

# PRODUCTS and MATERIALS

## Digester

The Rapid digester is designed for wet digestions such as Kjeldahl nitrogen determination, trace metal analysis, and other high-temperature applications. It features 25 individually heated ceramic modules molded to the profile of digestion tubes. Hot spots, warpage, and tube-alignment problems are eliminated because heater elements heat only their individual modules. They are encapsulated which eliminates hazards of corrosive spills. The temperature controller offers stepless set-point control from ambient to 450°C. The digester is supplied with an acid-resistant tube carrier rack, two removable heat shields, and a locking retainer plate. Straight or volumetric digestion tubes may be specified. There is also an optional fume remover system that consists of 25 borosilicate glass bulbs and borosilicate manifold, a water ejector, and a condensate drain stand and drip pan. Labconco. Circle 764.

## Specimen Dryer

The Torrimet specimen dryer is a self-contained bench-top or wall-mounted unit. A 1200-watt, thermally controlled heater provides hot air discharge temperatures of 125° to 150°F. The unit provides for rapid drying of even large and uncommonly shaped metallographic specimens. The Torrimet's rapid drying substantially reduces interference with analysis caused by stains due to slow drying of water, alcohol, and etching reagents. The dryer operates on line current and features an externally accessible fuse for ease of maintenance. Buehler. Circle 766.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card (on page 366A and 454E) and placing it in the mailbox. Postage is free.

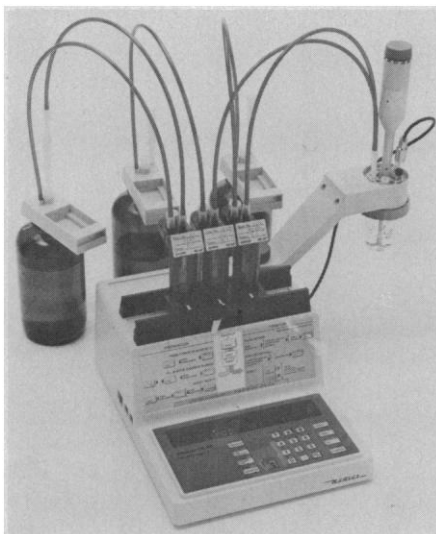
—RICHARD G. SOMMER

## Fluorometric Detector

The model 1311 FluoroMonitor is a high-sensitive filter fluorometric detector for liquid chromatography. Its split-beam, 90-degree optical system compensates for variation of intensity from the light source which ensures reproducibility. The 30-microliter fused silica cell has low background fluorescence and minimizes peak band spreading. The flow cell and optical system's modular design allows for rapid change of source lamps and filters. The standard excitation source is 340 to 380 nanometers. Sources of 214, 307, and 325 nanometers are available. Laboratory Data Control. Circle 765.

## Titration

Model DL40 MemoTitrator is a microprocessor-controlled instrument for titrations with potentiometric, voltammetric, and photometric indications. It stores up to ten standard methods which may be performed individually or in combination. These include titration to a specific endpoint (relative or absolute); equilibrium, recording, incremental, and manual titrations; controlled dispensing; pH and pX measurement; and others. The MemoTitrator may be



equipped with up to three interchangeable burettes. Mettler Instrument. Circle 767.

## Microcarrier

Bio-Carriers are polyacrylamide microcarriers for culture of anchorage-dependent mammalian cells. Cells grow on the surface of small, positively charged beads suspended in nutrient medium by gentle stirring or agitation. The positive charge is provided by covalently bonded dimethylaminopropyl groups. A 1-liter spinner flask can be used to grow as many cells as 20 half-gallon roller bottles or 150 75-square-centimeter flasks. Bio-Carriers may be added to flasks, petri dishes, or roller bottles to increase the surface area of these vessels. Bio-Rad Laboratories. Circle 768.

## Perchloric Acid Fume Hood

The hoods are available in standard widths of 3 to 8 feet and custom units may be constructed to individual needs. These hoods are made of 316 stainless steel which is nonreactive and acid resistant. They are fashioned with seamless rounded corners to eliminate potential hazard of acid-fume buildup. The hoods feature a full-length perforated spray pipe and an integral trough drain. Sargent-Welch Scientific. Circle 770.

## Literature

*Water Quality Monitors* catalogs portable instruments and accessories for field and laboratory work. Montedoro-Whitney. Circle 772.

*Electrophoresis* packet describes the Panagel system of use in pharmaceutical and clinical laboratory applications. Worthington Diagnostics. Circle 773.

*Gas Chromatographs* is a brochure that features a line of microprocessor-controlled research instruments. Gow-Mac Instrument. Circle 774.

*Radiation Sources* is a 103-page catalog of radioisotopes that includes nuclide reference tables, application guides, and prototype-testing information. Amersham. Circle 775.

*Photometer* is devoted to the KMX-6 low-angle laser light-scattering device and its accessories. Chromatix. Circle 776.

*Data Processor for Microbial Counting* describes an accessory for the Spiral plating system's Laser Counter. Spiral System Marketing. Circle 777.



## Control High Pressure With Confidence

K-LINE valves offer outstanding reliability and performance under pressures to 60,000 psi, plus low maintenance and exclusive design features that extend seat and stem life. All this at a price that compares favorably to that of ordinary high pressure valves.

K-LINE valves are quality built and engineered to withstand high-cycle operation. Each valve is rigidly tested before shipment.

### CHECK THESE FEATURES:

- Non-rotating, ball bearing stem
- High strength, corrosion-resistant body
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- Rolled threads resist galling
- Minimum backlash, positive operating fuel

Write for Bulletin PD-220



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Division of The Duriron Company, Inc.

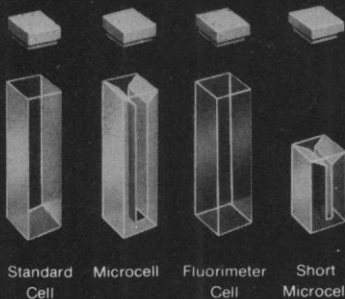


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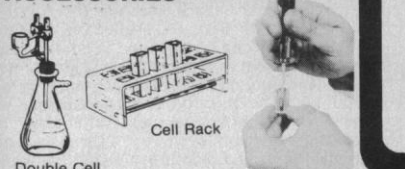


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# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising closing for a particular Friday issue is Wednesday, 3 1/2 weeks before. Advertising is accepted only in writing; no abbreviations. Also, 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, plus \$4 for use of box number, per insertion. \$10 minimum, per insertion. Prepayment required. This rate is available only to individuals seeking jobs.

**DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKET PLACE, and so forth):** \$7.20 per millimeter; \$180 minimum, per insertion (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing information required for all other advertising.

Send copy for all **Positions Wanted** ads and **Display** ads less than 1/6 page in size (125 millimeters) 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

**Entomologist/Pesticide Chemist.** M.S. 1979. Seeks research position in agriculture/biology; 3 years in plant quarantine in foreign country; 1 1/2 years of evaluation of different insecticides. Send to: A. T. Hassanien, 549 Southeast 135 Street, Portland, Oregon 97233. 1/25; 2/8

**Experimental (Perception) Psychologist.** Ph.D., 26 years of university teaching, research experience; honors program director; numerous publications, including book chapters; desires career change. Seeks challenging position in or out of academia. Box 15, SCIENCE. X

**Fisheries/Environmental Biologist.** Ph.D. with 10 years of research/supervisory/consulting experience. Publications on ecology, behavior, natural history of fish and invertebrates. Seeks research and/or teaching position with emphasis on general biology in smaller institutions, application of biological principles to current issues, and involvement with local community. Box 20, SCIENCE. 1/25; 2/1

**Medicinal/Pharmaceutical Chemist.** Ph.D. 1975. Background in organic synthesis/instrumentation. Dermatology research experience. Seeks industrial research position. Telephone: 415-561-2370. Or write: W. G. Reifenrath, 310 Channing Way, San Rafael, California 94903. X

**Microbiologist/Biochemist.** Ph.D. Senior scientist. Basic, applied dental and antimicrobial research; university and industry; products, publications. Industrial antibiotics and citric acid fermentations, recovery, purification; patents, publications. Miniaturization of fermentations, strain development, culture preservation. Taught as assistant professor. Box 21, SCIENCE. 1/25; 2/1, 8

**Physician-Pharmacologist/Toxicologist.** (M.D., Ph.D.), research background, industrial and regulatory experience. Desires significant responsibility in toxicology/health impact assessment with major corporate organization. Reply to: Box 333, SCIENCE. 1/25; 2/1

## POSITIONS OPEN

### ANATOMIST

Neuroanatomy and gross anatomy. M.S. and/or Ph.D. required. Research interest in biomechanics of the vertebral column desirable. Position open immediately or as mutually agreed. Please send résumé to:

Irene Ellis  
Los Angeles College of Chiropractic  
920 East Broadway  
Glendale, Calif. 91205  
An Equal Opportunity Employer

### UNIVERSITY OF SOUTH CAROLINA SCHOOL OF MEDICINE DEPARTMENT OF ANATOMY

The Department of Anatomy of the University of South Carolina School of Medicine is seeking a qualified anatomist to fill an assistant professor position commencing not later than 1 June 1980. Primary teaching responsibility will be to medical students, in one of the basic anatomical disciplines. Necessary qualifications include the Ph.D. or M.D. degree, a positive commitment to teaching, involvement in research, and service to the school and university. Submit résumé and letters of recommendation to:

Professor Richard J. Weymouth, Chairman  
Department of Anatomy  
School of Medicine  
University of South Carolina  
Columbia, South Carolina 29208

An Affirmative Action/Equal Opportunity Employer

### ANIMAL CYTOLOGIST/HISTOLOGIST

Opening available at the assistant professor level and possibly above. Effective date: September 1980. Applicants should have a Ph.D. and a strong commitment to research and undergraduate teaching. The successful applicant will participate in teaching a two-course sequence in animal cytology/histology, in team teaching at the introductory level, and in developing advanced work in electron microscopy. Credentials will be reviewed when completed, up to 15 March. Interested persons should send their curriculum vitae, transcripts or listing of science courses taken, a representative publication, a brief outline of research plans, and a letter of recommendation, plus the names of two additional referees. These materials should be sent to: Dr. Dorothea J. Widmayer, Chairman, Department of Biological Sciences, Wellesley College, Wellesley, Massachusetts 02181.

An Equal Opportunity/Affirmative Action Employer

### ASSISTANT PROFESSOR OF ECOLOGY

The University of San Diego, an independent Catholic university of 4100 students, has a faculty position available for a general ecologist beginning 1 September 1980. The position involves teaching ecology one semester each year and introductory biology both semesters. In this undergraduate department of eight faculty, most members are active in research and publication in addition to their primary responsibility for teaching excellence.

Please write for application materials. Include with your letter of inquiry, complete curriculum vitae (including a list of publications) and the names and addresses of three referees. Write to: Chairman, Department of Biology, University of San Diego, Alcalá Park, San Diego, Calif. 92110. The University of San Diego is an Equal Opportunity Employer.

### ASSISTANT PROFESSOR ENDOCRINE PHYSIOLOGY

The Department of Physiology in the College of Medicine at the University of California, Irvine (UCI), is seeking an assistant professor. We intend to fill the position by autumn 1980.

The research interests of candidates should be at the molecular and/or cellular level and related to important problems of endocrine physiology. Candidates should hold a doctoral degree (Ph.D. or M.D.), have postdoctoral training, and have shown the excellence and originality in research expected of potential leaders in their fields. Duties will include teaching endocrinology to medical students and biophysics and physiology to graduate students.

Send curriculum vitae, several representative publications, and the names of four references to:

Professor Stephen H. White, Chairman  
Department of Physiology  
University of California  
Irvine, California 92717

UCI is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

## POSITIONS OPEN

### UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

A tenure-track ASSISTANT PROFESSORSHIP position is available for a cellular physiologist in the Department of Physiology. Duties include: conducting research in the area of cellular/molecular physiology; teaching physiology to medical, other health professional students, and graduate students. Necessary qualifications: Ph.D. or M.D. degree, at least 2 years of postdoctoral research training, and record of published work dealing with physiological mechanisms at the cellular or molecular level. Reply to: Box 19, Science. Code 700F0. A nondiscriminatory, Affirmative Action Employer.

**ASSISTANT PROFESSOR, BIOCHEMISTRY.** Applications are invited for an investigator in the fields of regulation of gene expression in eucaryotes or ultrastructure of macromolecules and organelles. Highly qualified candidates in other areas of biochemistry will also be considered. This Department of Biochemistry has grown significantly during the last few years. Established fields of investigation relate to developmental biology, nucleic acids and protein synthesis, membrane biochemistry, and structure and cloning of eucaryotic genes. The department is well-equipped for most areas of biochemistry and has a P3 facility for recombinant DNA research. Send curriculum vitae, bibliography, and three references by March 1980 to: Dr. Philip W. Tucker, Department of Biochemistry, University of Mississippi Medical Center, 2500 North Street, Jackson, Miss. 39216. Equal Opportunity Employer, M/F.

