

file of Federal Political Executives. David T. Stanley, Dean E. Mann, and Jameson W. Doig. Brookings Institution, Washington, D.C., 1967. xiv + 169 pp., illus. \$3.95.

Methoden der Organischen Chemie (Houben-Weyl). Vol. 10, part 2, Stickstoffverbindungen I. Rudolf Stroh, Ed. Thieme, Stuttgart, ed. 4, 1967 (available from Intercontinental Medical Book Corp., New York). xlviii + 964 pp., illus. DM 276; subscription, DM 248.

Methods of Biochemical Analysis. Vol. 15. David Glick, Ed. Interscience (Wiley), New York, 1967. x + 531 pp., illus. \$15.

Minutes of the Vienna Psychoanalytic Society. Vol. 2, 1908-1910. Translated from the German by M. Nunberg. Herman Nunberg and Ernst Federn, Eds. International Universities Press, New York, 1967. xvi + 582 pp. \$12.50.

The Mobile Professors. David G. Brown. American Council on Education, Washington, D.C., 1967. xii + 212 pp. \$6.

Modal Approximations. Theory and an Application to Reactor Physics. Weston M. Stacey, Jr. M.I.T. Press, Cambridge, Mass., 1967. xii + 122 pp., illus. \$6.

Modern Transistor Electronics Analysis and Design. Fred K. Manasse, John A. Ekiss, and Charles R. Gray. Prentice-Hall, Englewood Cliffs, N.J., 1967. xx + 555 pp., illus. \$12.95. Networks Series.

Molecular Approaches to Psychobiology. Edward Glassman, Ed. Dickenson, Belmont, Calif., 1967. xiv + 145 pp., illus. Text ed. \$2.25; trade ed., \$3. Dickenson Series on Contemporary Thought in Biological Science.

The Molecular Biology of Viruses. Proceedings of a symposium, Alberta, Canada, June 1966. John S. Colter and William Paranchych, Eds. Academic Press, New York, 1967. xvi + 730 pp., illus. \$19.50.

Molten Salts Handbook. George J. Janz. Academic Press, New York, 1967. xiv + 588 pp. \$25.

A National System for Storage and Retrieval of Geological Data in Canada. Report of a committee chaired by S. C. Robinson. W. C. Brisbin and N. M. Ediger, Eds. Geological Survey of Canada, Ontario, 1967. v + 175 pp., illus. Paper, \$2.

Nerve Cells and Insect Behavior. Kenneth D. Roeder. Harvard University Press, Cambridge, Mass., ed. 2, 1967. xvi + 238 pp., illus. \$5.50. Harvard Books in Biology, No. 4.

The New Sweden. The Challenge of a Disciplined Democracy. Frederic Fleisher. McKay, New York, 1967. xiv + 365 pp. \$6.50.

Nonlinear Partial Differential Equations. A symposium on methods of solution, Newark, Del., December 1965. W. F. Ames, Ed. Academic Press, New York, 1967. xviii + 316 pp., illus. \$14.

Nouveau Traité de Chimie Minérale. Vol. 17, fasc. 1, Fer. G. Chaudron, H. Massiot, A. Michel, H. Mondange, P. Pascal, and S. Talbot-Besnard. Masson, Paris, 1967. xxxix + 938 pp., illus. Cloth, 192 F.; paper, 180 F.

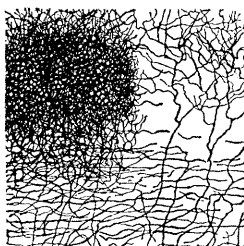
Nuclear Power Plant Technology. J. George Wills. Wiley, New York, 1967. xii + 323 pp., illus. \$16.50.

DECEMBER BOOKS

THE NEUROSCIENCES:

A STUDY PROGRAM

Planned and edited by
GARDNER C. QUARTON,
THEODORE MELNECHUK, and
FRANCIS O. SCHMITT



The first book to scan important neurosciences from molecule and cell to brain and behavior. Sixty-five distinguished scientists scan conceptual mountainpeaks in promising areas of brain research. Published for The Neurosciences Research Program by The Rockefeller University Press.

