W. Prengle, Department of Chemical Engineering; *Thermodynamics of Solutions*; 1 year; \$15,700.
- UNIVERSITY OF HOUSTON, Houston, Tex.; H. W. Prengle, Department of Chemical Engineering; *Vapor-Liquid Equilibria of Extractive Distillation Systems*; 3 years; \$17,800.
- ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, Ill.; Robert C. Kintner, Department of Chemical Engineering; *Motions of Moving Bubbles and Drops*; 3 years; \$22,000.
- ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, Ill.; L. F. Mondolfo, Department of Metallurgical Engineering; *Nucleation in Liquid Metals*; 3 years; \$18,000.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; C. E. Bowman and C. E. Kesler, Department of Theoretical and Applied Mechanics; *Research on Engineering Materials*; 1 year; \$7,600.

- UNIVERSITY OF ILLINOIS, Urbana Ill.; Arthur L. Friedberg, Department of Ceramic Engineering; *Study of Nucleation Phenomena and Opacification in Titania-Opacified Porcelain Enamels*; 2 years; \$13,700.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Clyde E. Kesler, Department of Theoretical and Applied Mechanics; *Fatigue of Concrete*; 1 year; ~~\$7,900~~ 63000
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; M. F. Peters, Department of Chemical Engineering; *Kinetics and Mechanisms of Intermediate and Side Reactions*; 2 years; \$16,500.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; J. W. Westwater, Department of Chemical Engineering; *Microscopic Examination of Nucleation in Boiling Liquids*; 3 years; \$18,900.
- STATE UNIVERSITY OF IOWA, Iowa City, Iowa; Karl Kammermeyer and James O. Osburn, Department of Chemical Engineering; *Separation Effect in Flowing Fluids*; 2 years; \$17,500.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Jerome Gavis, Department of Chemical Engineering; *Tensile Stress in Jets of Viscoelastic Fluids*; 2 years; \$11,400.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; James M. McKelvey, Department of Chemical Engineering; *Heat Transfer in Dropwise Condensation*; 2 years; \$7,800.
- LAMAR RESEARCH CENTER, Beaumont, Tex.; J. F. Woodham, Chemical Engineering Department, Lamar State College of Technology; *Chemical Reaction in Fractionation Equipment*; 30 months; \$9,400.
- LAMAR RESEARCH CENTER, Beaumont, Tex.; H. H. Yang, Department of Chemical Engineering, Lamar State College of Technology; *Two-Phase Fluid Flow*; 1 year; \$10,000.
- LEHIGH UNIVERSITY, Bethlehem, Pa.; Frank Kreith, Department of Mechanical Engineering; *Influence of Centrifugal Forces on Heat Transfer and Flow*; 2 years; \$11,500.
- LEHIGH UNIVERSITY, Bethlehem, Pa.; Bruno Thurlimann, Department of Civil Engineering; *Influence Surfaces for Bending Moments in Slabs*; 2 years; \$15,100.
- LEHIGH UNIVERSITY, Bethlehem, Pa.; L. A. Wenzel, Department of Chemical Engineering; *Catalytic Hydration*; 1 year; \$3,100.
- UNIVERSITY OF LOUISVILLE, Louisville, Ky.; S. C. Spalding, Jr., Department of Chemical Engineering; *Fluidized Bed Derivatives*; 1 year; \$10,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Morris Halle, Research Laboratory of Electronics; *Problems of Linguistic Structure*; 2 years; \$21,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Tau-Yi Toong, Department of Mechanical Engineering; *Ignition and Flame Stabilization in a Boundary Layer Over a Hot Flame*; 2 years; \$25,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; John G. Trump, Department of Electrical Engineering; *High Voltage Discharges*; 2 years; \$27,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; H. H. Uhlig, Department of Metallurgy; *Origin of Meteorites*; 3 years; \$22,400.
- UNIVERSITY OF MASSACHUSETTS, Amherst, Mass.; Kenneth D. Cashin, Chemical Engineering Department; *Relationship Between Heat Transfer and Quality of Fluidization in Gas-Solid Fluidized System*; 2 years; \$6,100.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; Herman E. Koenig, Department of Electrical Engineering; *Dynamic Network Theory*; 2 years; \$12,900.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; T. H. Wu, Department of Civil Engineering; *Porewater Pressure Changes in Clays Under Shear Stress*; 2 years; \$17,500.

- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Donald L. Katz, Department of Chemical and Metallurgical Engineering; *Thermodynamic Properties of the Light Hydrocarbons at High Pressure and Low Temperature*; 2 years; \$16,800.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Gordon E. Peterson, Speech Research Laboratory; *Research Instrumentation for an Electrostatic Sound Spectrograph*; 2 years; \$25,000.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Gunnar Hok, Department of Electrical Engineering and D. R. Mason, Department of Chemical and Metallurgical Engineering; *Relaxation and Resonance Phenomena in Magnetic and Dielectric Ceramics*; 1 year; \$25,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; E. R. G. Eckert, Department of Mechanical Engineering; *Heat Transfer Research*; 1 year; \$25,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Herbert S. Isbin, Department of Chemical Engineering; *Studies Using Gamma Irradiation*; 1 year; \$17,500.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; R. C. Jordan, Department of Mechanical Engineering; *Heat Transfer*; 1 year; \$3,450.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Gordon J. Murphy, Department of Electrical Engineering; *Synthesis of Sampled-Data Control Systems*; 2 years; \$19,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; J. L. Threlkeld and R. C. Jordan, Department of Mechanical Engineering; *Collection of Solar Radiation on Plane Surfaces*; 2 years; \$13,800.
- UNIVERSITY OF MISSISSIPPI, University, Miss.; Frank A. Anderson, Department of Chemical Engineering; *Binary Mixture Viscosities*; 1 year; \$4,100.
- UNIVERSITY OF MISSOURI, Columbia, Mo.; George B. Clark, Department of Mining Engineering, School of Mines and Metallurgy, Rolla, Mo.; *Strain Rates in Rock Under Transient Loads*; 3 years; \$33,300.
- MONTANA STATE COLLEGE, Bozeman, Mont.; Robert C. Seibel and Donald K. Weaver, Jr., Department of Electrical Engineering; *Meteor Burst Phenomena*; 1 year; \$5,800.
- UNIVERSITY OF NEW MEXICO, Albuquerque, N. Mex.; K. Moore, Electrical Engineering Division; *Use of Distributed Amplifier Techniques with Transistors*; 1 year; \$9,000.
- NEW YORK UNIVERSITY, New York, N. Y.; George Gerard, Department of Aeronautical Engineering; *Effect of High Temperatures on Engineering Materials*; 1 year; \$10,000.
- NEW YORK UNIVERSITY, New York, N. Y.; John P. Nielsen, Department of Metallurgical Engineering; *Kinetics of Transformation Nuclei Appearance*; 1 year; \$5,700.
- NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING, Raleigh, N. C.; Robert Allen McAllister, Department of Chemical Engineering; *Physical Properties of Liquid Mixtures*; 2 years; \$12,700.
- UNIVERSITY OF NORTH DAKOTA, Grand Forks, N. Dak.; Edward C. Lawson, Department of Mechanical Engineering; *Heat Transfer in Rectangular Channels*; 2 years; \$14,300.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; George Thodos and D. F. Mason, Chemical Engineering Department; *Vapor-Liquid Equilibrium Studies*; 3 years; \$8,400.
- UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Marcel K. Newman, Department of Mechanical Engineering; *Thermo-Elastic Damping in Impact Vibrations of Beams*; 2 years; \$14,900.

- UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Giuseppe Parravano, Department of Chemical Engineering; *Zone Melting Techniques in Fractional Crystallization*; 1 year; \$3,000.
- UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Kwang-Tzu Yang, Department of Mechanical Engineering; *Unsteady Laminar Boundary Layers with Heat Transfer*; 2 years; \$12,600.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Hamilton Gray, Department of Civil Engineering; *Climatic Influences on the Moisture Content and Density of Granular Soils*; 3 years; \$10,300.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Webster B. Kay, Department of Chemical Engineering; *Phase Behavior of Liquid and Gaseous Systems*; 1 year; \$10,000.
- OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE, Stillwater, Okla.; Gordon L. Nelson, Department of Agricultural Engineering; *Micro Meteorology Research*; 1 year; \$9,900.
- UNIVERSITY OF OKLAHOMA RESEARCH INSTITUTE, Norman, Okla.; O. K. Crosser, Chemical Engineering Department, University of Oklahoma; *Heat Transfer and Pressure Drop in Fluids Near Their Critical Points*; 3 years; \$14,500.
- OREGON STATE COLLEGE, Corvallis, Oreg.; Harvey D. Christensen, Department of Mechanical Engineering; *Nonlinear Oscillation Theory for the Behavior of Elastic Beam-Columns*; 1 year; \$3,100.
- OREGON STATE COLLEGE, Corvallis, Oreg.; James G. Knudsen, Department of Chemical Engineering; *Heat Transfer Coefficients in Baffled Tubular Heat Exchangers*; 2 years; \$4,900.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; Arthur Rose, Department of Chemical Engineering; *Rigorous Multicomponent Distillation of Calculations*; 2 years; \$15,600.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; H. I. Tarpley, Department of Electrical Engineering; *Training and Research in Computing Applications*; 1 year; \$16,000.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; R. W. Houston, Department of Chemical Engineering; *Liquid Phase Thermal Diffusion*; 3 years; \$12,300.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Y. H. Ku, Department of Engineering Sciences; *Nonlinear Mechanics*; 3 years; \$34,400.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Robert Maddin and R. A. Dodd, Department of Metallurgical Engineering; *Fatigue Failure of High Purity Fe-C and Fe-C-N Alloys*; 3 years; \$25,600.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; M. C. Molstad, Department of Chemical Engineering; *Mixing on Bubble Cap Trays*; 1 year; \$2,100.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; O. M. Salati, Department of Electrical Engineering; *Electrical Noise and Interference*; 1 year; \$5,200.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; J. R. Burnett, Department of Electrical Engineering, Purdue University; *Servomechanism Power Flow*; 2 years; \$18,600.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; Alden H. Emery, Jr., Department of Chemical Engineering, Purdue University; *Thermal Diffusion of Liquids in Columns*; 2 years; \$9,000.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; Pekka Rautala, Department of Metallurgical Engineering, Purdue University; *Structure of Metallic Elements*; 2 years; \$15,800.
- RENSSELAER POLYTECHNIC INSTITUTE, Troy, N. Y.; Hendrick C. Van Ness, Department of Chemical Engineering; *Thermodynamic Properties of Liquid and Vapor Solutions*; 3 years; \$23,900.

- RUTGERS UNIVERSITY, New Brunswick, N. J.; J. Vincent Fitzgerald, School of Ceramics; *Anelasticity of Ceramic and Portland Cement Materials*; 1 year \$8,400.
- STANFORD UNIVERSITY, Stanford, Calif.; George Leppert, Department of Mechanical Engineering; *Local Boiling With Forced Convection*; 2 years; \$11,600.
- STANFORD UNIVERSITY, Stanford, Calif.; Karl Klotter, Department of Mechanical Engineering; *Non-Linear Oscillations*; 2 years; \$15,400.
- STANFORD UNIVERSITY, Stanford, Calif.; Byrne Perry, Department of Civil Engineering; *Flow Through Porous Media*; 2 years; \$16,100.
- STEVENS INSTITUTE OF TECHNOLOGY, Hoboken, N. J., Gregory J. Comstock, Department of Powder Metallurgy Laboratory; *Fine Particulate Metals*; 1 year; \$12,500.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; Harry H. Ambrose, Department of Civil Engineering; *Boundary-Roughness Effects Upon Turbulent Flow*; 2 years; \$19,300.
- TEXAS AGRICULTURAL AND MECHANICAL RESEARCH FOUNDATION, College Station, Tex.; Warren Rice, Department of Mechanical Engineering; *Transfer Coefficients at Low Velocities*; 1 year; \$9,500.
- UNIVERSITY OF TEXAS, Austin, Tex.; Earnest F. Gloyna, Department of Civil Engineering; *Effect of Preaeration Upon the Treatment of Sewage*; 1 year; \$5,900.
- UNIVERSITY OF TEXAS, Austin, Tex.; John J. McKetta, Jr., Department of Chemical Engineering; *Distribution of H₂O, CO₂ and H₂S in Petroleum Hydrocarbon Mixtures*; 3 years; \$28,700.
- UNIVERSITY OF UTAH, Salt Lake City, Utah; Ivan B. Cutler, Department of Ceramics; *Rates of Oxidation of Carbides*; 3 years; \$18,100.
- VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg, Va.; Nelson F. Murphy, Department of Chemical Engineering; *Preparation and Properties of Some Metallic Compounds of Substituted Amines*; 1 year; \$4,600.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; H. G. Larew, Department of Civil Engineering; *Strength and Deformation Characteristics of Fine Grained Soils*; 2 years; \$13,500.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; P. C. Rosenthal, Department of mining and Metallurgy; *X-Ray Diffraction Studies of Minerals and Metals*; 1 year; \$10,900.
- YALE UNIVERSITY, New Haven, Conn.; Aris Phillips, Department of Civil Engineering; *Strain Hardening and Creep of Structural Members*; 2 years; \$11,300.
- YALE UNIVERSITY, New Haven, Conn.; Charles A. Walker and Harding Bliss, Department of Chemical Engineering; *Catalytic Gas Reactions*; 2 years; \$14,800.

Environmental Biology

- ERNEST E. TINKHAM, Indio, Calif.; *Environmental Relationships of Desert Sand Dune Biota*; 3 years; \$3,200.
- UNIVERSITY OF ARIZONA, Tuscon, Ariz.; Raymond M. Turner, Department of Botany; *Environmental Influences on Desert Tree Growth*; 3 years; \$7,300.
- UNIVERSITY OF ARKANSAS, Fayetteville, Ark.; J. A. Sealander, Jr., Department of Zoology; *Influence of External Conditions Upon Blood Values in Small Mammals*; 3 years; \$10,400.
- BOWLING GREEN STATE UNIVERSITY, Bowling Green, Ohio; Lawrence C. Bliss, Biology Department; *Productivity of Alpine Plant Communities*; 1 year; \$1,200.
- UNIVERSITY OF BRITISH COLUMBIA, Vancouver, Canada; Paul A. Dehnel, Department of Zoology; *Acclimation of Oxygen Consumption to Temperature and Salinity in Crustaceans*; 3 years; \$9,400.
- BROOKLYN BOTANIC GARDEN, Brooklyn, N. Y.; Paul R. Burkholder, Director of Research; *Biological Productivity in Long Island Sound*; 2 years; \$19,000.