### ASSISTANT OR ASSOCIATE PROFESSORSHIP DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS LOYOLA UNIVERSITY OF CHICAGO/ STRITCH SCHOOL OF MEDICINE

Tenure-track position. Active research essential. Grant record desirable. Applicant should have Ph.D. in biochemistry or related field and appropriate postdoctoral experience. Molecular biology preferred. Sub-interest in membrane research valuable. Competitive salary and appropriate starting funds offered. Duties include productive research and effective teaching of medical and graduate students. Application deadline: 11 February 1980. Send curriculum vitae, selective reprints, a concise description of current and prospective research program, and names of three references to:

Dr. A. Rosenberg, Chairman  
Department of Biochemistry and Biophysics  
Loyola University of Chicago  
2160 South First Avenue  
Maywood, Illinois 60153

Affirmative Action/Equal Opportunity Employer

### ASSISTANT PROFESSOR— BIOLOGICAL CHEMISTRY

The Department of Biological Chemistry, University of California, Los Angeles (UCLA), School of Medicine, has an opening at the level of assistant professor. We are particularly interested in highly qualified individuals with research interests in areas of biochemical endocrinology, cellular and metabolic regulation, or biological catalysis, although outstanding candidates in other fields will be seriously considered. A genuine interest and excellence in teaching is also required. Applicants for earlier openings in the department will be considered for this position and need not reapply. Applicants should include curriculum vitae, names of three references, and a brief description of future research plans. Please submit by 15 March to: Dohn Glitz, Search Committee, Department of Biological Chemistry, UCLA School of Medicine, Los Angeles, California 90024. An Equal Opportunity Employer; applications from minority candidates and women are encouraged.

Opening in tenure-track position for ASSISTANT PROFESSOR OF BIOLOGY effective 1 September 1980. Ph.D., strong background in ecology and botany, commitment to church-related, liberal arts education, and inquiry approach to teaching are required. Must be able to teach introductory biology for majors and nonmajors, general ecology, an advanced ecology course, survey of the plant kingdom, plant anatomy, and plant physiology, and supervise senior research projects. Teaching experience and special training in the higher plant groups are desirable. Send curriculum vitae and three reference letters to: Philip E. Ode, Chairman, Department of Biology, Thiel College, Greenville, Pennsylvania 16125. Application deadline: 1 March 1980. Thiel College is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### ASSISTANT PROFESSOR OF BIOLOGY

A tenure-track position, beginning 29 August 1980, for an individual with a Ph.D. in animal physiology. Primary course responsibilities will include cell physiology and organismal physiology. Some participation in other department courses such as general biology also will be expected. Interested candidates should forward their curriculum vitae, three letters of reference, and a summary of their research interest by 1 March 1980 to: **Professor Lester Hearson, Department of Biology, Wabash College, Crawfordsville, Indiana 47933.** An Equal Opportunity/Affirmative Action Employer.

Department of Microbiology, University of Saskatchewan, has a tenurable vacancy for an **ASSISTANT PROFESSOR**, field of **GENERAL MICROBIOLOGY**. Appointment to commence 1 July 1980. Salary to be commensurate with experience. Deadline for receipt of applications: 31 March 1980. Apply to: **Dr. D. Eidinger, Head, Department of Microbiology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.**

### Yale University School of Medicine Section of Neuropathology

Opening for **ASSISTANT PROFESSOR IN NEUROPATHOLOGY**, 2 to 3 years of training in neuropathology; experimental experience in virology, molecular biology, neurochemistry, or electron microscopy preferred.

Shared responsibilities for neurosurgical and autopsy material and teaching of medical students and postdoctoral fellows. Reply:

**Elias Manuelidis, M.D., Chief  
Section of Neuropathology  
Yale University School of Medicine  
333 Cedar Street  
New Haven, Connecticut 06510**

*Yale is an Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF PHARMACOLOGY.** Department of Pharmacology invites applications from pharmacologists for a position of assistant professor open 1 July 1980. The applicant must have a Ph.D. with a 2-year postdoctoral or teaching experience. The duties include teaching of pharmacology to sophomore medical students and a strong commitment to productive research. An independent laboratory equipped with electrophysiological instrumentation is available. Preference will be given to individuals with evidence of research publications using electrophysiological methodology, although pharmacologists with interest and experience in other areas of pharmacology will also be considered. Please send curriculum vitae with three names of professional references to: **Dr. V. G. Prabhu, Professor and Chairman, Department of Pharmacology, Chicago College of Osteopathic Medicine, 1122 East 53 Street, Chicago, Illinois 60615.**

*An Equal Opportunity/Affirmative Action Employer*

### ASSISTANT PROFESSOR OF PSYCHOLOGY

Regular faculty position. Candidates must be in at least one of the following areas: (i) **PSYCHOPHARMACOLOGY**, (ii) **PSYCHOPHYSIOLOGY**, and (iii) **BEHAVIORAL TOXICOLOGY**. Candidates expected to develop productive research program, actively pursue research grant funding, direct Ph.D. student research, and teach graduate courses. Position includes teaching of undergraduate courses in experimental psychology and statistics. Candidates must have both basic and applied research interests, and should have interest in areas of research with direct relevance to human populations (for example, aging, alcohol, drug dependency, autonomic functioning, mood alteration, seizure disorders, and so forth). Submit curriculum vitae, letter describing research plans, reprints, and three letters of reference to: **Dr. Robert Berman, Psychology Department, Wayne State University, Detroit, Mich. 48202.** *Equal Opportunity Employer.*

**BIOCHEMIST(S)**, Ph.D. plus postdoctoral training to join active research group in areas of: (i) peptide hormone biosynthesis, processing, and secretion, and (ii) action of hormones on targets. Must be strong in one of the following areas: cell-free protein synthesis, genetic regulation, membrane biochemistry, cyclic nucleotide chemistry, secretory mechanisms. Government laboratory affiliated with the University of Kansas. Nontenure-track appointment in Department of Biochemistry optional. Send résumé, research interests, and salary requirements to: **Dr. David V. Cohn, Professor of Biochemistry, VA Medical Center, Kansas City, Mo. 64128.** *Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSORS OF PHARMACOLOGY, University of Kentucky College of Medicine.** Applications for two positions at an assistant professor level are invited. Responsibilities include the teaching of neuropsychopharmacology and cardiovascular pharmacology in both the medical and graduate program. The department wishes to expand its research capabilities and interests into the areas neuropsychopharmacology, cardiovascular, autonomic, and receptor pharmacology. The University of Kentucky has recently established an Aging Center which may offer unique research opportunities for individuals whose research interests interface with aging. Candidates should have either an M.D. or Ph.D. degree. Inquiries with curriculum vitae and bibliography should be sent to:

**Dr. William R. Martin  
Professor and Chairman  
Department of Pharmacology  
MR-111 Research Facility Number 2  
University of Kentucky  
Lexington, Kentucky 40536**  
*An Equal Opportunity Employer*

### BASIC CANCER RESEARCH SCIENTISTS

The Mid-America Cancer Center at the University of Kansas is seeking research scientists to conduct basic cancer research with particular attention to areas relating to carcinogenesis. Ample opportunities exist to interface with scientists in other disciplines involved in cancer research. Excellent research space and start-up funding available. Scientists with proven track record are invited to apply by writing and providing curriculum vitae to:

**Dr. C. C. Cheng  
Chairman, Search Committee  
Mid-America Cancer Center  
39th and Rainbow Boulevard  
Kansas City, Kansas 66103**

*An Equal Opportunity/Affirmative Action Institution*

**BIOCHEMIST/CELL BIOLOGIST**—Collaborative research on the role and identity of proteases involved in hormone production and metabolism, and the composition and mechanisms of the secretory control systems in endocrine cells at the chemical and morphologic levels. Experience in subcellular fractionation techniques and/or enzyme separation and assays necessary, and knowledge of electron microscopy desirable. Well-equipped government laboratory with university affiliation. Send résumé, research interests, and salary requirements to: **Dr. David V. Cohn, Professor of Biochemistry, VA Medical Center, Kansas City, Mo. 64128.** *Equal Opportunity Employer.*

### BIOCHEMISTRY POSITION

#### UNIVERSITY OF PATRAS, GREECE

The University of Patras is seeking a research-oriented individual to fill a staff position in biochemistry. A Ph.D. degree is required. For an individual with postdoctoral experience and a publication record, this position can evolve into a tenured faculty position. Greek citizenship is required. Send résumé to: **Professor S. Aktipis, Department of Biochemistry, Loyola University of Chicago, 2160 South First Avenue, Maywood, Ill. 60153.**

**BIOLOGIST.** Assistant professor, tenure-track position; September 1980. Duties include teaching introductory cell biology, microbiology, cell physiology, and clinical microbiology or plant physiology. Ph.D. required. Send curriculum vitae, names of three references, and other evidence of competency by 3 March 1980 to: **David H. Ost, Department of Biology, California State College, 9001 Stockdale Highway, Bakersfield, Calif. 93309.** *An Affirmative Action/Equal Opportunity/Title IX Employer, M/F.*

### BIOSTATISTICIAN—CANCER CENTER

Northwestern University Cancer Center, Biometry Section, seeks a Ph.D. statistician with experience in cancer epidemiology or in the development and application of statistical methods to cancer related research problems. This is a tenure-track faculty position in the Department of Community Health and Preventive Medicine with primary responsibility in the Cancer Center. An established research record is considered essential. Academic level and salary depend on qualifications. Duties include independent statistical and/or epidemiological research, statistical collaborations in cancer research, consultative services to Cancer Center researchers, and limited teaching responsibilities. Send complete curriculum vitae and names of three references to: **Search Committee, Northwestern University Cancer Center, Biometry Section, Ward 3-332, 303 East Chicago Avenue, Chicago, Illinois 60611.**

## ENDOWED CHAIR

**Calhoun Professor of Biomedical Engineering and Science  
Biomedical Engineering and Science Institute  
(Search Reopened)**

Drexel University invites nominations and applications for the position of Ernest Calhoun chair professor of biomedical engineering and science. This endowed chair position is intended to strengthen and broaden the research activities of the Biomedical Engineering and Science Institute.

There are presently 14 faculty members in the institute active in the following interdisciplinary research areas: artificial organs; biomedical imaging and signal processing; biomaterials; biotelemetry; diagnostic ultrasound; electrical and mechanical properties of biological systems; electrodes; electrophysiology; hemodynamics; pacemakers; physiological systems; and rehabilitation engineering. The institute includes modern engineering laboratories and computing facilities. It also includes animal facilities and a computerized surgical/hemodynamic laboratory directed by a full-time V.M.D. Close research relationships exist with medical schools in the Philadelphia area.

The individual who will fill this position must be a nationally recognized scholar and productive researcher in biomedical engineering/science with established records of teaching and research. The individual must hold either the Ph.D. or M.D., or an equivalent degree.

Interested applicants should submit curriculum vitae and names of references to:

**Dov Jaron, Ph.D., Director  
Biomedical Engineering and Science Institute  
Drexel University  
Philadelphia, Pennsylvania 19104**

Closing date for applications is 1 March 1980. *Drexel University is an Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS OPEN COLLEGE OF AGRICULTURAL SCIENCES AND FOODS KING FAISAL UNIVERSITY HOFUF, SAUDI ARABIA Academic Year 1980-1981

The expanding College of Agricultural Sciences and Foods of King Faisal University invites inquiries from qualified applicants for the 1980-1981 academic year in the following fields: **Agronomy, Horticulture, Beekeeping, Poultry Science, Biology, Chemistry, Physics, Botany, Biochemistry, Agricultural Extension, Plant Pathology, Agricultural Economics, Animal Science, Animal Ecology, Dairy Science, Agricultural Engineering, and Water Resources and Climatology.**

**PREREQUISITES:** Master's or equivalent degree; practical and/or teaching experience. Knowledge of Arabic is helpful but not required. Language of instruction is English. Positions available September 1980; interviews scheduled with the dean in Houston, London, and Ottawa in April/May 1980.

**SALARY RANGES:** Approximate annual U.S. equivalent; professor, \$25,469 to \$33,965; associate professor, \$22,779 to \$28,973; assistant professor, \$18,570 to \$27,487; and lecturer, \$11,611 to \$16,035. Salaries are paid monthly in Saudi riyals. Substantial increase in these salaries is being considered for 1980-1981.

**BENEFITS:** Free, furnished accommodations; substantial educational allowance for up to four children. Air tickets to and from Saudi Arabia once per year for family of four. Sixty-day paid summer holiday; yearly bonus; overweight allowance. No Saudi income tax. Contracts are for 1 year and are renewable.

Send curriculum vitae with current telephone number and the names, addresses, and telephone numbers of three references to:

**Dr. Hussein M. Elarosi  
Dean, College of Agricultural Sciences and Foods  
King Faisal University**

c/o Saudi Arabian Educational Mission, 2221 West Loop South, Houston, Texas 77027;

OR

c/o P.O. Box 2, Sudbury-on-Thames, Middlesex TW16 5JP England.

## POSITIONS OPEN

### BIOCHEMISTRY

Position open for junior biochemist experienced in isolation and purification of proteolytic enzymes, to participate in studies on molecular mechanisms of fibrinolysis. Full-time research position with medical school appointment. Send résumé and recommendations to: **Dr. V. Gurewich, Vascular Laboratory, St. Elizabeth's Hospital, Boston, Mass. 02135.**

The **DEPARTMENT OF BIOLOGY**, Oberlin College, expects authorization to fill two faculty positions at the assistant professor level beginning fall 1980. Ph.D. required, postdoctoral experience desired.

1) **PLANT ECOLOGIST**—To teach courses in plant ecology and vascular plant systematics and to share teaching responsibilities in genetics, population biology, and environmental studies.

