

gess, Minneapolis, 1978. x, 454 pp., illus. \$16.95.

Sun! A Handbook for the Solar Decade. Stephen Lyons, Ed. Friends of the Earth, San Francisco, 1978. xiv, 366 pp., illus. Paper, \$2.95.

Syntax and Semantics. Vol. 9, Pragmatics. Peter Cole, Ed. Academic Press, New York, 1978. xii, 340 pp. \$21.50.

Technology and the Multinationals. Corporate Strategies in a Changing World Economy. Jack Baranson. Lexington (Heath), Lexington, Mass., 1978. xvi, 172 pp. \$16.

Tocopherol, Oxygen and Biomembranes. Proceedings of a symposium, Lake Yamana-ka, Japan, Sept. 1977. C. de Duve and O. Hayaishi, Eds. Elsevier/North-Holland, New York, 1978. xiv, 374 pp., illus. \$46.75.

Too Close for Comfort. The Psychology of Crowding. Paul M. Insel and Henry Clay Lindgren. Prentice-Hall, Englewood Cliffs, N.J., 1978. xii, 180 pp. Cloth, \$8.95; paper, \$3.95. A Spectrum Book.

Topics in Cognitive Development. Vol. 2, Language and Operational Thought. Papers from two symposia. Barbara Z. Presseisen, David Goldstein, and Marilyn H. Appel, Eds. Plenum, New York, 1978. xvi, 210 pp. \$18.95.

Trace Elements in Igneous Petrology. A Volume in Memory of Paul W. Gast. C. J. Allègre and S. R. Hart, Eds. Elsevier, New York, 1978. xii, 272 pp., illus. \$49.95. *Developments in Petrology 5.* Reprinted from *Earth and Planetary Science Letters*, vol. 38, No. 1.

Understanding and Conducting Research. Applications in Education and the Behavioral Sciences. Emanuel J. Mason and William J. Bramble. McGraw-Hill, New York, 1978. xvi, 412 pp. \$13.95. To order this book circle No. 399 on Readers' Service Card

Urban Planning for Arid Zones. American Experiences and Directions. Gideon Golany, Ed. Wiley-Interscience, New York, 1978. xxiv, 246 pp., illus. \$23.

The Vertebrates. Their Forms and Functions. Charles G. Crispens, Jr. Thomas, Springfield, Ill., 1978. x, 210 pp., illus. \$15.50.

War on the Mind. The Military Uses and Abuses of Psychology. Peter Watson. Basic Books, New York, 1978. 534 pp. \$20.

Water in a Developing World. The Management of a Critical Response. Papers from a conference, Mar del Plata, Argentina, Mar. 1977. Albert E. Utton and Ludwik Teclaff, Eds. Westview Press, Boulder, Colo., 1978. viii, 282 pp. \$18. *Westview Special Studies in Natural Resources and Energy Management.* Reprinted from the *Natural Resources Journal*, vol. 16, No. 4.

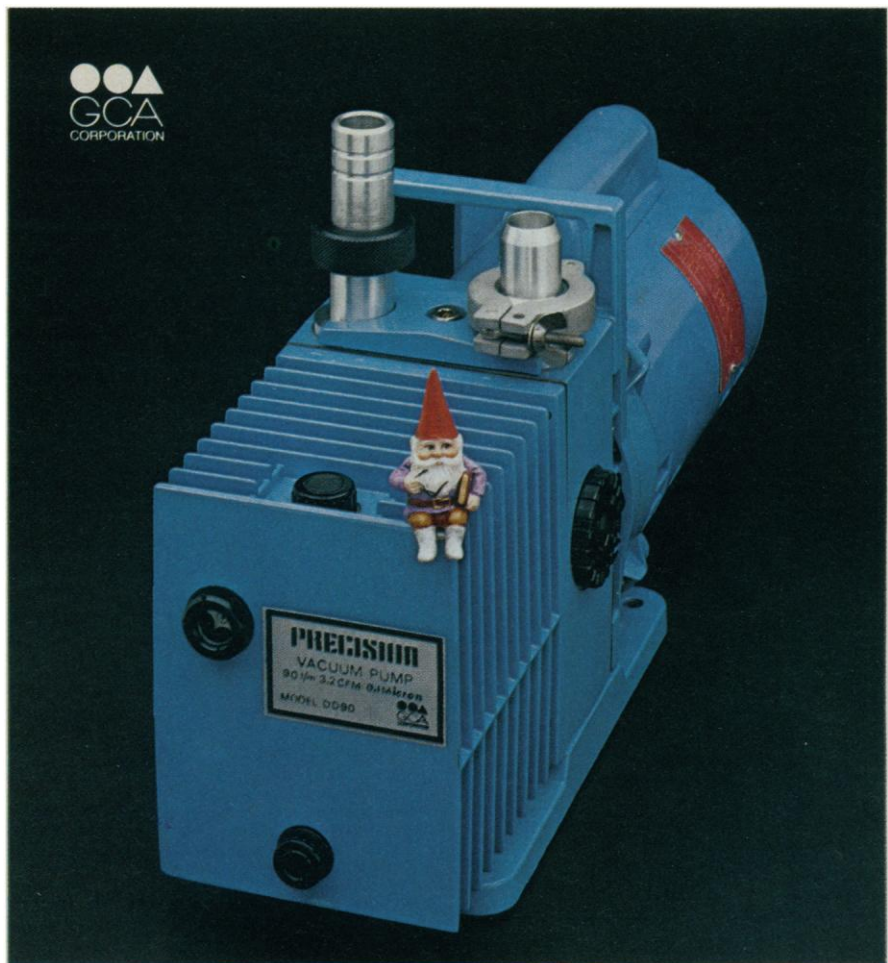
Water Supply and Pollution Control. John W. Clark, Warren Viessman, Jr., and Mark J. Hammer. Harper and Row, New York, ed. 3, 1977. xviii, 858 pp., illus. \$19.50.

Wines and Beers of Old New England. A How-to-Do-It History. Sanborn C. Brown. Drawings by Ed Lindlof. University Press of New England, Hanover, N.H., 1978. xxx, 158 pp. Cloth, \$12.50; paper, \$5.95.

The Year in Endocrinology, 1977. Sidney H. Ingbar, Ed. Plenum, New York, 1978. xviii, 400 pp., illus. \$22.50.

The Year in Metabolism, 1977. Norbert Freinkel, Ed. Plenum, New York, 1978. xx, 448 pp., illus. \$22.50.

The Young Darwin and His Cultural Circle. A Study of the Influences Which Helped Shape the Language and Logic of the First Drafts of the Theory of Natural Selection. Edward Manier. Reidel, Boston, 1978. xii, 242 pp., illus. Cloth, \$24.50; paper, \$11.95. *Studies in the History of Modern Science*, vol. 2.



Take what our new pump will give

**90 l/m, 0.1 micron, 65 dB
plus your very own gnome**

Here are the figures—0.1 micron ultimate vacuum. 50% thru put even at one micron—45 l/m! 65 decibels at its lowest pressure.

Our new pump gives you low pressure for a clean, trouble-free process chamber. Quickly. And quietly.

We worry about the quality of the pump when we build it. Your only worry is the quality of your work when you use it.

We want you to be precise.

The gnome is like the pump—fast,

hard working, quiet as the night. Send for the new Precision direct drive brochure. We'll include a gnome redemption card with details on how to get your very own gnome with each purchase of a Precision pump.



Write:
GCA/Precision
Scientific Group
3737 West Cortland
Street, Chicago,
Illinois 60647

"From GNOMES, ©1978 Uniboek, B.V."

PUMP WITH
PRECISION™

Personnel Placement

Personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, or handicap.

Positions Wanted: 40¢ per word; \$4 extra for use of box number. \$10 minimum charge, per insertion. Prepayment required. This rate is available only to individuals; personnel agencies, companies, colleges, and universities take display rate for all advertising.

Display (Positions Open, Market Place, and so forth): \$5.80 per millimeter; \$145 minimum charge, per insertion (covers 25 millimeters on single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads under 103 millimeters (4 inches). No cash discount. Prepayment required for foreign advertising. Purchase orders and billing information required for all other ads.

SCIENCE is published weekly, on Friday. Copy must be received in writing by Wednesday, 3½ weeks before Friday issue date required. Send copy for all positions wanted ads and display ads under 5 inches to:

SCIENCE, Room 207
1515 Massachusetts Ave., NW
Washington, D.C. 20005
Telephone: 202-467-4456

Send copy for display ads, 1/6 page and larger, to:

Scherago Associates, Inc.
1515 Broadway
New York, N.Y. 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Ave., NW
Washington, D.C. 20005

POSITIONS WANTED

Clinical Biochemist. M.T., Ph.D. Specialist in chemistry (ASCP), clinical chemist (NRCC), AACC. Broad experience in clinical chemistry, RIA, radio-receptor assay, automation, method development. Publications. Seeks hospital position. Box 339, SCIENCE. X

Cytogeneticist. Ph.D. 1971. Postdoctoral experience. Past research and publications in fish cytogenetics and evolution, chromatin ultrastructure by cytophotometry and TEM, and human cancer cytogenetics with banding techniques. Desires research or research/teaching position. Box 341, SCIENCE. X

Ecologist/Biostatistician. Ph.D. 1978. Seeks challenging teaching-research position. Ph.D. dissertation in statistical analysis of cyclic populations. Experience includes time series analysis, 10 years of teaching/consulting background in ecology and biostatistics, and environmental consulting developing countries; multilingual. Will also teach general biology. Willing to relocate. Box 343, SCIENCE. 11/10, 17

Geneticist/Plant Biologist. Ph.D. Established independent investigator, sustained research program, regular publication, teaching experience. Broad basic interests: evolution, experimental hybridization, developmental genetics, differentiation. Specialized contributions: genetic regulation, radiation genetics, nuclear cytoplasmic interactions. Exceptional material, regulatory mechanisms promise: genetic, cell, organelle, molecular. Desires appropriate association, challenge, facilities, complementary staff or students: university, institute, or botanical garden. Box 342, SCIENCE. 11/10, 17

Immunopharmacologist. Ph.D. Five years of experience in pharmaceutical industry in inflammation and cellular immunology. Experience in tissue culture, drug screening and testing, subcellular biochemistry, various immunological techniques. Publications. Seeking research/administration position. Box 347, SCIENCE. X

Microbiology-Biochemistry-Toxicology. Ph.D. 1970. Two-year postdoctoral, NIH; 3 years of chemical industry R & D; 3 years of government contract research in chemical carcinogenesis. Development of mammalian genetic toxicology assays. Seeks position in science-based R & D environment. Box 345, SCIENCE. X

POSITIONS WANTED

Microbiologist. Ph.D. microbiology (1975). An energetic microbiologist with top academic record and with teaching and research experience in enzymology, cellulases—their purification, fractionation, and kinetics, and SCP from agricultural wastes, desires research or teaching position. Box 348, SCIENCE. X

Neuroanatomist. Qualified to teach medical, dental, paramedical, resident, or graduate courses. Deans and chairpersons, what are your current educational costs? Compare with \$12,000 to \$15,000 for visiting professor, audiovisual aids, outlines, for 6- to 12-week course. Box 340, SCIENCE. 11/10, 17

Physical Oceanographer. Ph.D. Eight years of experience; fresh water and ocean field work, data analysis, remote sensing, buoy design. Environmental and energy projects. Experience as staff scientist, principal investigator, and administrator. Seeking stimulating scientific and/or administrative position. Box 346, SCIENCE. X

Innovative R & D Manager. Ph.D. bioengineering. Experience: instrumentation, hospital automation, blood analysis, immunology, hematology, and physiology (5 years industrial, 4 years hospital/academic). Desires challenging R & D director position with potential growth in corporate management. Box 344, SCIENCE. X

POSITIONS OPEN

ANATOMY/PHYSIOLOGY. Applications invited for tenure-track position with primary teaching responsibility in anatomy/physiology for nursing and dental hygiene students. Individual must also pursue a productive research program in unspecified area and direct graduate students. Appointment level expected as assistant professor, but salary and level depend on qualifications and experience. Send curriculum vitae, three letters of recommendations, reprints and description of research program, and a summary of teaching capabilities to: **John C. Downey, Ph.D., Head, Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50613.** Closing date: 15 January 1979. *The University of Northern Iowa is an Equal Opportunity/Affirmative Action Employer and welcomes nominations and applications of women and minority group members.*

ANATOMIST

Applications are invited for a vacant position in anatomy at the assistant or associate professor level. Applicants should possess an M.D. and/or Ph.D., and have experience in teaching gross anatomy to medical students. Experience in teaching embryology or histology would be an asset.

Candidates would be expected to have a strong research background. Excellent facilities are available in histology, neuroscience, molecular biology, immunology, and cell physiology.

Salary will be commensurate with experience. Applicants should send curriculum vitae and names of three referees to: **Dr. T. M. Scott, Chairman, Anatomy Search Committee, Faculty of Medicine, Health Sciences Center, Memorial University, St. John's, Newfoundland, Canada A1B 3V6.**

Department of Genetics and Molecular Biology seeks two **ASSISTANT/ASSOCIATE PROFESSORS** working with pro- or eukaryotic microorganisms. Laboratory facilities are excellent; teaching responsibilities minimal; knowledge of Spanish is not necessary. Applicants should possess a Ph.D. Send curriculum vitae, names of three references, synopsis of research, and reprints to: **Dr. Jose Ruiz Herrera, Depto. de Genetica y Biologia Molecular, C.I.E.A. del I.P.N., Apartado Postal 14-740, Mexico 14, D.F.**

ASSISTANT PROFESSOR. The Department of Chemistry, University of Virginia, invites applications for two full-time, tenure-track appointments to begin September 1979. Candidates with research interests in any area of organic or biologically oriented organic chemistry are invited to apply. The department particularly encourages applications in the areas of synthetic organic or nucleic acid chemistry. Applicants should submit curriculum vitae, an outline of proposed research, and at least two letters of recommendation to: **Dr. Francis A. Carey, Department of Chemistry, University of Virginia, Charlottesville, Virginia 22901.** *An Equal Opportunity Employer.*

POSITIONS OPEN

ANATOMIST. Position available in the Department of Basic Sciences, Peoria School of Medicine, one of the four clinical schools within the University of Illinois College of Medicine. Applicants must have a Ph.D. in anatomy and experience beyond the doctor's degree. Duties will include instructing medical and associated health sciences students, and conducting an independent research program. Must have demonstrated potential for research. Salary to be commensurate with experience and qualifications, with academic rank of assistant professor. Starting date: 1 July 1979 or 1 September 1979. Send application and names of three individuals for references before 31 December 1978 to: **Dr. F. J. Grundbacher, Department of Basic Sciences, Peoria School of Medicine, 123 S.W. Glendale Avenue, Peoria, Illinois 61605.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer and encourages applications from members of minority groups and women.*

ANIMAL BEHAVIORIST-ENDOCRINOLOGIST 1 January 1979

Opening at assistant professor level for animal behaviorist-endocrinologist with capability to teach anatomy and physiology in nursing program. Establishment of a strong research program is expected. Tenure-track position. Applications accepted until 20 November 1978.