- BUTLER UNIVERSITY, Indianapolis, Ind.; Marion T. Hall, Department of Botany, *Variability in Southwestern Species of Juniperus*; 2 years; \$5,600.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Theodore H. Bullock, Department of Zoology, Los Angeles, Calif.; *Physiological Ecology of Marine Invertebrates*; 2 years; \$31,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Elmer R. Noble, Santa Barbara College, *Ecology of Protozoan Parasitism in Marine Fishes*; 3 years; \$19,300.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; William C. Ashby, Department of Botany, *Ecological Life History of Basswood*; 2 years; \$12,400.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Ralph G. Johnson, Department of Geology; *Organization of Communities in a Pennsylvania Sea*; 2 years; \$8,000.
- UNIVERSITY OF COLORADO, Boulder, Colo.; Robert W. Pennak, Department of Biology; *Biostratonomy and Ecological History of Colorado Lakes*; 1 year; \$5,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Harold C. Conklin, Department of Anthropology; *Ecological Study of Tropical Forest Agriculture*; 2 years; \$16,000.
- DARTMOUTH COLLEGE, Hanover, N. H.; Dana L. Abell, Department of Zoology; *Ecological Significance of First Order Streams*; 1 year; \$2,000.
- DARTMOUTH COLLEGE, Hanover, N. H.; F. H. Bormann, Department of Botany; *Transfer Between Adjacent Plant Root Systems*; 2 years; \$10,900.
- DUKE UNIVERSITY, Durham, N. C.; W. Dwight Billings, Department of Botany; *Comparative Physiological Ecology of Alpine and Arctic Plants*; 3 years; \$30,700.
- DUKE UNIVERSITY, Durham, N. C.; C. G. Bookhout, Director, Duke University Marine Laboratory; *Improvement of Research Facilities at the Duke University Marine Laboratory*; 1 year; \$31,000.
- DUKE UNIVERSITY, Durham, N. C.; Daniel A. Livingstone, Department of Zoology; *Late-Pleistocene Development of Freshwater Lakes*; 2 years; \$8,300.
- DUKE UNIVERSITY, Durham, N. C.; Henry J. Oosting and W. Dwight Billings, Department of Botany; *Vegetational and Species Problems in Ecology*; 1 year; \$4,000.
- UNIVERSITY OF FLORIDA, Gainesville, Fla.; James N. Layne, Department of Biology; *Biology of the Florida Deer Mouse*; 2 years; \$6,300.
- HARVARD UNIVERSITY, Cambridge, Mass.; Hugh M. Raup, Department of Biology; *Development of Arctic Vegetation*; 1 year; \$1,200.
- HASKINS LABORATORIES, New York, N. Y.; S. H. Hutner, Microbiologist; *Ecology of Eurythermal Phytoflagellates*; 2 years; \$15,200.
- UNIVERSITY OF HAWAII, Honolulu, T. H.; Maxwell S. Doty, Department of Botany; *Primary Productivity of the Pacific*; 3 years; \$23,500.
- UNIVERSITY OF IDAHO, Moscow, Idaho; Philip C. Dumas, Department of Biological Sciences; *Ecological Relations of Phrynosoma and Rana Species*; 2 years; \$4,500.
- IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Ames, Iowa; Kenneth D. Carlander, Department of Zoology and Entomology; *Biology of Caddis and Mayflies*; 3 years; \$14,500.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; Henry S. Fitch, Department of Zoology; *Ecological Life History of the Copperhead*; 1 year; \$4,700.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; Charles D. Michener and Robert E. Beer, Department of Entomology; *Arthropod Associates of Army Ants*; 2 years; \$5,300.
- LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE, Baton Rouge, La.; Philip S. Callahan, Department of Entomology; *Nocturnal Behavior of Certain Lepidoptera*; 2 years; \$7,200.
- UNIVERSITY OF MARYLAND, College Park, Md.; Daniel A. Livingstone, Department of Zoology; *Late-Pleistocene Development of Freshwater Lakes*; 2 years; \$8,300.
- UNIVERSITY OF MIAMI, Coral Gables, Fla.; Hilary B. Moore, The Marine Laboratory; *Level Sea Bottom Communities*; 1 year; \$18,600.

- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; David C. Chandler and George H. Lauff, Great Lakes Research Institute; *Quantitative Measurement of Biological Productivity in the Great Lakes*; 1 year; \$12,200.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Francis C. Evans, Director, Laboratory of Vertebrate Biology; *Insect Populations of a Natural Community*; 3 years; \$13,300.
- UNIVERSITY OF MISSOURI, Columbia, Mo.; Clair Kucera, Department of Botany; *The Establishment of a Prairie Research Station*; 1 year; \$19,000.
- MISSISSIPPI SOUTHERN COLLEGE, Hattiesburg, Miss.; Robert A. Woodmansee, Division of Biological Sciences; *Plankton Communities Along a Salinity Gradient*; 1 year; \$1,700.
- MONTANA STATE COLLEGE, Bozeman, Mont.; John C. Wright, Department of Botany and Bacteriology; *Limnology of Canyon Ferry Reservoir*; 2 years; \$12,000.
- UNIVERSITY OF NEBRASKA, Lincoln, Nebr.; Calvin McMillan, Department of Botany; *Nature of Grassland Habitat*; 3 years; \$13,900.
- NEW MEXICO HIGHLANDS UNIVERSITY, Las Vegas, N. Mex.; Lora M. Shields, Department of Biology; *Algal Flora in the Surface Crust of Arid Soils*; 2 years; \$17,900.
- UNIVERSITY OF NEW MEXICO, Albuquerque, N. Mex.; Howard J. Dittmer, Biology Department; *Root Systems of Desert and Semiarid Land Plants*; 2 years; \$9,100.
- UNIVERSITY OF NEW MEXICO, Albuquerque, N. Mex.; James S. Findley, Department of Biology; *Interrelationships of Some New Mexico Mammals*; 3 years; \$8,300.
- NORTH DAKOTA AGRICULTURAL COLLEGE, Fargo, N. Dak.; Loren D. Potter, Botany Department; *Analysis of Seasonal Pollen Rain and its Correlation to Present Vegetation*; 1 year; \$3,200.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Jacob Verduin, Natural Resources Institute; *Productivity of Microplankton*; 2 years; \$4,000.
- OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE, Stillwater, Okla.; Troy C. Dorris, Department of Zoology; *Bottom Fauna of the Middle Mississippi River*; 1 year; \$500.
- OREGON STATE COLLEGE, Corvallis, Oreg.; Henry P. Hansen, Dean, Graduate School; *Plant Communities of an Oregon Wilderness Area*; 3 years; \$16,100.
- OREGON STATE COLLEGE, Corvallis, Oreg.; Robert M. Storm, Department of Zoology; *Herpetofauna of a Primitive Forest*; 1 year; \$5,600.
- UNIVERSITY OF OREGON, Eugene, Oreg.; J. Arnold Shotwell, Museum of Natural History; *Effects of Environmental Change on Community Organization*; 2 years; \$9,900.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Richard T. Hartman, Department of Biological Sciences; *Antagonistic Effects Between Algal Species*; 2 years; \$7,600.
- PORTLAND STATE COLLEGE, Portland, Oreg.; Quentin D. Clarkson, Division of Science; *Environmental Barriers to Hybridization in Iris*; 2 years; \$4,000.
- RUTGERS, THE STATE UNIVERSITY, New Brunswick, N. J.; Murray F. Buell, Department of Botany; *Vegetation Ecology*; 1 year; \$900.
- RUTGERS, THE STATE UNIVERSITY, New Brunswick, N. J.; Paul G. Pearson, Department of Zoology; *Small Mammal Populations in Relation to Burning of Ground Cover*; 2 years; \$8,600.
- SAM HOUSTON STATE TEACHERS COLLEGE, Huntsville, Tex.; Wilmot A. Thornton, Department of Biology; *Population Studies of Sympatric Anuran Species*; 3 years; \$6,700.
- STANFORD UNIVERSITY, Stanford, Calif.; Frederick A. Fuhrman, Department of Physiology; *Relation Between Temperature and Tissue Metabolism*; 1 year; \$4,300.

- SUL ROSS STATE COLLEGE, Alpine, Tex.; William W. Milstead, Department of Biology; *Interrelations of Canyon Lizard Species*; 4 years; \$7,200.
- UNIVERSITY OF TEXAS, Austin, Tex.; Howard T. Odum, Institute of Marine Science, Port Aransas, Texas; *Ecological Microcosms*; 3 years; \$21,800.
- TULANE UNIVERSITY, New Orleans, La.; Willis A. Eggler, Department of Botany, Newcomb College; *Relation of Temperature and Moisture to Growth and Reproductive Processes*; 2 years; \$14,700.
- TULANE UNIVERSITY, New Orleans, La.; Norman C. Negus, Zoology Department; *Population Dynamics of the Cotton Rat*; 2 years; \$12,900.
- VANDERBILT UNIVERSITY, Nashville, Tenn.; Elsie Quarterman, Department of Biology; *Hardwood Stands of the Southeastern Coastal Plain*; 3 years; \$8,100.
- WABASH COLLEGE, Crawfordsville, Ind.; Eliot C. Williams, Jr., Department of Zoology; *Loss of Pigmentation in Cave Planarians*; 2 years; \$4,000.
- STATE COLLEGE OF WASHINGTON, Pullman, Wash.; Donald S. Farner, Department of Zoology; *Hypothalamic Neurosecretory Activity in Relation to Daily Photoperiod*; 2 years; \$14,000.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; W. T. Edmondson, Department of Zoology; *Arid Land Limnology*; 2 years; \$20,600.
- WEST VIRGINIA UNIVERSITY, Morgantown, W. Va.; H. L. Barnett and V. G. Lilly, Department of Plant Pathology, Bacteriology and Entomology; *Parasitism of Piptocephalis on Other Fungi*; 2 years; \$12,200.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; J. T. Curtis and Grant Cottam, Department of Botany; *Integration of the Oak Forest Community*; 3 years; \$19,700.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; John C. Neese, Department of Zoology; *Physiological Ecology of Deep Water Chironomidae*; 2 years; \$11,800.
- WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass.; George L. Clarke, Marine Biologist; *Measurement of Light in the Sea*; 3 years; \$56,700.
- WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass.; Bostwick H. Ketchum; *Nitrogen Cycle in Coastal Sea Waters*; 3 years; \$20,700.
- WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass.; Bostwick H. Ketchum; *Chemical Composition of Phytoplankton as Related to Environmental Changes*; 3 years; \$36,700.
- WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass.; John H. Ryther; *Basic Productivity of the Sea*; 3 years; \$42,000.
- YALE UNIVERSITY, New Haven, Conn.; Edward S. Deevey, Geochronometric Laboratory; *Paleolimnology Studies*; 1 year; \$1,300.

Genetic Biology

- BRANDEIS UNIVERSITY, Waltham, Mass.; Margaret Lieb, Department of Biology; *Mechanisms of Mutation in Microorganisms*; 2 years; \$13,000.
- BRIGHAM YOUNG UNIVERSITY, Provo, Utah; Howard C. Stutz, Department of Botany; *Cytogenetic Studies of Secale L. and Related Grasses*; 1 year; \$5,000.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; N. H. Horowitz, Department of Biology; *Genetic Aspects of Enzyme Synthesis*; 3 years; \$33,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; I. Michael Lerner and Everett R. Dempster, Department of Poultry Husbandry; *Polygenic Variability*; 3 years; \$52,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Charles M. Rick, Department of Vegetable Crops, Davis, Calif.; *Cytogenetics of Lycopersicon Hybrids*; 3 years; \$17,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; G. Ledyard Stebbins, Department of Genetics, Davis, Calif.; *Cytogenetics in the Dactylis Glomerata Complex*; 3 years; \$21,000.

- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; David P. Bloch, Department of Zoology, Los Angeles, Calif.; *Chromosomal Complex During Cell Division and Cell Development*; 2 years; \$9,400.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Taylor Hinton, Department of Zoology, Los Angeles, Calif.; *Genes in the Metabolism of Nucleic Acid*; 2 years; \$24,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Richard W. Siegel, Department of Biology, Los Angeles, Calif.; *Genetic Factors Controlling the Duration of Immaturity in Paramecium Aurelia*; 3 years; \$8,500.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Edward D. Garber, Department of Botany; *Chromosomal and Genetic Homology in the Genus Collinsia*; 3 years; \$13,000.
- CHILDREN'S CANCER RESEARCH FOUNDATION, INC., Boston, Mass.; George Yerganian; *Genetics and Cytology of the Chinese Hamster*; 3 years; \$24,700.
- COLUMBIA UNIVERSITY, New York, N. Y.; Stanley M. Gartler, Institute for the Study of Human Variation; *Human Biochemical Genetics Utilizing Twins*; 2 years; \$13,500.
- COLUMBIA UNIVERSITY, New York, N. Y.; Jerry Hirsch, Department of Psychology; *Experimental Behavior Genetics*; 2 years; \$11,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Lindsay S. Olive, Department of Botany; *Genetics of Homothallic Fungi*; 2 years; \$13,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Francis J. Ryan, Department of Zoology; *Mutation and Selection in Microbial Populations*; 3 years; \$33,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Ruth Sager, Department of Zoology; *Comparative Studies of Chromosomal and Non-Chromosomal Heredity in Chlamydomonas*; 1 year; \$11,100.
- HARVARD UNIVERSITY, Cambridge, Mass.; R. P. Levine, The Biological Laboratory; *Metallic Ions and Genetic Recombination in Chlamydomonas Reinhardi*; 2 years; \$15,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; John R. Raper, Department of Biology; *Genetics and Physiology of Tetrapolarity in the Higher Fungi*; 2 years; \$15,000.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; John R. Laughman, Department of Botany; *Mutation, Duplication, and Complex Gene Structure in Maize*; 4 years; \$24,000.
- INDIANA UNIVERSITY, Bloomington, Ind.; Tracy M. Sonneborn, Department of Zoology; *Antigens of Paramecium Aurelia*; 1 year; \$8,500.
- IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Ames, Iowa; William R. Lockhart and Lloyd Y. Quinn, Department of Bacteriology; *Biochemical Genetics of Motility in Bacteria*; 1 year; \$3,000.
- LONG ISLAND BIOLOGICAL ASSOCIATION, Cold Spring Harbor, N. Y.; James C. King; *Genetic Heterozygosity and Developmental Variation*; 2 years; \$23,500.
- UNIVERSITY OF MARYLAND, College Park, Md.; D. T. Morgan, Jr., Department of Botany; *Frequencies of Haploids in Capsicum Frutescens Following X-Irradiation*; 3 years; \$6,200.
- CITY OF HOPE MEDICAL CENTER, Duarte, Calif.; William D. Kaplan, Chief, Section of Genetics; *Sterility Component of X-ray and Chemically Induced Dominant Lethals in D. Melanogaster*; 1 year; \$7,500.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; David L. Nanney, Department of Zoology; *Protozoan Genetics*; 3 years; \$25,000.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Erich Steiner, Department of Botany; *Incompatibility Allele Systems in Oenothera*; 3 years; \$7,000.
- UNIVERSITY OF MISSOURI, Columbia, Mo.; E. R. Sears, Department of Field Crops; *Cytogenetic Studies of Wheat*; 3 years; \$19,900.
- NEW YORK STATE COLLEGE OF AGRICULTURE, Ithaca, N. Y.; L. F. Randolph, Department of Botany; *Cytogenetic Studies of Horticultural and Crop Plants*; 3 years; \$12,000.

- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; Paul Grun, Department of Botany; *Cytogenetic Studies in the Genus Solanum*; 2 years; \$10,000.
- ROSCOE B. JACKSON MEMORIAL LABORATORY, Bar Harbor, Maine; Margaret C. Green; *Development in Short-Ear Mutant Mice*; 2 years; \$10,000.
- RUTGERS, THE STATE UNIVERSITY, NEW BRUNSWICK, N. J.; Waclaw Szybalski, Institute of Microbiology; *Genetics of Actinomyces*; 2 years; \$12,000.
- SMITH COLLEGE, Northampton, Mass.; Pauline B. Shapard, Department of Zoology; *Effects of a Suppressor Mutant in Drosophila Melanogaster*; 2 years; \$12,500.
- UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, Calif.; Giuseppe Bertani, Department of Medical Microbiology; *Virus-Host Cell Relationship in Lysogenic Bacteria*; 2 years; \$40,000.
- STANFORD UNIVERSITY, Stanford, Calif.; David D. Perkins, Department of Biology; *Genetic Recombination in Neurospora*; 2 years; \$25,000.
- UNIVERSITY OF TEXAS, Austin, Tex.; W. S. Stone and M. R. Wheeler, Department of Zoology; *Collection of Various Diptera for Cytogenetic Analysis*; 1 year; \$2,100.
- TRINITY COLLEGE, Hartford, Conn.; Stanley Zimmering, Department of Biology; *Interchromosomal Effect on Crossing-over and Segregation in Drosophila*; 2 years; \$4,350.
- TULANE UNIVERSITY, New Orleans, La.; E. Peter Volpe, Department of Zoology; *Genetics and Systematics in the Genera Bufo and Rana*; 2 years; \$10,000.
- UNIVERSITY OF UTAH, Salt Lake City, Utah; Robert K. Vickery, Jr., Department of Genetics; *Genetic Studies in Mimulus*; 2 years; \$9,000.
- WASHINGTON COLLEGE, Chestertown, Md.; Frank C. Erk, Department of Biology; *Genetic Control of Differentiation in Drosophila*; 1 year; \$5,000.
- WESTERN RESERVE UNIVERSITY, Cleveland, Ohio; Charles Yanofsky, Department of Microbiology; *Genetic Control of Enzyme Formation*; 3 years; \$25,000.
- YALE UNIVERSITY, New Haven, Conn.; Charles L. Remington, Department of Zoology; *Evolution in Natural Populations of Lepidoptera*; 3 years; \$24,000.

Mathematical Sciences

- AMERICAN MATHEMATICAL SOCIETY, Providence, R. I.; J. B. Rosser, Chairman; *Mathematical Logic*; 5 weeks; \$29,500.
- UNIVERSITY OF BUFFALO, Buffalo, N. Y.; J. H. Hodges, Department of Mathematics; *Matrices Over a Finite Field*; 2 years; \$6,600.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; E. F. Beckenbach, Department of Mathematics, Los Angeles; *Convex Sets and Functions*; 2 years; \$16,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; M. R. Hestenes and C. B. Tompkins, Department of Mathematics, Los Angeles; *Sparse Multivariate Tables*; 1 year; \$5,800.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; John Myhill, Department of Philosophy; *Recursion Theory*; 18 months; \$11,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Alfred Tarski, Department of Mathematics; *Theory of Models*; 2 years; \$24,000.
- CARLETON COLLEGE, Northfield, Minn.; Kenneth O. May, Department of Mathematics and Astronomy; *Research and Training in Mathematics*; 4 years; \$27,300.
- CATHOLIC UNIVERSITY OF AMERICA, Washington, D. C.; Eugene Lukacs, Department of Mathematics; *Mathematical Statistics*; 2 years; \$5,000.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; S. S. Chern and E. H. Spainer, Department of Mathematics; *Algebraic Topology and its Applications*; 2 years; \$42,000.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Andre Weil, Department of Mathematics; *Abelian Varieties and Their Applications*; 1 year; \$8,000.

- COLUMBIA UNIVERSITY, New York, N. Y.; R. V. Kadison and I. M. Singer; Department of Mathematics; *Group Representations and Operator Theory*; 1 year; \$13,100.
- COLUMBIA UNIVERSITY, New York, N. Y.; Ellis R. Kolchin, Department of Mathematics; *Differential Algebra and Group Varieties*; 2 years; \$13,500.
- UNIVERSITY OF CONNECTICUT, Storrs, Conn.; Richard P. Gosselin, Department of Mathematics; *Fourier Series and Trigonometric Interpolating Polynomials*; 2 years; \$4,300.
- UNIVERSITY OF DELAWARE, Newark, Del.; Chris C. Braunschweiger, Department of Mathematics; *Banach Space Geometry*; 2 years; \$5,800.
- DUKE UNIVERSITY, Durham, N. C.; John J. Gergen, Department of Mathematics, *Topics in Analysis and Topology*; 2 years; \$21,800.
- EMMANUEL MISSIONARY COLLEGE, Berrien Springs, Mich.; E. J. Specht, Department of Mathematics; *Linear Operators and Potential Theory*; 2 years; \$10,000.
- UNIVERSITY OF GEORGIA, Athens, Ga.; M. K. Fort, Jr., Department of Mathematics; *Problems in Topology*; 2 years; \$19,500.
- UNIVERSITY OF IDAHO, Moscow, Idaho; Kenneth A. Bush, Department of Mathematics; *Estimation and Perfect Samples*; 18 months; \$2,000.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; H. R. Brahana, Department of Mathematics; *Structure of Infinite P-Groups*; 1 year; \$5,300.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; A. H. Taub, Digital Computer Laboratory; *Analytical Program for Digital Computers*; 2 years; \$32,300.
- INDIANA UNIVERSITY, Bloomington, Ind.; C. Truesdell, Institute for Mathematics and Mechanics; *Theoretical and Historical Studies in Mechanics*; 1 year; \$7,700.
- INSTITUTE FOR ADVANCED STUDY, Princeton, N. J.; Arne Beurling and Hassler Whitney, School of Mathematics; *Studies in Mathematics*; 2 years; \$42,000.
- INSTITUTE FOR ADVANCED STUDY, Princeton, N. J.; Deane Montgomery, Department of Mathematics; *Regular Mappings and Homotopy*; 3 months; \$1,400.
- INSTITUTE OF MATHEMATICAL STATISTICS, Santa Monica, Calif.; Oscar Kempthorne; *Summer Institute on Analysis of Variance*; 6 weeks; \$11,600.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Wei-Liang Chow, Department of Mathematics; *Algebraic Geometry Over Abstract Fields*; 2 years; \$31,300.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; N. Aronszajn, Department of Mathematics; *Boundary Value Problems*; 6 months; \$3,000.
- KENTUCKY RESEARCH FOUNDATION, Lexington, Ky.; V. F. Cowling; Department of Mathematics; *Summability and Analytic Functions*; 1 year; \$7,700.
- LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE, Baton Rouge, La.; E. V. Schenkman and H. Jacob, Department of Mathematics; *Endomorphism Semigroups*; 2 years; \$22,000.
- MARQUETTE UNIVERSITY, Milwaukee, Wis.; L. J. Heider, Department of Mathematics; *Functionals in Integration Theory*; 2 years; \$7,900.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Kenkichi Iwasawa; Department of Mathematics; *Galois Extensions of Algebraic Number Fields*; 2 years; \$9,300.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Nathaniel Coburn, Department of Mathematics; *Non-Steady Flow of Compressible Fluids*; 2 years; \$10,800.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; F. M. Henderson, Department of Engineering Mechanics; *Graphical Representation of Elliptic Functions*; 1 year; \$15,300.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; E. E. Moise, Department of Mathematics, *The Topology of Manifolds*; 18 months; \$8,200.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; R. L. Wilder, Department of Mathematics; *Mappings of Manifolds*; 1 year; \$9,200.

- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; E. Calabi, L. W. Green, and H. Yamabee, Department of Mathematics; *Structure of Manifolds*; 1 year; \$7,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Seizo Ito, Department of Mathematics; *Partial Differential Equations on Manifolds*; 1 year; \$6,500.
- NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D. C.; Paul A. Smith, Chairman, Division of Mathematics; *Advisory Committee on Travel Grants*; 2 years; \$2,000.
- NATIONAL BUREAU OF STANDARDS, Washington, D. C.; Milton Abramowitz, Chief of the Computing Laboratory; *Mathematical Tables*; 2 years; \$120,000.
- NEW YORK UNIVERSITY, New York, N. Y.; R. Courant, Institute of Mathematical Sciences; *Research and Training in Mathematics*; 1 year; \$50,000.
- NEW YORK UNIVERSITY, New York, N. Y.; Avron Douglis, Department of Mathematics; *Equations of Wave Propagation*; 2 years; \$8,000.
- NEW YORK UNIVERSITY, New York, N. Y.; Wilhelm Magnus, Institute of Mathematical Sciences; *Free Groups and Nielsen Transformations*; 2 years; \$15,400.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; R. P. Boas and J. A. Dieudonne, Department of Mathematics; *Research in Analysis, Algebra and Geometry*; 2 years; \$18,000.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; W. M. Boothby, Department of Mathematics; *Complex Analytic Manifolds*; 2 years; \$10,900.
- OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE, Stillwater, Okla.; Franklin A. Graybill, Department of Mathematics; *Estimates of the Components of Variance*; 2 years; \$15,200.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; Haskell B. Curry, Department of Mathematics; *Problems in Mathematical Logic*; 2 years; \$18,200.
- PHILANDER SMITH COLLEGE, Little Rock, Ark.; Lee Lorch, Department of Mathematics; *Singular Integrals and Lebesgue Constants*; 2 years; \$9,800.
- PURDUE UNIVERSITY, Lafayette, Ind.; Meyer Jerison and Leonard Gillman; Department of Mathematics; *Rings of Functions*; 2 years; \$29,500.
- UNIVERSITY OF ROCHESTER, Rochester, N. Y.; Dorothy Bernstein, Department of Mathematics; *Solutions of Partial Differential Equations*; 2 years; \$15,400.
- UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, Calif.; Albert L. Whitman; Department of Mathematics; *Cyclotomic Theory*; 2 years; \$9,500.
- STANFORD UNIVERSITY, Stanford, Calif.; Stefan Bergman, Department of Mathematics; *Functions of Several Complex Variables*; 2 years; \$28,000.
- STANFORD UNIVERSITY, Stanford, Calif.; Bernard Epstein, Department of Mathematics; *Free Boundary Problems in Hydrodynamics*; 1 year; \$6,600.
- STANFORD UNIVERSITY, Stanford, Calif.; Solomon Feferman, Applied Mathematics and Statistics Laboratory; *Generalized Product Theories*; 1 year; \$2,200.
- STANFORD UNIVERSITY, Stanford, Calif.; Charles Loewner, Department of Mathematics; *Semi-Groups and Functions of Matrices*; 2 years; \$14,800.
- SYRACUSE UNIVERSITY, Syracuse, N. Y.; A. Edrei, Department of Mathematics; *Meromorphic Functions*; 2 years; \$10,200.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; O. G. Harrold, Jr., Department of Mathematics; *Generalization of the Schoenflies of Extension Theorem*; 3 years; \$16,100.
- UNIVERSITY OF TEXAS, Austin, Tex.; H. S. Vandiver, Department of Mathematics; *Theory of Numbers*; 2 years; \$32,000.
- WAYNE UNIVERSITY, Detroit, Mich.; Samuel Kaplan, Department of Mathematics; *Cartesian Product Spaces*; 1 year; \$6,000.
- WAYNE STATE UNIVERSITY, Detroit, Mich.; Karl Zeller, Department of Mathematics; *Summability Methods*; 1 year; \$7,000.

- UNIVERSITY OF WISCONSIN, Madison, Wis.; R. H. Bruck, Department of Mathematics; *Projective Planes*; 2 years; \$17,200.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Laurence C. Young, Department of Mathematics; *Topological Problems in the Calculus of Variations*; 2 years; \$9,000.
- XAVIER UNIVERSITY OF LOUISIANA, New Orleans, La.; Charles B. Bell, Jr., Department of Mathematics; *Distribution-Free Statistics*; 2 years; \$9,200.
- YALE UNIVERSITY, New Haven, Conn.; G. A. Hedlund, Department of Mathematics; *Research in Algebra, Analysis and Geometry*; 2 years; \$28,700.
- YALE UNIVERSITY, New Haven, Conn.; Oystein Ore, Department of Mathematics; *Theory of Graphs*; 18 months; \$5,800.
- YALE UNIVERSITY, New Haven, Conn.; C. F. Rickart and J. T. Schwartz, Department of Mathematics; *Algebraic and Analytical Operator Theory*; 1 year; \$20,000.

Molecular Biology

- HUGO BAUER, National Institutes of Health, Bethesda, Md.; *Analysis and Identification of Products of Histidine Metabolism*; 1 year; \$4,000.
- UNIVERSITY OF ALABAMA, University, Ala.; Joseph C. O'Kelley, Department of Biology; *Cellulose Synthesis by Lyophilized Preparations of Acetobacter Xylinum*; 2 years; \$11,500.
- BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC., Yonkers, N. Y.; Beatrice S. Magdoff; *Structure of Southern-Bean Mosaic Virus*; 2 years; \$21,500.
- BRANDEIS UNIVERSITY, Waltham, Mass.; Harold P. Klein, Department of Biology; *Formation of Alpha-Amylase by Pseudomonas Saccharophila*; 2 years; \$14,000.
- BRIGHAM YOUNG UNIVERSITY, Provo, Utah; Jay V. Beck, Department of Bacteriology; *Nucleic Acid Formation by Certain Bacilli During Sporulation*; 3 years; \$19,000.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; Max Delbruck, Division of Biology; *Light Growth Responses of Phycomyces*; 5 years \$45,000.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; Richard S. Schweet, Division of Biology; *Soluble Enzymes Related to Protein Synthesis*; 3 years; \$21,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; William J. Hartman, Department of Physiological Chemistry; *Dihydroxyphenylserine Decarboxylase*; 2 years; \$12,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Gordon MacKinney, Department of Food Technology; *Biosynthesis of Carotenoids*; 3 years; \$21,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; D. Rao Sanadi, Department of Physiological Chemistry, School of Medicine; *Mechanism of Substrate Level Phosphorylation*; 3 years; \$30,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Howard K. Schachman, Department of Biochemistry; *Physical Chemical Studies on Macromolecules of Biological Interest*; 4 years; \$44,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; R. Y. Stanier, Department of Bacteriology; *Physiology of Photosynthetic Bacteria*; 5 years; \$51,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Arthur L. Black, School of Veterinary Medicine, Davis, Calif.; *Biosynthesis of Amino Acids in Dairy Cows*; 2 years; \$14,500.
- COLLEGE OF CHARLESTON, Charleston, S. C.; Joseph R. Merkel, Fort Johnson Marine Biological Laboratory; *Photocatalytic and Enzymatic Flavin Systems*; 1 year; \$4,500.
- CHICAGO MEDICAL SCHOOL, Chicago, Ill.; A. Robert Goldfarb, Department of Biochemistry; *Basic Properties of the Peptide Bond*; 2 years; \$10,000.