2) **IMMUNOBIOLOGIST**—To teach courses in immunobiology and virology and to share teaching responsibilities in genetics and cell and molecular biology.

Candidates should have a strong commitment to undergraduate teaching and to developing a research program that can involve undergraduates. Applicants should submit curriculum vitae, transcripts of undergraduate and graduate work, and have three letters of recommendation sent to: **Dr. Anna Ruth Brummett, Chairman, Department of Biology, Oberlin College, Oberlin, Ohio 44074.** Closing date for applications: 10 March 1980. *Oberlin College is an Equal Opportunity/Affirmative Action Employer.*

### THE UNIVERSITY OF TORONTO DEPARTMENT OF BOTANY

Applications are invited for a faculty position in the Department of Botany. Applicants should have a major interest in the systematics of higher plants. The appointment will be made in the tenure stream. The successful candidate will normally have a Ph.D. and a significant research record, together with teaching experience in taxonomy. The position will include curatorial responsibilities for the herbarium. The appointment will be at the assistant or associate professor level, at a starting salary of not less than \$17,400, dependent upon experience. The appointment is subject to final budgetary confirmation.

Further particulars can be obtained from: **Professor T. C. Hutchinson, Chairman, Department of Botany, University of Toronto, Toronto, Ontario, Canada M5S 1A1**, to whom all applications and the names and addresses of three referees should be sent before 15 March 1980.

**BOTANIST** with Ph.D. in area of vascular plant taxonomy and broad training in biosystematics to teach courses in plant taxonomy and general botany. In addition to imaginative and creative teaching, candidate will be expected to conduct an active research program. Preferences will be given to candidates specializing in chemotaxonomy and experimental taxonomy. Position begins 1 September 1980. Rank and salary are open. Please submit curriculum vitae, statement of research interests, and three letters of reference by 8 March to: **Lois Pfister, Department of Botany and Microbiology, 770 Van Vleet Oval, University of Oklahoma, Norman, Okla. 73019.** *An Equal Opportunity Employer.*

Ph.D. in a field compatible with programs in botany and microbiology to direct and teach in an introductory level biology course for nonmajors, conduct research, and teach a course in field of specialization. The position requires interest in developing an imaginative and substantive biology course for nonmajors and potential to attract extramural research funds. Position available 1 September 1980. Assistant professor level. Please submit curriculum vitae, statement of career goals and research interests, and three letters of recommendation to: **James Estes, 770 Van Vleet Oval, University of Oklahoma, Norman, Oklahoma 73019.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available for person with training in ecology and plant physiology. The person will identify appropriate plant species and formulate bioassays to evaluate the toxicity of chemicals on the growth and reproduction of vascular plants native to the United States. The salary will be \$12,000 to \$14,000 per year, for a 2-year period. Send curriculum vitae and three letters of reference to: **Paul Risser, Chairman, Department of Botany and Microbiology, University of Oklahoma, Norman, Oklahoma 73019.** Position is open immediately with a closing date of 29 February. *An Equal Opportunity Employer.*

## POSITIONS OPEN

### CARDIOPULMONARY PHYSIOLOGY

The Department of Anatomy and Physiology, College of Veterinary Medicine, has reopened a position for a tenure-track faculty member to participate in teaching systemic physiology to veterinary and graduate students and to establish a productive research program.

Candidates must have a Ph.D. degree or equivalent (D.V.M. desirable) and an interest and demonstrated research competency in cardiopulmonary physiology, especially of large domestic animals. Rank and salary are open and depend on qualifications. Applicants are invited to submit résumés and list of three references by 15 February 1980 to: **Dr. Roger Fedde, Department of Anatomy and Physiology, College of Veterinary Medicine, Kansas State University, Manhattan, Kansas 66506.** *An Affirmative Action/Equal Opportunity Employer.*

**CARDIOVASCULAR PHYSIOLOGIST** at the assistant or associate professor level. Duties and responsibilities: teaching of physiology to medical students, graduate students and postdoctoral fellows and research. Teaching will involve the area of cardiovascular physiology. The individual will be expected to devote a substantial amount of time to research and to obtain NIH or NSF grants to support his/her research program. Send curriculum vitae and names of three people who will support the application to: **Dr. James O. Davis, Department of Physiology, University of Missouri-Columbia, School of Medicine, Columbia, Mo. 65212.** *An Affirmative Action/Equal Opportunity Employer.*

### DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF) DEPARTMENT CHAIRPERSON

Candidates with outstanding academic qualifications in microbiology, immunology, virology, or allied fields are invited to apply for the position of professor and chairperson of the Department of Microbiology and Immunology at UCSF. Candidates should have demonstrated accomplishments in research of high quality, and have a commitment to teaching programs at the professional school and graduate level. Applicants should submit curriculum vitae, bibliography, and the names of four referees to:

**H. J. Ralston, M.D.  
Chairman, Microbiology Search Committee  
Department of Anatomy  
University of California  
San Francisco, Calif. 94143**

no later than 15 March 1980.

*UCSF is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

### WELLESLEY COLLEGE DIRECTOR OF THE STONE CENTER FOR DEVELOPMENTAL SERVICES AND STUDIES

Wellesley College invites applications for a new position, director of the Robert S. and Grace W. Stone Center for Developmental Services and Studies. The Stone Center will be dedicated to research, training, and clinical services that promote the healthy social and emotional growth of women throughout the life span, but especially women in their college years. The director will be responsible for the creation and administration of this major new center and will be asked to participate in the academic life of the college.

**Qualifications**—The position requires a creative, enterprising social scientist with a distinguished record that includes research on psychosocial development, clinical experience, teaching, and scholarly publications. A Ph.D., M.D., or equivalent evidence of achievement is required. The director should have excellent management skills, the capacity to develop and sustain innovative programs, and a personal style that inspires and supports colleagues.

The salary, compatible with senior research and/or clinical experience, is negotiable. Starting date: 1 August 1980 or the earliest mutually convenient date thereafter.

A letter of application, accompanied by curriculum vitae, one relevant publication, and the names of current references should be sent to:

**Search Committee for the Stone Center  
Wellesley College  
Wellesley, Massachusetts 02181**

Application deadline: 29 February 1980.

*Equal Employment Opportunity/Affirmative Action/Title IX Institution*

## POSITIONS OPEN

### CELL BIOLOGY FACULTY POSITION Cornell University

Applicants are being sought with demonstrated research excellence in animal cell biology; the areas of immunology, cytoskeleton, and cell-cell interactions are of special interest, but candidates in other areas will be considered as well. Ability to teach cell biology is also important. Rank and salary to be determined by experience. Applicants should send curriculum vitae and a statement of future research plans, and arrange for three letters of recommendation to be sent to:

**S. J. Edelstein, Chairman  
Section of Biochemistry, Molecular and Cell Biology  
110 Wing Hall  
Cornell University  
Ithaca, N.Y. 14853**

The deadline for receipt of materials is 1 March 1980.

*Cornell University is an Equal Opportunity/Affirmative Action Employer.*

### CHAIRMAN DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE

The school is searching for a new chairperson for this important clinical department who will also be chief of the Physical Medicine and Rehabilitation Service at Georgetown University Hospital and director of the educational programs. Applicants should be experienced in the clinical specialty, teaching at the undergraduate and graduate levels, and in research. *Georgetown University is an Affirmative Action/Equal Opportunity Institution in employment and admissions.* Letters from interested persons or proposals for the position should be addressed to:

**Peter A. Kot, M.D.  
Professor of Physiology and Biophysics  
Georgetown University  
School of Medicine  
3900 Reservoir Road, NW  
Washington, D.C. 20007**

### CHAIRPERSON— DEPARTMENT OF PHARMACOLOGY

Applications and nominations are invited for the position of chairperson of the Department of Pharmacology in the School of Medical Sciences, University of Nevada, Reno. Qualifications include an M.D. and/or Ph.D., or equivalent degree, demonstrated commitment to excellence in teaching medical students, established reputation as a research scientist with grant funding, leadership and administrative abilities. Candidates should qualify for rank of full professor. Preference will be given to individuals who specialize in some aspect of neuropharmacological research, but other areas of pharmacology will be considered. Salary will be competitive with western regional medical schools and commensurate with candidate's qualifications and experience. Application deadline is 1 March 1980. Interested applicants should send a letter of application, curriculum vitae, and names of three references to: **J. D. Wood, Chairman, Pharmacology Search Committee, Anderson Medical Sciences Building, University of Nevada-Reno, Reno, Nevada 89557.** *An Equal Opportunity/Affirmative Action Employer.*

### CORONARY PHYSIOLOGY RESEARCH ASSOCIATE

If you are interested in studying the control of coronary circulation please send a résumé with references to:

**Dr. Eric Feigl  
Department of Physiology and Biophysics, SJ-40  
University of Washington Medical School  
Seattle, Wash. 98195  
An Affirmative Action Employer**

**DEAN, COLLEGE OF NATURAL SCIENCES.** The University of Texas at Austin invites applications for the position of dean of the College of Natural Sciences. Applicants should qualify for a tenured appointment in a natural sciences department and should provide evidence of accomplishment in scholarship and teaching. Administrative experience is essential. Interested persons should address inquiries to: **Professor John E. Gilbert, Chairman, Consultative Committee, Department of Mathematics, The University of Texas at Austin, Austin, Texas 78712.** The closing date for applications is 7 February 1980. *The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**CLINICAL TOXICOLOGIST**—Food and Drug Administration (*an Equal Opportunity Employer*) has a permanent Civil Service or Commissioned Corps (U.S. Public Health Service) opening for **Director**, Division of Poison Control (National Clearinghouse for Poison Control Centers), located in Rockville, Md. The position has no direct patient-care duties, but does involve advising treating physicians on an international basis. The incumbent will be responsible for planning, conducting, and evaluating epidemiologic, animal, and clinical research; medical review, evaluation, and dissemination of toxicity and treatment information; coordinating the poison control program with other federal agencies, state and local governments, professional societies, and others; planning, implementing, and evaluating consumer and professional education programs; and influencing regulations via labeling reviews, recommending bans on products, recalls, and so forth.

Initial grade of the position: GS-14 (salary range: \$42,812 to \$50,112 per year, depending upon experience and qualifications). Comprehensive fringe benefits available.

Requirements: medical degree (M.D. or D.O.) and Board-eligibility in a medical specialty or equivalent experience, plus extensive experience in clinical toxicology or poison control. Acceptability of applicants and of degree source governed by Civil Service regulations.

Send résumé or curriculum vitae to:

**Marsha Pincus**  
Food and Drug Administration  
Division of Personnel Management (Room 4B42)  
5600 Fishers Lane  
Rockville, Md. 20857

## SEARCH FOR GRADUATE DEAN UNIVERSITY OF SOUTH ALABAMA

The University of South Alabama invites applications and nominations for the position of dean of the Graduate School. The graduate dean reports directly to the vice president for academic affairs and is responsible for the supervision and coordination of the programs of the Graduate School of the university. Along with other academic deans, this officer participates in the instructional planning necessary to maintain and augment the university's role in the higher education of its state and region.

A candidate for this position must have a proven record and continuing participation in scholarly research and a minimum of 5 years of academic experience at the graduate level. Administrative experience is desirable.

Applications should include complete curriculum vitae, complete transcripts from all colleges and universities attended, and three letters of reference/recommendation.

Nominations and applications should be addressed to:

**The Office of Graduate Dean**  
ILB 211, University of South Alabama  
Mobile, Alabama 36688

The deadline for completed applications is 29 February 1980.

*Equal Opportunity Employer*

## DIRECTOR OF CANCER RESEARCH

Full-time position as Director of Cancer Research in the Division of Gynecologic Oncology. Requires a Ph.D. in biochemistry and preferably postdoctoral training experience in radioimmunoassay. Immunologic and other analytical techniques are desired. The applicant should be able to perform independent research as well as being able to develop methods for the measurement of tumor-associated oncofetal antigens in tumor tissue and plasma. Salary and position according to qualifications. Submit curriculum vitae to:

**J. R. van Nagell, Jr., M.D.**  
Division of Gynecologic Oncology  
University of Kentucky Medical Center  
Lexington, Kentucky 40536

## DIRECTOR OF STANDARDS DEVELOPMENT

To oversee inception and administer the operation of an Ophthalmic Standards Development Program for the American Optometric Association (AOA). Research and administrative skills essential for this position. Ph.D. or equivalent experience desirable. Salary commensurate with experience. Send résumé with salary history and expectation to: **Commission on Ophthalmic Standards, AOA, 243 North Lindbergh, St. Louis, Mo. 63141.** Deadline for submission: 15 April. *An Equal Opportunity Employer.*

## POSITIONS OPEN

### COORDINATOR, WILDLIFE BIOLOGY Washington State University

Seeking coordinator to direct expanding program. Associate or professor level, permanent, tenure-track, starting fall 1980. Should have significant research record and educational accomplishments. Teach one course, carry on active research, and administer program within Department of Zoology. Send résumé and solicit three letters of recommendation to be sent to:

**Dr. Robert J. Jonas**  
Search Committee Chairman  
Wildlife Biology—Department of Zoology  
Washington State University  
Pullman, Wash. 99163

Deadline: 1 March 1980.