Send curriculum vitae and three letters of recommendation to: **Dr. B. J. Grantham, Chairman, Department of Biology, University of Southern Mississippi, Box 5018, Hattiesburg, Miss. 39401.**

The University of Southern Mississippi is an Equal Opportunity Employer.

AQUATIC TOXICOLOGISTS

Applications are being welcomed for several junior and senior level staff positions in aquatic toxicology. Position responsibilities include implementation and maintenance of acute and chronic toxicity tests, proposal preparation, report production, experimental design, and staff supervision. The successful applicant will have training and experience in toxicity and bioassay testing as well as familiarity with current regulations and technical trends. The Long Island-based company offers a full benefits package, competitive salary, and highly professional atmosphere. Send cover letter and résumé to:

**Roy R. Stoecker, Ph.D., Director
Aquatic Sciences and Laboratory Services
Equitable Environmental Health Inc.
333 Crossways Park Drive
Woodbury, New York 11797**

FACULTY POSITION ASSISTANT PROFESSOR IN PHARMACOLOGY AND TOXICOLOGY

This position requires a Ph.D. in CNS pharmacology, or toxicology; postdoctoral training desirable. Candidate will be expected to participate in teaching at the professional and the graduate levels and to develop his or her research project.

Qualified applicants should send their curriculum vitae to:

**Naim Khazan, Ph.D.
Department of Pharmacology and Toxicology
University of Maryland School of Pharmacy
636 West Lombard Street
Baltimore, Maryland 21201**

The University of Maryland is an Equal Opportunity Employer.

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Applications are solicited for faculty positions in: **PHARMACOLOGY** (#135), assistant professor; responsibilities include teaching medical, dental, allied health, and graduate students, conducting independent cardiovascular research. Requirements: Ph.D. in pharmacology or M.D. and 1 or 2 years of postdoctoral training required. **PHYSIOLOGY** (#137), associate professor or professor; responsibilities include teaching and research in cardiovascular, neural, or renal physiology. Requirements: Ph.D. or M.D. and 2 years or more of postdoctoral training.

Applicants should send curriculum vitae identifying vacancy number for which they are applying to: **Dr. Thomas N. Lynn, College of Medicine, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190.** *We are an Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSORSHIP

The Department of Nutrition and Food Science at Massachusetts Institute of Technology (MIT) has an opening at the assistant professor level beginning July 1979 for an individual with a background in **CHEMISTRY** or **BIOCHEMISTRY**. The position will be associated with an established faculty in food chemistry, and the individual would be expected to develop an independent teaching and research program. A doctoral degree and demonstrated ability to conduct independent research are required.

Send résumé, statement of professional interests, and names of at least three references to: **Dr. Steven R. Tannenbaum, Department of Nutrition and Food Science, MIT, Cambridge, Mass. 02139.** MIT is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR, tenure-track position, in one of the categories below. Salary negotiable. Begins 1 February 1979. Teach undergraduates and graduates, supervise graduate research, and work with existing research teams. All require Ph.D. or equivalent degree in relevant area. Apply by 1 January 1979 to person listed below at: **Box U-136, Institute of Materials Science, University of Connecticut, Storrs, Conn. 06268.** Denote category of application.

Category A. Conduct independent research in tribology specializing in friction and wear of plastics and metals. For associate professor, three or more years of postdoctoral industrial or academic experience are required, plus publication record. Apply to: **Dr. J. Johnson (A).**

Category B. Perform independent research in theory of alloy design and alloy properties, and team research to provide fundamental understanding of experimental alloy properties. Should have demonstrated record of research in alloy band theory, pseudopotential theory, and so forth. Apply to: **Dr. P. Clapp (B).**

Category C. Conduct experimental research in developing new alloys, collaborate with academic and industrial researchers in developing new ideas for practical alloys. Should have three or more years of industrial experience in alloy development with significant patents and publication record. Apply to: **Dr. P. Clapp (C).**

ASSISTANT PROFESSOR OF CHEMISTRY. A regular appointment in physical chemistry will be made effective 1 July 1979. Excellent opportunity for someone interested in a career which emphasizes both research and undergraduate teaching. Applicants must have a Ph.D., be able to teach physical chemistry and other courses in the curriculum, and be able to involve undergraduates in their research programs. Please send a résumé and brief description of your research and teaching ideas to: **Chairman, Department of Chemistry, Amherst College, Amherst, Massachusetts 01002.** Transcripts and three letters of recommendation must also be received by 4 December 1978 if your application is to be considered. *Amherst College is an Equal Opportunity/Affirmative Action Employer. M/F/H.*

ASSISTANT/ASSOCIATE PROFESSORS—BIOLOGY. Three new positions available 1979 in research-oriented department emphasizing organism-level studies.

1) **TROPICAL FOREST BIOLOGIST.** Botanist with research interests in community ecology or forest structure preferred. Appropriate areas can include succession dynamics, seed dispersal, competition, plant-animal interactions, co-evolution, phenology, and so forth.

Preference for the following positions given to candidates with a demonstrated interest in tropical organisms:

2) **VERTEBRATE PHYSIOLOGIST.** Interdisciplinary research in behavior, neurobiology, or ecology preferred.

3) **EVOLUTIONARY BIOLOGIST/POPULATION GENETICIST.** Specific interests might include genetic structure of populations, dynamics of natural selection, reproductive life history strategies, and so forth.

Candidates must have Ph.D. or equivalent and an active research program. Competitive salary based on qualifications and experience. Apply before 10 January with curriculum vitae, a recent reprint, and names of four references (have overseas letters of recommendation sent immediately) to: **Search Committee for [position sought], Department of Biology, Box 249118, University of Miami, Coral Gables, Fla. 33124.** *Equal Opportunity Employer*

POSITIONS OPEN

- 1) **ASSISTANT OR ASSOCIATE PROFESSOR, IN-RESIDENCE**
- 2) **ASSOCIATE OR FULL PROFESSOR, IN-RESIDENCE**

The University of California, Irvine, Department of Pathology, is recruiting for two faculty positions, one at the assistant or associate level and one at the associate or full professor level. Required: M.D., Board-eligibility in clinical pathology. Duties: service and administrative responsibilities in blood banking and cellular immunology, teach medical students and house staff, and research. *All qualified candidates welcome; minorities and women encouraged to apply.* Send curriculum vitae and references to: **Dr. H. C. Pirkle, University of California, Irvine, Department of Pathology, 101 City Drive South, Orange, California 92668,** by 11 December 1978.

ASSISTANT PROFESSOR: BIOCHEMISTRY

The Department of Biochemistry at the University of Minnesota Medical School invites applications for a tenure-track position at the assistant professor level. Preference will be given to individuals who have had 1 or 2 years of postdoctoral experience with a strong background in fundamental biochemical disciplines and who show promise of developing a vigorous research program. Applicants must be qualified to teach biochemistry in graduate and professional school courses. Applications must be received by 15 January 1979. Send curriculum vitae, a coherent and comprehensive plan for future research, and names of three references to: **Search Committee, Department of Biochemistry, University of Minnesota Medical School, 435 Delaware Street, SE, 227 Millard Hall, Minneapolis, Minnesota 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

ASSISTANT PROFESSOR OF OPHTHALMOLOGY AND BIOCHEMISTRY. Collagen chemistry, tissue culture, cell biology research in relation to body and growth of eye vessels, collagen of RPE and Bruch's membrane, vitreous changes, and so forth. Establishment of tissue culture/biochemistry unit. Teaching secondary. Send inquiries and curriculum vitae to: **Stephen J. Ryan, M.D., Department of Ophthalmology, University of Southern California School of Medicine, Doheny Eye Foundation Building, 1355 San Pablo Street, Los Angeles, Calif. 90033.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF PHYSIOLOGY UNIVERSITY OF CALIFORNIA SAN FRANCISCO

Position Available: 1 July 1979

We are looking for a **neurophysiologist** conducting cellular studies of the central or peripheral nervous system who will develop an active research program and teach professional and graduate students. Those interested should send curriculum vitae, bibliography, and names of three references to: **William F. Ganong, M.D., Chairman, Department of Physiology, University of California, San Francisco, California 94143.** *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSISTANT OR ASSOCIATE PROFESSORS (TWO) IN PLANT BIOLOGY starting fall quarter 1979. (i) **Botanist/ecologist**, preferably marine, (ii) **plant physiologist**, preferably involved with vascular plants. Ph.D. required. Appropriate teaching experience and recent research productivity highly desired. A more advanced level of experience and productivity is required for consideration of appointment at level of associate professor. Appointees will participate in undergraduate teaching, including introductory biology and other more advanced courses appropriate to their specialty. They will be expected to develop their own research as well as graduate programs of research and teaching in their specialties. Relevant facilities include the university's Marine Science Institute (Nahant), a large departmental greenhouse, an EM center; and a diversity of research and teaching equipment. Salary and level of appointment commensurate with experience and other qualifications. For more information, write: **Dr. Ernest Ruber, Chairman, Botanist/Ecologist Search Committee, or Dr. Daniel Scheirer, Chairman, Plant Physiologist Search Committee, Department of Biology, Northeastern University, Boston, Mass. 02115.** With application, send curriculum vitae, statement of research plans, transcripts, and names of at least three professional colleagues who may be contacted for references. *Northeastern University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UNIVERSITY OF WISCONSIN-MADISON CENTER FOR HEALTH SCIENCES DEPARTMENT OF PHYSIOLOGY

A faculty position at the assistant professor level is currently available. Applications are invited from persons with postdoctoral experience and a demonstrated interest in physiological processes at the cellular or subcellular level or in mammalian respiratory physiology. Participation is expected in the teaching programs of the department which includes courses in cell and organ systems physiology to undergraduate, graduate, and medical students. Interested candidates should submit curriculum vitae, complete bibliography, and letters of reference from three individuals to: **Dr. Richard C. Wolf, Department of Physiology, University of Wisconsin-Madison, 470 North Charter Street, Madison, Wis. 53706.** To receive full consideration applications should be received by 1 December 1978. *The University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT SCIENTIST to investigate strategies for reducing crop depredation by birds. Ph.D. in biology. Applicant should have a strong background in ethology, ecology, and ornithology, and must have a proved ability to observe and interpret animal behavior in the wild. Send application to: **Dr. Donald Aylor, Chief, Department of Ecology and Climatology, Connecticut Agricultural Experiment Station, Box 1106, New Haven, Connecticut 06504.** *An Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF ROCHESTER

ASSOCIATE IN SURGERY. Ph.D. biochemist or physiologist for position as co-investigator with chairman of surgery in NIH-sponsored research into the metabolic aspects of shock, trauma, and nutrition. The successful candidate will also be expected to instruct resident staff, medical students, and technical personnel in laboratory procedures; organize and supervise activities of surgical research laboratory, including animal research experiments; write abstracts and papers; administer grant, including responsibility for budget; work with chairman in preparation of grant applications. Approximately 40 percent of time will be available to conduct own investigative work and a cross appointment with relevant basic science department is negotiable. Position available December 1978.

Applicants should submit curriculum vitae, bibliography, three letters of reference, and a statement of research plans to: **Dr. William R. Drucker, Chairman, Department of Surgery, University of Rochester, 601 Elmwood Avenue, Rochester, New York 14642.** *Equal Opportunity Employer.*

BIOCHEMISTRY

The Biochemistry Department of Brandeis University invites applications for a tenure-track assistant professor position. The criterion for selection will largely rest on demonstrated and potential outstanding research accomplishments. Excellence in teaching is also expected. Send curriculum vitae, names of three references, and a short description of research accomplished, in progress, and that proposed for the next several years to: **Dr. Robert Schleif, Biochemistry Department, Brandeis University, Waltham, Mass. 02154.** Deadline for applications is 1 January 1979. *Brandeis is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTS. Two postdoctoral positions available for studies on vertebrate cell surface proteins and the nucleic acid-protein interactions. Main emphasis on the structural analysis. Recent Ph.D. in biochemistry with experience preferred. Salary negotiable. Send curriculum vitae and names of three references to: **Dr. David C. Yang, Department of Chemistry, Georgetown University, Washington, D.C. 20057.** *An Equal Opportunity Employer.*

BIOLOGY FACULTY POSITIONS. Assistant professor. One or more positions beginning January or September 1979. Preference will be given to candidates in the following areas: ecology, genetics (microbial or molecular), microbiology-immunology, and physiology. Applicants should have postdoctoral training and a strong interest and background in research and teaching at the undergraduate and graduate levels. Send curriculum vitae and names of three references to: **Dr. Wayne E. Magee, Director, Division of Allied Health and Life Sciences, College of Sciences and Mathematics, The University of Texas at San Antonio, San Antonio, Texas 78285.** *An Affirmative Action/Equal Opportunity Employer*

POSITIONS OPEN

BIOCHEMIST. Twelve-month year joint appointment as assistant or associate professor of chemistry and research associate in university Biomedical Research Institute. Responsible for undergraduate biochemistry instruction and supervision of institute biochemistry laboratory. Will develop and perform independent medically related research. Ph.D. required. Position currently open. Application deadline: 8 December 1978. Send curriculum vitae to: **Dr. Brian C. Hodgkin, Biomedical Research Institute, Center for Research and Advanced Study, University of Southern Maine, Portland, Maine 04102. Affirmative Action/Equal Opportunity Employer.**

Pharmaceutical research centre located in Montpellier (France) is seeking a **BIOCHEMIST**, with a Ph.D. degree (or equivalent) and experience in high level research studies for the following fields:

- **PROTEIN CHEMISTRY**
- **ENZYMOLGY**

The candidates for this position:

- 1) will have creative minds,
- 2) will work in multidisciplinary fields,
- 3) will supervise a team of technicians, and
- 4) will be fluent in French.