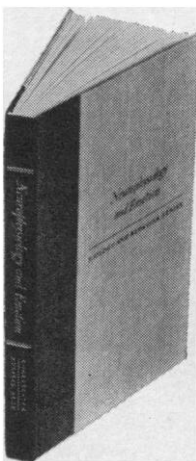
1,000 pages 650 illus 8½ x 11 \$17.50

NEUROPHYSIOLOGY AND EMOTION

David C. Glass, editor

The first of three volumes in a Biology and Behavior Series presenting opportunities for collaborative research between biologists and social scientists. Prospectus for complete series—including Genetics (March) and Environmental Influences (July)—on request. Published by Russell-Sage Foundation and The Rockefeller University Press.

256 pages 75 illus 6½ x 9½ \$7.50

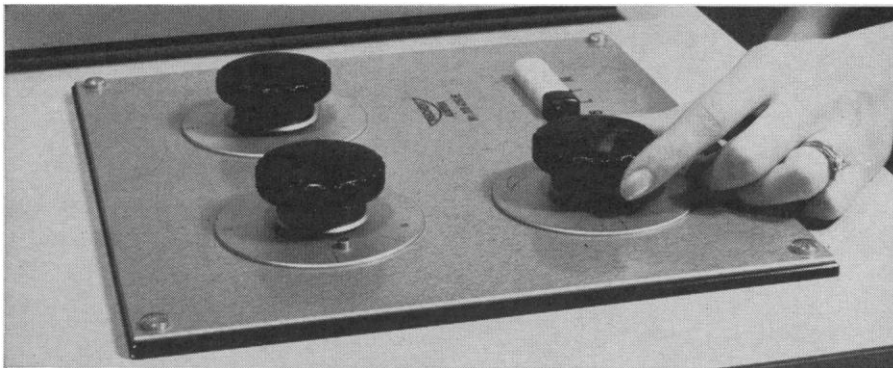


LAW AND THE SOCIAL ROLE OF SCIENCE

Harry W. Jones, editor. Based on the proceedings of a conference under the auspices of The Rockefeller University and the Walter E. Meyer Research Institute of Law. Published by The Rockefeller University Press.

244 pages 6¾ x 9½ \$6.00

*From your bookseller or from The Rockefeller University Press,
66th Street and York Avenue, New York 10021*

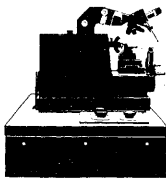


"DIAL" ULTRA-THIN SECTIONS?

Precisely . . . since the new Reichert "Om U2" ultramicrotome is automated. Now you just dial for single or continuous ultra-thin sections for electron microscopy. With all controls dial or push-button operated, you merely "select" speed, sequence and thickness of sections. The completely inertia-free thermal advance of the "Om U2" represents a major breakthrough in ultramicrotomy.

The "Om U2" gives you the accuracy of the thermal advance and the advantages of a precision, mechanical advance in one instrument. The tedious task of producing useful ultra-thin sections is now a thing of the past.

Hacker



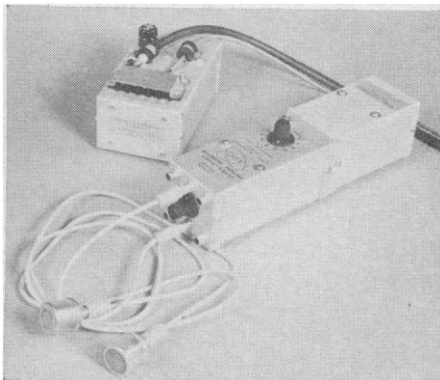
Request literature and
a free demonstration.
William J. Hacker & Co., Inc.
Box 646
W. Caldwell, N.J. 07006
(201) 226-8450