*An Equal Opportunity/Affirmative Action Employer*

### DEAN SCHOOL OF SCIENCE AND ENGINEERING

The University of Alabama in Huntsville is seeking applications and nominations for the position of dean of the School of Science and Engineering, effective 1 September 1980. The University of Alabama in Huntsville is a comprehensive university with nearly 5000 students and it is currently organized into the Schools of Humanities and Behavioral Sciences, Science and Engineering, Nursing, Primary Medical Care, a developing School of Management, and the Johnson Center for Environmental and Energy Research. There are doctoral programs in physics, engineering, and medicine. The School of Science and Engineering offers degree programs in biology, chemistry, computer science, mathematics, physics, civil engineering, electrical engineering, industrial and systems engineering, and mechanical engineering. A new program in chemical engineering is anticipated soon. Excellent opportunities exist for research and consulting with NASA, the Redstone Arsenal, and high-technology industries in Huntsville.

Candidates should have an earned doctorate in science or engineering, sound credentials as a teacher and scholar, evidence of administrative ability, and experience in securing externally funded research.

Current academic credentials and a list of references should be submitted by 15 March 1980 to: **Dr. Elmer E. Anderson, Vice President for Academic Affairs, The University of Alabama in Huntsville, P.O. Box 1247, Huntsville, Ala. 35807.**

*Equal Opportunity in Education and Employment*

### SCIENTIFIC DIRECTOR FOR BLOOD CENTER

Ph.D. with 5 years of postdoctoral experience in research and laboratory management. Must have background knowledge of blood banking. Will be responsible for establishing new procedures and coordinating research projects with clinical departments. Opportunity for participating in ongoing research and pursuing own initiatives. Academic appointment commensurate with qualifications. Send curriculum vitae to: **Tibor J. Greenwalt, M.D., Director, The Paul I. Hoxworth Blood Center of the University of Cincinnati, 3231 Burnet Avenue, Cincinnati, Ohio 45267.**

**DIRECTOR, LABORATORY OF ORNITHOLOGY.** Cornell University invites applications for the position of director of its Laboratory of Ornithology. The appointee is expected to be a senior ornithologist with a record of scholarly research, to possess demonstrated administrative capabilities, and to have the vision and ability to foster amateur participation in productive studies of ornithology. Send curriculum vitae and names of references by 1 March 1980 to: **Vice Provost, 303 Day Hall, Cornell University, Ithaca, N.Y. 14853.** *An Equal Opportunity/Affirmative Action Employer.*

**EXTENSION SPECIALIST—SOIL FERTILITY** University of Idaho, Department of Plant and Soil Sciences. Assistant or associate extension professor. Rank and salary commensurate with training and experience. Tenure-track position, 75 percent extension and 25 percent research, located at the Research and Extension Center, Twin Falls, Idaho. Ph.D. in soils with emphasis in soil fertility required. The position deals with soil fertility in diversified irrigated and dryland crops in southern Idaho. For further information and application forms, write or call: **Dr. H. S. Fenwick, Chairman, Screening Committee, Extension Soil Fertility Position, Department of Plant and Soil Sciences, University of Idaho, Moscow, Idaho 83843.** Telephone: 208-885-6319. Closing date for receipt of application forms, transcripts, and at least three letters of reference is 1 March 1980.

### KING FAISAL UNIVERSITY COLLEGE OF MEDICINE DAMMAN, SAUDI ARABIA FACULTY POSITIONS OPEN 1980-1981

The expanding College of Medicine, now in its sixth year, is accepting applications from qualified men and women for the 1980-1981 academic year in:

<b>CHEMISTRY</b>	<b>PATHOLOGY</b>
<b>BIOLOGY</b>	<b>EPIDEMIOLOGY</b>
<b>PHYSICS</b>	<b>MICROBIOLOGY</b>
<b>BIOCHEMISTRY</b>	<b>PARASITOLOGY</b>
<b>ANATOMY</b>	<b>PHARMACOLOGY</b>
<b>PHYSIOLOGY</b>	<b>COMMUNITY MEDICINE</b>

Doctorate or equivalent degree required. Language of instruction is English. Interviews to be held in London, Houston, and Ottawa during February 1980.

Salaries are highly competitive and negotiable; comparable to other Saudi universities.

Benefits include free furnished housing, educational allowances, air tickets to and from Saudi Arabia once each year for a family of four, 60-day paid vacation, and liberal overweight allowance. No Saudi income tax.

Send curriculum vitae with current telephone number and the names and addresses of three references to:

**Dr. Tawfig Tamimi**  
Dean, College of Medicine  
King Faisal University  
c/o Saudi Arabian  
Educational Mission  
2221 West Loop South  
Houston, Texas 77027  
OR  
c/o P.O. Box 2  
Sunbury-on-Thames  
Middlesex TW16 5JP England

**HARVARD UNIVERSITY GRADUATE SCHOOL OF EDUCATION**—The Program in Administration, Planning and Social Policy has two faculty openings for September 1980. We seek faculty members whose teaching and research interests lie in one or more of the following areas: (i) economic analysis, with particular emphasis on educational and public finance; (ii) the functioning, role, and management of community colleges; (iii) legal perspectives on educational management and policy; and (iv) organizational and management theory, with particular emphasis on personnel administration in education. The positions will be at the assistant/associate professor level (other nontenured ranks possible), with normal initial terms of 3 to 5 years. One of the positions will include participation in the school's Programs in Professional Education, such as the Institute of Educational Management and the Management of Lifelong Education. Doctorate or equivalent and evidence of teaching and research experience are required. Send curriculum vitae, three references, and application letter by 15 February 1980 to: **Professor Patricia Albjerg Graham, Chairperson, Search Committee, Harvard Graduate School of Education, 13 Appian Way, Cambridge, Mass. 02138.** *An Affirmative Action/Equal Opportunity Employer.*



## POSITIONS OPEN

### UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE DEPARTMENT OF PATHOLOGY

Applications are invited for position of Director of Clinical Laboratories at the Hospital of the University of Pennsylvania. Applicants must be Board-certified in clinical pathology (or have comparable experience) and have academic credentials suitable for a tenured appointment as associate professor or professor of pathology.

Applications, including curriculum vitae and four references, should be sent to:

**Dr. Arnold J. Rawson, Acting Chairman**  
Department of Pathology  
University of Pennsylvania School of Medicine  
Philadelphia, Pa. 19104

*Equal Opportunity/Affirmative Action Employer*

### FACULTY POSITION IN BIOLOGY

Southwestern University seeks qualified applicants for a full-time opening in the biology faculty beginning fall 1980. The person appointed will assume the department chairmanship beginning with the second year of his/her appointment. Applicants must have Ph.D. and sufficient teaching and other experience to assume leadership of the department; strong training in physiology and comparative anatomy; and other interests compatible with participation in an undergraduate liberal arts program. Appointment at the assistant or associate professor level. Closing date for applications is 15 February 1980. Send inquiries and résumés to: **G. Benjamin Oliver, Dean, Southwestern University, Georgetown, Texas 78626.** *An Equal Opportunity/Affirmative Action Employer.*

**TWO FACULTY POSITIONS.** The Department of Chemistry, Illinois Wesleyan University, is seeking applicants for two tenure-track positions. The area of specialty is open for both positions, excluding physical chemistry. The first position is for **DEPARTMENT HEAD**, and is expected to be made at the associate professor rank. Duties include administering a liberal arts college department, teaching, and promoting undergraduate research activities. The second appointment will be made at the **INSTRUCTOR/ASSISTANT PROFESSOR** level. Excellence in teaching and a commitment to research are requirements for both positions. *Applications from women and minority candidates are particularly welcome.* Send curriculum vitae and three letters of reference to: **Roger Schnaitter, Director of Natural Science, Illinois Wesleyan University, Bloomington, Illinois 61701.** The closing date for applications is 21 February 1980. *Illinois Wesleyan University is an Equal Opportunity Employer.*

### FACULTY POSITIONS AVAILABLE

Cornell University's School of Electrical Engineering is seeking outstanding candidates for senior or junior (tenure-track) faculty positions in one or more of the following areas: computer engineering, including VLSI; digital signal processing; quantum electronics; theoretical plasma physics. Candidates will be expected to participate in teaching and research. Doctorate or experience at equivalent level of performance required. Send résumé to:

**Director**  
School of Electrical Engineering  
226 Phillips Hall  
Cornell University  
Ithaca, New York 14853

*Cornell University is an Equal Opportunity/Affirmative Action Employer.*

### HYDROGEOLOGIST

**Department of Geological Sciences  
The University of Texas at Austin**

A tenured or tenure-track faculty position is open in hydrogeology, effective September 1980. Responsibilities will include graduate and undergraduate courses in hydrogeology and related subjects and development of graduate research programs.

Applicants for this position must have completed all requirements for the Ph.D. degree at the time of employment. Salary and appointment level will be commensurate with experience. Please send complete résumé and statement of research interests and planned research projects to:

**Dr. Robert E. Boyer, Chairman**  
Department of Geological Sciences  
The University of Texas at Austin  
P.O. Box 7909  
Austin, Texas 78712

*Equal Opportunity/Affirmative Action Employer, M/F*

## POSITIONS OPEN

**Tenure-track FACULTY POSITION** for analytical chemist with clinical background, to start fall 1980. Assistant or associate professor. Ph.D. required. Teaching, research, and administrative experience desirable, but not required. Duties include teaching analytical and clinical chemistry, research, and administration of a B.S. clinical chemistry program. Send curriculum vitae, transcript(s), and three letters of reference by 1 March to: **J. D. Hostettler, Analytical Search Committee, University of Colorado at Colorado Springs, Colorado Springs, Colo. 80907.** *Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION IN IMMUNOLOGY

A position as assistant professor is available in the Department of Microbiology and Immunology at the University of Washington. The position involves research and testing, including medical student education in the regional Medical School (WAMI) program. Applicants with experience and interest in immunology related to infectious diseases are particularly sought. Applications should include full curriculum vitae and names of three referees, and must be received prior to 15 February. Apply to:

**Dr. Ingegerd Hellström**  
Search Committee Chairperson  
Fred Hutchinson Cancer Research Center, ZD-08  
1124 Columbia  
Seattle, Washington 98104

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

**FACULTY POSITIONS.** The Department of Chemistry, Rochester Institute of Technology, has a total of three openings with preferences in the following fields: analytical chemistry, graphic arts chemistry, and chemical technology (director of the program). Strong candidates with expertise in polymer or biochemistry will also be considered. Successful applicants will be expected to teach undergraduate and graduate (M.S.) courses as well as maintain an ongoing research program in their respective fields. Academic rank and salary will be determined on the basis of prior experience. Applications, including résumés, a statement of teaching and research interests, and three letters of recommendation, should be sent prior to 22 February 1980 to: **Dr. Earl Krakower, Head, Chemistry Department, Rochester Institute of Technology, Rochester, New York 14623.** *An Affirmative Action/Equal Opportunity Employer.*

### GENETIC ENGINEERING

We are seeking applications for a position in our biological research group located in our recently constructed laboratories in Richmond, Calif. The principal responsibility will be to apply the techniques of recombinant DNA technology to develop new biological systems/processes and to broaden our existing programs. Applicants should have a Ph.D. or equivalent experience in molecular biology, genetics, or related fields and must have research experience with cloning techniques.

We offer a competitive salary and fringe benefits package in addition to an attractive San Francisco Bay area location. Applicants should send a résumé, statement of research interests and experience, and the names of three references to:

**James P. Baker**  
Personnel Manager  
Stauffer Chemical Company  
de Guigne Technical Center  
1200 South 47 Street  
Richmond, Calif. 94804

*Stauffer is an Affirmative Action/Equal Opportunity Employer.*

**HEAD, Department of Physiology and Biophysics  
University of Illinois at the Medical Center  
School of Basic Medical Sciences  
Chicago, Illinois**

Applications and nominations are invited for the headship of the Department of Physiology and Biophysics. The successful candidate will be responsible for the leadership of an active, multi-disciplinary department with a strong research mission. Candidates must have an outstanding record of accomplishment in research as well as a demonstrated commitment to medical and graduate education. Letters of application and/or curriculum vitae should be sent to: **Dr. M. D. Maines, Chairperson of Search Committee, Department of Pharmacology, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.** To receive full consideration, applications should be received by 15 March 1980.

*An Affirmative Action/Equal Opportunity Employer*

## POSITIONS OPEN

**GENETICIST.** The Department of Biological Sciences at the State University of New York at Binghamton has an opening for a geneticist (assistant professor) to begin September 1980. Salary is open and will be commensurate with credentials. Requirements: Ph.D. and active research program in plant or mammalian somatic systems, recombinant DNA systems, virology, regulation, biochemical genetics, or other areas of modern genetics. Teaching will be at the undergraduate and/or graduate levels to integrate the expertise of the applicant with our developing teaching programs. The department is housed in a modern building with excellent equipment and facilities. This campus is one of the four University Centers of the State University of New York and is located in a scenic area of upstate New York, 185 miles northwest of New York City. The department now has 28 full-time faculty.

Send curriculum vitae; three letters of reference; reprints, pre-prints, and succinct summary of research program projected; statement of teaching interests; and home and business telephone numbers to: **Dr. August Mueller, Genetics Search Committee, Department of Biological Sciences, State University of New York at Binghamton, Binghamton, N.Y. 13901.**

*The State University of New York at Binghamton is an Equal Opportunity/Affirmative Action Employer.*

### GENETICIST

Assistant professor (tenure-track) to join the Department of Biology and the Centre for Human Genetics at McGill University. Preference given to candidates having expertise in the new genetics (recombinant DNA cloning, molecular mapping, transformation, and so forth) as applied to human and other mammalian systems. Duties will include teaching in undergraduate and graduate programs in genetics. Send curriculum vitae, statement of research interests and goals, and arrange for three letters of reference to be sent to: **Dr. F. H. Rigler, Chairman, Department of Biology, McGill University, 1205 Docteur Penfield Avenue, Montreal, Quebec, Canada H3A 1B1.** Deadline for receipt of applications is 1 March 1980.