Send curriculum vitae and references to:

Dr. Gros
Centre de Recherches Clin-Midy
34082 Montpellier, France

BIOLOGY DEPARTMENT. Permanent opening beginning September 1979, at the instructor or assistant professor rank. Salary range: \$11,936 to \$14,500. Duties include teaching lecture and laboratory portions of a human physiology and a human anatomy course, participating in the graduate program, with a likelihood of additional duties in general biology. Doctorate with course background in mammalian anatomy and physiology required. Teaching experience in mammalian anatomy and/or physiology is preferred. Send completed applications to: **Chairman, Search Committee for Anatomy and Physiology Position, Biology Department, Indiana University of Pennsylvania, Indiana, Pa. 15705**, by 30 November 1978. Completed applications must include three letters of recommendation, transcripts of all college level work, and a résumé. For further information please telephone **Dr. Michael Kesner** at 412-357-2309.

An Affirmative Action/Equal Opportunity Employer

BIOLOGY DEPARTMENT. Permanent position beginning September 1979 at the instructor or assistant professor rank. Salary range: \$11,936 to \$14,500. Primary duty will be to teach general biology at the Armstrong Branch Campus. Doctorate degree and teaching experience with nonmajors preferred. Please send completed application to: **Chairman, Search Committee for Armstrong Position, Biology Department, Indiana University of Pennsylvania, Indiana, Pa. 15705**, by 30 November 1978. Completed applications must include three letters of recommendation, transcripts of all college level work, and a résumé. For further information please telephone **Anthony Nastase** at 412-357-2279.

An Affirmative Action/Equal Opportunity Employer

BIOMEDICAL INSTRUMENT DESIGNER DUKE UNIVERSITY

Machine and process precision parts and fabricate complex instruments using various shop equipment including lathes, milling machines, and welding equipment. Provide technical assistance and consultation to faculty and student researchers; assist in the development and fabrication of advanced precision instruments. Position requires strong instrument maker and precision machinist background. Send résumé to: **Annette Patterson, 2106 Campus Drive, Durham, North Carolina 27706. An Equal Opportunity/Affirmative Action Employer.**

DEAN FOR GRADUATE STUDIES AND RESEARCH. Applications and nominations are sought for the position of dean for graduate studies and research of the University of Nebraska Medical Center. Responsibilities include administration of graduate and research programs. Candidates must have earned doctorate with experience in research and administration in academic health setting. Applications or nominations, preferably accompanied by curriculum vitae, should be sent to: **Dr. William Metcalf, Chairman of the Search Committee, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Deadline: 1 December 1978. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

BOTANY MISSISSIPPI STATE UNIVERSITY

Ph.D. with specialization in cytogenetics. Available January 1979. A tenure-track position with a rank of assistant professor. Teaching in the area of specialty plus general botany. Evidence of research activity or potential for research is essential. Forward application, including transcripts, curriculum vitae, and three letters of recommendation to: **Dr. James D. Yarbrough, Department of Biological Sciences, P.O. Box GY, Mississippi State University, Mississippi State, Miss. 39762. An Equal Opportunity/Affirmative Action Employer.**

CHAIRPERSON Department of Biological Sciences North Texas State University

Nominations and applications are invited for chairperson of a 23-member department within a growing university of 17,000 students, adjacent to the Dallas-Fort Worth Metroplex. Initial appointment is for 4 years, but may be renewed for one additional 4-year term. Candidates should provide evidence of ongoing scholarly achievements in teaching and research, and have the ability to provide administrative leadership in developing and managing departmental and interdisciplinary programs. The area of research expertise is open and rank and salary are negotiable.

Send curriculum vitae and five letters of support before 1 January 1979 to:

Dr. David R. Redden, Chairman, Search Committee
Department of Biological Sciences
North Texas State University
Denton, Texas 76203

An Equal Opportunity/Affirmative Action Employer

CHAIRPERSON, Department of Natural Science, in newly reorganized College of Natural and Mathematical Sciences, at Eastern Kentucky University. Applications being accepted from qualified persons with experience and strong interest in general education. Send letter of application, résumé, and three letters of recommendation by 1 December 1978 to: **Dr. Clyde Lewis, Dean, Central University College, Eastern Kentucky University, Richmond, Kentucky 40475. An Equal Opportunity/Affirmative Action Employer**

CHAIRMAN, Department of Microbiology. Louisiana State University (LSU) School of Medicine in Shreveport seeks a qualified candidate to chair the Department of Microbiology and to lead the teaching and research program at the Medical Center. Preference given to those with past experience in teaching, research, and administration. Submit curriculum vitae to: **John McDonald, M.D., Chairman, Search Committee for Microbiology Chairman, Department of Surgery, LSU School of Medicine in Shreveport, P.O. Box 33932, Shreveport, Louisiana 71130. An Equal Opportunity Employer.**

CLINICAL PATHOLOGIST/ CLINICAL CHEMIST

The University of Arkansas Pathology Services Project at the National Center for Toxicological Research (NCTR) has an opening for a clinical pathologist/clinical chemist. Applicants should possess the Ph.D. degree. Knowledge of rodent hematology and clinical chemistry helpful. Duties include: (i) supervision and administration of a Clinical Pathology Laboratory; (ii) hematologic and clinical chemical evaluation of rodents involved in toxicological studies; and (iii) involvement in medical and graduate education. Salary commensurate with qualifications/experience. Send résumé to: **Director, Pathology Services Project, NCTR, HFT-230, Jefferson, Arkansas 72079. Equal Opportunity Employer.**

ECOLOGY YALE UNIVERSITY DEPARTMENT OF BIOLOGY

Seeks candidates for senior and junior appointments in ecology. The appointees will be expected to contribute to a strong program of research and scholarship in ecology, and participate in undergraduate and graduate teaching.

Send curriculum vitae, résumé of past and present research, and names of referees to: **Chairman, Department of Biology, 102 KBT, Yale University, New Haven, Connecticut 06520. Deadline for receipt of applications is June 1979.**

Yale University is an Equal Opportunity/Affirmative Action Employer. We invite applications from all qualified individuals, especially women and members of minority groups.

POSITIONS OPEN

COORDINATOR OF LABORATORIES

Immediate opening for an M.S. or Ph.D. to be in charge of teaching laboratory in medical physiology. Must be familiar with laboratory procedures and equipment and willing to collaborate in some area of physiology research. Salary commensurate with qualifications/experience. Send curriculum vitae and three letters of reference to:

Dr. Charles D. Barnes, Chairman
Department of Physiology
Texas Tech University School of Medicine
Lubbock, Texas 79430

DEAN AND PROFESSOR OF NURSING

The Medical College of Ohio is seeking a nurse educator to serve as the dean and professor of nursing in an innovative health consortium. The N.L.N. accredited Baccalaureate Nursing Program accepts 100 students after their first year in consortium affiliated programs at Bowling Green State University and the University of Toledo. Located on a new campus in Toledo, with a full-time faculty of 30 members, the School of Nursing has recently added a B.S. degree for R.N.'s, a P.N.P. program, and is planning a graduate program. Candidates for dean must have a doctorate and have baccalaureate educational experience in clinical nursing, teaching, and administration. A graduate educational experience and research experience are preferred. Closing date for applications is 30 November 1978, with a desired appointment date in January 1979, and a starting date of 1 July 1979. Send curriculum vitae and three names of references to: **Joel P. Zrull, M.D., Chairman, Search Committee for Dean and Professor of Nursing, C.S. #10008, Medical College of Ohio, Toledo, Ohio 43699.**

The Medical College is an Equal Opportunity/Affirmative Action Employer.

DEVELOPMENTAL BIOLOGIST EMORY UNIVERSITY

The Department of Biology of Emory University invites applications for a position at the assistant professor level in the area of developmental biology. Research interests and training should be in the study of the cellular or molecular aspects of development. The Ph.D. is required and postdoctoral experience is preferred. The position requires participation in undergraduate and graduate courses in embryology and developmental biology, the supervision of M.S. and Ph.D. students, and the development of an independent research program.

Send curriculum vitae and summary of research interests and plans by 31 December, and arrange for three letters of reference to be sent by the same date, to:

Dr. Robert P. Nuttall
Developmental Biology Search Committee
Department of Biology
Emory University
Atlanta, Georgia 30322

An Affirmative Action/Equal Opportunity Employer

DEVELOPMENTAL PSYCHOLOGIST

Applications are invited for a position at the assistant professor level starting August 1979. We seek a person who will establish a systematic research program and who will excel at teaching. Some postdoctoral experience is desirable. Applicants should submit résumé, transcripts, representative publications, and three letters of recommendation to: **Developmental Search Committee, Department of Psychology, Davie Hall 013A, University of North Carolina, Chapel Hill, North Carolina 27514. An Equal Opportunity/Affirmative Action Employer.**

EPIDEMIOLOGIST. Dartmouth College and the Dartmouth Medical School offer an exceptional career opportunity for a creative epidemiologist with the capacity for innovative teaching and research, particularly in the areas of neoplastic diseases, environmental hazards, and human nutrition. The person named to this academic position would hold a joint appointment in the Department of Community Medicine of the Medical School, and in the Environmental Studies Program of the Faculty of Arts and Sciences, and will also be on the staff of the Norris Cotton Cancer Center. He or she would be expected to combine active research in epidemiology with teaching at the undergraduate, predoctoral, and postdoctoral levels. Faculty rank and salary will be commensurate with background and experience. Reply to: **James F. Hornig, Environmental Studies Program, Box 6182, Dartmouth College, Hanover, N.H. 03755.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

DIRECTOR, GRADUATE SCHOOL OF GEOGRAPHY

Clark University invites nominations and applications for the position of director of its Graduate School of Geography. The initial appointment will be for a 4-year term beginning 1 August 1979. Administrative responsibilities include leadership and support of a department of 18 faculty and professional staff, a major graduate program with about 40 Ph.D. candidates in residence, and about 120 undergraduate majors, as well as relationships with allied interdisciplinary programs.

Qualifications: High scholarly achievement; significant administrative experience; demonstrated commitment both to advanced research training programs in geography and to liberal education; and ability to lead a strong, diverse and independent-minded academic community in continuing scholarly growth and development. Rank and salary commensurate with the position.

Send applications and nominations to: **Dr. William A. Koelsch, Chairman, Search Committee, Graduate School of Geography, Clark University, Worcester, Massachusetts 01610.** *Clark University is an Equal Opportunity/Affirmative Action Employer. Applications from women and minorities are encouraged.* Application deadline: 5 December 1978.

ELECTRON MICROSCOPE SUPERVISOR—New position requires advance degree or 5 years of experience using TEM and SEM, and performing laboratory level maintenance including mechanical and electronic alignment and aperture cleaning. Salary negotiable with excellent benefits; working in a research and teaching atmosphere. Application deadline: 1 December; starting date: 1 January. Send résumé to or contact: **Eastern Virginia Medical School, Personnel Office, P.O. Box 1980, Norfolk, Virginia 23507; telephone: 804-446-5241.** *Affirmative Action Employer.*

ENDOCRINE PHYSIOLOGIST

A tenure-track **ASSISTANT PROFESSOR** position is available 1 January 1979 for an individual interested in teaching and research. Applicants must have postdoctoral experience and demonstrated research ability. An individual with interest in endocrine regulation of metabolism or mechanism of hormone actions is preferred. Send résumé, curriculum vitae, and names of three references to: **Dr. F. N. Briggs, Department of Physiology, Medical College of Virginia, Box 608, MCV Station, Richmond, Virginia 23298.**

An Equal Opportunity/Affirmative Action Employer

ENVIRONMENTAL MUTAGENESIS

The Board of Toxicology and Environmental Health Hazards of the National Academy of Sciences is seeking a senior professional in the area of environmental mutagenesis. The individual will be responsible for the development and implementation of a broad program aimed at the assessment of the scientific data base on mutagenesis as it impacts on human health. The individual would develop areas of evaluative investigations, determine technical approaches, and function with a study group to provide expert judgmental analysis for the resolution of scientific problems. A Ph.D. degree or equivalent, with evidence of experience and scholarly contributions to the area of environmental mutagenesis are required. Applicants should submit curriculum vitae to: **Dr. Robert G. Tardiff, Executive Director, Board on Toxicology and Environmental Health Hazards, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** *An Equal Opportunity Employer.*

EVOLUTIONARY ECOLOGY/ANIMAL BEHAVIOR. The Biology Department, University of Utah, seeks applications for two regular faculty positions in the areas of evolutionary ecology and animal behavior. Rank and salary will be negotiable according to experience. Interested applicants should submit curriculum vitae, a summary of professional goals, and names of three people who have agreed to give references. Candidates should also include reprints/preprints of no more than two papers which best represent their research achievements and interests. We are specifically seeking candidates with a broad biological interest, who show exceptional achievement and/or promise in both research and teaching. Send applications before 31 December 1978 to: **Dr. William R. Gray, Chairman, Faculty Recruitment Committee, Biology Department, University of Utah, Salt Lake City, Utah 84112.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ENVIRONMENTAL DEFENSE FUND

National environmental organization seeks **EXECUTIVE DIRECTOR** to live in New York City or Washington, D.C., area. Responsibilities include coordination of scientific and legal programs and personnel, as well as fund-raising. Salary negotiable. Management and fund-raising experience essential; familiarity with environmental matters preferred. Send résumé and references to: **Environmental Defense Fund, 1525 18th Street, NW, Washington, D.C. 20036.**

Applications are invited for a **FACULTY POSITION IN ZOOLOGY** beginning 1 September 1979. Candidates are sought at, but not restricted to, the assistant professor level. Applicants should have a research background in structural-functional relationships at analytical ultrastructural, physiological, and biochemical levels, with emphasis on such areas as cell-cell interactions, cell motility, cell surface phenomena and/or membranes. Applicants should have sufficient breadth to be able to contribute to undergraduate teaching at the organismal level, as well as in their specialty.

Send application letter, statement of research plans, and curriculum vitae, including teaching and funding experience, sample reprints, and names of five referees, to: **Dr. A. G. Jacobson, Department of Zoology, University of Texas at Austin, Austin, Texas 78712.**

Application deadline: 15 December 1978.
An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION IN PHYSIOLOGY. The Section on Physiology, University of South Dakota School of Medicine, invites applications for a faculty position in physiology at the assistant professor level. The position is available after 1 July 1979. The duties of the position include working with existing physiology faculty to develop and teach a strong course in medical physiology, to develop a research program in the individual's area of interest, and to participate in the Ph.D. graduate training program. Preference will be given to those applicants with a strong background in respiratory or endocrine physiology. Applicants must have a Ph.D. degree and have completed 2 years of postdoctoral experience. Some initial research support will be made available to the successful candidate. The Medical School, located in Vermillion, a town of 9000, situated on a bluff overlooking the Missouri River, admits a class of 65 students each year and has been a strong 2-year basic medical science school since 1907. In 1975, the school advanced to a 4-year M.D. degree-granting program. It is presently a growing and expanding medical school, encouraging innovative teaching. Applicants should send curriculum vitae, including bibliography, brief description of research interests, teaching experience, career objectives, and names of three references to: **Joseph D. Welty, Ph.D., Section on Physiology, Division of Biochemistry, Physiology and Pharmacology, The University of South Dakota School of Medicine, Vermillion, S.D. 57069.** Telephone: 605-677-5237. Closing date for receipt of applications is 31 January 1979.