INDEX OF ADVERTISERS

5 January 1968

Alton Electronics Co.	132
Amicon Corp.	128
Atomic Energy of Canada Ltd.	33
Beckman Instruments, Inc.	2, 3
Brinkmann Instruments	125
BRS Electronics	128
Buchler Instruments, Inc.	130
Canal Industrial Corp.	22
Cary Instruments	24
Chemical Rubber Co.	120
Coleman Instruments	8
Digital Equipment Corp.	30
Edmund Scientific Co.	121
E & M Instrument Co., Inc.	126
Endo Laboratories	134
Fisher Scientific Co.	127
Gencom Div., Whittaker Corp.	124
Gilford Instrument Laboratories, Inc.	28
Gilson Medical Electronics	36
Greiner Scientific Corp.	117
Hacker, William J., & Co., Inc.	132
Heath Co.	21
Hoffman-La Roche, Inc.	133
Hyland	119
Instrumentation Specialties Co., Inc.	16
Jeolco (U.S.A.)	17
Klett Manufacturing Co., Inc.	133
Labindustries	34
LKB Instruments, Inc.	35
Lourdes Instrument Corp.	123
Mann Research Laboratories	126
Mettler Instrument Corp.	119
MSE, Inc.	14
Nalgene Labware Div.	9
New Brunswick Scientific Co., Inc.	11
New England Nuclear Corp.	130
Nikon, Inc.	135
Nuclear-Chicago Corp.	32
Nuclear Data Inc.	26
Ohaus Scale Corp.	15
Olympus Corp. of America	18
Packard Instrument Co., Inc.	38
Parr Instrument Co.	133
Pharmacia Fine Chemicals Inc.	121
Professional Tape Co., Inc.	119
Rockefeller University Press	131
Sargent, E. H., & Co.	6, 7
Schoeffel Instrument Corp.	126
Schwarz BioResearch, Inc.	23
Sep-Ko Chemicals, Inc.	20
Sigma Chemical Co.	125
Sorvall, Ivan, Inc.	29
Technicon Corp.	13
Tenney Engineering, Inc.	130
Thomas, Arthur H., Co.	136
Tracerlab	122
Unitron Instrument Co.	25
University of Texas Press	118
Wang Laboratories, Inc.	122
Wild Heerbrugg Instruments, Inc.	129
Worthington Biochemical Corp.	27
Zeiss, Carl, Inc.	10

AEC ELECTRONIC LABORATORY INSTRUMENTS



SOLID STATE DEVICES

ACTIVITY
MEASUREMENT
SIGNAL RECORDING
DIGITAL SYSTEMS

For catalog please write to:
ALTON ELECTRONICS CO.
P. O. BOX 185
SUMMIT, N. J., 07901

OCEANOGRAPHY

1961. Fourth Printing: September 1966.
Invited lectures presented at the International Oceanographic Congress held in New York in 1959.

Edited by Mary Sears. 666 pp., 146 illus., indexes.

\$14.75. AAAS members' cash orders: \$12.50.

Chapters:

I. History of the Oceans

Authors: Gustaf Arrhenius, J. B. Bernal, Sir Edward C. Bullard, Maurice Ewing, Edwin L. Hamilton, G. E. Hutchinson, Mark Landisman, A. I. Oparin.

II. Populations of the Sea

Trygve Braarud, H. O. Bull, G. S. Carter, Preston E. Cloud, Jr., Hermann Friedrich, R. S. Glover.

III. The Deep Sea

M. N. Bramlette, W. S. Broecker, Anton F. Bruun, Maurice Ewing, R. D. Gerard, B. C. Heezen, W. V. R. Malkus, Edgard E. Picciotto, Torben Wolff, L. A. Zenkevitch.

IV. Boundaries of the Sea

F. G. Barber, Erik Eriksson, P. H. Kuenen, Gunnar Thorson, J. P. Tully, Pierre Welander.

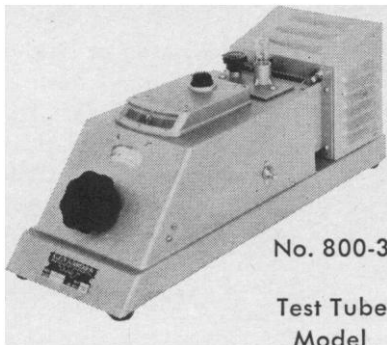
V. Cycles of Organic and Inorganic Substances in the Ocean

L. H. N. Cooper, Edward D. Goldberg, Johannes Krey, G. E. Lucas, Lars Gunnar Sillén, John H. Steele.

**American Association
for the Advancement of Science**

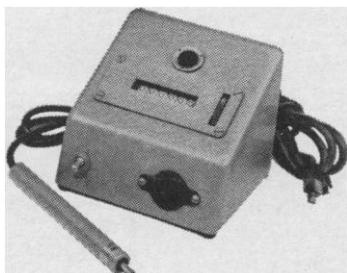
1515 Massachusetts Avenue, N.W.
Washington, D.C. 20005