### LIPOPROTEIN- GASTROINTESTINAL PHYSIOLOGIST

A tenure-track position at the rank of assistant professor is available in the Department of Physiology and Biophysics of the University of Tennessee Center for the Health Sciences. Candidates should have a Ph.D. or M.D. degree, a minimum of 2 years of postdoctoral training, and a strong research background in gastrointestinal physiology. We are primarily interested in individuals whose research is in the area of lipoprotein metabolism. Demonstrated ability to initiate a strong, independent research program and to engage in the teaching activities of the department is expected. Opportunity is available for interaction with an established lipoprotein research group. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. Leonard Share, Chairman, Department of Physiology and Biophysics, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

**UNIVERSITY OF MIAMI**  
Rosenstiel School of Marine and Atmospheric Science  
4600 Rickenbacker Causeway  
Miami, Florida 33149

### MARINE SCIENCE LIBRARIAN

Head librarian with rank of assistant/associate professor (tenure-earning track). Applicants should have M.L.S. degree or equivalent and at least 2 years of experience in a scientific or technical library, preferably in the marine sciences. A degree in the natural or physical sciences would be preferred. Experience with computerized bibliographical retrieval systems an advantage.

Responsibilities: administer a rapidly growing collection of 30,000 volumes covering all fields of marine and atmospheric science, and a staff of six.

Salary competitive. Closing date: 1 April 1980.

Send detailed résumé to:

**Dr. David E. Fisher**  
Chairman, Search Committee  
Division of Marine Geology and Geophysics  
University of Miami  
Rosenstiel School of Marine and Atmospheric Science  
4600 Rickenbacker Causeway  
Miami, Florida 33149  
Telephone: 305-350-7394

*An Equal Opportunity/Affirmative Action Employer  
A private, independent, international university*

**NATIONAL SCIENCE FOUNDATION**  
Policy Analyst—Fossil Fuels

The Environment Energy and Resources Group of the Division of Policy Research and Analysis at the National Science Foundation (NSF) has an opening for a policy analyst, EC-12 (equivalent to GS-12), on a permanent or a 2- to 3-year (rotational) assignment. Salary range: \$24,703 to \$32,110 per annum, depending on experience. The successful candidate will join a multidisciplinary policy-research group assessing issues relating to environment, energy and resources, and their national science and technology policy implications.

The group carries out research on selected topics in its areas of expertise, prepares research agendas, evaluates research proposals submitted for NSF funding, manages funded projects, and evaluates project reports. The group also responds to requests for analysis of policy issues from Executive Branch agencies, such as the President's Office of Science and Technology Policy.

Applicant should have a range of policy related experience in fossil fuel technologies, such as coal liquefaction and gasification, oil shale development and magnetohydrodynamics; in the environmental effects of fossil fuel conversion and combustion; and have knowledge of resource issues relating to fossil fuels. Applicant should hold a Ph.D. in the physical sciences or another relevant field but equivalent experience may be substituted. At least 1 year of experience beyond Ph.D. or equivalent is desired.

Applications accepted until position is filled. Selection should be made by April 1980 with a starting date around June 1980. For information, telephone: 202-632-4091. To apply, send a full biographical summary or form SF-171, specifying announcement Number EX 80-8, to: NSF, Division of Personnel and Management, Personnel Management Branch, 1800 G Street, NW, attention: Odessa G. White. For information on application procedures, telephone: 202-632-4106. An Equal Opportunity Employer.

**THE CHINESE UNIVERSITY  
OF HONG KONG**

**Faculty of Medicine**

Applications are invited for the following post:

Senior Lectureship in Biochemistry tenable at this new medical school with an annual student intake of 100.

**Qualifications**

Applicants should possess relevant academic qualifications, and have undergraduate teaching and research experience, preferably experience in teaching medical students. A medical qualification will be an advantage.

**Date of Assumption of Duty**

The appointee is expected to assume duty on January 1, 1981 or as soon as possible thereafter to participate in planning an integrated curriculum and supervise installation of departmental facilities. Teaching will commence in the fall term of 1981.

**Conditions of Service**

Salary: HK\$105,540-141,780 per annum by 8 increments. (Exchange rate approximately US\$1 = HK\$5) Terms of service include long leave, superannuation benefits (University 15%, appointee 5%), medical and housing benefits, education allowance for children and, for those employed on overseas terms, air passages as well.

**Application procedure**

Further information and application forms are obtainable from the Personnel Section, The Chinese University of Hong Kong, Shatin, N.T. Closing date of application is March 31, 1980. Please mark 'Application' on cover.



## Aquatic Resources

# Consulting Opportunities

**Montreal Engineering Company Limited**, an international multi-disciplinary consulting firm, invites applications for the following senior positions in the Resources Department:

## Aquatic Ecologist

... with a broad background in ecology, and field research experience (based in Calgary, Alberta).

## Fisheries Biologist

... with experience in marine and anadromous fisheries research (based in Vancouver, British Columbia).

Applicants for either position should possess a M.Sc. or Ph.D. degree with both basic and applied research experience, and the ability to apply ecological principles in the management of aquatic resources. Successful candidates will be expected to pursue their own research interests in addition to participating in the environmental activities of the department, which currently include reclamation research, environmental monitoring, impact assessment, and waste management.

Interested applicants should submit their curriculum vitae to the **Personnel Department**, care of the address below.

## MONTREAL ENGINEERING COMPANY, LIMITED

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## POSITIONS OPEN

### GEOPHYSICIST/SEISMOLOGIST

Expected tenure-track slot for Ph.D. seismologist. Rank and salary open depending upon qualifications and experience. Seismological research facilities are available at Weston Observatory. Contact: J. Christopher Hepburn, Chairman, Department of Geology and Geophysics, Boston College, Chestnut Hill, Mass. 02167; telephone: 617-969-0100. Boston College is an Affirmative Action/Equal Opportunity Employer.

**GROSS ANATOMISTS**—Two temporary faculty positions are available for experienced gross anatomists to participate in teaching a dissection-oriented course for medical and dental students in 1980-1981 and 1981-1982. The course runs from the last week of September through January. **Opportunities for collaborative research with departmental faculty in neuroscience or cell biology available.** Applications are accepted for part-year, 1-year, or 2-year appointments. Salary and rank commensurate with previous experience. Send curriculum vitae and the names of three references to:

Dr. J. J. Pysh, Acting Chairman  
Department of Anatomy  
Northwestern University  
303 East Chicago Avenue  
Chicago, Illinois 60611

An Equal Opportunity/Affirmative Action Employer

### INDUSTRIAL MICROBIOLOGISTS

Two entry-level positions that require a B.S. or M.S. degree in microbiology are available immediately. The ideal candidate for these positions should possess a strong fundamental background in microbiology and its techniques. Emphasis on microbial metabolism, fermentation, physiology, biochemistry and/or genetics would be a requirement. These positions involve microbial screening and identification. Isolation, identification, and development of microbial products is also involved. Salary range is \$1250 to \$1585 per month, dependent on qualifications. Please send your résumé to:

Manager, Personnel Services/Labor Relations  
CPC International, Inc.  
Moffett Technical Center  
Argo, Ill. 60501

### NATIONAL SCIENCE FOUNDATION LABOR ECONOMIST

The Division of Science Resources Studies of the National Science Foundation (NSF) is seeking nominations for a senior labor economist under the provisions of the Intergovernmental Personnel Act of 1970. Duties include the modeling and simulation of the supply and utilization of U.S. scientific and technical personnel, analyses of the factors influencing the supply and utilization of scientific and technical personnel, and consulting with division staff on concepts and methods of supply and utilization analyses and data collection strategies.

Applicants should hold a Ph.D. in economics, statistics, or related fields, and have demonstrated experience in econometrics, modeling of labor market phenomena, and the ability to work with large social science data bases.

The assignment is for 1 to 2 years, starting between February and June 1980. The individual selected for assignment will remain an employee of the nominating organization which may be reimbursed by NSF for a portion of salary and other costs related to the assignment.

Letters of nomination and curriculum vitae should be forwarded by the applicant's institution (not by the individual) to:

Alan Fechter, Head  
Scientific and Technical Personnel Studies Section  
National Science Foundation  
1800 G Street, NW  
Washington, D.C. 20550

**MAMMALIAN PHYSIOLOGISTS AND BIOPHYSICISTS.** Positions open for the 1980-1981 academic year in the areas of cardiovascular physiology, renal physiology, gastrointestinal physiology, endocrinology, reproductive physiology, and respiratory physiology at King Faisal University College of Medicine in Dammam, Saudi Arabia. Ph.D. and/or M.D. and at least 2 years of teaching experience. Salaries are highly competitive and benefits are excellent. Language of instruction is English. Send complete curriculum vitae with telephone numbers and three references to: Dr. Tawfig Tamimi, Dean, College of Medicine, King Faisal University, c/o Saudi Arabian Educational Mission, 2221 West Loop South, Houston, Texas 77027.

## POSITIONS OPEN

**IMMUNOPARASITOLOGIST**—Associate professorship. Involves teaching, research and service. D.V.M. and/or Ph.D. with experience in hemotropic disease research. Position open 1 June 1980; deadline for applications: 29 February 1980. Apply to: Dr. C. A. Carson, Department of Veterinary Microbiology, College of Veterinary Medicine, University of Missouri, Columbia, Mo. 65211. The University of Missouri is an Equal Opportunity Employer.

The Department of Biochemistry at Case Western Reserve University, Cleveland, Ohio, invites applications for the position of **INSTRUCTOR IN BIOCHEMISTRY**. The candidate should have experience in enzymology and protein chemistry and a strong commitment to teaching and research. Experience with techniques of enzyme subunit fractionation, peptide isolation, and protein sequence determination are considered essential. Salary will be commensurate with qualifications and will be derived in part from research funding.

Applicants should send curriculum vitae, bibliography, and names and addresses of three references to:

Harland Wood  
Department of Biochemistry  
Case Western Reserve University  
2119 Abington  
Cleveland, Ohio 44106

### YALE UNIVERSITY DEPARTMENT OF GEOLOGY AND GEOPHYSICS

Applications are solicited for a **junior faculty position in structural geology and tectonics** to begin in the academic year 1980-1981. Areas of interest to the department include field-oriented, regional studies and the application of laboratory and theoretical methods to structural problems.

Yale University is an Equal Opportunity Employer and encourages women and members of minority groups to compete for this position. Curriculum vitae and the names of three or more referees should be sent by 1 March 1980 to: Robert B. Gordon, Chairman, Department of Geology and Geophysics, Box 2161 Yale Station, New Haven, Conn. 06520.

**LABORATORY DIRECTOR.** Ph.D. wanted immediately to co-direct the Transfusion and Hematology Laboratories of a Children's Hospital. Background in immunology, blood banking, or immunohematology desirable. Research and teaching opportunity (affiliation with State University of New York). Salary commensurate with qualifications. Submit curriculum vitae and three references to: Dr. J. Humbert, Head, Hematology Division, Children's Hospital of Buffalo, Buffalo, N.Y. 14222. An Equal Opportunity/Affirmative Action Employer.

### LECTURER IN BIOLOGY

Department of Biology anticipates possibly one or more temporary or part-time teaching positions in undergraduate biology for one or more quarters and is establishing a roster of qualified and interested candidates. Subject areas are introductory biology, zoology, botany, human anatomy-physiology, ecology, genetics, cell physiology, and entomology. Department offers B.S., B.A., and M.S. degrees and concentrations in ecology and marine biology. Preference will be given to persons with Ph.D. and demonstrated research in specific area of biology. Send curriculum vitae with names of three referees to: Dr. J. R. P. Ross, Chair, Roster Committee, Department of Biology, Western Washington University, Bellingham, Wash. 98225 by 29 February 1980. Western Washington University is an Equal Opportunity/Affirmative Action Employer.

### FACULTY POSITION MECHANICAL ENGINEERING UNIVERSITY OF CALIFORNIA, IRVINE

Associate professor to full professor. Possible opening available in mechanical design beginning 1 July 1980. Doctorate in mechanical engineering required with research interests in design and the related areas of kinematics, computer-aided design, and numerical analysis. Professional status is desired as evidenced by the P.E. license or appropriate professional experience. Responsibilities include undergraduate and graduate teaching, directing undergraduate and graduate students, and conducting funded research.

Applications must be received by 3 March 1980. Send curriculum vitae to: Professor G. S. Samuelsen, School of Engineering, University of California, Irvine, Calif. 92717.

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## POSITIONS OPEN

**MEMBRANE BIOCHEMIST—PHYSIOLOGIST—Ph.D.** Temporary position for a recent graduate with interests in membrane structure and function. Investigation of transport proteins using photoaffinity labeling techniques. Salary: \$13,219. 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.