Equal Education and Employment Opportunity/Affirmative Action Institution

The Department of M.C.D. Biology of the University of Colorado (Boulder) is seeking qualified applicants for a **FACULTY POSITION** to begin September 1979. The department seeks a person who has proved ability for superior scholarship in modern research and teaching in molecular, cellular, or developmental biology. The position may be filled at either a junior or senior level. Send curriculum vitae, bibliography, and names and addresses of three references to: **Search Committee Chairperson, Department of M.C.D. Biology, University of Colorado, Boulder, Colorado 80309.** Closing date for applications is 1 January 1979. *The University of Colorado is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN BIOLOGY

Two positions at the level of assistant professor; Ph.D. required. One position with major responsibilities in vertebrate physiology and endocrinology; the other in microbiology and biochemistry. Small liberal arts college with emphasis on teaching but with opportunities for research. Send curriculum vitae, statement of interests, and names of three references to: **A. D. Chiquoine, Department of Biology, Hamilton College, Clinton, New York 13323.** *An Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

The University of Michigan is seeking a sub-specialty Boarded M.D. in neonatal-perinatal medicine for a **FACULTY POSITION IN PEDIATRICS.** Candidates should have a research interest in some aspect of perinatal medicine. Position available 1 July 1979. Reply to: **Box 349, SCIENCE.** Code 1100H0. *A nondiscriminatory, Affirmative Action Employer.*

FACULTY POSITION—NEUROPATHOLOGIST

Requirements: M.D. degree, Board-certification in anatomic and neuropathology. Medical license in the state of Ohio will be required. Medical school teaching experience preferred. Send curriculum vitae to: **F. Lamont Jennings, M.D., Chairman, Department of Pathology, P.O. Box 927, Dayton, Ohio 45401.** *Wright State University is an Equal Opportunity/Affirmative Action Employer.*

Michigan State University Faculty Position FOREST ECOLOGICAL SCIENCES

Available immediately; a 12-month appointment at the assistant professor rank involving teaching (50 percent) and research (50 percent) in the forest ecological sciences. Teaching will involve undergraduate and graduate courses in the forest ecological sciences and one associated area, depending on qualifications of the applicant and departmental needs. Examples of associated areas are hydrology, range management, and fire management. Research interests should relate to ecological aspects of forest resources management and related fields. Candidates must have one degree in forestry and a Ph.D. in ecology or closely related area. Salary commensurate with qualifications. Interested persons contact: **James B. Hart Jr., Department of Forestry, Michigan State University, East Lansing, Michigan 48824.** Telephone: 517-353-9640. To apply, send résumé, transcripts, and three letters of recommendation. Closing date: 2 January 1979 or until suitable candidate located. *An Equal Opportunity/Affirmative Action Employer.*

GENETICIST/CYTOGENETICIST

The Department of Biology, University of Nevada, Reno (UNR), and the Nevada Mental Health Institute (NMHI), Reno, are seeking an individual at the assistant professor/assistant geneticist level. Responsibilities include teaching a course in general/human genetics and an advanced course in areas of specialization (at UNR) and assisting in chromosome analysis and genetic counseling services (at NMHI). The successful candidate must have an earned Ph.D. degree and is expected to pursue an active program of research in some field of cytogenetics and/or environmental mutagenesis. Application deadline: 1 February 1979. Application forms and details from: **Dr. Baldev K. Vig, Chairman, Search Committee, Department of Biology, University of Nevada, Reno, Nevada 89557.** *The University and State of Nevada are Equal Opportunity/Affirmative Action Employers.*

The **DEPARTMENT OF GEOLOGICAL SCIENCES** of Cornell University plans to expand over the next few years through addition of several faculty positions. Qualifications include innovation in research and proficiency in teaching. Level of appointment is open but biased toward assistant professor. Fields of special interest include, but are not restricted to, mineral and energy resources, stratigraphy, and geology of the continental crust. Some research positions will also be opened in fields such as the above and seismology, geophysics, and tectonics. Send résumé to: **Jack Oliver, Chairman, Department of Geological Sciences, Cornell University, Ithaca, New York 14853.** *An Equal Opportunity/Affirmative Action Employer.*

IMMUNOPATHOLOGIST. Full-time position. The Dartmouth-Hitchcock Medical Center invites inquiries from Board-qualified or -certified pathologists who are actively interested in the area of immunopathology and who, preferably, have had both postgraduate training and some experience in this field. Additional postgraduate training in internal medicine desirable. Position involves participation in teaching medical students and residents, clinical service activities, and an active interest in immunopathological research. Direct inquiries (including curriculum vitae) to: **George D. Sorenson, M.D., Chairman, Department of Pathology, Dartmouth Medical School, Hanover, N.H. 03755.** *Equal Opportunity/Affirmative Action Employer*

POSITIONS OPEN

FACULTY POSITIONS

The Department of Biology, College of the Holy Cross, invites applications for two tenure-track positions beginning fall 1979. Rank and salary are open and depend on qualifications and experience.

- 1) **BIOCHEMIST**: to teach a two-semester upper division biochemistry course sequence with laboratory for biology and chemistry majors. Research area is open.
- 2) **PHYSIOLOGIST**: to teach a one-semester course with laboratory in introductory biology for freshman biology majors, and a one-semester upper division course with laboratory in general or comparative animal physiology. Research area is open.

Candidates should have a strong commitment to undergraduate teaching and to developing a research program that can involve undergraduates. Applicants should submit by 15 January 1979 curriculum vitae, graduate and undergraduate transcripts, reprints of recent publications, a statement of research interests and plans, and letters from three referees to: **Dr. William R. Healy, Chairman, Department of Biology, College of the Holy Cross, Worcester, Massachusetts 01610. The College of the Holy Cross is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION IN ANATOMY

NEUROANATOMIST sought for position in the Department of Human Anatomy; appointment at the assistant professor or beginning associate level with primary teaching commitment in the area of neurobiology. Demonstrated commitment and excellence in research and teaching are essential and one or more years of experience after the doctoral is preferred. Send complete curriculum vitae, including a statement of research interest and names of at least three references, to: **Dr. Allen C. Enders, Chairman, Department of Human Anatomy, School of Medicine, University of California, Davis, California 95616.** Closing date for applications is 15 December 1978. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—VIROLOGIST experienced in molecular biology. Postdoctoral research experience required. Teaching at the graduate and undergraduate levels and development of an independent research program will be expected. Send curriculum vitae, description of research objectives, and names of three references to: **Dr. Irving Crawford, Head, Microbiology Department, University of Iowa, Iowa City, Iowa 52242.** Formal screening of applicants will begin 1 February 1979. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW. Physiology and biophysics. Research associate for studies of mechanisms of enzyme regulation, using techniques such as NMR, microcalorimetry, and fluorescence spectroscopy. Renewable position. Available March 1979.

Recent Ph.D. in biochemistry, biophysics, or chemistry preferred.

Please submit curriculum vitae to: **Personnel Department, College of Medicine and Dentistry of New Jersey, Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854. Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL POSITION available immediately for individual with background in physiology, cell biology, or immunology. Studies involve peptide induced ionic fluxes in tumor cells, change in membrane potential, and induced metabolic changes. Project also requires isolation of serum proteins. Funding according to NIH postdoctoral guidelines. Applicants must be U.S. citizens or have permanent or immigrant visas. Contact: **P. A. Ward, M.D., Professor and Chairman, Department of Pathology, University of Connecticut Health Center, Farmington, Conn. 06032. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL POSITION IN PHARMACOLOGY

Postdoctoral position available immediately. Research concerning arterial chemoreceptors. Experience in animal surgery essential, and background in laboratory methods of respiratory physiology desirable. Starting salary: \$11,000. Contact: **Dr. Elliott Mills, Department of Pharmacology, Box 3813, Duke University Medical Center, Durham, N.C. 27710. Telephone: 919-684-4276. Duke University is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

INSECT ECOLOGIST

The Department of Entomology, a unit of the College of Liberal Arts and Sciences, invites applications for a tenure-track position of assistant professor of entomology, to begin 21 August 1979, subject to university budgetary approval. Research interests must lie in insect ecology, with emphasis on both conceptual and field studies. A Ph.D. degree is necessary; postdoctoral work is desirable but not required. Salary will be commensurate with experience. Responsibilities include teaching an insect ecology course as part of the entomology and ecology programs, and teaching and directing research programs of graduate and undergraduate students in entomology and other curricula in biology.

In order to assure full consideration, applications must be received by 15 January 1979. Send curriculum vitae, personal bibliography, statement of research interests, outline for a suggested course in insect ecology, and three letters of reference to:

**Dr. James G. Sternburg
Search Committee Chairman
Department of Entomology
320 Morrill Hall
University of Illinois
Urbana, Illinois 61801
Telephone: 217-333-2910**

The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

INSTRUCTOR OF BIOCHEMISTRY—Available immediately. Candidate should have recognized achievements in the membrane field and be able to set up a laboratory for the study of liposome-cell membrane fusion. Requirements include a Ph.D. degree in biochemistry or the equivalent and a minimum of 2 years postdoctoral experience. The candidate should have experience with studies of the interactions of liposomes with mammalian cells in culture, and familiarity with the isolation and purification of viral membrane proteins (ideally experience with the F-glycoprotein of Sendai virus). The position is tenure-track and starting salary will be commensurate with experience. The new faculty member's time will be divided 75 percent research and 25 percent teaching. The successful candidate will be expected to obtain his or her own research support within 2 years. Please send curriculum vitae and references no later than 1 December 1978 to: **Dr. Jere P. Segrest, Department of Biochemistry, University of Alabama in Birmingham, The Medical Center, Birmingham, Alabama 35294. An Equal Opportunity/Affirmative Action Employer.**

LIPID BIOCHEMIST/ENZYMOLOGIST. Senior postdoctoral position; research associate/instructor level. To participate in major multidisciplinary research program studying the pathogenesis of immunologically induced inflammatory lung diseases; especially with respect to lipid (for example, prostaglandins from thromboxanes, hydroxy fatty acids, and so forth) metabolism in whole lung, various lung cell types in cell culture, alveolar macrophages, and leukocytes. Candidates should have experience in enzymology, cell fractionation, and analytical lipid biochemistry (GC/MS, HPLC, TLC, and so forth). Salary level: \$15,000 to \$22,000 depending upon experience. Possibility for advancement in academic rank. Available 1 January 1979. Submit qualifications, curriculum vitae, and letters of recommendation to: **Dr. Maurice B. Seinstein, Department of Pharmacology, University of Connecticut, Health Center, Farmington, Conn. 06032. An Equal Opportunity Employer, M/F.**

California Institute of Technology is seeking candidates for a junior professorial position in **PETROLOGY**, with emphasis on active research involving field and experimental approaches. Area of specialization (in igneous, sedimentary, metamorphic, or ore petrology) is open. Please write, with résumé, to: **Barclay Kamb, Chairman, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, Calif. 91125. An Equal Opportunity Employer.**

California Institute of Technology is seeking to fill a senior professorial position in **RESOURCE GEOLOGY** to conduct research and teaching in metallic, nonmetallic, and/or energy mineral resources, and to provide leadership in stimulating new research directions in mineral resource exploration, assessment, and policy. Broad industrial and academic experience desired. Please write, with résumé, to: **Barclay Kamb, Chairman, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, Calif. 91125. An Equal Opportunity Employer.**

POSITIONS OPEN

MEDICINAL-PHARMACEUTICAL CHEMIST to assume responsibility for drug assay development and analysis in Clinical Pharmacology Division active in clinical research. Straight salaried position or preferably available as postdoctoral trainee with potential for evolving to faculty position. Inquiries to: **Dr. Craig Brater, M.D., Assistant Professor, Division of Clinical Pharmacology, University of Texas Health Science Center at Dallas, Dallas, Texas 75235. Telephone: 214-688-2287.**

MICROBIOLOGISTS AND/OR IMMUNOLOGISTS

Two positions (tenure-track). Facilities excellent, esprit de corps good. Excellent Ph.D. training program established. Highly research-oriented. Applicants must develop and maintain a quality research program. Areas: microbial genetics, molecular virology, or cellular immunology are particularly sought. Enthusiasm and competence in medical school and/or graduate teaching are essential. Submit curriculum vitae and three letters of recommendation to:

**Joseph H. Coggin, Jr., Ph.D.,
Professor and Chairman
Department of Microbiology
University of South Alabama College of Medicine
307 University Boulevard
Mobile, Alabama 36688**

We are an Equal Opportunity/Affirmative Action Employer.