Klett Summerson Photoelectric Colorimeter



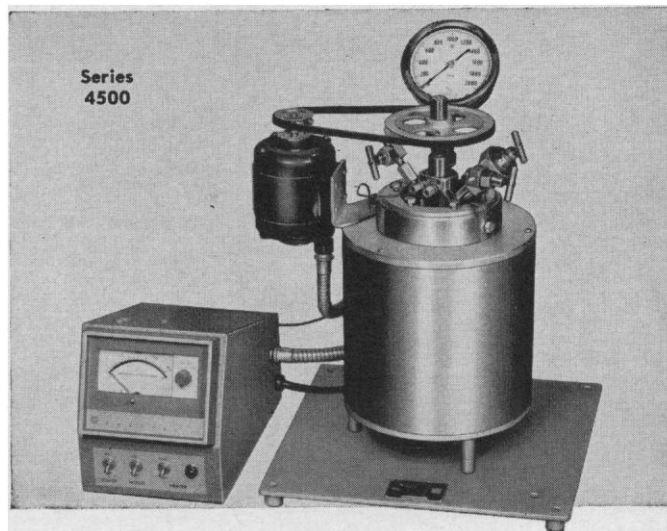
KLETT COLONY MARKER and TALLY

This instrument takes the drudgery and error out of the counting of bacterial colonies.



Klett MANUFACTURING CO., INC.,
179 East 87th Street, New York, 28, N.Y.

PARR STIRRED REACTORS



- 1000 psig. working pressure.
 - 350° C. working temperature.
 - One and two liter capacities.
 - Corrosion resistant construction.
- An automatic temperature controller, a new packing gland and other improvements are included in the latest model.

Ask for new Spec. 4500 or phone (309) 762-7716 for details.

PARR INSTRUMENT COMPANY
211 Fifty-Third St. Moline, Illinois 61265

Personnel Placement

POSITIONS WANTED

Biophysicist. Ph.D. physical chemistry, 1956. University faculty member with current grants. Many publications in visual sodium transport, photochemistry, and electroretinography. Box 633, SCIENCE. 1/5

Medical Translator. German/English invites freelance assignments from companies and scientists. (NO agents.) Write 68-43 Groton, Flushing, N.Y. 11375. 1/5, 19; 2/2

M.D. Seeks Research Position. Experience in pathology, exfoliative cytology. Radioisotopes, autoradiography. Physiology of reproduction, animal surgery. Box 617, SCIENCE. 1/5, 12, 19, 26

Petrographer—Mineralogist, 10 years' experience ceramics, rocks, ores, fuels—XRD, XRF, DTA, TGA, MSA, optical microscopy. Box 641, SCIENCE. 1/5, 12

Pharmacologist—Experimental Pathologist, M.D. 1967, Ph.D. 1958. Internship in pathology. Experience in CNS pharmacology, neuropathology, and electron microscopy. Publications. Seeks full-time research position July 1968. Box 646, SCIENCE. X

Physiologist, Ph.D., desires teaching-research-administrative appointment. Publications. Experience in undergraduate, medical and graduate teaching. Box 648, SCIENCE. X

Virologist—tissue culturist, Ph.D. 1960. Teaching/research experience. Biosynthesis, immunology and tumorigenesis of viruses. Publications. Seeks academic or research position. Box 642, SCIENCE. 1/5

M.A. Zoology. Desires basic research position in animal population ecology or plant ecology; or college biological sciences teaching position. Box 647, SCIENCE. X

POSITIONS OPEN

Biology department seeks an **ANIMAL PHYSIOLOGIST** to teach courses in general physiology and to develop a course in comparative animal physiology. Ph.D. desired, or ABD well along with dissertation. Salary and rank open. Dean Donald C. Ziemke, Nasson College, Springvale, Maine 04083.

Pathologist-M.D., D.V.M. or Ph.D. with research background in atherosclerosis, trained in electron microscopy. To \$15,000 for part time commitment. Resumes and/or inquiries to Dr. S. C. Spraragen, Chief, Radioisotope Service, VA Hospital, 800 Poly Place, Brooklyn, N.Y. 11209. Telephone 212-836-6600, Extension 271.

CANADA Queen's University at Kingston Department of Geological Sciences SENIOR TECHNICIAN REQUIRED

To be responsible for operation of a section-preparation laboratory in a large, well-equipped department. He and an assistant would prepare thin, polished, and polished-thin sections of rocks and ores.

Qualifications: accepted industrial or technical diploma or several years' experience in a similar capacity in industry or a university.

Salary: commensurate with qualifications. Apply, giving details of age, experience, and the names of two referees, to Professor J. W. Ambrose, Head, Department of Geological Sciences, Queen's University, Kingston, Ontario, Canada.