### MEMORIAL UNIVERSITY OF NEWFOUNDLAND DEPARTMENT OF GEOLOGY

Applications are invited for a faculty position in **METAMORPHIC PETROLOGY**, commencing 1 July 1980 or as soon as possible thereafter. Candidates must be strongly field-oriented and committed to establishing a research programme in Labrador. Teaching duties will include senior undergraduate and graduate level courses in petrographic, kinetic, and thermodynamic aspects of metamorphic petrology. Applications at any rank will be considered, but the successful applicant must hold the Ph.D. degree at the time of appointment.

Applications, which must include detailed curriculum vitae and the names and addresses of three referees, should be sent by 15 March 1980 to: Dr. D. Skevington, Head, Department of Geology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1B 3X5, telephone: 709-753-1200, extension 3142/3, from whom further particulars can be obtained.

**MOLECULAR GENETICIST, ASSISTANT PROFESSOR OF MICROBIOLOGY.** Tenure-track position, Ph.D. required, with postdoctoral experience preferred. The University of Tennessee/Knoxville wishes to appoint a person whose major research interest is the molecular genetics of prokaryotic or eukaryotic organisms. Experience in recombinant DNA technology is desirable. Applicants should be committed to quality instruction at the undergraduate and graduate levels and the development of an active research program. Applications should be received by 15 March 1980 and include a résumé and three letters of reference. Send information to: Dr. Richard J. Courtney, Chairman, Search Committee, Department of Microbiology, University of Tennessee, Knoxville, Tenn. 37916. University of Tennessee is an Equal Opportunity/Affirmative Action Employer.

### University of Alberta Department of Genetics MOLECULAR GENETICIST

The Department of Genetics, University of Alberta, invites applications for a tenure-track appointment at the assistant professor level. The successful candidate will be expected to develop an active research programme using molecular approaches to genetic problems in either eukaryotes or prokaryotes. The appointee will participate in undergraduate and graduate teaching. Applicants are asked to submit curriculum vitae, publication list, and the names and addresses of three referees before 15 March 1980. In addition, applicants are asked to arrange for these referees to send confidential assessments to: R. C. von Borstel, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada T6G 2E9. The University of Alberta is an Equal Opportunity Employer.

**NEUROPHYSIOLOGIST/NEUROANATOMIST**—A research position is available in the Department of Anatomy for a recent Ph.D. with experience in neurobiology. Experiments will include intracellular injection of HRP in nerve cells and afferent fibers in the cat spinal cord. Opportunities are available to learn and to use standard neuroanatomical techniques at the light and electron microscopic levels. Please send curriculum vitae to: David Egger, Department of Anatomy, 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.

**OCEANOGRAPHY AND OCEAN ENGINEERING FACULTY POSITIONS** available in expanding multidisciplinary undergraduate and graduate (M.S., Ph.D.) programs. Expertise in at least two areas within one or more of the following categories desirable: (i) remote sensing—meteorology—physical oceanography; (ii) fisheries—coastal resources management—biological oceanography. Ph.D. required. Contact: N. W. O'Hara, Head, Department of Oceanography and Ocean Engineering, Florida Institute of Technology, Melbourne, Fla. 32901. Equal Opportunity Employer.

## ENZYME REGULATION

Syntex, a research oriented, international pharmaceutical company, with headquarters on the SAN FRANCISCO PENINSULA, will be opening a new research facility in mid-1981. This group will be located in Mississauga, Ontario, close to metropolitan Toronto, and will be concerned with basic chemical and biochemical approaches to the regulation of enzyme action. Initially, you will work in Palo Alto.

Applications for the position of Research Director of this group are now being solicited. Applicants should have an established scientific reputation with at least five years of postdoctoral training and a proven ability to conduct meaningful research on transition state analogs, suicide inhibitors, etc.

This is an outstanding opportunity for a suitable individual and provides excellent benefits and working conditions. A resume including salary history should be submitted to Ralph Torrence, Professional Employment, Syntex, 3401 Hillview Avenue, Palo Alto, CA 94304. We are an equal opportunity employer.

**SYNTEX**

## CLINICAL INVESTIGATION ASSISTANT

Newly-created position in a growing ethical pharmaceutical company for Dr. P.H. or life-science PhD. Will assist with continuing clinical research activities for marketed drugs and dissemination of medical information for company products. Will complement monitoring work of Clinical Investigation physicians, reporting to the group Director. Ongoing assignments will include protocol development, inter-departmental coordination for drug-study initiation, continuing administration of new indication/dosage studies, wide spectrum communication with key personnel in the health care professions, and other related tasks. Verifiable health care knowledge and excellent oral and written communication skills essential. Some field-related experience in addition to academic achievement preferred. Position open for immediate staffing.

We are located in historic Ridgefield, Conn. next to Westchester County, N.Y. Outstanding compensation package includes competitive salary, major medical, dental and life insurance, investment savings plan, company paid pension, relocation assistance, educational reimbursement and a unique vacation plan.

Please send resume with salary history and requirements in complete confidence to: Stuart E. Rapp, Employment Manager.



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## SOLAR ENERGY RESEARCH INSTITUTE

### Colorado Opportunities

The SOLAR ENERGY RESEARCH INSTITUTE near Denver in the foothills of the Rockies has openings in the Analysis Division.

#### Principal Environmental Scientist Environmental Assessment Branch

- Will assume leadership and/or coordination role for environmental research on all solar technologies within SERI. Environmental research will include local, regional, national and international impacts.

Ph.D. in ecology, biology, environmental studies or related field with 10 years relevant research experience or equivalent experience/education needed. Demonstrated management skill on large scale research projects required. Experience in solar energy desirable.

#### Staff Economist Economic Branch

- Will participate in economic research projects on solar energy including research design, execution and writing in conjunction with senior research staff.

Requires M.A. or M.S. in economics, agricultural economics, or related field plus 2-4 years applicable research experience or equivalent relevant experience and/or education. Solar energy research desired.

#### Engineer

##### Systems Analysis Branch

- Requires M.S. or B.S. in mechanical engineering, chemical engineering or related field with up to 4 years experience. Solar related experience desired.

Will perform systems analysis and evaluation of solar components and parametric system sensitivity studies. Will also perform technical evaluation of proposals and technical reports.

##### Aeromechanical Engineer/Cost Analyst Systems Analysis Branch

- Aeromechanical and costing experience preferred. Masters degree with 0-4 years experience or Bachelors with 2-4 years experience or equivalent.

Will assist in conceptualization of the cost estimating processes needed for development and production of advanced wind systems.

- Please send resumes including salary history and professional references (no phone calls) to:

Dept. R-ARA  
Personnel Services

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RESEARCH INSTITUTE**

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## POSITIONS OPEN

### PARKINSON'S DISEASE SCHOLAR

The National Parkinson Foundation, Inc., and the University of Miami School of Medicine invite nominations and applications for the position of **Parkinson's disease scholar**. This newly created position will provide a unique opportunity for the scholar to develop and direct a dynamic research program in basal ganglionic disease or a related area of neurobiology in the National Parkinson Foundation, an institute adjacent to, and affiliated with the Medical School. Funds are available to outfit substantial new research space and to provide significant and continuing research and salary support. An appropriate academic appointment would be arranged. Applicants should be basic scientists and/or academic physicians with distinguished records of research accomplishment and proven capacity to attract extramural funding. Nominations, applications and supporting material should be sent to: **Search Committee, The National Parkinson Foundation, Inc., 1501 Northwest 9 Avenue, Miami, Florida 33136. The National Parkinson Foundation is an Equal Opportunity Employer.**

Position open for a **PATHOLOGIST—DIRECTOR OF HEMATOLOGY LABORATORY** in the Department of Pathology, Northwestern University Medical School, and Northwestern Memorial Hospital, Chicago, Illinois. Full-time academic appointment; rank dependent on level of experience and scholarly development. An active research program obligatory. Send résumé to: **Dante G. Scarpelli, M.D., Ph.D., Professor and Chairman, Department of Pathology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. 60611. Equal Opportunity/Affirmative Action Employer**

The **DEPARTMENT OF PHARMACOLOGY** of Case Western Reserve School of Medicine invites applications for a faculty position. Candidates should have the M.D. or Ph.D. degree, postdoctoral research experience, and a record of productivity in original research. Salary and rank are negotiable and dependent on qualifications. Research interests should be in the molecular aspects of the action of chemical agents. Expertise in immunology, membrane function and/or molecular biology is preferred but not essential. The successful candidate will be expected to participate in graduate and medical school teaching and to maintain an excellent research program. Applicants should submit curriculum vitae, names of three references, and a short description of their research interests to: **Dr. Alan G. Goodridge, Department of Pharmacology, Case Western Reserve University, 2119 Abington Road, Cleveland, Ohio 44106. Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.**

### PHYSICIST, Ph.D./SENIOR ONCOLOGY CENTER

Excellent position available immediately. Expanding urban cancer center offers stimulating atmosphere, full benefit package, opportunity for professional growth.

Desire senior staff physicist for major radiation therapy facility. Primary responsibility for calibration and dosimetry of high energy x-rays and electrons produced by clinical linear accelerators.

Applicants must be knowledgeable in theoretical and experimental techniques regarding the interaction of radiation with matter. Familiarity with computerized data processing techniques essential. Position provides opportunity to develop research interests.

All inquiries will be processed in confidence and should contain compensation requirements. Please reply in writing only, with curriculum vitae, to:

**The Johns Hopkins Medical Institutions  
c/o David G. Grant, Director  
Radiation Oncology Physics  
600 North Wolfe Street  
Baltimore, Maryland 21205  
Equal Opportunity Employer**

### POSTDOCTORAL POSITION

Position available for individual interested in areas of gene structure and regulation or molecular mechanisms of site-specific recombination: previous experience with, or desire to learn, DNA cloning, nucleic acid biochemistry, genetics, or in vitro systems. Please send résumé with desired starting date and list of three references to: **Arthur Landy, Division of Biology and Medicine, Brown University, Providence, R.I. 02912. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**PHYSIOLOGY**—The Department of Physiology at the University of Massachusetts Medical School has an opening at the assistant professor level. Applicants should have at least 2 years of postdoctoral experience and demonstrated abilities in research and teaching. The successful applicant will be expected to develop an active independent research program in the area of physiology which complements those of other department members. He/she will also be expected to participate in the teaching of physiology to medical and graduate students. Candidates should submit curriculum vitae, current research interests and objectives, and three letters of reference to: **Dr. H. M. Goodman, Department of Physiology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, Mass. 01605. An Affirmative Action/Equal Opportunity Employer.**

Applications are invited for the 9- or 12-month **TENURE-TRACK POSITION** with a strong background in **microbiology or related biomedical science**. Doctoral degree and teaching experience are desirable. Rank and salary commensurate with qualifications and experiences. Duties are as follows:

- 1) Share with other members in teaching prep science and general biology,
- 2) Teach microbiology and related areas in cell biology,
- 3) Establish strong microbiology program,
- 4) Share with other members in developing research programs for the students in the Honor Program,
- 5) Develop instructional materials, and
- 6) Serve on college-wide committees.

Because of its mission of serving deaf students, individuals who already possess sign language skills or who are deaf (hearing-impaired) are encouraged to apply. Qualified individuals without these skills must attend an 8-week paid orientation program for training in sign language and fingerspelling.

Please submit résumé and names of three references by 15 March 1980 to:

**P.O. Box 138  
Gallaudet College  
7th Street and Florida Avenue, NE  
Washington, D.C. 20002**

*An Equal Opportunity/Affirmative Action Employer*

### POSITIONS OPEN—FALL 1980

**Higher Vertebrates.** Assistant professor. Tenure position. Teach mammalogy, histology, and assist with general education courses for nonscience majors.

**Biology—General Education.** Assistant professor. Temporary—up to 3-year appointment. Teach biological science general education courses plus a specialized course (open).

**Immunology—Genetics.** Assistant professor of biology. Temporary—up to 3-year appointment. Teach immunology, physiology, genetics, and general education biology courses.

**Natural Resources Management.** Assistant professor. Temporary—up to 3-year appointment. Instruct in areas of natural resource management and service courses to nonscience majors.

The applicant should be at the Ph.D. level with outstanding record for teaching undergraduates and with a commitment for continuing in a research program. Interested applicants should submit a résumé, undergraduate and graduate transcripts, and have three letters of recommendation sent to:

**Dean A. Rosebery, Head  
Science Division  
Northeast Missouri State University  
Kirksville, Mo. 63501**

*The University is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORALS IN ECOLOGY AT THE ECOSYSTEMS CENTER

**MARINE BIOLOGICAL LABORATORY (MBL)**

Two postdoctoral appointments will be open during spring 1980:

- 1) For work with J. E. Hobbie and associates on the role of microbes in the decomposition processes in a salt marsh (June), and
- 2) For work with G. M. Woodwell and associates on biotic influences on world carbon budget with special emphasis on terrestrial plant communities.