OCEANOGRAPHER OR CHEMIST. The Great Lakes Environmental Research Laboratory of National Oceanic and Atmospheric Administration (NOAA) in Ann Arbor, Michigan, is seeking an individual to serve as **project leader** for its nutrient chemistry program. Individual will plan and direct a program on the dynamics and cycling of nutrients in the Great Lakes. Position requires an understanding of the principles of inorganic chemistry and of the chemical interactions in aquatic environments. Incumbent must use a systems approach to research studies which requires an understanding of the interaction of nutrient dynamics with biological and geochemical processes. Qualifications: B.S. or higher degree (Ph.D. preferred) in chemical oceanography or nutrient/environmental chemistry plus 3 years of appropriate research experience. Position is in the federal competitive Civil Service. Position will be filled at the GS-14, GS-13, or GS-12 level with starting per annum salaries of \$32,442, \$27,453, or \$23,087, respectively. Additional information may be obtained from: **Dr. Robertson, telephone: 313-668-2280.** Secure application forms (SF-171 and CSC Form 1170/8) from a federal personnel office or U.S. Civil Service Commission office and submit with a transcript and current publications list to: **DOC/NOAA/ERL, Personnel Services Division (R5611), Attn: Ms. Straight, Boulder, Colo. 80302.** Ref. Vac. #78-333. Applications must be postmarked no later than 19 January 1979 to receive consideration. *Equal Opportunity/Affirmative Action Employer.*

PATHOLOGISTS. Board-qualified surgical pathologist with background in nuclear transplantation or blastocyst injection. Rank and salary commensurate with experience. Send curriculum vitae to: **Dr. G. Barry Pierce, Chairman, Pathology Department, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver, Colorado 80262.**

An Equal Opportunity/Affirmative Action Employer

PHYSIOLOGICAL PSYCHOLOGY. Psychology Department, Indiana University, Bloomington, will appoint assistant professor (tenure-track) in physiological psychology for fall 1979 to do research, teach graduate and undergraduate courses, and supervise student research. *We seek minority and women candidates.* Send curriculum vitae, future research plans, and three reference letters by 15 December 1978 to: **Dr. I. J. Saltzman, Department of Psychology, Indiana University, Bloomington, Ind. 47401.**

An Affirmative Action/Equal Opportunity Employer

PHYSIOLOGIST. Ph.D. needed in active Hematology Laboratory, Thomas Jefferson University, Philadelphia, Pa. Must have experience in measurements of platelet size, morphology, and functions related to the evaluation of patients and platelet transfusion. Minimum salary: \$15,000 plus, commensurate with experience. Excellent employee benefits. Send detailed résumé with salary requirements to: **Burvin Hardy, Bureau of Employment Security, 1709 South Broad Street, Philadelphia, Pa. 19148. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

INSECT PHYSIOLOGIST

Applications are invited for a full-time, regular (tenure-track) faculty position in the Department of Zoology and Entomology, Colorado State University, beginning fall semester 1979. The successful candidate will be expected to conduct a vigorous research program in some area of insect physiology, teach undergraduate cell biology, and develop an upper level course in insect physiology. Ph.D. or equivalent required; rank and salary commensurate with experience. Interested applicants should submit current curriculum vitae, copies of important publications, a statement of professional goals, and names of three references to: **Dr. Thomas A. Gorell, Chairman, Insect Physiologist Search Committee, Department of Zoology and Entomology, Colorado State University, Fort Collins, Colorado 80523.** Deadline for receipt of applications: 31 December 1978.

Colorado State University is Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

PLANT MORPHOLOGIST/ANATOMIST

Research and teaching position open from September 1979. Ph.D. required; experience preferred. Submit applications and three letters of recommendation to: **Dr. M. F. Denton, Department of Botany, University of Washington, Seattle, Wash. 98195.** Applications should be received by 15 January 1979.

The University of Washington is an Affirmative Action/Equal Opportunity Employer.

POPULATION BIOLOGIST

Tenure-track position beginning 1 September 1979 to be filled by a person with a Ph.D. specializing in population biology. Duties include teaching at the undergraduate and graduate level and establishing or continuing a strong research program. Applicants should submit curriculum vitae, transcripts, reprints, and three letters of reference to: **John D. Bacon, Department of Biology, The University of Texas at Arlington, Arlington, Texas 76019.** Closing date: 15 December 1978. *Equal Opportunity/Affirmative Action Employer.*

Tenure-track POSITIONS. Biochemistry, inorganic chemistry, organic chemistry, each contingent on funding. \$14,256 to \$21,624; fall 1979. Ph.D. required. Teaching duties in specialty and general chemistry. Deadline: 2 January 1979. Send résumé and four letters supplied by referees to: **Dr. William Rife, Head, Chemistry Department, California Polytechnic State University, San Luis Obispo, Calif. 93407.** *Affirmative Action/Equal Opportunity/Title IX Employer.*

POSTDOCTORAL

Available possibly on 1 January 1979 for research on insect cytochrome P-450. Recent Ph.D. (biochemistry) with experience in protein chemistry preferred. Salary negotiable. Send curriculum vitae and three references to: **Dr. M. Agosin, Riverbend Research Laboratory Building, University of Georgia, Athens, Ga. 30602.**

POSTDOCTORAL POSITION available in laser light scattering laboratory. Background in polymer solution chemistry or physical biochemistry required. Contact: **Professor F. E. Karasz, Department of Polymer Science and Engineering, or Professor N. C. Ford, Department of Physics, University of Massachusetts, Amherst, Mass. 01003.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Two-year postdoctoral position in visual psychophysics available after 1 January 1979. Starting salary of \$10,000 or higher (depending upon experience). Candidates with experience in computer programming and electronics are preferred. Send curriculum vitae and references to:

**Joy Hirsch, Ph.D.
Yale University School of Medicine
Department of Ophthalmology and Visual Science
333 Cedar Street
New Haven, Connecticut 06510**

POSTDOCTORAL POSITION available immediately to study mechanism of folding of serine proteinases. Send curriculum vitae and names of three references to: **Dr. Albert Light, Department of Chemistry, Purdue University, West Lafayette, Ind. 47907.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately in neurophysiology. Research will involve the use of hippocampal slice preparations as well as intact animal preparations to investigate mechanisms of neural plasticity in the hippocampus. Neurophysiology experience necessary. Neuropharmacology and neurochemistry interests desirable. Send curriculum vitae including references to: **Dr. Carl W. Cotman, Department of Psychobiology, University of California, Irvine, Irvine, California 92717.**

All qualified candidates welcome: women and minorities are encouraged to apply.

POSTDOCTORAL POSITION—BIOCHEMISTRY

Position available for a minimum of 2 years, starting January 1979. Studies on the molecular aspects of muscle contraction. Experience in biochemistry and/or bio-organic chemistry required. Nucleotide-protein and protein-protein interactions involving contractile proteins will be investigated.

Send résumé and letter of reference to: **Dr. Morris Burke, Department of Biology, Case Western Reserve University, Cleveland, Ohio 44106.**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available to study microsomal membrane structure and organization, mixed function oxidases including fatty acid desaturases and elongation. Stipend support at NIH postdoctoral level for applicants with Ph.D. or M.D. degree. Must be U.S. citizen or permanent resident. Send inquiries, including curriculum vitae and names of three references, to: **Dr. Dominick L. Cinti, Department of Pharmacology, University of Connecticut, Health Center, Farmington, Conn. 06032.**

An Equal Opportunity Employer, M/F

TWO POSTDOCTORAL POSITIONS

**University of Texas
Port Aransas Marine Laboratory
Port Aransas, Texas 78373**

POSTDOCTORAL POSITIONS are available immediately for research in marine science including the following areas: algal physiology, organic and stable isotope geochemistry, biological oceanography, fish ecology, respiratory physiology, aquaculture, microbial ecology, and vision. Two awards will be made to qualified candidates without regard to area of research, but collaboration with permanent academic staff of the institution in ongoing research groups and projects may help in gaining access to facilities and research vessels. Applications will be reviewed on the basis of the material submitted and statements of research interests. Positions are for 1 year but may be renewed for an additional year if mutually desirable.

Salary is \$12,000 with supplementary support funds for supplies and travel. Deadline for applications is 15 December 1978, with awards being made by 1 February 1979. Applicants should forward curriculum vitae, two letters of recommendation, and a statement of research interests and plans to: **Chairman, Postdoctoral Search Committee, The University of Texas, Marine Science Institute, Port Aransas Marine Laboratory, Port Aransas, Texas 78373.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH SCIENTIST/ RESEARCH ASSOCIATE

A vacancy exists in the Mariculture Research Program at the Port Aransas Marine Laboratory of the University of Texas Marine Science Institute for a specialist in reproductive physiology of marine animals.

The successful candidate should have a Ph.D. and training and experience in the reproductive physiology of marine animals, and will be expected to take a leadership role in this area of research. He/she will be expected to develop a basic research program in reproductive physiology of marine animals and collaborate with colleagues in the mariculture group on the problems of the reproduction of mariculture species, with initial emphasis on marine finfishes.

The appointment will be at the level of research scientist or research associate, depending on qualifications and experience. The salary will be commensurate with the candidate's qualifications and is available for up to 5 years including a statutory probationary period. Seed money for research is also available.

Send applications and three letters of recommendation to: **Dr. Oswald A. Roels, Port Aransas Marine Laboratory, Marine Science Institute, Port Aransas, Texas 78373.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL APPOINTMENTS

The Ames Laboratory of the U.S. Department of Energy has a number of vacancies for postdoctoral fellows in the fields of chemistry, physics, metallurgy, and engineering. The appointments would be for 1 year, renewable for a second year if mutually agreeable. In some instances there may be a possibility for continued employment beyond the 2-year postdoctoral appointment if circumstances warrant.

Interested persons should submit a complete résumé, along with the names and addresses of three professional references, to:

**Ames Laboratory
Personnel Office
127 Spedding Hall
Iowa State University
Ames, Iowa 50011**

An Equal Opportunity Employer

POSTDOCTORAL POSITIONS available in Departments of Anatomy, Biochemistry, Microbiology, Pharmacology and Physiology. Applicants must have a Ph.D. or M.D. degree. Positions available during 1978-1979. Send application to: **appropriate Department Head, Arizona Health Sciences Center, Tucson, Arizona 85724.** *An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE position is available immediately in the Biological Markers Laboratory of a research facility located 45 miles northwest of Washington, D.C. The position involves the study of peptide synthesis in continuous cell cultures derived from human neoplasms. Applicant with training in biochemistry or molecular biology is preferred. Send résumé with three references to: **Personnel Office, Position #1069, Frederick Cancer Research Center, Litton Bionetics, Inc., P.O. Box B, Frederick, Md. 21701.** *An Equal Opportunity Employer, M/F.*

POSTDOCTORAL RESEARCH ASSOCIATES

Two postdoctoral positions available 1 December 1978. Experience desired in: (i) intracellular recording and dye injections, or (ii) ultrastructural studies on an invertebrate nervous system. Send curriculum vitae and names of three references to:

**Dr. James G. Townsel
University of Illinois College of Medicine
131 DMP
1853 West Polk Street
Chicago, Illinois 60612**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE. Position available 1 July 1979 to study ocular secretory IgA mechanisms. Applicants must possess a strong background in secretory IgA immunobiology with emphasis on immunization procedures to elicit secretory IgA, measurement of secretory IgA antibody, and immunofluorescence localization of secretory component and various immunoglobulins. Fellowship is for 2 years in the Department of Ophthalmology, Harvard Medical School, and the Department of Cornea Research, Eye Research Institute of Retina Foundation. Send curriculum vitae and three letters of recommendation to: **Mathea R. Allansmith, M.D., 20 Stanford Street, Boston, Mass. 02114.** Stipends: \$10,000 to \$13,000, yearly.

POSTDOCTORAL TRAINING in the areas of metabolic and hormonal alterations following trauma and in shock. Mostly in vivo studies in experimental animal models. In addition to research training, there is good opportunity to participate in ongoing teaching program. Stipend: \$14,000 to \$17,200 per annum, depending on experience. Send curriculum vitae to: **John J. Spitzer, M.D., Professor and Head, Department of Physiology, Louisiana State University Medical Center, 1542 Tulane Avenue, New Orleans, La. 70112.**

RESEARCH ASSOCIATE. Opportunity for physician with 2 years of postgraduate training, one year of which must be in hematology and hematological pathology, to assume full-time position in the Hematology Department at \$14,500 per year. Will be responsible for isolation and purification of human blood cells and monoclonal protein. Interested candidates should send curriculum vitae to: **David Nations, Personnel Department, The Jewish Hospital of St. Louis, 216 South Kingshighway, St. Louis, Missouri 63110.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ALEXANDER DUESSEN PROFESSORSHIP IN ENERGY RESOURCES DEPARTMENT OF GEOLOGICAL SCIENCES THE UNIVERSITY OF TEXAS AT AUSTIN

Applications are invited for an endowed position as the Alexander Duesen Professor with tenure to participate in the undergraduate and graduate teaching programs in our department. This person would also be expected to develop a program of research involving graduate students. We especially seek someone with expertise in petroleum geology and with close contact with the energy industries. Applicants should be actively involved in the application of their special research to the finding or developing of energy resources. Applications should be received by 1 January 1979.

The position is available 1 September 1979. Interested applicants should send a complete résumé, including names of references, to:

Robert E. Boyer, Chairman
Department of Geological Sciences
The University of Texas
Austin, Texas 78712

An Affirmative Action/Equal Opportunity Employer, M/F

PROFESSOR AND CHAIRMAN OF PATHOLOGY TEMPLE UNIVERSITY SCHOOL OF MEDICINE Philadelphia, Pa.

Applications are invited for this currently open position. This department is responsible for undergraduate and graduate medical education, a Ph.D. program, and approved residency and service programs at Temple University Hospital. Applicants must possess a medical degree, certification by the American Board of Pathology, and should be eligible for medical licensure in Pennsylvania. Interested candidates with outstanding academic credentials should send complete curriculum vitae and the names of three references to: **Dr. Peter N. Magee, Chairman, Pathology Search Committee, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140. An Equal Opportunity/Affirmative Action Employer.**

STANFORD UNIVERSITY SCHOOL OF EARTH SCIENCES

Requests nominations and applications from distinguished scholars and academic administrators for the post of **PROFESSOR AND DEAN** of the School of Earth Sciences, beginning with the 1979-1980 academic year. We seek individuals with records of major and sustained scholarly contributions to the field of earth sciences who have demonstrated a potential for academic leadership and administration.

The School of Earth Sciences includes the Departments of Applied Earth Sciences, Geology, Geophysics, and Petroleum Engineering. The dean of the school must have the vision and leadership capability to maintain and enhance the scholarly excellence of the school on the forefront of science and technology and graduate training. As the senior officer of the school, the dean is responsible for the operation of the school and hence must have the capability to administer programs, engage the advice of the school's faculty, supervise staff, and function effectively in a complex administrative environment.

Stanford recognizes a special responsibility to ensure that the search does not overlook qualified candidates who are women or members of ethnic minority groups.