- UNIVERSITY OF COLORADO, Boulder, Colo.; Robert W. Cowgill, Department of Biochemistry; *Metabolism of Methylhistidines and Anserine in Animal Tissues*; 3 years; \$8,500.
- COLUMBIA UNIVERSITY, New York, N. Y.; Barbara W. Low, Department of Biochemistry; *Crystal Structure Analysis of Insulin and Oxytocin*; 3 years; \$39,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; Stuart W. Tanenbaum, Department of Microbiology; *Biosynthesis of Patulin and Related Aromatic Compounds by Members of the Penicillium Species*; 2 years; \$16,000.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Martin Gibbs, Department of Biochemistry and Nutrition; *Carbohydrate Dissimilation in the Autotrophic Cell*; 3 years; \$35,000.
- DUKE UNIVERSITY, Durham, N. C.; Aubrey W. Naylor, Department of Botany; *Relation of Biochemical Differentiation and Chloroplast Morphogenesis to Initiation of Photosynthetic Process*; 3 years; \$9,000.
- EMORY UNIVERSITY, Emory University, Ga.; Frank W. Fales, Department of Biochemistry; *Alkali-Insoluble Reserve Carbohydrate of Yeast Cells*; 2 years; \$12,000.
- EMORY UNIVERSITY, Emory University, Ga.; Elliot Juni, Department of Bacteriology and Immunology; *Mode of Action of Diphosphothiamin in Carbohydrate Metabolism*; 6 months; \$1,900.
- UNIVERSITY OF FLORIDA, Gainesville, Fla.; Arthur L. Koch, Department of Biochemistry, College of Medicine; *Detection and Estimation of the Activity of Individual Enzyme Molecules*; 3 years; \$22,000.
- FORDHAM UNIVERSITY, New York, N. Y.; Friedrich F. Nord, Department of Organic Chemistry and Enzymology; *Structural, Biochemical, and Physico-Chemical Studies on Lignin*; 3 years; \$21,000.
- HAVERFORD COLLEGE, Haverford, Pa.; Ariel G. Loewy, Biology Department; *Cytoplasmic Proteins Related to Conversion of Chemical Energy to Work in a Myxomycete*; 3 years; \$16,500.
- HARVARD UNIVERSITY, Cambridge, Mass.; Konrad Bloch, Department of Chemistry; *Mechanism of Synthesis of Steroids in Biological Systems*; 4 years; \$42,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; Paul Doty, Department of Chemistry; *Polypeptide Synthesis*; 3 years; \$33,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; John T. Edsall, Biological Laboratories; *Physical Chemistry of Amino Acids, Peptides and Proteins*; 3 years; \$38,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; Lowell P. Hager, Department of Chemistry; *Enzymatic Activation Mechanisms*; 3 years; \$22,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; T. T. Tchen, Department of Chemistry; *Conversion of Inorganic Sulfur to Organic Sulfur*; 2 years; \$12,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; James D. Watson, Department of Biology; *Structure of Bacterial Microsomes*; 2 years; \$30,000.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Lindsay M. Black, Department of Botany; *Plant Virus Investigations on Those With Long Incubation Periods in Their Insect Vectors*; 3 years; \$22,000.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Max E. Rafelson, Jr., Department of Biological Chemistry, College of Medicine, Chicago, Ill.; *Growth and Two-Carbon Metabolism in Microorganisms*; 2 years; \$15,000.
- INDIANA UNIVERSITY, Bloomington, Ind.; Walter A. Konetzka, Department of Bacteriology; *Microbial Dissimilation of Naturally Occurring Lignans*; 2 years; \$6,000.
- INDIANA UNIVERSITY, Bloomington, Ind.; Henry R. Mahler, Department of Chemistry; *Mode of Synthesis of Flavoproteins and Other Respiratory Enzymes*; 3 years; \$30,000.

- IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Ames, Iowa; S. Arnoff, Department of Botany and Plant Pathology; *Intercellular Movement of Organic Compounds*; 2 years; \$8,000.
- STATE UNIVERSITY OF IOWA, Iowa City, Iowa; R. E. Kallio, Department of Bacteriology, College of Medicine; *Bacterial Metabolism of One-Carbon Compounds*; 3 years; \$16,000.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; W. D. McElroy, McCollum-Pratt Institute; *Conversion of Chemical Energy Into Light Energy By Biological Systems*; 3 years; \$24,000.
- KYOTO UNIVERSITY, Maizuru, Japan; Hiroshi Fujita, Department of Fisheries; *Differential Equation for the Ultracentrifuge*; 2 years; \$1,700.
- LAWRENCE COLLEGE, Appleton, Wis.; W. Mary Griffiths; *Photosynthetic Pigment System of Rhodospseudomonas Spheroides*; 1 year; \$3,000.
- LAWRENCE COLLEGE, Appleton, Wis.; Robert M. Rosenberg, Department of Chemistry; *Interaction of Proteins With Alcohols and Detergents*; 3 years; \$6,000.
- UNIVERSITY OF LOUISVILLE, Louisville, Ky.; R. Duncan Dallam and John F. Taylor, Department of Biochemistry, School of Medicine; *Chemical Composition of and Enzymes Associated With Cytoplasmic Granules*; 3 years; \$24,000.
- MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass.; Reinhold Benesch; *Structure and Function of Proteins With Special Reference to Their Sulfur-Containing Moieties*; 4 years; \$31,000.
- MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass.; Andrew G. Szent-Gyorgyi, Institute of Muscle Research; *Completion of an Ultracentrifuge Laboratory for Biological Research*; 1 year; \$10,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; David F. Waugh, Department of Biology; *Interactions of Proteins*; 3 years; \$32,000.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; Robert S. Bandurski, Department of Botany and Plant Pathology; *Sulfate Reduction and Its Incorporation Into Organic Compounds*; 3 years; \$29,000.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; Harold M. Sell, Department of Agricultural Chemistry; *Biochemistry of Natural and Synthetic Growth Substances in Higher Plants*; 2 years; \$11,500.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; M. J. Coon, Department of Biological Chemistry; *Omega Oxidation in Fatty Acid and Amino Acid Metabolism*; 3 years; \$39,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; David R. Briggs, Department of Agricultural Biochemistry; *Chemical and Physical Properties and Structure of Proteins in Relation to Specific Biological Function*; 3 years; \$22,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Samuel Kirkwood, Department of Agricultural Biochemistry; *Enzyme Systems Concerned With the Metabolism of Iodine in the Animal Body*; 3 years; \$15,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Fred Smith, Department of Agricultural Biochemistry; *Detailed Structure of Polysaccharides*; 3 years; \$18,000.
- NEW YORK UNIVERSITY, New York, N. Y.; Paul R. Gross, Department of Biology; *Chemistry, Enzymology and Ultrastructure of the Amphibian Yolk Platelet*; 3 years; \$8,500.
- NEW YORK UNIVERSITY, New York, N. Y.; Milton Levy, Department of Biochemistry, School of Dentistry; *Chemical Structure of Collagen and Other Fibrous Proteins*; 3 years; \$32,000.
- NEW YORK UNIVERSITY, New York, N. Y.; Werner K. Maas, Department of Pharmacology, College of Medicine; *Regulation of Enzyme Synthesis in Bacteria*; 3 years; \$15,000.

- NEW YORK UNIVERSITY, New York, N. Y.; Robert C. Warner, Department of Biochemistry, College of Medicine; *Physical Properties of Enzymatically Synthesized Polynucleotides and of Ribonucleic Acid*; 3 years; \$47,000.
- NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING, Raleigh, N. C.; Harold J. Evans, Department of Botany; *Oxidative Processes in Leguminous Plants*; 3 years; \$25,000.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; John W. Hastings, Department of Biological Sciences; *Luminescence in the Marine Dinoflagellates*; 3 years; \$29,000.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; Irving M. Klotz, Department of Chemistry; *Protein Complexes: Interactions of Proteins With Disulfide Compounds*; 3 years; \$31,000.
- OHIO STATE UNIVERSITY, Columbus, Ohio; George C. Webster, Department of Agricultural Biochemistry; *Protein and Ribonucleic Acid Synthesis in a Cell-Free System From Plants*; 2 years; \$7,000.
- OREGON STATE COLLEGE, Corvallis, Oreg.; W. David Loomis, Department of Chemistry; *Biosynthesis of Terpens in Mint (*Mentha, sp.*)*; 2 years; \$8,000.
- UNIVERSITY OF OREGON, Eugene, Oreg.; Robert F. Labbe, Department of Biochemistry, Medical School, Portland, Oreg.; *The Mechanism by Which Iron Is Incorporated Into Heme*; 2 years; \$16,000.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; Andrew A. Benson, Department of Agricultural and Biological Chemistry; *Polyphosphate Metabolism of Plants*; 3 years; \$23,000.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Thomas F. Anderson, The Johnson Foundation for Medical Physics, School of Medicine; *Morphology and Growth of Bacteriophages*; 5 years; \$53,000.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Ronald Bentley, Department of Biochemistry and Nutrition, School of Public Health; *Carbohydrate Metabolism in Molds*; 3 years; \$24,000.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Peter S. Olmsted, Department of Biochemistry, School of Medicine; *Mechanism of In Vitro Polynucleotide Synthesis*; 2 years; \$10,000.
- PUBLIC HEALTH RESEARCH INSTITUTE OF THE CITY OF NEW YORK, INC., New York, N. Y.; Sarah Ratner, Division of Nutrition and Physiology; *Enzymatic Mechanisms of Amino Nitrogen Transfer and Urea Formation*; 3 years; \$32,000.
- REED COLLEGE, Portland, Oreg.; Lewis H. Kleinholz, Department of Biology; *Crustacean Pigmentary System*; 2 years; \$6,000.
- ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, New York, N. Y.; Stanford Moore and William H. Stein; *Automatic Recording Apparatus for Chromatography*; 1 year; \$7,400.
- RUTGERS, THE STATE UNIVERSITY, New Brunswick, N. J.; Otto J. Plescia, Institute of Microbiology; *Fixation of Complement by Sensitized Red Blood Cells*; 2 years; \$15,000.
- ST. JOSEPH'S COLLEGE, Collegeville, Ind.; Jay Barton, II, Department of Biology; *Nucleoprotein Complexes, With Special Reference to the Insoluble Proteins of Cell Nuclei*; 2 years; \$20,000.
- SOUTHERN ILLINOIS UNIVERSITY, Carbondale, Ill.; Maurice Ogur, Department of Microbiology; *Synthesis and Degradation of Polyphosphates in Yeast*; 3 years; \$16,000.
- UNIVERSITY OF TEXAS, Austin, Tex.; Austen F. Riggs, Department of Zoology; *Hemoglobin and Nitrogen Fixation*; 3 years; \$17,000.
- TUFTS UNIVERSITY, Medford, Mass.; Erich Heinz, Department of Biochemistry, School of Medicine, Boston, Mass.; *Basis of Active Transport*; 3 years; \$20,000.

- VANDERBILT UNIVERSITY, Nashville, Tenn.; Leon W. Cunningham, Department of Biochemistry; *Enzymatic Hydrolysis and Chemical Properties of Purified Glycoproteins*; 3 years; \$15,000.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Mildred Cohn, Department of Biological Chemistry; *Phosphorylation and Phosphate Transfer Reactions*; 3 years; \$30,000.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Arthur Kornberg, Department of Microbiology, School of Medicine; *Enzymatic Synthesis of Desoxyribonucleic Acid and Studies of Virus Formation*; 5 years; \$87,000.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Jack L. Strominger, Department of Pharmacology, School of Medicine; *Uridine Diphosphoglucose Dehydrogenase*; 2 years; \$5,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Helmut Beinert, Institute for Enzyme Research; *Occurrence of Semiquinoid Intermediates in Flavoprotein Catalysis*; 1 year; \$4,800.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; David E. Green, Institute of Enzyme Research; *Structure and Function of Mitochondria*; 5 years; \$60,000.
- WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, Mass.; Francis A. Richards and Bostwick H. Ketchum; *Physical and Chemical Properties of Chlorophyll C and Other Plankton Pigments*; 2 years; \$10,000.
- YALE UNIVERSITY, New Haven, Conn.; Henry A. Harbury, Department of Biochemistry; *Protein-Prosthetic Group Interaction*; 1 year; \$8,000.
- YALE UNIVERSITY, New Haven, Conn.; G. E. Hutchinson, Department of Zoology; *Diagenesis of Chlorophylls in Lake Sediments*; 1 year; \$1,150.
- YALE UNIVERSITY, New Haven, Conn.; Gifford B. Pinchot, Department of Microbiology; *Phosphorylation Coupled to Electron Transport in Cell-Free Bacterial Extracts*; 3 years; \$19,000.
- YALE UNIVERSITY, New Haven, Conn.; Julian M. Sturtevant, Department of Chemistry; *Physico-Chemical Studies of Protein and Related Reactions With Emphasis on Thermochemistry*; 3 years; \$39,000.

Physics

- BROWN UNIVERSITY, Providence, R. I.; Rohn Truell, Division of Applied Mathematics; *Ultrasonic Study of Defects in Solids*; 2 years; \$16,900.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; W. H. Barkas, Radiation Laboratory; *Information on Nuclear Track Emulsions*; 6 months; \$2,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Francis A. Jenkins, Department of Physics; *Nuclear Moments From Optical Hyperfine Structure*; 2 years; \$15,100.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; David S. Saxon, Department of Physics, Los Angeles, Calif.; *Research in Theoretical Physics*; 2 years; \$24,700.
- CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pa.; Sergio de Benedetti, Department of Physics; *Behavior of Slow Positrons in Solids*; 2 years; \$31,900.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; R. S. Mulliken, Department of Physics; *Quantum Mechanical Studies on Molecular Structure*; 3 years; \$143,400.
- CLEMSON AGRICULTURAL COLLEGE, Clemson, S. C.; J. E. Miller, Department of Physics; *A Study of Sulphur*; 2 years; \$12,000.
- UNIVERSITY OF COLORADO, Boulder, Colo.; M. Mizushima, Department of Physics; *Microwave Spectroscopy*; 1 year; \$12,400.
- COLUMBIA UNIVERSITY, New York, N. Y.; P. Kusch, Department of Physics; *Hyperfine Structure of Ionized Helium Three and the Hydrogen Molecular Ion*; 2 years; \$31,700.
- CORNELL UNIVERSITY, Ithaca, N. Y.; K. I. Greisen, Department of Physics; *Cosmic Ray Particle and Shower Study*; 2 years; \$48,900.

- CORNELL UNIVERSITY, Ithaca, N. Y.; R. L. Sproull, Department of Physics; *Phonon Scattering in Solids*; 3 years; \$25,600.
- DEPAUW UNIVERSITY, Greencastle, Ind.; Malcolm Correll, Department of Physics; *Solar Prominence Magnetic Fields*, 3 years; \$12,000.
- DUKE UNIVERSITY, Durham, N. C.; William M. Fairbank, Department of Physics; *Theoretical and Experimental Investigations of Quantum Liquids*; 2 years; \$30,100.
- DUKE UNIVERSITY, Durham, N. C.; H. Sponer, Department of Physics; *Electronic Structure of Molecules*; 2 years; \$23,800.
- GEORGETOWN UNIVERSITY, Washington, D. C.; R. L. Mooney, Department of Physics; *Hyperfine Structure in the Microwave Spectra of Polyatomic Molecules*; 2 years; \$10,100.
- GOUCHER COLLEGE, Baltimore, Md.; John I. Lodge, Department of Physics; *Interactions of Strange Particles*; 2 years; \$8,900.
- HVERFORD COLLEGE, Haverford, Pa.; Fay Ajzenberg-Selove, Department of Physics; *Neutron Spectra and Energy Levels*; 3 years; \$30,700.
- ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, Ill.; Forrest F. Cleveland, Department of Physics; *Vibrational Spectra of Polyatomic Molecules*; 2 years; \$16,600.
- INDIANA UNIVERSITY, Bloomington, Ind.; E. J. Konopinski, Department of Physics; *Elementary Particle Interactions*; 2 years; \$55,200.
- INSTITUTE FOR ADVANCED STUDY, Princeton, N. J.; J. Robert Oppenheimer, Director; *Fundamental Theory of Particles and Fields*; 1 year; \$20,000.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; G. H. Dieke, Department of Physics; *Spectroscopy of Rare Earths at Low Temperatures*; 1 year; \$4,700.
- KANSAS STATE COLLEGE, Manhattan, Kans.; A. B. Cardwell, Department of Physics; *Photoelectric Properties of Uranium Metal*; 2 years; \$11,500.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; L. W. Seagondollar, Department of Physics; *Excited Levels of Low Mass Nuclei*; 2 years; \$23,300.
- UNIVERSITY OF LOUISVILLE, Louisville, Ky.; D. M. Bennett, Department of Physics; *Autoradiographic Studies Using Gamma Emitting Isotopes*; 2 years; \$6,600.
- MANHATTAN COLLEGE, New York, N. Y.; Brother Gabriel Kane, Department of Physics; *Interactions and Flux of Primary Cosmic Rays*; 2 years; \$3,400.
- UNIVERSITY OF MARYLAND, College Park, Md.; Joseph Weber, Institute of Fluid Dynamics and Applied Mathematics; *Research in General Relativity*; 2 years; \$7,700.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Manson Benedict, Department of Physics; *The Establishment of a Research Reactor Facility*; 2 years; \$500,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; B. B. Rossi, Laboratory for Nuclear Sciences; *Air Shower Cosmic Ray Research*; 2 years; \$48,300.
- MICHIGAN STATE UNIVERSITY, East Lansing, Mich.; W. H. Tanttala and J. A. Cowen, Department of Physics; *Interactions of Lattice Vibrations with Nuclei, Electrons, and Holes*; 2 years; \$21,000.
- MIDDLEBURY COLLEGE, Middlebury, Vt.; Chung-Ying Chih, Department of Physics; *Emulsion Studies of K Mesons, Hyperons and Hyperfragments*; 2 years; \$6,300.
- UNIVERSITY OF MISSOURI, Columbia, Mo.; Paul W. Schmidt, Department of Physics; *Small Angle X-ray Scattering*; 2 years; \$15,300.
- MONTANA STATE UNIVERSITY, Missoula, Mont.; M. J. Jakobson, Department of Physics; *Photoneutron Cross-Sections*; 2 years; \$19,200.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; J. H. Roberts, Department of Physics; *Hyperfragments in Nuclear Emulsions Exposed to High Energy Particles*; 2 years; \$24,800.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; Stephen M. Shafroth, Department of Physics; *Gamma Ray Studies of Nuclear States*; 2 years; \$16,600.