Write, enclosing a résumé and names of three referees, to:

**M. L. Montgomery  
The Ecosystems Center—MBL  
Woods Hole, Mass. 02543**

## POSITIONS OPEN

### THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS

#### Postdoctoral Associate in Molecular Biology and Biochemical Genetics

Applications are invited for postdoctoral positions available immediately in the biochemistry, molecular biology, and genetics of mitochondrial biogenesis in yeast. Candidates should have some experience in molecular biology and nucleic acid techniques. Applications with curriculum vitae and the names of two references should be sent to: **Dr. R. A. Butow, Department of Biochemistry, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

*An Equal Opportunity/Affirmative Action Employer*

### POSTDOCTORAL ASSOCIATE

Two positions are available to work on: (i) the regulation of tubulin gene expression during cilia regeneration in *Tetrahymena* (see Guttman and Gorovsky, Cell 17:307), or (ii) the relationships between histones, chromatin structure and gene activity (see Giri and Gorovsky, Nucleic Acids Research, December 1979; and Allis *et al.* Proc. Natl. Acad. Sci. USA 76:4857). One position available immediately, the other available 1 February 1980. Applicants should send curriculum vitae and have two letters of recommendation sent to: **Dr. Martin A. Gorovsky, Department of Biology, University of Rochester, Rochester, New York 14627.**

*The University of Rochester is an Affirmative Action/Equal Opportunity Educational Institution.*

**POSTDOCTORAL POSITION**—Research on the effects of ethanol or mammalian hepatic inflammation and fibrosis including studies of protein and collagen metabolism. Position is available immediately for 2 to 3 years. Please send curriculum vitae, statement of research interest, and three letters of recommendation to: **Charles S. Lieber, M.D., Alcoholism Research and Treatment Center, BRONX VA HOSPITAL, 130 West Kingsbridge Road, New York, N.Y. 10468. An Equal Opportunity Employer.**

### POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY

Available immediately to study regulation of eukaryotic gene transcription using in vitro system. Starting salary negotiable (\$12,000 up). Send curriculum vitae and three letters of recommendation to: **Dr. Guang-jer Wu, Department of Microbiology, Emory University, Atlanta, Ga. 30322. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** for biochemist with training in membrane transport of small molecules or in brain lipids. The position is available immediately for 1 year with possibilities of renewal for second and third years. Research is aimed at elucidating the role of lipids in synaptosomal amino acid transport. Salary will be approximately \$13,000 per year. Please send curriculum vitae and references to: **Dr. E. Raghupathy, University of California, Brain-Behavior Research Center, Sonoma State Hospital, Eldridge, Calif. 95431, before 1 March 1980. University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

**POSTDOCTORAL POSITION** available to study the distribution of (Na<sup>+</sup>-K<sup>+</sup>)-ATPase in the central nervous system and in neuronal tissue culture, with particular emphasis on development and differentiation of neural tissue. Research will involve application of techniques in enzyme purification, immunocytochemistry, and immunocytochemistry at the EM level. Background in immunocytochemistry/cytochemistry with interest in neurosciences preferred. Send curriculum vitae and three letters of recommendation to: **Dr. George Siegel, Neuroscience Building, or Dr. Stephen Ernst, Anatomy Department, University of Michigan Medical Center, Ann Arbor, Michigan 48109. The University of Michigan is an Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE.** Position available for studies on isolation and characterization of cell membrane immunoglobulin receptors that mediate maternal-fetal transfer of immunity. Ph.D. in biochemistry or related discipline required. Salary to \$17,000. Send curriculum vitae and three references to: **Dr. Max Schlamowitz, Chief, Section of Immunochemistry and Immunology, Department of Biochemistry, The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.**

*Affirmative Action/Equal Opportunity Employer*



**UNIVERSITY OF LONDON  
KING'S COLLEGE**

**Developmental  
Neurobiology**

Applications are invited for an MRC Postdoctoral Research Assistant to work on the development of limb innervation in the chick embryo. Experience in electrophysiology and/or developmental biology would be an advantage.

The post will be available for three years, salary in the range £4333-4910 per annum plus £740 per annum London Allowance.

Applications, together with c.v. and names of two referees to Dr J M Lewis, Dept of Anatomy, King's College, Strand, London WC2R 2LS as soon as possible.

**MEDICAL OFFICER  
HEALTH SCIENTIST  
ADMINISTRATOR**

**Extramural Program**

The National Institute of Environmental Health Sciences, National Institutes of Health located in Research Triangle Park, North Carolina, is seeking applicants for the position of Program Director for a section of the Extramural Program involving training, research, program project, center and other types of grants. The position is at the GS-13 or GS-14 level (\$29,375 to \$45,126) depending upon qualifications. This is a career Civil Service position, requiring U.S. citizenship. Individuals currently serving in the Public Health Service Commission Corps are also invited to apply.

The Extramural Program has responsibility for administration of all grants awarded by the Institute. The successful applicant will participate with the Associate Director and other staff members in funding decisions on new and continuing grant applications; program planning and implementation; liaison with grantees, prospective grantees, NIH components, various advisory groups, and other federal agencies; and in the general management of the grants program.

The applicant should have training to the M.D. or Ph.D. level (or equivalent) in sciences related to environmental health and three to ten years experience in biomedical research and administration. Experience in administration of research grants or contracts is preferred over other administrative experience.

All candidates should submit a completed Standard Form 171 along with a separate Curriculum Vitae and Bibliography by February 15, 1980, to: Elena D'Orazio, Personnel Office, National Institute of Environmental Health Sciences, P.O. Box 12233, Research Triangle Park, NC 27709. Forms are available at Federal Job Information Centers and at Federal agency personnel offices.

This position has been identified for inclusion in the Merit Pay System. The successful applicant may be required to serve a one year probationary period. An Equal Opportunity Employer.

**NATIONAL INSTITUTES OF HEALTH**

**POSTDOCTORAL FELLOWSHIPS  
IN VIRAL ONCOLOGY  
AND RELATED DISCIPLINES**

A number of postdoctoral fellowships are available for research in the fields of viral oncology and related disciplines in several departments at the University of Wisconsin-Madison, including the Departments of Bacteriology, Biochemistry, Biophysics, Genetics, Human Oncology, Medical Microbiology, Oncology, Pharmacology, and Physiological Chemistry. These National Research Service Fellowships pay \$10,000 to \$14,000 per year, depending on experience.

The training program is under the direction of Howard M. Temin, with Paul Kaesberg as co-director. Other trainers include: John Anderegg\*, Laurence A. Ball\*, Fred Blattner\*, Ernest Borden\*, Richard Burgess, James Dahlberg\*, Julian Davies\*, Harry Hinze, Martha Howe\*, Henry Kubinski, William McClain\*, Janet Mertz\*, June Osborn, William Reznikoff, Rex Risser, Roland Rueckert, Bill Sugden, Waclaw Szybalski\*, Duard Walker\*, Bernard Weisblum, and Robert Wells\*.

Training consists of research experience in the laboratory of one trainer, as determined by available openings (\* indicates opening for 1980-1981), and regular contact with the entire group at twice-weekly seminars.

Postdoctoral candidates who are U.S. citizens or permanent residents are invited to send complete curriculum vitae with detailed research experience, background, field of interest, date available, and names of three references to:

**Helen Iverson  
McArdle Laboratory for Cancer Research  
University of Wisconsin  
450 North Randall Avenue  
Madison, Wisconsin 53706**

*The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer and does not discriminate on the basis of sex or race with regard to either admissions or employment in the education programs or activities which it operates.*

**New Professional Position in Key Technical Function  
of a Growing Ethical Pharmaceutical Company**

**Microbiologist**

We are an American company with established European affiliation, developing full Research, Production and Headquarters operations in Southwestern Connecticut. We are seeking a talented industrial laboratory scientist, oriented toward the practical applications of Microbiology. These include testing and evaluation of components, in-process materials, drug products, equipment and compressed air, microbiological stability testing and process water monitoring and control. Qualified candidates should have:

- PhD/MS in Microbiology with some demonstrated industrial laboratory experience. BS level would require greater direct experience
- Knowledge of compendial and CGMP microbiological requirements for drug products
- Supervisory experience and excellent communication skills would be strong advantages

Position reports to the Manager, Quality Control Laboratories. We are located in historic Ridgefield, Conn., next to Westchester County, N.Y. Outstanding compensation package includes competitive salary, major medical, dental and life insurance, investment savings plan, company paid pension, relocation assistance, educational reimbursement and a unique vacation plan.

Please send resume with salary history and requirements in complete confidence to: Stuart E. Rapp, Employment Manager.



**Boehringer  
Ingelheim**

**90 East Ridge, PO Box 368, Ridgefield, CT 06877**

An Equal Opportunity Employer M/F

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** available immediately to work on neurophysiology and reproduction in *Aplysia*. Background in electrophysiology required, experience in invertebrate neurobiology and/or neuroendocrine systems preferred. Send curriculum vitae and references to: **Dr. James E. Blankenship, Marine Biomedical Institute, P.O. Box 146, University of Texas Medical Branch Substation, Galveston, Texas 77550.** An Equal Opportunity/Affirmative Action Employer, M/F/H.

**POSTDOCTORAL POSITION** for studies on the regulation of muscle contraction in mammalian cardiac muscle and its relation to cardiac disease. Work will involve studies of contractile proteins, phosphorylation and dephosphorylation of myosin, gel electrophoresis, and ATPase assay. Experience in protein chemistry and enzymology desirable. Send résumés and references to:

**Joseph Wiener, M.D.  
Professor and Chairman  
Department of Pathology  
Wayne State University  
School of Medicine  
540 East Canfield  
Detroit, Michigan 48201**

An Equal Opportunity/Affirmative Action Employer

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately with group investigating role of ion transport in insulin action. Studies include Na-K-ATPase, ion fluxes, physiological studies on whole animals, effect of ions on metabolic pathways, intracellular microelectrodes, Fourier-transform NMR. Send résumé and three references to: **Dr. R. D. Moore, Professor of Biophysics, State University of New York, Plattsburgh, N.Y. 12901.** Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

Position available for 1 or 2 years beginning summer 1980 for freshwater biologist specializing in lacustrine plankton, microbes, macrophytes, or fish. Duties include management of small field laboratory in Venezuela and work with a Venezuelan-American team. Some Spanish desired. Send résumé and names of three references to: **Dr. William M. Lewis, Jr., Department of EPO Biology, Box 334, University of Colorado, Boulder, Colo. 80309.** Applications accepted through March 1980. The University of Colorado is an Affirmative Action/Equal Opportunity Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

A postdoctoral position is currently available in the **Department of Microbiology, Emory University, Atlanta, Ga. 30322**, for a recently graduated Ph.D. with training in the biomedical sciences. The primary focus on the ongoing research program is to define the mechanisms of interaction of bacteria and bacterial products with host immune and inflammatory cells. Areas of particular current interest are the perturbational effects of bacterial endotoxins on mammalian cell membranes. Excellence in, and enthusiasm for, unique approaches to research problems are more important criteria for the available position than is expertise in a given discipline of predoctoral training. Interested individuals should contact: **David C. Morrison, Ph.D.**, at the above address and enclose information relevant for consideration for this position.

### POSTDOCTORAL RESEARCH ASSOCIATE

Immediate opening for a Ph.D. physicist with a strong background in experimental condensed matter physics. The possible research is on phase transitions in gels and polymers and/or cataract disease. Salary is approximately \$15,000 per year. The contract is for 1 year and can be renewed. Send curriculum vitae and the names of three references to: **Professor Toyochi Tanaka, Department of Physics, Massachusetts Institute of Technology, Cambridge, Mass. 02139.** An Equal Opportunity/Affirmative Action Employer.

### RESEARCH ASSOCIATE

Department of Physics, Massachusetts Institute of Technology (MIT), has an immediate opening for a Ph.D. physicist to participate in the study of cataract disease using photon correlation spectroscopy. Candidate should have a strong background in both areas and in polymer physics. The salary is approximately \$15,000 per year. Send curriculum vitae and the names of three references to: **Professor Toyochi Tanaka, Department of Physics, MIT, Cambridge, Mass. 02139.** MIT is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study structure-function relationships of plasma membrane-cytoskeleton proteins of the lens of the eye. Training in protein chemistry essential, and familiarity with carbohydrate and lipid chemistry desirable. Stipend: \$10,000 per annum. Send curriculum vitae and letters of reference to: **Dr. H. Maisel, Department of Anatomy, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, Michigan 48201.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE

Immediate opportunity for recent Ph.D. in biochemistry trained in protein chemistry to purify a microsomal-bound steroid hydrosylase. Send résumé and three letters of reference to: **Dr. William H. Elliott, E. A. Doisy Department of Biochemistry, St. Louis University Medical School, 1402 South Grand, Saint Louis, Mo. 63104.** An Equal Opportunity/Affirmative Action Employer, M/F/H.

**POSTDOCTORAL RESEARCH ASSOCIATE.** Position (up to 3 years) available immediately for research on methylation of brain histone and non-histone proteins. Salary: \$12,500 to \$14,000, depending upon experience. Applicant must be a recent M.D. or Ph.D. recipient with a background in molecular biology, biochemistry or related field. Send résumé with three references to: **Dr. John Duerre, Ireland Research Laboratory, University of North Dakota, School of Medicine, Grand Forks, N.D. 58202.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCHER, Ph.D.** biochemist with training in lipid biochemistry. Experience in glycolipid isolation and structural characterization highly desirable. Research directed to study of immunoregulatory lipids; work involves close interaction with immunologists. Available 1 April. Send résumé and two letters of reference to: **Stephan Ladisch, M.D., Department of Pediatrics, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024.** Equal Opportunity/Affirmative Action Employer.