Address inquiries, nominations, and papers (to meet the 15 December deadline) to:

Gerald J. Lieberman, Vice Provost and Dean of Research and Chairperson of the Search Committee
President's Office
Stanford University
Stanford, California 94305

RESEARCH ASSOCIATE level position available for 1 or 2 years for recent Ph.D. or postdoctoral graduate. Strong biochemistry background required. Experience or interest in virus interaction with or modification of lymphocyte cell surface desirable. Immunology background helpful. Send résumé with three references to: **Personnel Office, Position #989, Frederick Cancer Research Center, Litton Bionetics, Inc., P.O. Box B, Frederick, Md. 21701. An Equal Opportunity Employer, M/F.**

POSITIONS OPEN

University of California Irvine, College of Medicine seeks **RESEARCHERS IN GYNECOLOGIC ONCOLOGY AND ENDOCRINOLOGY**. Ph.D. in microbiology, biochemistry, cellular biology, immunology, endocrinology, or an allied field required. *All qualified candidates welcome; minorities and women encouraged to apply.* Send curriculum vitae and five references to: **Philip J. DiSaia, M.D., Obstetrics and Gynecology, University of California, Irvine, Medical Center, 101 City Drive South, Orange, California 92668.**

RESEARCH ASSOCIATE, Ph.D. Biochemistry position available immediately with established group investigating porphyrin-protein interactions as related to diseases of porphyrin metabolism. Broad experience in separation, identification of proteins essential. Background in TLC, HPLC, fluorometric methods desirable. *Columbia University is an Equal Opportunity/Affirmative Action Employer.* Send résumé to: **Box 26, Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

RESEARCH ASSOCIATE POSITIONS IN NMR SPECTROSCOPY

The NSF Center in NMR Spectroscopy at the University of South Carolina is seeking highly qualified applicants for **three positions** within the facility. The salaries for these positions range from \$16,000 to \$17,500. The applicants should have extensive experience in the applications of NMR spectroscopy. It is anticipated that one of the positions will be filled by a hardware specialist. The duties of the personnel at the center will be divided approximately equally between service and a variety of research programs. The principal instrument of the center will be a Bruker WH-400 NMR spectrometer. This instrument is completely multinuclear, with large tube capability for biological samples. A companion instrument, to which the center has access, is a Bruker WH-200. This instrument, in addition to being multinuclear, is capable of performing high resolution NMR experiments on solids. The starting date for these positions is 1 January 1979. Applicants should send résumés, reprints of published papers, and three letters of reference to: **Dr. Paul D. Ellis, Chemistry Department, University of South Carolina, Columbia, South Carolina 29208. The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.**

SENIOR RESEARCH ASSOCIATE

An individual with experience in all aspects of scanning electron microscopy and with an interest in energy dispersive analysis is invited to apply for this career position. Responsibilities will include operation and maintenance of a new Philips 500 SEM, specimen preparation, teaching, and general support in the electron microscopy area. Must have master's degree with 4 years of experience. Doctorate level applicants may be considered. Contact:

Personnel Office
The University of Texas Health Science Center
at San Antonio
7703 Floyd Curl Drive
San Antonio, Texas 78284

An Equal Opportunity/Affirmative Action Employer

SENIOR RESEARCH FELLOW IN ATOMIC/MOLECULAR PHYSICS

The University of Maryland and the National Bureau of Standards (NBS) in Washington, D.C., are announcing a 1-year fellowship for a senior research scientist to pursue research at the NBS Synchrotron Ultraviolet Research Facility (SURF). The SURF fellow will hold an appointment in the Institute of Physical Science and Technology at the College Park campus of the University of Maryland. In addition to his/her research activities at SURF, the appointee will interact with the faculty and students at the university principally through lectures and seminars.

Applications are now being accepted for the academic year 1979-1980, with detailed schedule to be negotiated. Salary and faculty rank will be commensurate with current position. We are initially seeking an individual interested in pursuing atomic/molecular physics at SURF. Experience in the use of synchrotron radiation and/or photoelectron spectroscopy of gases will be considered particularly valuable for the appointment.

Send résumé, desired starting date, and research plans to:

Professor Joseph Silverman
Institute for Physical Science and Technology
University of Maryland
College Park, Maryland 20742

POSITIONS OPEN

RESEARCH ASSOCIATE

An immediate opening is available for a Ph.D. immunochemist or biochemist with experience in radioisotope labeling of immunoglobulins, in addition to protein fractionation. Responsible for the development of radiolabeled antibodies for use in clinical and experimental studies of radioimmunoassay of human tumors. Salary negotiable in the range of \$14,000 to \$16,000 per annum. Send résumé, list of publications, and names of three references to:

Dr. David M. Goldenberg, Director
Division of Experimental Pathology
MS 409

University of Kentucky Medical Center
Lexington, Kentucky 40506

Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE/ ELECTRON MICROSCOPIST

Applications are invited for an open position of a research associate-electron microscopist for Minority Biomedical Support Research Program at Southern University, Baton Rouge, Louisiana. Applicants should hold earned doctorate degree in cell biology or zoological sciences with specialization in ultrastructure studies, and be able to write a fundable research proposal in ultrastructural research. Position available 3 January 1979. Send complete curriculum vitae, reprints of published work, and names and addresses of three references to:

Dr. Fred A. Christian, Director
Health Research Center
Southern University
Baton Rouge, La. 70813
Telephone: 504-771-4243

RESEARCH ASSOCIATE. Microbiology research associate required for study of the bacterial colonization of rock and metal surfaces in aquatic environments with emphasis on the chemical nature of adhesion mechanisms. Position requires Ph.D. with some biochemical training and salary will be between \$17,000 and \$20,000, depending on postdoctoral experience. Appointment is for 1 year, renewable depending on funding. Please send curriculum vitae and names of two references to: **Dr. J. W. Costerton, Department of Biology, University of Calgary, Calgary, Alberta, Canada T2N 1N4.**

RESEARCH ASSOCIATE-NEUROBIOLOGY

Research associate position available immediately to study central nervous system regenerative phenomena. Training in ultrastructural, neuroanatomical, and neurochemical techniques necessary. Ph.D. degree preferred. Teaching in anatomical disciplines expected. Appointment: 1 or 2 years. Send curriculum vitae, reprints, and names of three references to: **Dr. James E. Turner, Department of Anatomy, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, North Carolina 27103. An Equal Opportunity/Affirmative Action Employer.**

TEACHING/RESEARCH POSITIONS (three) in physical oceanography, ocean engineering (coastal and/or mining) available at the assistant or associate professor level. Ph.D. required. Undergraduate/graduate teaching with strong research interest and field orientation desirable. Send résumé and names of references to: **N. W. O'Hara, Head, Department of Oceanography and Ocean Engineering, Florida Institute of Technology, Melbourne, Fla. 32901. An Equal Opportunity Employer.**

TERRESTRIAL ECOLOGIST

Tenure-track assistant professorship with research and teaching interests in community or ecosystem ecology. Excellent opportunities for interdisciplinary collaboration. Send résumé, reprints, and names of three references to: **G. M. Hornberger, Department of Environmental Sciences, University of Virginia, Charlottesville, Virginia 22903. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.**

VIROLOGY POSTDOCTORAL POSITIONS AVAILABLE. Research interests of participating faculty include transformation by SV40, expression of endogenous viruses, virus-induced diabetes, herpesviruses and human cancer, rotaviruses, hepatitis, and environmental virology. Submit curriculum vitae, three references, and outline of research interests to: **Dr. Janet Butel, Department of Virology, Baylor College of Medicine, Houston, Texas 77030.**

PHARMACOLOGIST

Breakthrough opportunity for research-oriented professional

Continuing expansion of our Research Department's investigations of new, therapeutic agents, opens up an exciting career opportunity for a growth-minded pharmacologist.

Successful candidate for this position with a major international pharmaceutical manufacturer should be a PhD with 0-2 years experience in general and CNS Pharmacology, and an interest in working in a challenging research environment.

Ideal location, pleasant Westchester suburban area within easy reach of metropolitan New York. Competitive salary. Excellent benefits. Send resume, in confidence, with salary history to:

Selection & Placement Manager



One Scarsdale Road, Tuckahoe,
New York 10707
An equal opportunity employer M/F

MICROBIOLOGY

Two (2) career-oriented appointments are presently available at our Pharmaceutical Research Center in the Northern New Jersey Metropolitan area.

(1) One requires a Doctorate (Ph.D.) in Microbiology or Microbial Chemistry and a minimum of 5 years industry experience in antibiotics screening. Education and/or experience should also include a strong background in biochemistry and mathematics. The individual selected will be expected to initiate novel screening methodology and assist in the direction and coordination of our antibiotic soil screen program.

(2) The second position requires a Ph.D. in Microbiology or a suitably related discipline. 1 or 2 years experience in applied microbiology would be desirable, with particular emphasis on instrumentation (liquid chromatography, automated analytical equipment) and statistics. The individual selected will monitor ongoing assay programs including automated turbidimetric, agar diffusion and physical chemical systems.

For prompt review of resumes, please indicate whether you are interested in position (1) or (2) by number. They should be sent to: Manager, Personnel Administration, Schering-Plough Research Corporation, 60 Orange Street, Bloomfield, New Jersey 07003.



Schering-Plough

We Are An Equal Opportunity Employer M/F

MANAGER BIODYNAMICS SECTION

BIOSCIENCES RESEARCH LABORATORY

3M, a leader among R&D minded organizations is seeking an exceptionally creative pharmacologist to direct a broadly based research program in the health care field. Candidates for this position should possess the following qualifications:

- * Broad training in pharmacology/physiology and biochemistry. Knowledge of neuroendocrinology highly desirable
- * 7-10 years of post doctoral research in one of the above disciplines
- * Managerial experience and supervising several scientists at the doctorate level.

Responsibility for this position will involve supervision of pharmacologists/physiologists, biochemist and neuroendocrinologists. Involved in research design to establish a base of technology useful in health care product development.

Located at 3M Center in St. Paul, Minnesota, we offer a competitive salary, excellent benefits and a challenging opportunity. Send your resume including salary history/requirements in confidence to:

Dennis G. Nelson
Technical Placement Manager
3M COMPANY 3M CENTER
St. Paul, Minnesota 55101



People still count here

We Are An Equal Opportunity Employer M/F

SOCIAL AND BEHAVIORAL SCIENTISTS

The Research Division of the Boys Town Center for the Study of Youth Development (Boys Town, Nebraska) currently is seeking social and behavioral scientists to design and conduct research programs on issues and problems related to youth development (roughly the years from 10 to 20) and the family. Applications will be accepted from candidates interested in any set of issues or problems related to youth development, including studies of childhood antecedents or adult outcomes of youth development. However, in choosing from among candidates of equal excellence, we will favor proposed research in the following areas: problem behavior, delivery of youth services, aggression, the development of health-related behavior, and the study of family- or peer-oriented intervention efforts.

We seek scientists already experienced in youth and family research and will employ at a range of levels comparable to that from assistant to full professor. We are interested in including intervention research in our blend of programs; applications from practitioner-researchers with appropriate research training, independent research experience, and research publications are welcome. However, we are not a direct service agency and applications from practitioners without a productive research record will not be seriously considered.

The Boys Town Center is a privately funded research organization for studying youth development in an interdisciplinary environment which also features serious and lively dissemination and training efforts. Supportive resources within the center include a library services division, research computing division, and a residential conference center. Salaries are competitive and fringe benefits are comprehensive and attractive.

Persons wishing to apply should send a curriculum vitae, a two-page (single-spaced) statement of research objectives and plans, and preprints or reprints of recent work to: Dr. John P. Hill, Chair, Research Recruitment Committee, The Boys Town Center, Boys Town, Nebraska 68010. Candidates should arrange for three letters of recommendation to be sent as well. Materials received after 1 December may not be considered.

An Equal Opportunity/Affirmative Action Employer, M/F

POSITIONS OPEN

FACULTY POSITION

The Department of Materials Science and Engineering at the State University of New York (SUNY) is seeking to add faculty who can contribute to our graduate teaching and research programs in areas of materials science. It is desirable that faculty will be associated with the laboratory for surface and science technology. Rank and salary open. The final authorization of this position is contingent upon final state approval. Contact:

Chairman, Department of Materials
Science and Engineering

SUNY at Stony Brook
Stony Brook, New York 11794

*An Equal Opportunity/Affirmative
Action Employer*

THE AUSTRALIAN NATIONAL UNIVERSITY

Applications are invited for the position of **SENIOR LECTURER IN GENETICS** in the Department of Botany, Faculty of Science of this university. Candidates must have broad interests in and knowledge of genetics, substantial experience in university teaching, and a record of productive research. Appointment will be for 3 years in the first instance with the possibility of reappointment, after review, to retiring age. Salary on appointment will be in accordance with qualifications and experience within the range of A\$20,365 to A\$23,737 per annum. Current exchange rates: A\$1 = U.S.\$1.15. Reasonable travel expenses, superannuation benefits. Further information from: **Academic Registrar, Australian National University, P.O. Box 4, Canberra, ACT 2600, Australia** with whom applications close 2 December 1978.

VIROLOGIST. Applications are solicited for a 12-month, tenure-track faculty position. The appointment will be at the assistant professor level and will be available 1 July 1979. Applicants must have a Ph.D. Postdoctoral experience is desirable. The successful candidate will be expected to develop and direct a quality research program and advise graduate students in animal virology. Responsibilities will include teaching general virology, participation in general microbiology, and development of a graduate-level course in advanced virology. Send complete curriculum vitae and a list of five references to: **Dr. Bruno J. Kolodziej, Chairman, Search Committee, Department of Microbiology, College of Biological Sciences, The Ohio State University, 484 West 12 Avenue, Columbus, Ohio 43210.** Applications will be accepted until 1 March 1979. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. All qualified persons, including women, members of minority groups, and the handicapped, are encouraged to apply.*

TRAINEESHIPS

POSTDOCTORAL TRAINING in RNA tumor virology. Stipend from NIH training grant in tumor virology available immediately. Interests include the genetics of avian RNA tumor viruses and the biochemistry of viral gene products in infection and transformation. Applicants should have training in cell or molecular biology. Send curriculum vitae, including names of three references, to: **Dr. Robert Nowinski, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, Seattle, Wash. 98104.**

The deadline for applications will be 1 December 1978.

The University of Washington is an Affirmative Action/Equal Opportunity Employer.

PRE- AND POSTDOCTORAL ENVIRONMENTAL EPIDEMIOLOGY TRAINEESHIPS

Applications are being accepted for pre- and postdoctoral training in environmental epidemiology to begin in 1979. Eligible persons are: (i) predoctoral candidates with a background in biological or environmental sciences, epidemiology or biostatistics, or (ii) postdoctoral candidates with an M.D., D.V.M., D.D.S., or Ph.D. degree. Contact: **Dr. Anita K. Bahn, Chairperson, Graduate Group in Epidemiology, University of Pennsylvania, 36th and Hamilton Walk, Philadelphia, Pennsylvania 19104; telephone: 215-243-4890.**

TRAINEESHIPS

TRAINING IN METABOLISM

PREDOCTORAL AND POSTDOCTORAL TRAINEESHIPS are available immediately and for 1979 in a new NIH/supported program. Trainees will participate in collaborative investigations under supervision by faculty of the Departments of Biochemistry, Medicine, Pediatrics, and Pharmacology of Case Western Reserve University, School of Medicine. The program has been designed for the Ph.D. or would-be Ph.D. desiring a foundation in clinical investigation while developing his or her basic science capabilities and for M.D.'s to obtain expertise in basic science. Ph.D. candidates must fulfill the requirements of the basic science department for awarding the degree. For detailed information write to:

Dr. Merton F. Utter, Program Director
Department of Biochemistry
Case Western Reserve University
School of Medicine
Cleveland, Ohio 44106

NIH PREDOCTORAL TRAINEESHIPS IN THEORETICAL BIOLOGY, NEUROSCIENCE, AND PHYSIOLOGY. Predoctoral traineeships for graduate study in theoretical biology, neuroscience, and physiology through the Graduate Groups of Anatomy, Biochemistry, Biology, Physiology, Psychology and others are available beginning 1 July 1979. Send inquiries to: **Dr. R. E. Forster, Department of Physiology, University of Pennsylvania School of Medicine, Philadelphia, Pa. 19104.**

Equal Opportunity Employer.