- OHIO UNIVERSITY, Athens, Ohio; C. A. Randall, Department of Physics; *Emulsion Investigations of Primary Cosmic Rays*; 2 years; \$17,500.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; K. R. Atkins, Department of Physics; *Liquid Helium*; 2 years; \$25,100.
- PENNSYLVANIA STATE UNIVERSITY, University Park, Pa.; R. G. Cochran and W. W. Pratt, Department of Physics; *Short-Lived Radioisotopes Employing a Continuous-Flow Activation System*; 2 years; \$17,000.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; K. A. Brueckner, Department of Physics; *Theory of Many-Body Systems*; 2 years; \$37,700.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; S. Frankel, Department of Physics; *Low Energy Nuclear Spectroscopy*; 2 years; \$21,800.
- RICE INSTITUTE, Houston, Tex.; C. F. Squire, Department of Physics; *Low Temperature Physics*; 2 years; \$26,400.
- UNIVERSITY OF ROCHESTER, Rochester, N. Y.; M. P. Givens, Institute of Optics; *Optical Constants of Metals*; 1 year; \$7,700.
- UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, Calif.; J. R. Holmes, Department of Physics; *Optical Properties of Evaporated Films of Ferromagnetic Metals*; 2 years; \$15,600.
- SWARTHMORE COLLEGE, Swarthmore, Pa.; Dennison Bancroft, Department of Physics; *Velocity of Sound in Gases*; 2 years; \$15,000.
- SYRACUSE UNIVERSITY, Syracuse, N. Y.; Richard L. Arnowitt, Department of Physics; *Theory of Elementary Particles*; 2 years; \$13,100.
- ST. BONAVENTURE UNIVERSITY, St. Bonaventure, N. Y.; Zachary O'Friel, Department of Physics; *Heavy Primaries in Cosmic Radiation*; 2 years; \$6,600.
- UNIVERSITY OF UTAH, Salt Lake City, Utah; J. W. Keuffel, Department of Physics; *Study of Cosmic Ray Mesons*; 3 years; \$45,100.
- VANDERBILT UNIVERSITY, Nashville, Tenn.; Sherwood K. Haynes, Department of Physics; *Beta-Ray Spectroscopy at Very Low Energies*; 2 years; \$22,000.
- UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE, Burlington, Vt.; A. D. Crowell, Department of Physics; *Adsorption on Metals Using Radioactive Tracers*; 2 years; \$15,000.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; J. W. Beams, Department of Physics; *Low Temperature and Solid State Physics*; 2 years; \$8,200.
- WESTERN RESERVE UNIVERSITY, Cleveland, Ohio; D. E. Moe, Department of Physics; *Energy Spectrum of Electrons Emitted From Gases Bombarded by Positive Ions*; 2 years; \$15,700.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; R. C. Herb, Department of Physics; *Development of High Voltage Electrostatic Generators for Nuclear Physics Research*; 2 years; \$120,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; K. M. Watson and H. W. Lewis, Department of Physics; *Theory of Conductivity and Many-Particle Problems in Quantum Mechanics*; 2 years; \$30,000.
- YALE UNIVERSITY, New Haven, Conn.; V. W. Hughes, Department of Physics; *Beam Resonance Experiments on Helium and Structure of Positronium*; 3 years; \$54,000.
- YALE UNIVERSITY, New Haven, Conn.; C. T. Lane, Department of Physics; *Dynamics of Liquid Helium*; 3 years; \$53,600.

Psychobiology

- AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.; T. C. Schneirla, Department of Animal Behavior; *Biological Basis of Behavior in *Neivamyrmex**; 3 years; \$16,900.

- BROWN UNIVERSITY, Providence, R. I.; J. W. Kling, Department of Psychology; *Factors Influencing Response Strength*; 1 year; \$3,900.
- BUCKNELL UNIVERSITY, Lewisburg, Pa.; Harry L. Jacobs, Department of Psychology; *Psychophysiology of Hunger*; 2 years; \$4,500.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; Roger W. Sperry, Division of Biology; *Neural Mechanisms of Behavior*; 3 years; \$72,600.
- CLEVELAND HEARING AND SPEECH CENTER, Cleveland, Ohio; Earl D. Schubert; *Role of Binaural Time Differences in Reception of Speech*; 1 year; \$3,200.
- COLUMBIA UNIVERSITY, New York, N. Y.; William N. Schoenfeld and William W. Cumming, Department of Psychology; *Research on Schedules of Reinforcement*; 2 years; \$21,500.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Donald G. Forgays and Harry Levin, Department of Psychology; *Learning as a Function of Stimulus Change*; 16 months; \$6,300.
- EARLHAM COLLEGE, Richmond, Ind.; John A. Barlow, Department of Psychology; *Studies of Secondary Motivation*; 3 years; \$8,000.
- FLORIDA STATE UNIVERSITY, Tallahassee, Fla.; Lloyd M. Beidler, Department of Physiology; *Research on Chemoreception*; 3 years; \$25,000.
- GEORGE PEABODY COLLEGE FOR TEACHERS, Nashville, Tenn.; Joan H. Cantor, Department of Psychology; *Variables Influencing Stimulus Predifferentiation*; 1 year; \$4,700.
- GRINNELL COLLEGE, Grinnell, Iowa; Irving Y. Fishman, Department of Biology; *Research on Chemoreception*; 3 years; \$14,600.
- HARVARD UNIVERSITY, Cambridge, Mass.; Sarnoff A. Mednick, Department of Social Relations; *Studies in Stimulus Generalization*; 1 year; \$7,100.
- HARVARD UNIVERSITY, Cambridge, Mass.; B. F. Skinner, Department of Psychology; *Research on Reinforcement Schedules*; 1 year; \$4,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; B. F. Skinner, Department of Psychology; *Research on Reinforcement Schedules*; 2 years; \$45,300.
- HARVARD UNIVERSITY, Cambridge, Mass.; S. Smith Stevens, Psychological Laboratory; *Psychophysical Scaling*; 3 years; \$55,300.
- ILLINOIS COLLEGE, Jacksonville, Ill.; Nicholas E. Collias, Department of Biology; *Behavior in Ploceidae*; 1 year; \$1,900.
- INDIANA UNIVERSITY, Bloomington, Ind.; James A. Dinsmoor, Department of Psychology; *Studies on Instrumental Conditioning*; 2 years; \$10,000.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Edward F. MacNichol, Jr., Department of Biophysics; *Visual Research*; 3 years; \$19,100.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; Charles D. Michener, Department of Entomology; *Origin and Evolution of Caste Behavior Among Certain Bees*; 3 years; \$23,300.
- KENT STATE UNIVERSITY, Kent, Ohio; Charles C. Perkins, Department of Psychology and Emanuel C. Hertzler, Department of Biology; *Role of Reinforcement in Conditioning*; 1 year; \$4,500.
- LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE, Baton Rouge, La.; Clyde E. Noble, Department of Psychology; *Analysis of Trial-and-Error Learning*; 3 years; \$22,200.
- UNIVERSITY OF MARYLAND, College Park, Md.; Henricus G. Kuypers, Department of Anatomy, School of Medicine; *Research on the Brain Stem Reticular Formation*; 2 years; \$10,400.
- UNIVERSITY OF MARYLAND, College Park, Md.; Howard E. Winn, Department of Zoology; *Behavior of Pisces-Percidae*; 3 years; \$8,300.

- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; Abram M. Barch, Department of Psychology; *Perceptual-Motor Learning*; 2 years; \$10,000.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; John E. Bardach, Department of Fisheries; *Behavior of Reef Fish*; 1 year; \$5,100.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Eugene S. Gollin, Institute of Child Welfare; *Development of Visual and Tactual Recognition*; 2 years; \$14,800.
- MOUNT HOLYOKE COLLEGE, South Hadley, Mass.; John Volkmann, Department of Psychology; *Research in Visual Perception*; 1 year; \$5,000.
- UNIVERSITY OF NEVADA, Reno, Nev.; Paul F. Secord, Department of Psychology; *Research Training in Experimental Psychology*; 2 years; \$6,800.
- UNIVERSITY OF NEW MEXICO, Albuquerque, N. Mex.; George M. Peterson, Department of Psychology; *Neurophysiology of Behavior*; 2 years; \$13,400.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; John W. Cotton and Donald J. Lewis, Department of Psychology; *Experimental Investigation of Extinction*; 3 years; \$22,900.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; Brendan A. Maher, Department of Psychology; *Frontal Area Function in Lower Animals*; 15 months; \$5,800.
- OHIO STATE UNIVERSITY, Columbus, Ohio; Jay M. Enoch, School of Optometry; *Amblyopia and the "Stiles-Crawford Effect"*; 1 year; \$5,100.
- UNIVERSITY OF OKLAHOMA, Norman, Okla.; Charles C. Carpenter, Department of Zoology; *Ethnological Studies of Reptiles*; 3 years; \$14,200.
- PRINCETON UNIVERSITY, Princeton, N. J.; Byron A. Campbell, Department of Psychology; *Methodological Study of the Aversive Properties of Stimuli*; 1 year; \$6,200.
- PRINCETON UNIVERSITY, Princeton, N. J.; Harold Gulliksen, Department of Psychology; *Mathematical Techniques in Psychology*; 5 years; \$40,300.
- PRINCETON UNIVERSITY, Princeton, N. J.; William M. Smith, Department of Psychology; *Visual Contour Processes*; 1 year; \$7,700.
- SOUTHERN ILLINOIS UNIVERSITY, Carbondale, Ill.; Israel Goldiamond, Department of Psychology; *Development of Psychophysical Techniques*; 1 year; \$7,200.
- STANFORD UNIVERSITY, Stanford, Calif.; John M. Warren, Department of Psychology; *Learning in Submammalian Organisms*; 2 years; \$9,500.
- SWARTHMORE COLLEGE, Swarthmore, Pa.; Solomon E. Asch, Department of Psychology; *Studies in Cognition*; 3 years; \$27,300.
- TEXAS TECHNOLOGICAL COLLEGE, Lubbock, Tex.; A. Clinton Pereboom, Department of Psychology; *Role of Exploratory Drive in Learning*; 1 year; \$1,800.
- UNIVERSITY OF TEXAS, Austin, Tex.; Harold W. Stevenson, Department of Psychology; *Discrimination Learning*; 2 years; \$9,900.
- TRINITY UNIVERSITY, San Antonio, Tex.; Eugene A. Craig, Department of Psychology; *Research on Visual Processes*; 1 year; \$7,600.
- TUFTS UNIVERSITY, Medford, Mass.; Paul D. Coleman, Department of Psychology; *Study of Auditory Localization*; 1 year; \$7,500.
- VASSAR COLLEGE, Poughkeepsie, N. Y.; Eric G. Heinemann, Department of Psychology; *Simultaneous Brightness Induction in Human Vision*; 2 years; \$12,500.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Carl E. Scherric, Jr., Department of Psychology; *Psychophysical Parameters of Vibratory Perception*; 2 years; \$10,500.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; Moncrieff H. Smith, Jr., Department of Psychology; *Aspects of Biological Motivation*; 2 years; \$11,400.
- WESLEYAN UNIVERSITY, Middletown, Conn.; William R. Thompson, Department of Psychology; *Influence of Stress on Behavior*; 2 years; \$9,400.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; John T. Emlen, Jr., Department of Zoology; *Origin and Development of Basic Behavior Patterns*; 3 years; \$17,000.

- UNIVERSITY OF WISCONSIN, Madison, Wis.; David A. Grant, Department of Psychology; *Studies in Eyelid Conditioning*; 3 years; \$25,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Arthur D. Hasler, Department of Zoology; *Environmental Influences on Fish Behavior*; 3 years; \$28,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Herschel W. Leibowitz, Department of Psychology; *Studies of Perceptual Constancy*; 1 year; \$5,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Willard R. Thurlow, Department of Psychology; *Studies of Auditory Pattern Formation*; 3 years; \$17,700.
- UNIVERSITY OF WYOMING, Laramie, Wyo.; Margaret Altmann, Jackson Hole Biological Research Station; *Behavior Patterns in Wild Ungulates*; 1 year; \$9,100.
- YALE UNIVERSITY, New Haven, Conn.; Lawrence Stark, Section of Neurology, Yale School of Medicine; *Servo-Analysis of the Pupillary Reflex*; 3 years; \$16,800.

Regulatory Biology

- ALABAMA POLYTECHNIC INSTITUTE, Auburn, Ala.; H. E. Sauberlich, Department of Animal Husbandry and Nutrition; *Role of B Vitamins in Biosynthetic Pathways of Micro-Organisms*; 3 years; \$18,500.
- UNIVERSITY OF ARIZONA, Tucson, Ariz.; Joseph T. Bagnara, Department of Zoology; *Endocrine Control of Pigmentation in Amphibia*; 2 years; \$7,000.
- AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.; Dorothy E. Bliss, Department of Fishes and Aquatic Biology; *Neurosecretory Control of Growth and Locomotor Activity in *Gecarcinus Lateralis**; 3 years; \$15,700.
- BROOKLYN BOTANIC GARDEN, Brooklyn, N. Y.; Paul R. Burkholder, Director of Research; *Obligate and Facultative Photoautotrophy in the Genus *Chlamydomonas**; 1 year; \$4,650.
- BROWN UNIVERSITY, Providence, R. I.; Paul F. Fenton, Department of Biology; *Inherited Metabolic and Endocrine Patterns of the Mouse*; 3 years; \$11,550.
- BRYN MAWR COLLEGE, Bryn Mawr, Pa.; L. Joe Berry, Department of Biology; *Metabolic Factors Related to Susceptibility to Bacterial Infection in Mice*; 2 years; \$10,900.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; A. van Harreveld, Division of Biology; *Nature and Mechanism of Asphyxial Potentials*; 2 years; \$18,400.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; Geoffrey Keighley, Division of Biology; *Factors Regulating Production of Hemoglobin and Red Cells*; 3 years; \$27,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Michael Doudoroff, Department of Bacteriology; *The Biosynthesis and Function of Photosynthetic Bacterial Pigments*; 3 years; \$26,300.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Ralph H. Kellogg and Nello Pace, Department of Physiology; *Respiratory Adjustments During Exercise and Prolonged Hypoxia*; 15 months; \$27,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Wilbur B. Quay, Department of Zoology; *Functional Significance of the Mammalian Pineal Organ*; 2 years; \$15,700.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Wilbur B. Quay, Department of Zoology; *Structure and Function of the Mammalian Pineal Body*; 18 months; \$5,800.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Robert C. Stebbins and Richard M. Eakin, Museum of Vertebrate Zoology and Department of Zoology; *Structure and Function of the Parietal Eye in Reptiles*; 2 years; \$10,400.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Yoshinori Tanada, Department of Biological Control; *Synergism Among Insect Viruses*; 18 months; \$6,800.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Morton I. Grossman, Department of Medicine, Los Angeles, Calif.; *Factors Related to Exocrine Secretory Function of the Pancreas*; 3 years; \$23,500.

- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Bernard O. Phinney, Department of Botany and Charles A. West, Department of Chemistry, Los Angeles, Calif.; *Genetical and Biochemical Studies on Gibberellins in Higher Plants*; 3 years; \$35,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Robert D. Tschirgi, School of Medicine, Los Angeles, Calif.; *Electrolyte Exchange Between Plasma and Extravascular Fluids of the Central Nervous System*; 2 years; \$30,100.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Barbara B. Oakeson, Department of Biological Sciences, Santa Barbara College; *Histologic Cycle of the Thyroid in Sparrows*; 1 year; \$2,600.
- CHARING CROSS HOSPITAL, London, England; Alfred L. Copley, Director of Experimental Research on Vascular Diseases; *Role of Endothelium in Fibrin Formation, Platelet Agglutination and Production of Vascular Purpura*; 18 months; \$6,000.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; E. S. Guzman Barron, Department of Medicine; *Pathways of Glucose and Pentose Oxidation and Terminal Pathways of Respiration in Molds*; 1 year; \$5,750.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Lawrence Bogorad and Wayne McIlrath, Department of Botany; *Physiology of Floral Induction and Flowering*; 3 years; \$23,350.
- UNIVERSITY OF COLORADO, Boulder, Colo.; Alfred S. Crowle, Department of Microbiology, School of Medicine, Denver, Colo.; *The Mechanism of Acquired Immunity to Tuberculosis*; 3 years; \$21,500.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Richard H. Barnes, School of Nutrition; *Role of Intestinal Microflora in the Nutrition of the Host Animal*; 3 years; \$26,200.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Donald B. Melville, Cornell University Medical College; *Significance of Ergothioneine in Mammalian Metabolism*; 3 years; \$37,550.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Jean Paul Mitsch, Department of Floriculture and Ornamental Horticulture; *Regulation of Growth of Woody Plants*; 3 years; \$24,050.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Lemuel D. Wright, School of Nutrition; *Metabolism and Biological Role of Mevalonic Acid*; 5 years; \$43,500.
- DUKE UNIVERSITY, Durham, N. C.; Terry W. Johnson, Department of Botany; *The Nutrition and Metabolism of Lignicolous Marine Fungi*; 3 years; \$13,600.
- DUKE UNIVERSITY, Durham, N. C.; Knut Schmidt-Nielsen, Department of Zoology; *Factors in the Rates of Oxygen Supply to Tissues*; 2 years; \$22,500.
- FLORIDA STATE UNIVERSITY, Tallahassee, Fla.; Dexter M. Easton, Division of Physiology; *Inhibition and Trans-Membrane Potentials in Crustacean Muscle Fibers*; 2 years; \$9,200.
- UNIVERSITY OF FLORIDA, Gainesville, Fla.; Ernest B. Wright, Department of Physiology; *Excitation and Conduction in Nerve*; 3 years; \$22,600.
- GEORGE WASHINGTON CARVER FOUNDATION, Tuskegee Institute, Ala.; James H. M. Henderson, Department of Biology, Tuskegee Institute; *Mechanism of Action of Plant Growth Regulators*; 3 years; \$13,250.
- UNIVERSITY OF GEORGIA, Athens, Ga.; William J. Payne, Department of Bacteriology; *Culture and Metabolism of Marine Bacteria*; 2 years; \$7,000.
- HAHNEMANN MEDICAL COLLEGE, Philadelphia, Pa.; William L. Gaby, Division of Microbiology; *Mechanisms of Inhibition of Antibody Formation*; 2 years; \$10,700.
- HAHNEMANN MEDICAL COLLEGE, Philadelphia, Pa.; Albert C. Moat, Department of Microbiology; *Role of Biotin in the Metabolism of Yeast*; 2 years; \$9,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; Luigi Gorini and Bernard D. Davis, Department of Microbiology, School of Medicine; *Synthesis and Secretion of Bacterial Exocellular Proteinases*; 30 months; \$42,200.

- HARVARD UNIVERSITY, Cambridge, Mass.; Paul L. Munson, Harvard School of Dental Medicine; *Interrelationships of the Adrenal Cortex, Anterior Pituitary, and Hypothalamus*; 3 years; \$35,200.
- HARVARD UNIVERSITY, Cambridge, Mass.; Ralph H. Wetmore and Kenneth V. Thimann, Biological Laboratories; *Analysis of Growth and Differentiation in Plants*; 3 years; \$39,000.
- Haverford College, Haverford, Pa.; Melvin Santer, Department of Biology; *Energy Metabolism and Carbon Assimilation in Autotrophic Bacteria*; 3 years; \$6,400.
- ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, Ill.; William Danforth, Department of Biology; *Cellular Permeability and Metabolic Regulation*; 2 years; \$11,550.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Ralph D. DeMoss, Department of Bacteriology; *Bacterial Pigments*; 1 year; \$4,800.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; John B. Hanson, Department of Agronomy, College of Agriculture; *Effect of Plant Growth Regulators on Metabolic Activities of Subcellular Particles From Plant Tissues*; 2 years; \$13,300.
- INDIANA UNIVERSITY, Bloomington, Ind.; Eugene D. Weinberg, Department of Bacteriology; *Mutual Effects of Metallic Ions and Antimicrobial Compounds*; 2 years; \$7,800.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Carl Lamanna, Department of Microbiology; *Cessation of Growth of Bacteria at Minimum Temperatures*; 2 years; \$5,950.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; David G. Fleming, Department of Physiology; *Regulation of Food Intake in Parabiologic Rats*; 2 years; \$13,800.
- LOS ANGELES STATE COLLEGE OF APPLIED ARTS AND SCIENCES, Los Angeles, Calif.; Anthony J. Andreoli, Division of Natural Sciences; *Bacterial Oxidation of Aliphatic Aldehydes*; 2 years; \$8,500.
- UNIVERSITY OF MAINE, Orono, Maine; Harold W. Gausman, Department of Agronomy, Agricultural Experiment Station; *Function of Chloride in Potato Nutrition*; 2 years; \$7,300.
- MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass.; Morris Rockstein, Department of Physiology; *Mechanisms of Orientation to Light by Starfish*; 2 years; \$5,200.
- MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass.; Charles G. Wilber; *Cardiovascular Physiology in Fish*; 3 years; \$3,450.
- MARYMOUNT COLLEGE, Salina, Kans.; Sister Crescentia Giersch, Rose Waller Research Laboratory; *Effect of Amino Acids Upon the Nutrition of *Stichococcus Bacillaris**; 2 years; \$2,600.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Edward Herbert, Department of Biology; *Synthesis of Ribonucleic Acid in Cell-Free Systems*; 2 years; \$10,700.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; Warren S. McCulloch, Research Laboratory of Electronics; *Transmission of Signals Across the Central Nervous System*; 2 years; \$28,400.
- UNIVERSITY OF MASSACHUSETTS, Amherst, Mass.; Henry N. Little, Department of Chemistry; *Effect of Amino-Triazole on Higher Plants and Other Organisms*; 2 years; \$10,750.
- UNIVERSITY OF MASSACHUSETTS, Amherst, Mass.; John G. Moner, Department of Zoology; *The Nature and Action of Substances Which Stimulate Cell Division*; 3 years; \$16,000.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; Edward C. Cantino, Department of Botany and Plant Pathology; *Metabolic and Morphogenetic Relationships and Light Induced Growth in Fungi*; 30 months; \$12,500.

- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Alfred S. Sussman, Department of Botany; *Dormancy in Ascospores of Neurospora*; 2 years; \$10,000.
- UNIVERSITY OF MISSOURI, Columbia, Mo.; Boyd L. O'Dell, Department of Agriculture; *Unidentified Nutrients Required by the Guinea Pig*; 2 years; \$10,000.
- NEW ENGLAND INSTITUTE FOR MEDICAL RESEARCH, Ridgefield, Conn.; John H. Heller, Director; *Role of the Reticuloendothelial System in the Metabolism of Certain Proteins*; 2 years; \$12,100.
- NEW YORK UNIVERSITY, New York, N. Y.; Isidor Greenwald, Department of Biological Chemistry; *Thyroid Function From Historical Data*; 2 years; \$5,400.
- NEW YORK UNIVERSITY, New York, N. Y.; Alwin M. Pappenheimer, Jr., Department of Microbiology, Bellevue Medical Center; *The Mode of Action of Diphtheria Toxin*; 3 years; \$60,200.
- NEW YORK ZOOLOGICAL SOCIETY, New York, N. Y.; Thomas Goreau, University College of the West Indies, Mona, Jamaica; *Physiology of Reef Building Corals*; 2 years; \$17,750.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; David P. Earle, Department of Medicine, Chicago, Ill.; *In Vivo Role of Complement*; 2 years; \$12,400.
- NORTHWESTERN UNIVERSITY, Evanston, Ill.; Albert Wolfson, Department of Biological Sciences; *Metabolic and Endocrine Factors in the Regulation of Bird Migration*; 3 years; \$26,600.
- OHIO UNIVERSITY, Athens, Ohio; Charles H. Southwick, Department of Zoology; *Adrenal Responses of Rodents to Behavioral Stress*; 2 years; \$5,650.
- UNIVERSITY OF OREGON, Eugene, Oreg.; Jacob Straus, Department of Biology; *Biosynthesis of Anthocyanin in Corn Endosperm Tissue Cultures*; 3 years; \$17,200.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Harry E. Morton and Paul F. Smith, Department of Microbiology; *Nutrition and Metabolism of the Pleuropneumonia-Like Group of Organisms*; 2 years; \$13,500.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Alex Shrift, Department of Botany; *Role of Sulfur-Containing Amino Acids in Cell Division*; 2 years; \$11,000.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; George F. Springer, Pepper Laboratory of Clinical Medicine; *Nature of Blood Group Active Substances From Bacteria and Higher Plants*; 3 years; \$20,000.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; Merwin Moskowitz, Department of Biological Sciences, Purdue University; *Propagation of Macrophages in Tissue Culture*; 3 years; \$21,500.
- QUEEN'S UNIVERSITY, Kingston, Ontario, Canada; H. Arliss Denyes, Department of Zoology; *Function of Cortical Tubular Cells in Acclimation and Hibernation*; 1 year; \$3,200.
- RICE INSTITUTE, Houston, Tex.; Jack W. Daugherty, Department of Biology; *The Role of the Hepatopancreas of the Snail in Metabolic Processes*; 2 years; \$13,600.
- UNIVERSITY OF ROCHESTER, Rochester, N. Y.; E. F. Adolph, Department of Physiology; *Development of Regulatory Mechanisms in Individual Animals*; 3 years; \$24,000.
- UNIVERSITY OF ROCHESTER, Rochester, N. Y.; E. S. Nasset, Department of Physiology; *Influence of the Thyroid Gland on the Secretion of Gastric Juice*; 3 years; \$34,500.
- RUTGERS, THE STATE UNIVERSITY, New Brunswick, N. J.; Hans Fisher, Department of Poultry Husbandry; *Amino Acid Requirements for Growth and Egg Production*; 3 years; \$22,500.
- RUTGERS, THE STATE UNIVERSITY, New Brunswick, N. J.; James C. Hall, Division of Natural Sciences, Newark College of Arts and Sciences; *Effect of Insulin on Carbohydrate Oxidation by Mitochondrial Preparations*; 2 years; \$12,150.

- SCRIPPS CLINIC AND RESEARCH FOUNDATION, La Jolla, Calif.; Henry I. Nakada, Division of Laboratories; *Metabolism of Glyoxylic Acid by Mammalian Tissues*; 2 years; \$8,050.
- SMITHSONIAN INSTITUTION, Washington, D. C.; Robert B. Withrow, Astrophysical Observatory; *Photoregulation of Growth in Plants*; 3 years; \$27,000.
- UNIVERSITY OF SOUTH DAKOTA, Vermillion, S. Dak.; Alworth D. Larson, Department of Microbiology and Public Health; *Factors Involved in the Utilization of Valine Isomers by Bacteria*; 1 year; \$3,000.
- STANFORD UNIVERSITY, Stanford, Calif.; Winslow R. Briggs, Department of Biological Sciences; *Growth Limiting Factors in Ferns*; 3 years; \$9,150.
- STANFORD UNIVERSITY, Stanford, Calif.; O. H. Robertson, Department of Biology; *Relation of Increased Endocrine Activity to Post-Spawning Degenerative Changes in Fishes*; 3 years; \$5,400.
- STANFORD UNIVERSITY, Stanford, Calif.; Philip E. Smith, Department of Anatomy; *Influence of the Hypophysis on Endometrial Response to Estrogen*; 2 years; \$9,900.
- SYRACUSE UNIVERSITY, Syracuse, N. Y.; Verner J. Wulff and Donald A. Kennedy, Department of Zoology; *Light Initiated Photo-Chemical Events in the Visual Process*; 3 years; \$27,900.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; Friedrich P. J. Diecke, Department of Physiology, Memphis, Tenn.; *Olfactory Sense in Mammals*; 3 years; \$17,900.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; D. Frank Holtman, Department of Bacteriology; *Role of Amino Acids in the Host-Parasite Relationship*; 2 years; \$10,500.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; Samuel R. Tipton, Department of Zoology and Entomology; *The Role of Thyroidal and Adrenocortical Hormones in Certain Enzymatic Activities*; 2 years; \$10,300.
- TEXAS AGRICULTURAL AND MECHANICAL COLLEGE SYSTEM, College Station, Tex.; Samuel P. Johnson, Department of Plant Physiology and Pathology; *Effect of Red and Far Red Light on Growth and Development of Plants*; 2 years; \$2,100.
- TEXAS AGRICULTURAL EXPERIMENT STATION, College Station, Tex.; James L. Liverman, Department of Biochemistry and Nutrition; *Metabolic Interrelationships of the Photoperiodic Response in Plants*; 3 years; \$32,100.
- UNIVERSITY OF TEXAS, Austin, Tex.; J. Allen Scott and Etta Mae Macdonald, Medical Branch, Galveston, Texas; *Nature of Racial or Species Immunity*; 3 years; \$24,200.
- UNIVERSITY OF UTAH, Salt Lake City, Utah; Alan K. Done, Department of Pediatrics; *Role of Ascorbic Acid in Adrenal Cortical Function*; 3 years; \$23,650.
- VANDERBILT UNIVERSITY, Nashville, Tenn.; Jane H. Park, Department of Physiology, School of Medicine; *Mechanisms of Hormonal Regulation of Oxidative Phosphorylation*; 2 years; \$13,100.
- UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE, Burlington, Vt.; Calvin Hanna, Department of Pharmacology, School of Medicine; *Nature of Tachyphylaxis*; 3 years; \$16,000.
- UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE, Burlington, Vt.; Thomas Sproston, Jr., Department of Botany; *Production of the Fruiting Bodies in Sclerotinia Trifoliorum*; 2 years; \$5,500.
- WABASH COLLEGE, Crawfordsville, Ind.; Willis H. Johnson, Department of Biology; *Nutritive Requirements of Paramecium Multimicronucleatum for Growth in Sterile Culture*; 2 years; \$5,300.
- STATE COLLEGE OF WASHINGTON, Pullman, Wash.; N. Higinbotham, Department of Botany; *Interaction of Auxin and Salts in Rubidium Uptake by Excised Plant Tissue*; 1 year; \$8,000.