VACUUM SALES ENGINEER—Our expanding vacuum equipment business provides opening for an aggressive, ambitious engineer to assume sales responsibility for the Pittsburgh District. Will be located in the home office with some travel required. Engineer without vacuum equipment sales experience will be considered. Successful applicant must be promotable. If you want to become an important member of a small, rapidly expanding company, send resume and salary requirements to: J. K. Bedell, Heraeus-Engelhard Vacuum, Inc., Seco Road, Monroeville, Pa. 15146.

Senior Investigator

Electroneurological effects

Continuing the expansion of our biomedical electronics research effort, an additional position has developed for a Senior Scientist with a PhD or equivalent experience in neurophysiology.

This investigator should be interested and will perform basic research in the physiological, biochemical and behavioral effects of electrical current on the nervous system. Particular emphasis will be placed on the mechanisms of sleep and level of consciousness. He will be part of a team in the basic research section of our biomedical research department and will lead a group of several professionals.

Hoffmann-La Roche is a leading pharmaceutical and fine chemical manufacturer conveniently located in suburban North Jersey approximately 20 minutes from New York City. Please address your curriculum vitae in confidence, stating approximate salary requirements to: Mr. R. M. Callan, Personnel Manager-Research, Dept. S1215.



**HOFFMANN-
LA ROCHE INC.**
Nutley, New Jersey 07110

An equal opportunity employer

POSITIONS OPEN

BIOLOGICAL SCIENTIST

Challenging opportunity to participate at the senior staff level in an expanding non-laboratory research program to evaluate new scientific and technical discoveries and plan their long-range exploitation within the scope of the company's interests.

We are seeking a person with a doctorate in a biological science with strong orientation and background in biochemistry. The successful candidate will be able to use information creatively and imaginatively, and will be highly skilled in verbal and written communication. Supporting staff will provide traditional and routine information services, such as literature searching, abstracting, translating, etc.

Publications and participation in professional activities are encouraged. Salary and benefit programs are liberal.

Please submit your resume in confidence to Dr. R. W. Kinney, Director of Scientific Employment

SMITH KLINE & FRENCH LABORATORIES

1564 Spring Garden Street
Philadelphia, Pa. 19101

An Equal Opportunity Employer

UNIVERSITY OF ALBERTA FACULTY OF SCIENCE DEPARTMENT OF GENETICS

Applications are invited for an academic position from geneticists with research experience in some fundamental aspect of genetics.

The appointee will be expected to carry on research and to undertake teaching duties. A new biological sciences building now under construction will provide extensive research and teaching facilities.

The present staff of the department participates in active research on biochemical genetics of bacteria, fungi, *Drosophila* and higher plants, radiation biology of mammalian cell cultures, cytology and cytotoxicology of animals and plants (including fungi), population genetics of animals and man, ecological aspects of genetic polymorphism, theoretical and applied quantitative genetics of plants, chemically induced mutation and recombination and developmental genetics.

The rank and salary will be appropriate to the appointee's experience and candidates with exceptional qualifications will be given special consideration.

Inquiries concerning the post and the form of applications should be directed to: Dr. J. Weijer, Chairman, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada.

UNIVERSITY OF QUEENSLAND AUSTRALIA

LECTURER IN MATHEMATICS

The University is seeking a postdoctoral applicant for a lectureship in Applied Mathematics. The appointee will be expected to join fully in the activities of a research group which is concentrating on applications of singular perturbation techniques in fluid dynamics, elasticity and heat convection. At present this group consists of four postdoctoral members of staff and eight research students. The appointee will also be expected to lecture and examine in appropriate branches of Applied Mathematics and to carry out other relevant duties.

The salary will be in the range \$A5400-\$A7300. Superannuation, Housing Assistance, Study Leave and Travel Grants are provided. An appointment will be made during 1968. Applications giving curriculum vitae, publications and referees, should be sent to the Registrar, University of Queensland, St. Lucia, Brisbane, 4067, Australia. Further information may be obtained from Professor A. F. Pillow of the Department of Mathematics.

C. J. CONNELL
Registrar

POSITIONS OPEN

EMBRYOLOGIST—HISTOLOGIST

Academic position available September, 1968. Ph.D. preferred. Rank and salary dependent on degree attained and experience. Salary will range from \$7,500 to \$9,000. Send applications with vitae and names of referees to Dr. Richard A. Ryan, Head, Department of Biology, Hobart & Wm. Smith Colleges, Geneva, New York

SCIENCE EDITOR

Leading dictionary publisher has opening for a technical editorial appointment for a native English speaker with strong background in one or more basic sciences (as chemistry, physics, or biology). Candidate with B.S., M.S., Ph.D., or equivalent will be considered for position at appropriate level of responsibility. Salary commensurate with training and experience. Send resume and covering letter to

Box 645, SCIENCE.