SYMPOSIUM

INTERNATIONAL PEPTIDE SYMPOSIUM

The Intramural Program of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) will sponsor an international symposium entitled "The Role of Peptides in Neuronal Function" to be held 7 to 9 May, 1979 at the National Institutes of Health reservation in Bethesda, Maryland. The 3-day meeting will draw together investigators from diverse disciplines for a comprehensive review of peptide research as it relates to the field of neurobiology.

The symposium is being organized by Dr. Jeffrey Barker and Dr. Thomas Smith of the NINCDS Laboratory of Neurophysiology. Those interested in attending should contact either: **Dr. Barker or Dr. Smith, Building 36, Room 2C02, National Institutes of Health, 9000 Rockville Pike, Bethesda, Md. 20014. Telephone: 301-496-2414.**

PROGRAMS

POSTDOCTORAL TRAINING IN ENDOCRINOLOGY at West Virginia University Medical Center. New interdisciplinary program supported by NIH. Participating faculty and research areas are: Margaret Albrink, M.D., hyperlipidemia/insulin resistance; James Blair, Ph.D., liver carbohydrate metabolism; Fred Butcher, Ph.D., stimulus-secretion coupling; Roy Butcher, Ph.D., pituitary-ovarian function; Howard Colby, Ph.D., adrenal/hepatic monooxygenases; George Hedge, Ph.D., (program director), thyroid/adrenal neuroendocrinology; Keith Inskeep, Ph.D., utero-ovarian relationships; Michael Mawhinney, Ph.D., androgen/estrogen action; John Thomas, Ph.D., androgen actions/toxicology. Application information and more detailed descriptions of research programs are available on request from: **Dr. George A. Hedge, Professor and Chairman, Department of Physiology, West Virginia University Medical Center, Morgantown, W.Va. 26506.** *West Virginia University is an Equal Opportunity/Affirmative Action Employer.*

PHARMACOLOGY AND TOXICOLOGY PREDOCTORAL TRAINING

Applications are invited from students interested in entering a graduate training program beginning September 1979. Preference will be given to those students interested and capable of pursuing a chemical or biochemical approach to pharmacological and toxicological problems. For further information write: **Dr. Leonard C. Waite, Department of Pharmacology and Toxicology, University of Louisville School of Medicine, Health Sciences Center, P.O. Box 35260, Louisville, Kentucky 40232.**

PROGRAMS

SIXTH SUMMER PROGRAM IN METHODS OF IMMUNOLOGIC RESEARCH AND DIAGNOSIS

The sixth biennial program on current methods of immunologic research and diagnosis will be offered by The Center for Immunology of the State University of New York at Buffalo, 4 to 22 June 1979. It will consist primarily of a combination of core and elective practical laboratory exercises to allow the participant to become acquainted with the techniques by personally carrying them out at the bench complemented by demonstration, lectures, and discussions. The entire program is designed to provide the participant with a survey of presently available methodology and insight into the underlying immunologic principles.

Further information may be obtained from: **James F. Mohn, M.D., Director, The Center for Immunology, State University of New York at Buffalo, 210 Sherman Hall, Buffalo, New York 14214.** The deadline for applications is 31 March 1979.

THE ROCKEFELLER FOUNDATION ANNOUNCES TWO INTERNATIONAL PROGRAMS at the BELLAGIO STUDY AND CONFERENCE CENTER Bellagio (Como), Italy

International conferences—Small conferences or working groups focusing on topics or problems of international significance.

Scholars in residence—An opportunity for scholars to work for approximately 4 weeks on individual projects.

The foundation provides the facilities of the center, located about 40 miles north of Milan, on a competitive basis to residents and conference organizers. It normally does not pay for related costs, such as transportation, of the participants in these two programs. For more information, write:

Susan E. Garfield, Coordinator
Bellagio Study and Conference Center
The Rockefeller Foundation
1133 Avenue of the Americas
New York, New York 10036

GRADUATE STUDY

The Department of Biological Sciences, in cooperation with the basic science faculty of the University of Maryland at Baltimore, provides graduate education toward the M.S. and Ph.D. degrees in the areas of molecular biology and biochemistry, genetics, cell, developmental, organismic, and population biology.

TEACHING ASSISTANTSHIPS and MINORITY STUDENT FELLOWSHIPS are available for qualified applicants. For details write to: **Dr. Paul Lovett, Department of Biological Sciences, University of Maryland Baltimore County, Catonsville, Maryland 21228.**

GRADUATE STUDIES. Medical University of South Carolina. Predoctoral traineeships available for study leading to the Ph.D. degree in the Departments of Anatomy, Basic and Clinical Immunology and Microbiology, Biochemistry, Biometry, Pathology, Pharmacology, Physiology, or the interdisciplinary program in Molecular and Cellular Biology and Pathobiology. Stipends are \$3900 per year and are awarded on a competitive basis. For application and catalog, write to: **Dean, College of Graduate Studies, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29403.** *The Medical University is an Equal Opportunity/Affirmative Action Employer.*

GRADUATE STUDIES. Department of Physiology and Biophysics, University of Kentucky Medical Center, seeks applicants for its Ph.D. program beginning fall semester 1979. Graduate assistantships (\$4,200 per year) are available on a competitive basis. Current research projects of the faculty include but are not limited to: circulatory dynamics, cardiovascular regulation, pulmonary function and regulation, neurobiology, and renal physiology.

Write: **Director of Graduate Studies, Department of Physiology and Biophysics, University of Kentucky College of Medicine, Lexington, Ky. 40506.**

FACULTY POSITIONS
TUFTS UNIVERSITY BIOLOGY DEPARTMENT
 Available starting 1 September 1979

ANIMAL PHYSIOLOGIST, broadly trained. Level of appointment commensurate with experience. Preference will be given to candidates who have demonstrated excellence in teaching and proven ability to obtain research funding. Teaching duties will include sharing the instruction in a year-long course in general physiology, teaching an advanced course in the area of research specialty, and contributing to the instruction of students at the Tufts professional schools.

Application deadline: 15 December 1978.

Search committee chairman: Dr. John W. Kimball.

DEVELOPMENTAL BIOLOGIST working with animal systems. Assistant professorship. The appointee will be expected to conduct a vigorous research program including the direction of doctoral students. Preference will be given to applicants with post-doctoral experience. Teaching duties will include an intermediate-level course in developmental biology, an advanced course in area of specialty, and some contribution to the teaching of students at the Tufts professional schools.

Application deadline: 15 December 1978.

Search committee chairman: Dr. Eli C. Siegel.

INVERTEBRATE ZOOLOGIST-MARINE BIOLOGIST. Assistant professorship. Duties include teaching invertebrate zoology with laboratory, participation in general biology course laboratory, and offering an advanced course in specialty. Active research program is essential. Appointee will be involved in development of marine programs at the university.

Application deadline: 10 January 1979.

Search committee chairman: Dr. Edward S. Hodgson.

Please send curriculum vitae, brief statement of research plans, and representative reprints, and arrange to have three letters of recommendation sent to the chairman of the appropriate search committee.

Biology Department
 Tufts University
 Medford, Mass. 02155

Tufts University is an Equal Opportunity/Affirmative Action Employer. Applications from women, minorities, and the handicapped are encouraged.

CARDIOVASCULAR BIOCHEMIST

McNEIL LABORATORIES, one of the nation's leading manufacturers of ethical pharmaceutical products, has an unusual career opportunity immediately available for an outstanding Biochemist who enjoys working in a highly stimulating interdisciplinary research environment. To qualify you must have a PhD Degree with at least 4 years of post doctoral or industrial experience. Additionally, you must possess a demonstrated ability to initiate and pursue independent creative research as evidenced by publication. Background and experience in cardiovascular pharmacology are added assets for this position which involves working on problems relating to pharmacological management of myocardial ischemia.

We're a Johnson & Johnson company with an ultra-modern corporate headquarters beautifully situated in a pleasant rural setting just outside Philadelphia, Pa. We provide an excellent salary, a superior benefits package, and a professional work environment where publication of results is encouraged. For prompt consideration, forward your curriculum vitae with names and addresses of three references to our Employment Manager.

McNeil Laboratories, Inc.
 Fort Washington, Pa. 19034.

McNEIL

An Equal Opportunity Employer, M/F/H

VISITING FELLOWSHIPS IN CANADIAN GOVERNMENT LABORATORIES

The Government of Canada offers fellowships for 1979-1980 on behalf of the following Canadian government departments and agencies: Agriculture Canada; Department of Communications-Communications Research Centre; Energy, Mines and Resources Canada; Fisheries and Environment Canada-Atmospheric Environment Service, Canadian Forestry Service, Inland Waters Directorate, Lands Directorate; Environmental Protection Service-Air Pollution Control Directorate; Fisheries and Marine Service-Fisheries Management, Ocean and Aquatic Sciences; Health and Welfare Canada-Health Protection Branch; National Defence; National Museums of Canada-Museum of Natural Sciences; National Research Council Canada; Atomic Energy of Canada Limited.

(\$14,500 under revision)

The initial appointment will be for 1 year and may be renewed for a second year. An allowance will be provided towards the cost of travel.

An applicant should hold a doctorate degree from a recognized university or a master's degree plus experience in conducting successful independent research. There are no restrictions limiting the nationality of applicants; however, successful candidates who are not Canadian citizens or Landed Immigrants residing in Canada must satisfy all the Canadian immigration requirements before commencing tenure of the fellowship. Applicants must not have reached their 36th birthday at the time of application.

For further information, please write to: Scholarships Officer, Natural Sciences and Engineering Research Council Canada, Montréal Road, Ottawa, Ontario, Canada K1A 0R6.

Applications must be received in Ottawa by 15 January 1979 to be considered in the 1979-1980 competition.



National Research
Council Canada

Conseil national
de recherches Canada

Manager Immunology Research Section

Biosciences Research Laboratory

3M, a major R&D minded organization has an immediate opening in its central research laboratories for an experienced immunologist to direct basic research in all aspects of immunology. This research program is intended to provide the technology base required for new product development in the health care field.

Qualifications for this position includes a PhD in Immunology or related field and at least 7 years of post doctoral research. Orientation toward microbiology and biochemistry is highly desirable. In addition, several years experience in directing the research of doctorate level scientists in immunology is essential.

Located at 3M Center in St. Paul, Minnesota, we offer a competitive salary, excellent benefits and a challenging opportunity. Send your resume including salary history requirements in confidence to:

Dennis G. Nelson
 Technical Placement Manager
 3M COMPANY 3M CENTER
 St. Paul, Minnesota 55101



People still count here

We Are An Equal Opportunity Employer M/F

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN NEUROPSYCHOLOGY

A 12-month fellowship is available, for activation any time before 30 June 1979 for collaborative research in the neuropsychology of motivation and affect in the NIMH Institutional Training Program of the Institute of Neurological Sciences at the University of Pennsylvania. Recent or imminent doctoral graduates in psychology, biology, neurosciences, health professions, or other relevant fields may apply. Candidate must be prepared to participate in research that requires collaboration among at least two of the following trainers in the program (Adler, Epstein, Gallistel, Grill, Hamilton, Hand, Miselis, Morrison, Reivich, and Wolf) and must specify in a letter of enquiry the nature of the proposed research and the trainers with whom it will be done. The plan should contemplate a training experience of two years, the second year of support to be contingent upon trainee's progress and availability of funds. Send curriculum vitae including names and telephone numbers of two referees to: Alan N. Epstein, Department of Biology, or Charles Gallistel, Department of Psychology, University of Pennsylvania, Philadelphia, Pa. 19174.

POSTDOCTORAL FELLOWSHIP IN IMMUNOBIOLOGY. Postdoctoral fellowships in immunology are available at the Medical College of Virginia/Virginia Commonwealth University. Fellows will be trained in cellular immunology, transplantation immunology, tumor immunology, macrophage-tumor cell interactions, and viral immunology. Training methods include individualized research, lectures, courses, seminars, and conferences. Only U.S. citizens or foreign nationals with permanent resident or immigrant visas will be considered. Send inquiry with brief résumé to: Dr. Alan M. Kaplan, Immunology Training Grant, Program Director, Department of Microbiology and Surgery, P.O. Box 756, Medical College of Virginia, Richmond, Va. 23298.

POSTDOCTORAL FELLOWSHIP in Genetics is available with emphasis on tumor virology, DNA sequencing, and recombinant DNA techniques. Send inquiries, curriculum vitae, and references to: Theodore Friedmann, M.D., Department of Pediatrics, University of California, San Diego, La Jolla, Calif. 92093.

UNIVERSITY OF MINNESOTA POSTDOCTORAL FELLOWSHIPS

Two or three postdoctoral fellowships are available in the Department of Anatomy to begin as soon as possible. Areas of research are:

Reproductive Biology of the Male, especially the effects of diabetes on male reproductive function. Individuals should have training in some aspects of male reproduction and be familiar with morphological and physiological techniques for study of the system.

Islet of Langerhans Somatostatin Secretion. Emphasis will be in the control of islet somatostatin secretion and its effects on alpha and beta cell function.

Interested persons should contact: Dr. David W. Hamilton, Anatomy Department, University of Minnesota, 262 Jackson Hall, 321 Church Street, SE, Minneapolis, Minn. 55455.