- UNIVERSITY OF WASHINGTON, Seattle, Wash.; Arthur W. Martin and David Duane Chapman, Department of Zoology; *Copper Metabolism in Molluscs*; 2 years; \$3,800.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; Richard B. Walker, Department of Botany; *Mineral Nutrition of Plants Endemic to Serpentine Soils*; 3 years; \$8,200.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Roy R. Peterson, Department of Anatomy; *Cytology of the Adenohypophysis*; 2 years; \$10,000.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Theodor Rosebury, Department of Bacteriology; *Interactions of Microorganisms Indigenous to Man*; 1 year; \$10,000.
- WESTERN RESERVE UNIVERSITY, Cleveland, Ohio; Stanley F. Patten, Jr., Department of Anatomy, School of Medicine; *Fate of the Lymphocyte*; 2 years; \$9,600.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; George W. Keitt, Department of Plant Pathology; *Nature of Parasitism and Disease Resistance*; 3 years; \$19,700.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Dexter S. Goldman, John W. Porter, and Alfonso B. Falcone, Institute of Enzyme Research, Department of Physiological Chemistry and Department of Medicine; *Recording Spectrophotometer for Biological Research*; 2 years; \$8,500.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Stanley G. Knight, Department of Bacteriology; *Metabolism of Filamentous Fungi with Special Reference to *Penicillium Chrysogenum**; 3 years; \$16,100.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Henry A. Lardy, Institute for Enzyme Research; *Respiration and Oxidative Phosphorylation of Brain Mitochondria*; 2 years; \$11,500.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; W. H. McShan and Roland K. Meyer, Department of Zoology; *Production and Mechanism of Release of Gonadotrophin and ACTH From Horse and Rat Pituitary Glands*; 3 years; \$29,600.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Peter R. Moore, Department of Pharmacology, The Medical School; *Multiple Nature of Alkaline Phosphatase*; 3 years; \$20,700.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; F. M. Strong, Department of Biochemistry; *Chemistry and Metabolism of Biologically Active Substances*; 5 years; \$39,700.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Duard L. Walker, Department of Medical Microbiology; *Multiplication of Mutant Viral Strains*; 2 years; \$23,200.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; P. W. Wilson and R. H. Burris, Department of Biochemistry; *Biological Fixation of Nitrogen*; 3 years; \$28,300.
- WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY, Shrewsbury, Mass.; Oscar Hechter; *Influence of Insulin and Other Factors on the Sugar-Transfer Mechanism in Muscle*; 3 years; \$31,800.
- YALE UNIVERSITY, New Haven, Conn.; Arthur W. Galston, Department of Plant Science; *Light-Controlled Growth Reactions in Plants*; 18 months; \$7,600.
- YALE UNIVERSITY, New Haven, Conn.; Alexander Mauro, Department of Physiology; *Electrophysiological Study of the Knife Fishes*; 3 years; \$15,100.
- YALE UNIVERSITY, New Haven, Conn.; Leonard M. Passano, Department of Zoology; *Sensory Integration in Lower Invertebrates*; 3 years; \$19,150.
- YALE UNIVERSITY, New Haven, Conn.; Grace E. Pickford, The Bingham Oceanographic Laboratory; *Endocrine Regulation of Metabolic Functions in Teleost Fishes*; 3 years; \$20,700.
- YALE UNIVERSITY, New Haven, Conn.; Wolf Vishniac, Department of Microbiology; *Enzymatic Reactions in Photosynthesis and Chemosynthesis*; 3 years; \$16,300.

Sociophysical Sciences

- UNIVERSITY OF ALABAMA, University, Ala.; Benjamin C. Moffett, Jr., Department of Anatomy, Medical Center; Birmingham, Ala.; *Early History of Arthrology*; 1 year; \$1,900.
- AMERICAN ACADEMY OF ARTS AND SCIENCES, Boston, Mass.; Philipp G. Frank, Department of Physics; *Acceptance of Scientific Theories*; 1 year; \$10,650.
- ANTIOCH COLLEGE, Yellow Springs, Ohio; Julian Blau, Department of Mathematics; *Balanced Tables and Functions in Mathematical Economics*; 1 year; \$10,000.
- COLUMBIA UNIVERSITY, New York, N. Y.; R. Duncan Luce, Bureau of Applied Social Research; *Mathematics of Imperfect Discrimination*; 2 years; \$12,900.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Howard B. Adelman, Department of Zoology; *Evolution of Embryology*; 3 years; \$24,150.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; Robert E. Schofield, Department of History; *Scientific Research in Eighteenth Century England*; 3 years; \$6,300.
- LEHIGH UNIVERSITY, Bethlehem, Pa.; Adolph Grunbaum, Department of Philosophy; *Philosophy of Fundamental Physical Theory*; 2 years; \$5,200.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Dorwin Cartwright, Research Center for Group Dynamics; *Information and Cognition in the Communication Process*; 2 years; \$16,300.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Herbert Feigl, Minnesota Center for Philosophy of Science; *Philosophical Foundations of Physics and the Comparative Methodology of Science*; 2 years; \$21,800.
- NATIONAL BUREAU OF ECONOMIC RESEARCH, INC., New York, N. Y.; Geoffrey H. Moore and Julius Shiskin, Department of Physics; *Application of Electronic Computers to the Analysis of Economic Statistics*; 2 years; \$27,200.
- UNIVERSITY OF NOTRE DAME, Notre Dame, Ind.; Ernan McMullin, Department of Philosophy; *Implications of the Quantum Principle of Uncertainty*; 1 year; \$3,400.
- YALE UNIVERSITY, New Haven, Conn.; Robert Summers, Cowles Foundation for Research in Economics; *A Sampling Experiment Investigation of Alternative Procedures for Parameter Estimation*; 2 years; \$14,300.

Systematic Biology

- AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.; Mont A. Cazier, Department of Insects and Spiders; *Revision of the Genus Diplotaxis*; 1 year; \$3,500.
- AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.; Albert Schwartz, Department of Amphibians and Reptiles; *Systematics and Zoogeography of the Genus Eleutherodactylus*; 2 years; \$6,200.
- AMHERST COLLEGE, Amherst, Mass.; Albert E. Wood, Department of Biology; *Evolution of the Paramyidae*; 1 year; \$3,000.
- UNIVERSITY OF ARIZONA, Tucson, Ariz.; Charles T. Mason, Jr., The Herbarium; *Inter-Relationships of the Western North American Gentians*; 3 years; \$2,500.
- BERNICE P. BISHOP MUSEUM, Honolulu, T. H.; R. H. van Zwaluwenberg, Honorary Associate in Entomology; *Elateridae of Oceania and New Guinea*; 1 year; \$8,000.
- BOSTON UNIVERSITY, Boston, Mass.; Arthur G. Humes, Department of Biology; *Copepoda (Crustacea) of Africa and Madagascar*; 2 years; \$5,000.
- BROWN UNIVERSITY, Providence, R. I.; George L. Church, Department of Botany; *Origin of Species Complexes in the Grass Genus Elymus*; 2 years; \$3,400.
- CALIFORNIA ACADEMY OF SCIENCES, San Francisco, Calif.; Edward S. Ross, Department of Entomology; *A Monograph of the Insect Order Embioptera*; 1 year; \$6,000.

- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Paul R. Needham, Department of Zoology; *Systematics of Salmo Gairdneri*; 1 year; \$2,100.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; George F. Papenfuss, Department of Botany; *Marine Algal Flora of South Africa*; 3 years; \$15,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Louis K. Mann, Experiment Station, Davis, Calif.; *Systematics and Evolution of the Genus Allium*; 3 years; \$14,700.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; John N. Belkin, Department of Entomology, Los Angeles, Calif.; *Mosquitoes of the South Pacific*; 2 years; \$8,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Thomas R. Howell, Department of Zoology, Los Angeles, Calif.; *Avifauna of Nicaragua*; 1 year; \$11,500.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Harlan Lewis, Department of Botany, Los Angeles, Calif.; *Systematics of the Family Onagraceae*; 3 years; \$11,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; C. H. Muller, Department of Biological Sciences, Santa Barbara, Calif.; *Evolution and Taxonomy of American Oaks*; 3 years; \$16,800.
- CHICAGO ACADEMY OF SCIENCES, Chicago, Ill.; Howard K. Gloyd; *The Crotalid Snake Genus Agkistrodon*; 1 year; \$2,000.
- CHICAGO NATURAL HISTORY MUSEUM, Chicago, Ill.; Philip Hershkovitz, Division of Mammals; *A Check-List of Recent Land Mammals of South America*; 3 years; \$8,000.
- CHICAGO NATURAL HISTORY MUSEUM, Chicago, Ill.; Julian A. Steyermark, Department of Botany; *Revised Catalogue of Missouri Flora*; 1 year; \$2,800.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; Alfred E. Emerson, Department of Zoology; *Taxonomic and Phylogenetic Studies of Termites*; 1 year; \$10,500.
- COLORADO AGRICULTURAL AND MECHANICAL COLLEGE, Fort Collins, Colo.; Victor B. Scheffer; *Zoological Significance of the Pinnipedia*; 1 year; \$8,500.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Helen J. Illick, Biology Department, Russell Sage College, Troy, N. Y.; *Morphology of the Lateral-Line System in Cyprinidae*; 2 years; \$3,400.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Edward C. Raney, Department of Conservation, Agricultural Experiment Station; *Systematics and Distribution of Fishes of Eastern United States*; 3 years; \$9,000.
- CRANBROOK INSTITUTE OF SCIENCE, Bloomfield Hills, Mich.; Warren P. Stoutamire, Assistant Botanist; *Cytotaxonomy of Gaillardia*; 3 years; \$3,600.
- DARTMOUTH COLLEGE, Hanover, N. H.; Carl L. Wilson, Department of Botany; *Floral Anatomy of the Dilleniaceae*; 1 year; \$3,500.
- DEPAUW UNIVERSITY, Greencastle, Ind., T. G. Yuncker, Department of Botany and Bacteriology; *Revision of the Plant Family Piperaceae in Brazil*; 3 years; \$5,000.
- DUKE UNIVERSITY, Durham, N. C.; Lewis E. Anderson, Department of Botany; *Renovation of the Grout Reference Slide Collection*; 2 years; \$8,500.
- DUKE UNIVERSITY, Durham, N. C.; William L. Culberson, Department of Botany; *Taxonomic Studies on the Lichen Flora of North America*; 1 year; \$6,500.
- FLORIDA STATE UNIVERSITY, Tallahassee, Fla.; Ruth S. Breen, Department of Botany; *An Illustrated Guide to the Mosses of Florida*; 2 years; \$5,000.
- UNIVERSITY OF FLORIDA, Gainesville, Fla.; Walter Auffenberg, Department of Biology; *Vertebrate Fauna of the Greater Antilles*; 2 years; \$6,000.
- GONZAGA UNIVERSITY, Spokane, Wash.; Ronald A. Ward, Department of Biology; *Speciation and Host-Relationships of Mallophaga*; 3 years; \$4,000.
- HARVARD UNIVERSITY, Cambridge, Mass.; Robert L. Dressler, Gray Herbarium; *Geographic Significance of the Tamaulipan Flora*; 2 years; \$5,500.
- HARVARD UNIVERSITY, Cambridge, Mass.; Richard A. Howard, Arnold Arboretum; *Vascular Patterns in Petioles of Woody Flowering Plants*; 2 years; \$5,000.

- UNIVERSITY OF HAWAII, Honolulu, T. H.; Albert H. Banner, Department of Zoology; *Zoogeography of the Alpheidae in the Central Pacific*; 1 year; \$5,300.
- UNIVERSITY OF HAWAII, Honolulu, T. H.; D. Elmo Hardy, Department of Entomology; *Diptera of Hawaii*; 3 years; \$6,600.
- UNIVERSITY OF HAWAII, Honolulu, T. H.; Harold St. John, Department of Botany; *Pandanus of the Pacific Islands*; 1 year; \$9,600.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; John O. Corliss, Department of Zoology; *Systematics and Genetics of Ciliated Protozoa*; 3 years; \$17,000.
- INDIANA UNIVERSITY, Bloomington, Ind.; L. S. McClung, Department of Bacteriology; *Taxonomy of Anaerobic Bacteria (Genus Clostridium)*; 3 years; \$10,400.
- INDIANA UNIVERSITY, Bloomington, Ind.; Frank N. Young, Department of Zoology; *Ecology and Taxonomy of Aquatic Coleoptera*; 3 years; \$1,600.
- IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Ames, Iowa; Martin J. Ulmer, Department of Zoology and Entomology; *Studies of Digenetic Trematodes and Other Helminths*; 2 years; \$5,700.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; H. B. Hungerford, Department of Entomology; *Aquatic and Semi-Aquatic Hemiptera of the World*; 3 years; \$15,000.
- UNIVERSITY OF KANSAS, Lawrence, Kans.; Charles D. Michener, Department of Entomology; *Phylogenetic Taxonomy of South American Hymenoptera*; 2 years; \$9,000.
- LOS ANGELES STATE COLLEGE OF APPLIED ARTS AND SCIENCES, Los Angeles, Calif.; Richard M. Straw, Department of Botany; *Taxonomy of the Mexican Species of Penstemon*; 3 years; \$7,500.
- LOYOLA UNIVERSITY, New Orleans, La.; Walter G. Moore, Department of Biological Sciences; *Variation in Natural and Experimental Populations of Anostraca*; 1 year; \$2,300.
- MERCER UNIVERSITY, Macon, Ga.; David W. Johnston, Department of Biology; *Bio-Systematics of North American Species of Corvus*; 2 years; \$3,400.
- UNIVERSITY OF MIAMI, Coral Gables, Fla.; Lauren C. Gilman, Department of Zoology; *Variation in Paramecium Caudatum*; 2 years; \$5,000.
- UNIVERSITY OF MIAMI, Coral Gables, Fla.; Richard Robins, The Marine Laboratory; *The Inshore Fish Fauna of the Florida Keys*; 2 years; \$10,000.
- UNIVERSITY OF MIAMI, Coral Gables, Fla.; Gilbert L. Voss. The Marine Laboratory; *Cephalopods of the Philippine Islands*; 2 years; \$5,600.
- MICHIGAN STATE UNIVERSITY OF AGRICULTURE AND APPLIED SCIENCE, East Lansing, Mich.; George W. Gillett, Department of Botany and Plant Pathology; *Flora of Lassen Volcanic National Park*; 2 years; \$3,000.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; R. J. Lowry and A. H. Smith, Department of Botany; *Cytology of the Fleshy Hymenomycetes in Relation to Their Phylogeny*; 2 years \$10,600.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Rogers McVaugh, Department of Botany; *Vascular Flora of Jalisco*; 3 years; \$14,700.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Henry K. Townes, Museum of Zoology; *Taxonomic Monographs of Nearctic Ichneumonidae*; 3 years; \$17,000.
- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; Alexander A. Granovsky, Department of Entomology and Economic Zoology; *Taxonomic Studies of Aphid Fauna*; 2 years; \$7,000.
- MISSOURI BOTANICAL GARDEN, St. Louis, Mo.; Hugh C. Cutler, Assistant Director; *History of Corn and Cultivated Cucurbita*; 2 years; \$4,700.
- MISSOURI BOTANICAL GARDEN, St. Louis, Mo.; Robert E. Woodson, Jr., Senior Taxonomist; *Flora of Panama*; 3 years; \$15,000.

- NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, Washington, D. C.; Tracy I. Storer, Department of Zoology, University of California, Davis, Calif.; *Biological and Ecological Study of Rats on Pacific Islands*; 2 years; \$11,500.
- COLLEGE OF NEW ROCHELLE, New Rochelle, N. Y.; Mary Dora Rogick, Department of Biology; *Bryozoa of the Antarctic*; 2 years; \$2,700.
- NEW YORK BOTANICAL GARDEN, New York, N. Y.; Donald P. Rogers, Curator; *Lower Basidiomycetes of Oregon*; 2 years; \$10,000.
- NEW YORK ZOOLOGICAL SOCIETY, New York, N. Y.; Myron Gordon, Genetics Laboratory; *A Biological Synthesis of the Poeciliid Fishes*; 2 years; \$7,500.
- OHIO ACADEMY OF SCIENCES, Cincinnati, Ohio; E. Lucy Braun, Department of Botany; *Vascular Flora of Ohio*; 3 years; \$12,000.
- OHIO WESLEYAN UNIVERSITY, Delaware, Ohio; Robert W. Long, Jr., Department of Botany; *Natural Hybridization of Perennial Sunflowers*; 2 years; \$3,000.
- OREGON STATE COLLEGE, Corvallis, Oreg.; Albert N. Steward, Department of Botany; *An Illustrated Key to Aquatic Plants of the Pacific Northwest*; 2 years; \$4,100.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Hui-Lin Li, Morris Arboretum; *Trees and Shrubs of Formosa*; 2 years; \$6,400.
- UNIVERSITY OF PITTSBURGH, Pittsburgh, Pa.; Malcolm T. Jollie, Department of Biological Sciences; *Phylogeny of the Falconiformes*; 1 year; \$2,300.
- POMONA COLLEGE, Claremont, Calif.; Lyman Benson, Department of Botany; *Cacti of United States and Canada*; 3 years; \$8,000.
- PORTLAND STATE COLLEGE, Portland, Oreg.; James A. Macnab, Division of Science; *Systematic Study of Endemic Earthworms*; 2 years; \$9,000.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; John S. Karling, Department of Biological Sciences, Purdue University; *A Monographic Study of Synchytrium*; 3 years; \$16,700.
- RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, Syracuse, N. Y., Josiah L. Lowe, College of Forestry, Syracuse, N. Y.; *Polyporaceae of North America*; 2 years; \$7,000.
- UNIVERSITY OF RHODE ISLAND, Kingston, R. I.; Richard D. Wood, Department of Botany; *Revision of Characeae Taxonomy*; 2 years; \$15,000.
- RUTGERS, THE STATE UNIVERSITY, New Brunswick, N. J.; Alan A. Boyden, Department of Zoology; *Classification of Representative Groups of Vertebrate Through Serological Studies*; 2 years; \$18,000.
- SMITHSONIAN INSTITUTION, Washington, D. C.; J. F. Gates Clarke, Department of Zoology; *Systematic Studies of Cerambycidae (Wood Boring Beetles)*; 1 year; \$21,600.
- SMITHSONIAN INSTITUTION, Washington, D. C.; G. Arthur Cooper, Department of Geology; *Morphology and Paleoecology of Permian Brachiopods*; 4 years; \$31,200.
- SMITHSONIAN INSTITUTION, Washington, D. C.; Conrad V. Morton, Department of Botany; *Studies of Type Specimens of Ferns*; 2 years; \$14,900.
- SOUTHERN METHODIST UNIVERSITY, Dallas, Tex.; William B. Stallcup, Department of Biology; *Serological Techniques in Avian Taxonomy*; 2 years; \$2,800.
- STANFORD UNIVERSITY, Stanford, Calif.; Victor C. Twitty, Department of Biological Sciences; *Biology of the Californian Species of Taricha*; 3 years; \$24,800.
- SWARTHMORE COLLEGE, Swarthmore, Pa.; Neal A. Weber, Department of Biology; *Fungus-Growing Ants and Their Fungi*; 2 years; \$5,000.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; L. R. Hesler, College of Liberal Arts; *Taxonomic Study of Agaricales of the Southeastern United States*; 3 years; \$8,500.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; A. J. Sharp, Department of Botany; *Vascular Plants of Tennessee*; 1 year; \$975.
- UNIVERSITY OF TEXAS, Austin, Tex.; R. K. Selander, Department of Zoology; *Speciation in Mexican Jays and Wrens*; 2 years; \$6,000.

- TULANE UNIVERSITY, New Orleans, La.; Royal D. Suttkus, Department of Zoology; *Speciation in the Subgenus Pteronotropis*; 1 year; \$4,000.
- UNION UNIVERSITY, Jackson, Tenn.; Allan F. Archer, Biology Department; *Antillean-Caribbean Fauna of Spiders and Other Arachnida*; 1 year; \$3,200.
- VALPARAISO UNIVERSITY, Valparaiso, Ind.; Carl H. Krekeler, Department of Biology; *Systematic Studies of Cavericolous Coleoptera*; 1 year; \$2,600.
- UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE, Burlington, Vt.; Hubert W. Voglemann, Pringle Herbarium; *A Study of Pringle's Undistributed Botanical Collections*; 1 year; \$2,500.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; Walter S. Flory, Jr., Blandy Experimental Farm, Boyce, Va.; *Phylogeny in the Amaryllidaceae*; 3 years; \$10,200.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Robert E. Woodson, Henry Shaw School of Botany; *Analysis of Peripheral Populations of Asclepias Tuberosa*; 2 years; \$5,500.
- STATE COLLEGE OF WASHINGTON, Pullman, Wash.; Lars Z. Brundin, Department of Entomology; *Taxonomy, Ecology, and Distribution of Chironomidae*; 1 year; \$1,700.
- WEST VIRGINIA UNIVERSITY, Morgantown, W. Va.; Mason E. Hale, Jr., Department of Biology; *Lichens of West Virginia*; 2 years; \$3,800.
- YALE UNIVERSITY, New Haven, Conn.; Theodore Delevoryas, Department of Botany; *Morphological Investigations of Cycadeoidales*; 3 years; \$7,700.
- YALE UNIVERSITY, New Haven, Conn.; John R. Reeder, Osborn Botanical Laboratory; *Taxonomy and Phylogeny of the Gramineae*; 2 years; \$8,500.

General

- ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, Philadelphia, Pa.; H. Radclyffe Roberts, Director; *Systematic Biology Collections*; 3 years; \$84,000.
- AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES, Washington, D. C.; E. G. Butler, President, Executive Committee of the American Society of Zoologists; *Policies and Future Activities of the American Society of Zoologists*; 2 years; \$11,500.
- BERMUDA BIOLOGICAL STATION, St. George's West, Bermuda; W. H. Sutcliffe, Jr., Director; *Repair and Improvement of Research Facilities*; 4 years; \$19,000.
- BROWN UNIVERSITY, Providence, R. I.; Z. R. Bliss, Department of Engineering; *Summer Investigations in Chemistry, Engineering, and Physics*; 3 months; \$9,000.
- UNIVERSITY OF BUFFALO, Buffalo, N. Y.; Sidney Shulman, Chairman, Student Research Fellowship Committee; *Short-Term Research by Medical Students*; 3 years; \$9,000.
- BOSTON UNIVERSITY, Boston, Mass.; L. J. Reyna, Department of Psychology; *Renovation of the Boston University Psychology Laboratory*; 1 year; \$25,800.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; G. D. McCann, Department of Electrical Engineering; *Computing Research*; 1 year; \$38,000.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; G. W. Beadle, Chairman, Division of Biology; *Thesis Research by Graduate Students in Biology*; 3 years; \$20,700.
- CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena, Calif.; F. W. Went, Division of Biology; *A Mobile Research Laboratory for Desert Ecology*; 2 years; \$30,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Otto Struve, Department of Astronomy; *Computing Research*; 1 year; \$50,000.
- UNIVERSITY OF CALIFORNIA, Berkeley, Calif.; Sherburne F. Cook, Professor of Physiology and Chairman, University of California Advisory Committee on High Altitude Research; *Construction of an Electrical Power Transmission Line for the White Mountain Research Station*; 2 years; \$132,000.

- CARLETON COLLEGE, Northfield, Minn.; Thurlo B. Thomas, Department of Biology; *Basic Research in Biology by Undergraduate and High School Students*; 3 years; \$22,300.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; A. A. Albert, Chairman, Survey Committee; *Survey of Research Potential and Training in the Mathematical Sciences*; 6 months; \$15,000.
- UNIVERSITY OF CHICAGO, Chicago, Ill.; George V. Le Roy, Associate Dean, Division of Biological Sciences; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- CORNELL UNIVERSITY, Ithaca, N. Y.; J. B. Rosser, Computing Center; *Computing Research*; 2 years; \$50,000.
- CORNELL UNIVERSITY, Ithaca, N. Y.; Lawrence W. Hanlon, Associate Dean, Medical College, New York, N. Y.; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- DUKE UNIVERSITY, Durham, N. C.; C. G. Bookout, Director, Duke University Marine Laboratory; *Research and Training at the Duke University Marine Laboratory*; 3 years; \$25,000.
- EMORY UNIVERSITY, Emory University, Ga.; Carl C. Pfeiffer, Director, Division of Basic Health Sciences; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- GULF COAST RESEARCH LABORATORY, Ocean Springs, Miss.; Gordon Gunter, Director; *Research and Training at the Gulf Coast Research Laboratory*; 1 year; \$3,000.
- HAHNEMANN MEDICAL COLLEGE AND HOSPITAL, Philadelphia, Pa.; Harold A. Taggart, Acting Dean; *Short-Term Research by Medical Students*; 1 year; \$2,400.
- HARVARD UNIVERSITY, Cambridge, Mass.; Henry C. Meadow, Assistant Dean; *Short-Term Research by Medical Students*; 3 years; \$15,000.
- HIGHLANDS BIOLOGICAL STATION, Highlands, N. C.; Thelma Howell, Executive Director; *Improvement of Facilities at the Highlands Biological Station*; 3 years; \$60,000.
- UNIVERSITY OF ILLINOIS, Urbana, Ill.; Milan Novak, Associate Dean, Chicago Professional Colleges, Chicago, Illinois; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- INDIANA UNIVERSITY, Bloomington, Ind.; Dean Fraser, Department of Bacteriology; *An Electron Microscope for Biological Research*; 1 year; \$27,000.
- STATE UNIVERSITY OF IOWA, Iowa City, Iowa; Albert P. McKee, Chairman, Committee on Student Fellowships; *Short-Term Research by Medical Students*; 3 years; \$6,000.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; Philip Bard, Dean, School of Medicine; *Short-Term Research by Medical Students*; 3 years; \$18,000.
- JOHNS HOPKINS UNIVERSITY, Baltimore, Md.; William D. McElroy, Chairman, Mergenthaler Laboratory for Biology; *College Undergraduate and High School Biological Research Projects*; 2 years; \$33,000.
- MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass.; Philip B. Armstrong, Director; *Optical Equipment for Use in Embryology and Invertebrate Zoology*; 1 year; \$11,500.
- MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass.; Philip B. Armstrong, Director; *Plant Rehabilitation: Modernization of Crane Wing of the Marine Biological Laboratory*; 2 years; \$415,000.
- MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Mass.; P. M. Morse, Department of Physics; *Computing Research*; 1 year; \$30,000.
- UNIVERSITY OF MICHIGAN, Ann Arbor, Mich.; Wayne L. Whitaker, Assistant Dean; *Short-Term Research by Medical Students*; 3 years; \$12,000.

- UNIVERSITY OF MINNESOTA, Minneapolis, Minn.; E. W. Ziebarth, Dean, Summer Session; *Biological Research and Training at the Lake Itasca Forestry and Biological Station*; 2 years; \$18,800.
- MOUNT DESERT ISLAND BIOLOGICAL LABORATORY, Salisbury Cove, Maine; Raymond Rappaport, Jr., Director; *General Support, Construction and Renovation of Facilities and Purchase of Major Equipment*; 3 years; \$55,000.
- NAPLES ZOOLOGICAL STATION, Naples, Italy; Peter Dohrn, Director; *General Support of the Naples Zoological Station, Italy*; 3 years; \$24,000.
- NATIONAL ACADEMY OF SCIENCES, Washington, D. C.; J. S. Coleman, Executive Secretary; *The Committee on Nuclear Science*; 2 years; \$25,000.
- NATIONAL ACADEMY OF SCIENCES, Washington, D. C.; Harold J. Coolidge, Executive Director; *Support of the Pacific Science Board*; 3 years; \$45,000.
- UNIVERSITY OF OKLAHOMA, Norman, Okla.; Carl D. Riggs, Director; University of Oklahoma Biological Station; *Research and Training at the University of Oklahoma Biological Station*; 2 years; \$8,000.
- OREGON STATE COLLEGE, Corvallis, Oreg.; A. T. Lonseth, Department of Mathematics; *Computing Research*; 1 year; \$20,000.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; Walter H. Gottschalk, Department of Mathematics; *Computing Research*; 1 year; \$70,000.
- UNIVERSITY OF PENNSYLVANIA, Philadelphia, Pa.; William B. Kennedy, Vice-Dean of the School of Medicine; *Short-Term Research by Medical Students*; 3 years; \$15,000.
- PRINCETON UNIVERSITY, Princeton, N. J.; Forman S. Acton, Department of Electrical Engineering; *Computing Research*; 1 year; \$40,000.
- PURDUE RESEARCH FOUNDATION, Lafayette, Ind.; Carl F. Kossack, Statistical Laboratory; *Computer Research*; 1 year; \$33,000.
- RESEARCH FOUNDATION OF THE STATE UNIVERSITY OF NEW YORK, Albany, N. Y.; Davis G. Johnson, Assistant Dean for Student Personnel, College of Medicine, Syracuse, N. Y.; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- STANFORD UNIVERSITY, Stanford, Calif.; J. G. Herriot, Department of Mathematics; *Computing Research*; 1 year; \$20,000.
- UNIVERSITY OF TENNESSEE, Knoxville, Tenn.; Thomas P. Nash, Jr., Dean, Division of Biological Sciences; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- UNIVERSITY OF VIRGINIA, Charlottesville, Va.; James N. Dent, William A. Jensen, Samuel Maroney, and Bruce Reynolds, Department of Biology; *Radioisotope Counting Equipment for Biological Research*; 1 year; \$8,000.
- WASHINGTON UNIVERSITY, St. Louis, Mo.; Edward W. Dempsey, Chairman of the Committee on Special Awards; *Short-Term Research by Medical Students*; 3 years; \$12,000.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; Carl B. Allendoerfer, Department of Mathematics; *Computing Research*; 1 year; \$17,500.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; Richard J. Blandau, Assistant Dean and Chairman; *Short-Term Research by Medical Students*; 3 years; \$18,000.
- UNIVERSITY OF WISCONSIN, Madison, Wis.; Preston C. Hammer, Numerical Analysis Laboratory; *Computing Research*; 1 year; \$30,000.
- YALE UNIVERSITY, New Haven, Conn.; Edgar J. Boell, Department of Zoology; *Facility for a Recirculating Seawater System*; 1 year; \$20,000.
- YALE UNIVERSITY, New Haven, Conn.; Vernon H. Lippard, Dean, School of Medicine; *Short-Term Research by Medical Students*; 3 years; \$15,000.
- UNIVERSITY OF WASHINGTON, Seattle, Wash.; A. W. Martin, Department of Zoology; *Graduate Student Research and Training at the Friday Harbor Laboratories*; 2 years; \$13,500.