Massachusetts Institute of Technology

Department of Nutrition & Food Science

Applications are invited for predoctoral traineeships and assistantships for programs leading to Masters' and Doctors' degrees in Nutritional Biochemistry and Metabolism; Food Science and Technology; or Biochemical Engineering. Stipends range from approximately \$2400 to \$3100 plus tuition. For application forms and information, write to Prof. N. S. Scrimshaw, Head, Dept. of Nutrition & Food Science, M.I.T., Cambridge, Mass. 02139

Applications are invited for one position in Department of Zoology, Teaching and Research, Ph.D. required. Fields of specialization to be considered primarily: EXPERIMENTAL EMBRYOLOGY, ELECTRON MICROSCOPY, MOLECULAR BIOLOGY. Salary and rank commensurate with experience. Send resume to: Chairman, Department of Zoology, University of Arkansas, Fayetteville, Arkansas 72701

Predocloral Assistantships and Traineeships in Physiology

Excellent opportunities for graduate students leading to the Ph.D. Ample stipends and free tuition. Training and research in endocrinology, gastrointestinal, water and electrolyte metabolism, cardiovascular, sensory physiology, energy metabolism and bioengineering. Write for details to Head, Department of Physiology, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

GRADUATE TRAINING IN BIOCHEMISTRY
leading to advanced degree. Assistantships and Fellowships available.

Graduate Advisor, Dept. of Biochemistry, Univ. of Florida College of Medicine, Gainesville, Florida 32601.

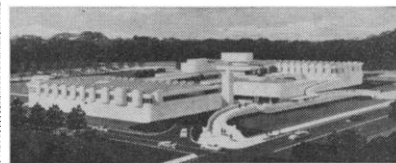
Graduate Assistantships in Biochemistry St. Louis University School of Medicine

Expanded staff and facilities of the Edward A. Doisy Department of Biochemistry offer ideal opportunity for graduate training in major fields of biochemistry and molecular biology represented in research and teaching program. Funds available are primarily for United States citizens or immigrants. Apply now for academic 1968-69 to: Dr. Robert E. Olson, Chairman, Department of Biochemistry, St. Louis Medical School, St. Louis, Missouri

POSTDOCTORAL TRAINEESHIPS IN METABOLISM AND NUTRITION. Postdoctoral Traineeships in the field of Metabolism are available in the Department of Biochemistry, St. Louis University, School of Medicine. The program is primarily for physicians who have had a minimum of an internship and who are interested in learning the application of biochemistry to clinical investigation. Facilities for human studies available in Department of Medicine. The stipends begin at \$6,000 per annum with \$500 for dependents and appointments may be made for a period of one to three years beginning July 1, 1968; Ph.D. degree possible. Please apply to: Dr. R. E. Olson, Professor and Chairman, Department of Biochemistry, St. Louis University School of Medicine, St. Louis, Missouri.

BIOCHEMIST

New opening for a recent Ph.D., with or without post-doctoral experience. Expanding R&D division with new, ultra-modern facilities. Work independently on drug metabolism studies. Publication encouraged. Submit resume in confidence to:



Dr. J. M. Schor
Endo Laboratories, Inc.
1000 Stewart Avenue
Garden City, N.Y. 11530

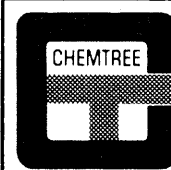
An equal opportunity employer

FELLOWSHIP

A postdoctoral fellowship in reproductive physiology is available for the year 1968-1969. For information write to: Dr. R. L. Brinster, King Ranch Laboratory of Reproductive Physiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Penna.

The Market Place

SUPPLIES AND EQUIPMENT



**SPECIAL
NUCLEAR
SHIELDING**
CHEMTREE CORPORATION
Central Valley, N.Y.
914-928-2293

SPRAGUE-DAWLEY, INC.

Pioneers in the development of the
STANDARD LABORATORY RAT.

P.O. Box 4220
Madison, Wisconsin
CE 3-5318

Hypophysectomized to
Superior Cervical Ganglionectomized
Rats

Zivic-Miller Laboratories, Inc.
Hieber Rd., Allison Park, Pa. 15101
Phone (412) 486-7404