An Equal Opportunity Educator and Employer

POSTDOCTORAL RESEARCH FELLOWSHIP IN HYPERTENSION

Medical College of Ohio at Toledo

Fellowships are available starting 1 July 1979 for clinical and basic science research in the field of hypertension. Applicants should have either a Ph.D. in any basic science (pharmacology, biochemistry, physiology, and genetics are especially germane) or an M.D. with a strong interest in basic or clinical research. M.D. fellows may also be part of training programs in endocrinology or nephrology with research work related to hypertension. Appointments are for 1 year and are renewable for one or two additional years. Stipends follow National Institutes of Health guidelines. Open only to U.S. citizens or persons with a permanent visa. Interested persons should send their curriculum vitae to: Dr. John Rapp, Department of Medicine, Medical College of Ohio, C.S. 10008, Toledo, Ohio 43699. *An Equal Opportunity Employer, M/F.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

A postdoctoral fellowship in the area of immunology of parasitic infections is available starting 1 January 1979 in the Laboratory of Parasitology, Department of Pathobiology, School of Veterinary Medicine, University of Pennsylvania. Persons holding a Ph.D., D.V.M., or M.D. degree and with a strong background in immunology or parasitology will be considered for this position. Individuals must also be citizens or resident aliens of the United States. Initial appointment is for one year.

Interested individuals should send a summary of their previous research and its significance and a statement of their career goals, together with the names of three referees, to: Dr. G. A. Schad, Department of Pathobiology, University of Pennsylvania, School of Veterinary Medicine, 3800 Spruce Street, Philadelphia, Pa. 19104.

MARINE BIOLOGICAL LABORATORY Woods Hole, Massachusetts

invites applications for

MACY FOUNDATION FELLOWSHIPS AND SCHOLARSHIPS FOR BLACKS AND OTHER MINORITIES

The Josiah Macy, Jr. Foundation has provided funds to support blacks and other minority groups in educational and research activities at the laboratory. Preference is given to the needs of faculty members and students in 4-year, predominantly black colleges. Fellowships of up to \$5,500 may be used to defray the costs of housing, personal expenses, and travel, as well as laboratory fees, for faculty who wish to improve their research and teaching skills through a summer of independent investigation. Scholarships of lesser amount may be used for tuition, travel, and personal expenses for applicants accepted to Marine Biological Laboratory summer and January courses.



Applications and additional information are available from: Admissions Office, Marine Biological Laboratory, Woods Hole, Mass. 02543; telephone: 617-548-3705.

An Equal Opportunity/Affirmative Action Institution

PREDOCTORAL FELLOWSHIPS

The Division of Experimental Pathology at the University of Kentucky College of Medicine has predoctoral fellowships available to students seeking the Ph.D. degree. An interdisciplinary program is available with research opportunities in the areas of cellular immunology, immunochemistry, tumor immunology, neuroimmunology, molecular and tumor virology, cell biology, and tumor cytogenetics. For further information contact: Dr. Thomas L. Roszman, Division of Experimental Pathology, Department of Pathology, University of Kentucky, Lexington, Kentucky 40506.

ENDOCRINE RESEARCH FELLOWSHIPS

Postdoctoral positions are available for interdisciplinary training in basic and/or clinical research in endocrinology. Fellowships supported by an NIH training grant are available to U.S. citizens or permanent residents with an M.D. or Ph.D. degree, starting 1 July 1979 for 1 or 2 years. The training faculty, with laboratories at Memorial Sloan-Kettering Cancer Center and the Rockefeller University, have the following research interests: F. C. Bancroft: hormonal regulation of pituitary gene expression; R. S. Bockman: prostaglandins, hormones in hemopoiesis and calcium metabolism; H. L. Bradlow: androgen and glucocorticoid metabolism; D. B. Donner: peptide hormone-receptor binding; J. Fishman: biosynthesis, metabolism, action of estrogens; I. A. Kourides: molecular regulation of thyrotropin; M. R. Sherman: steroid receptor structure, purification; A. S. Schneider: neurohormone secretion and action at cell membranes; and M. Sonenberg: peptide hormone and catecholamine action. Applications, including a statement of research interests and complete résumé, should be received by 1 February 1979 by: Dr. Martin Sonenberg, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, New York 10021. *Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

POSTDOCTORATE FELLOWSHIP is available for 1 or 2 years to work on defective interfering particles of rhabdoviruses. Salary: \$13,000. Send curriculum vitae and three references to:

Dr. M. E. Reichmann
Department of Microbiology
University of Illinois
Urbana, Illinois 61801

POSTDOCTORAL FELLOWSHIP available to participate in interdisciplinary research on the central nervous system regulation of immune processes. Position available immediately for 1 to 3 years. Send curriculum vitae and names of three references to: Dr. Robert Ader, Department of Psychiatry, or Dr. Nicholas Cohen, Department of Microbiology, University of Rochester School of Medicine and Dentistry, Rochester, New York 14642. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOWSHIP. Hemostasis research. Applications are being considered for a 2-year postdoctoral (M.D. or Ph.D.) trainee starting July or September 1979. This NHLBI-supported multidisciplinary program provides an opportunity for research in the biochemistry and immunology of blood coagulation, platelets, hemostasis, and thrombosis. Send curriculum vitae and letter stating career goals to: Leon W. Hoyer, M.D., Department of Medicine, University of Connecticut Health Center, Farmington, Conn. 06032. *An Equal Opportunity/Affirmative Action Employer*

MARKET PLACE

VEGA BIOCHEMICALS • 1979 CATALOG



Contains hundreds of new buffers, carbohydrates, purines, pyrimidines, lipids, substrates, peptides, reagents, and stains in handbook form with molecular formulas and weights, Merck Index numbers, applications, and physical data.

Please note our new address and phone:
VEGA Biochemicals
420 E. Columbia
Tucson, Arizona 85714
(602) 746-1401



Medwire Corp.
stocks a wide variety of

TEFLON* COATED

Platinum alloys, stainless steel, silver, multistrand and single strand available for prompt shipment. Write for descriptive brochure and price lists.

Medwire Corp.

Affiliate of Sigmund Cohn Corp.
122 So. Columbus Ave.
Mt. Vernon, N.Y. 10553
914-664-5300

*Reg. T.M. E. I. Dupont

Circle No. 7 on Readers' Service Card

Yes, Virginia $1 + 1 = 4$

A Channelyser plus any single-pen recorder plots 4 variables... at a fraction of the cost of a multi-pen recorder. Send for full details or call our Applications Dept. Need a recorder? Our BRY-1 has full features at an economy price.

BAILEY INSTRUMENTS INC.
Saddle Brook, NJ 07662 (201) 845-7252

Circle No. 5 on Readers' Service Card

LKB 2137 THE COMPLETE COLUMN

Everything you need to build a Column comes in a convenient storage box.

Decide what length you want to use, 35 or 65 or 95 cm.

Assemble it yourself in less than five minutes without tools.

Change the length whenever you need.

The same low cost for both 16 and 26 mm diameter.

Any one of three different column lengths is possible with each kit: 35, 65 or 95 cm. You can thus decide which of these best fits your personal needs, and easily assemble it, using the jacket sections provided, without tools.

Two flow adaptors included, to permit continuous variability of gel bed volume, and for precise sample application.

Improved flow characteristics are obtained through special center filter -dot- and flow spread pins.

Flow adaptor head designed for minimum dead space, **both** internally and externally.

Filters come ready-mounted on support rings, for a quick, snap-on attachment.

The adaptors are secured at the column ends by unique fork-type brackets, which assure the centering of the adaptors within the column. A fitting allows the hanging of a plumb line to determine the exact vertical orientation of the column.

New, clip-mount three-way valve, and sample applicator syringe, supplied with column.

Both 16 mm and 26 mm diameters available at the same low cost.

Optional accessories include a reservoir and column packing device, which will work with both available column diameters.

Order before December 31, and you will receive a free, 500 ml bottle of Ultrogel, in your choice of grade. Offer good while supply lasts!

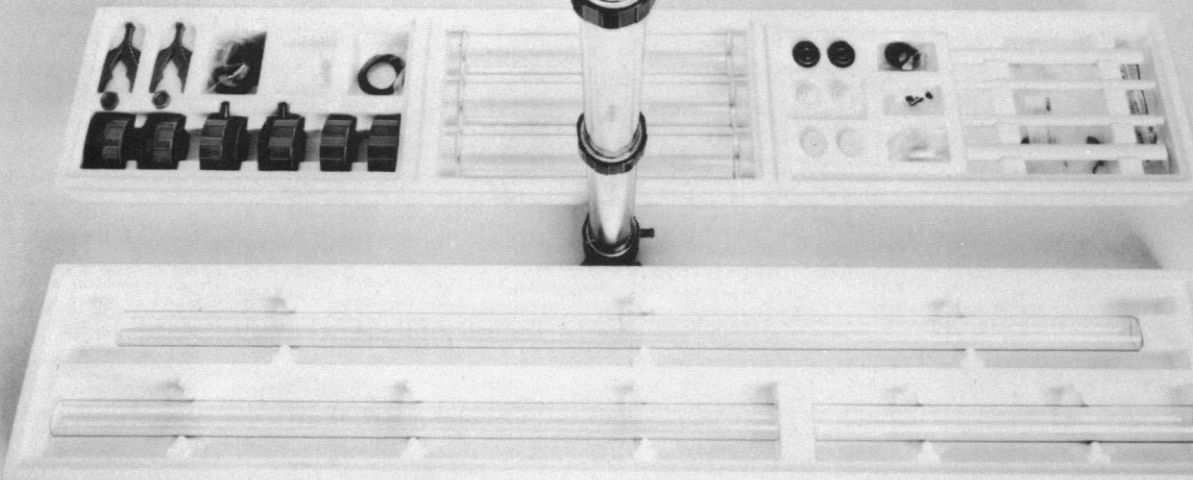


LKB

LKB Instruments Inc.

12221 Parklawn Drive, Rockville, Maryland 20852

Tel: (301) 881-2510



268

No other ultramicrotome ever looked like this.

Nor cut like it.

AO presents the ULTRACUT™. A completely new ultramicrotome with sleek, modern lines that reflect the special attention the designers gave to human engineering.

All the operating controls are within easy reach. You don't have to take your eyes from the microscope while making a cut.

When you operate the ULTRACUT Ultramicrotome, you will readily see the superior performance that has been built into the instrument.

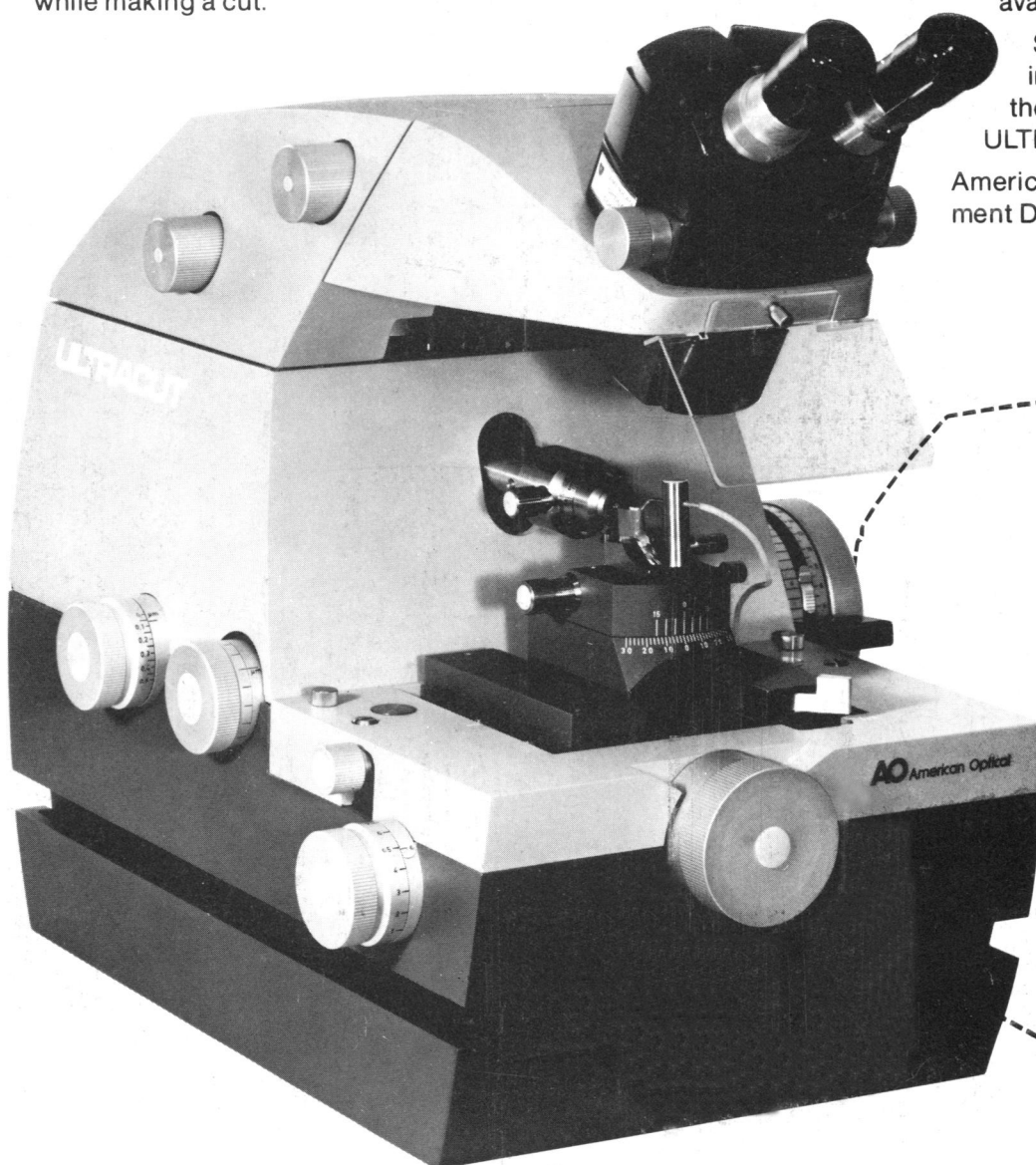
Exclusive reliability and time-saving conveniences include: darkfield knife alignment; built-in Reflexomat to maintain proper liquid level in

knife boat; audible and visual warning signals when approaching end of specimen or knife advance; unique insulated hull construction to protect key feed and drive mechanism from thermal and mechanical disturbances.

The ULTRACUT Ultramicrotome is available with or without table.

Sectioning is easier for the inexperienced and faster for the professional with the AO ULTRACUT Ultramicrotome.

American Optical, Scientific Instrument Division, Buffalo, NY 14215.



AO
American
Optical

I would like to know more about the New AO ULTRACUT Ultramicrotome.

☐ Please send detailed brochure.

☐ Please have sales representative call.

Name

Title

Firm or Institution

Address

City

State Zip