### PRE- AND POSTDOCTORAL STUDY IN DEVELOPMENTAL BIOLOGY AND TERATOLOGY, UNIVERSITY OF CINCINNATI

Predoctoral graduate teaching assistantships in developmental biology and National Research Service Award Fellowships in teratology which pay stipends and tuition are currently available to qualified applicants in an interdisciplinary program leading to a Ph.D. degree. Postdoctoral fellowships are also available. Major research interests include developmental genetics of mice, regulation of gene expression in animal cells, RNA structure and function, genetic control of enzyme biosynthesis, differentiation of cell surface antigens, cellular and tissue morphogenesis and effects of teratogens, experimental and human teratology, inborn errors of human metabolism, and cell biology of intestinal absorption. For details, write to: **Dr. Roger E. Ganschow, Institute for Developmental Research, Children's Hospital Medical Center, Cincinnati, Ohio 45229.**

**RESEARCH ASSOCIATE.** Postdoctoral position available for studies of hemoglobin regulation in erythroid culture systems. Starting date: 1 July 1980. Salary dependent on qualifications. Send curriculum vitae and names of three references to: **Dr. Blanche Alter, Division of Hematology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029.** An Equal Opportunity Employer.

**RESEARCH ASSOCIATE** position is available starting August 1980 in the area of fluorescence spectroscopy and cell motility. The project will involve the spectroscopic analyses of fluorescently labeled cytoskeletal and contractile proteins in solution and in living cells. Candidates must have a Ph.D. degree in biophysics or a related field and experience in fluorescence spectroscopy, contractile proteins, and single cell manipulations. Salary: \$14,000. Please contact: **Dr. D. Lansing Taylor, The Biological Laboratories, Harvard University, 16 Divinity Avenue, Cambridge, Mass. 02138.**

**RESEARCH ASSOCIATE:** research will involve molecular aspects of poxvirus replication with particular emphasis on transcription and gene regulation. Postdoctoral experience in nucleic acid biochemistry, sequencing, and cloning are desirable. Salary to \$16,400. Contact: **Dr. Enzo Paoletti, Division of Laboratories and Research, New York State Department of Health, Albany, New York 12201.**

## POSITIONS OPEN

### RESEARCH BIOCHEMIST

Ph.D. and master's level. Experienced in chromatography, gel filtration, and electrophoresis to do pioneering research and new methodology in separations science. Greater New York area. Send résumé to: **President, Haber, Inc., 470 Route 202, Towaco, New Jersey 07082.**

The U.S. Department of Agriculture's (USDA) Science and Education Administration is recruiting for a **RESEARCH ENTOMOLOGIST** position at the U.S. Grain Marketing Research Laboratory in Manhattan, Kansas. This position will be filled at grades 11 or 12 with a possible salary range of from \$20,611 to \$24,703, per annum. The incumbent plans and conducts basic and applied research in toxicology of insecticides and related biochemistry and analytical chemistry with the objective of determining the mode of insecticidal action on grain treated with protectant materials, developing new and improved insecticides, and developing methods for determining chemical residues. Applicants must have knowledge of insecticide toxicology and should have knowledge of insect physiology, biochemistry, and analytical chemistry. Applicants should send résumés to: **James P. Campbell, USDA-SEA/AR, 2000 West Pioneer Parkway, Peoria, Ill. 61615**, and should refer to MAN-79-35 when applying. The USDA-SEA/AR is an Equal Opportunity Employer.

**RESEARCH POSITION**—Functional anatomy of retina involving histology, cytochemistry, and physiology of neural interactions. Grant supported. Prerequisites: interest and general chemical and biological laboratory skills. Salary to \$24,000, depending upon education and experience. Send curriculum vitae and three references to: **Dr. H. G. Sperling, University of Texas, Sensory Sciences Center, P.O. Box 20708, Room 7.238B, Houston, Texas 77025.** An Equal Opportunity Employer.

**STAFF POSITION.** Position available immediately for biologist with Ph.D. in mammalian or cellular physiology to join research group evaluating the toxicity and mutagenicity of environmental pollutants. Experience in cytogenetics and cell culture very desirable. Send curriculum vitae and names of two references to: **Dr. D. C. Borg, Chairman, Medical Department, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., N.Y. 11973.** An Equal Opportunity Employer, M/F.

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The following positions are available beginning September 1980:

##### ENDOCRINOLOGY:

Beginning in September 1980, a tenure-track position will be available in the Department of Biological Sciences at the rank of assistant through full professor level.

We are seeking someone in the area of reproductive and/or neuroendocrinology. At the associate or full professor level, the candidate will be expected to have an on-going, well-defined, successful research program in addition to demonstrable teaching skills.

##### DEVELOPMENTAL BIOLOGY:

Beginning in September 1980, a tenure-track position will be available in the Department of Biological Sciences at the rank of assistant through full professor level.

We are seeking someone who has demonstrated his/her expertise in the field of developmental biology. At the associate or full professor level the candidate will be expected to have a well-defined, successful, on-going research program in addition to demonstrable teaching skills.

##### PLANT BIOLOGY:

Beginning in September 1980, a tenure-track position will be available in the Department of Biological Sciences at the assistant professor level in plant biology. Applicants must have 2 to 3 years of postdoctoral experience in their area of expertise and be capable of teaching undergraduate courses in plant physiology. Candidates must be able to demonstrate the potential for setting up an independent research program and demonstrate the potential for excellence in teaching.

##### GENETICS:

Beginning in September 1980, a tenure-track position will be available in the Department of Biological Sciences at the assistant professor level in genetics. Responsibilities will include the teaching of an undergraduate course in population genetics. Applicants must have 2 to 3 years of postdoctoral experience in their area of expertise and be able to demonstrate the potential for setting up an independent research program and demonstrate the potential for excellence in teaching.

To apply, submit curriculum vitae, including bibliography, statement of research interests, and teaching background, and have at least four referees send references to: Dr. Om P. Bahl, Chairman, Department of Biological Sciences, State University of New York at Buffalo, 109 Cooke Hall, Amherst, N.Y. 14260.

Application deadline: extended to 1 March 1980.

State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.

## GOVERNMENT OF JAMMU AND KASHMIR INSTITUTE OF MEDICAL SCIENCES 51-52 TULSI BAGH SRINAGAR

Institute of Medical Sciences, Srinagar is desirous to fill up senior faculty posts in the Disciplines of Clinical Pharmacology and Clinical Biochemistry.

Senior Consultants will be either in the category of professors or associate professors in the scale respectively of 2400-100-2500/125/2 -3000 and 2000-75-2425 + perks.

Scientists interested to serve the Institute may establish a contact with the Joint Director, Institute of Medical Sciences, 51-52 Tulsi Bach, Srinagar along with complete bio-data. The last date of the receipt of the application is 30th July, 1980.

Doctors who have already applied in response to our Preliminary Notice No: 21 dated 11-4-1979 need not apply again.



## POSITIONS OPEN

**SOLAR ENGINEER.** Position of assistant in engineering available immediately. Salary negotiable in the range of \$18,000 to \$20,000. Candidates should hold a minimum of a master's degree in engineering with 1 year of practical experience, doctorate or equivalent preferred. Duties include instructing engineers and scientists from developing countries in alternative energy technologies as part of a training program supported by the U.S. Agency for International Development. Send curriculum vitae, transcripts, and names and addresses of references to: **Dr. Erich A. Farber, Director, Solar Energy and Energy Conversion Laboratory, University of Florida, Gainesville, Florida 32611.**

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**STABLE ISOTOPE CHEMIST** or biochemist. Ph.D. with minimum of 5 years of experience and demonstrated record of publications in stable isotope applications. Should be experienced in stable isotope chemical syntheses and in the application of gas chromatography-mass spectrometric analysis of isotopically labeled compounds in human metabolic studies. Candidate will have major responsibility for development of new analytical techniques for human nutrition protocols. Position available immediately. Appointment at assistant professor level in newly created stable isotope laboratory. Please send inquiries to: **Judith M. Nagle, Personnel Services, Baylor College of Medicine, Texas Medical Center, 1200 Moursund, Houston, Texas 77030.**

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### State University of New York at Buffalo invites applications and nominations for the position of VICE PRESIDENT FOR RESEARCH

We are looking for a respected scholar and experienced research administrator who will provide leadership in enhancing the university's research activities, in the development and implementation of institutional research policies, and in the promotion of appropriate relationships between research and instruction. The vice president for research will also be expected to maintain effective communication with granting agencies, foundations, industry, the university's Research Foundation, the Biohazards Committee, and the Human Subjects Committees. The appointee will be responsible for a staff of professionals who assist the faculty in obtaining and properly managing research and training grants and contracts. Applications are especially invited from candidates who qualify for a senior tenured academic appointment.

Applications and nominations should be submitted by 15 February 1980 to:

**Dr. Gerhard Levy, Chairman  
Search Committee for Vice President for Research  
c/o President's Office  
503 Capen Hall**

**Amherst, New York 14260**

*State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.*

**WILDLIFE POPULATION ECOLOGIST—Ph.D.,** permanent research position. Academic concentrations in avian physiology and biometrics desirable and field experience essential. The successful candidate will join a group that works primarily with wild, warm-blooded vertebrates and should demonstrate the potential to establish a research program, publish, maintain high professional standards, and attract grant funds. Level: assistant professional scientist. For full consideration, a letter of application, complete curriculum vitae, and three letters of recommendation should be received before 1 April 1980 by: **Dr. Glen C. Sanderson, Head, Section of Wildlife Research, Illinois Natural History Survey, 172 Natural Resources Building, Urbana, Ill. 61801.** *An Affirmative Action/Equal Opportunity Employer.*

## GRANT ASSISTANCE

**Lerner Fund for Marine Research** provides financial assistance to scientists starting careers in marine biology, exclusive of botany. Level: graduate and postdoctoral. Range: \$200 to \$1000. In 1979, 45 percent of applicants were funded. Projects can be carried out anywhere in the world. Applications due by 15 March on prescribed forms. Write: **Lerner Fund for Marine Research, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024.**

## DOCTORAL PROGRAM

### Ph.D. IN ENGINEERING AND PUBLIC POLICY

The Department of Engineering and Public Policy at Carnegie-Mellon University offers an interdisciplinary, research-oriented Ph.D. for persons with an undergraduate degree in engineering or the mathematical or physical sciences. Persons with more advanced training or experience are especially welcome. Some financial support is available. Contact:

**Engineering and Public Policy  
Carnegie-Mellon University, 30912  
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## TRAINING PROGRAMS

**HYPERTENSION RESEARCH TRAINING PROGRAM.** Funded by NHLBI. Postdoctoral (Ph.D., M.D., D.V.M., or D.O.) research traineeships available July 1980, for 1 or 2 years in the following areas: salt-dependent hypertension (H. P. Dustan, M.D.); membrane sodium transport (H. W. Overbeck, M.D., Ph.D.; D. D. Ku, Ph.D.); neural mechanisms (S. Oparil, M.D.); nephron function (L. G. Navar, Ph.D.; D. W. Plath, M.D.); cardiac hypertrophy (S. P. Bishop, D.V.M., Ph.D.); membrane ion channels (D. W. Urry, Ph.D.; M. M. Long, Ph.D.; M. A. Khaled, Ph.D.); vascular wall molecular pathology (D. W. Urry, Ph.D.; M. M. Long, Ph.D.); vascular connective tissue (L. Roden, M.D., Ph.D.); exercise training in borderline hypertensives (A. Oberman, M.D.); renin-angiotensin-aldosterone (S. Oparil, M.D.); and hemodynamics (H. P. Dustan, M.D.; H. W. Overbeck, M.D., Ph.D.; S. Oparil, M.D.). Positions for predoctoral (Ph.D.) trainees (physiology, biochemistry, pathology, or pharmacology) are also available. Applicant must be U.S. citizen or hold immigrant's visa. Send curriculum vitae and three letters of recommendation to: **Harriet P. Dustan, M.D., Director, Cardiovascular Research and Training Center, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** *An Affirmative Action/Equal Opportunity Employer.*

## POSTDOCTORAL TRAINEESHIPS AVAILABLE

National Research Service Awards at the Donner Laboratory, University of California, Berkeley, in the area of lipoprotein structure and metabolism and its relationship to cardiovascular disease. Two traineeships available in July 1980. Traineeships carry an annual stipend of \$13,380 to \$17,040, depending on experience. We are interested in applicants with a strong background in any of the following areas: biochemistry, protein carbohydrate and/or lipid chemistry, enzymology, electron microscopy, and ultracentrifugal techniques.

U.S. citizens and permanent residents are eligible to apply. Please send résumé, transcripts, and names and phone numbers of two references to:

**Gertrude M. Forte, Ph.D.  
Donner Laboratory  
Lawrence Berkeley Laboratory  
University of California  
Berkeley, Calif. 94702  
Telephone: 415-486-5567**

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## ASSISTANTSHIPS

### GRADUATE TEACHING ASSISTANTSHIPS IN BIOLOGY

Predocutorial teaching assistantships available for graduate study leading to the Ph.D. degree in biology. The Department of Biological Sciences at Wayne State University consists of three divisions: (i) Environmental, Evolutionary and Systematic Biology; (ii) Molecular and Developmental Biology; and (iii) Regulatory Biology and Biophysics. Stipends are \$4000 per 9 months, plus tuition waiver and a possible housing allowance of \$140 per month. Summer support is also available. The teaching assistantships are awarded on a competitive basis. For applications, write: **Dr. V. Hari, Graduate Committee, Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202.** Telephone: 313-577-2754. *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

## TRAINEESHIPS

**VACANCY: POSTDOCTORAL and PREDOCTORAL TRAINEESHIPS** in statistical analysis, modeling, epidemiology, systems and analysis of cardiovascular disease processes. Candidates should have background in statistics, mathematics, or engineering with career goals in cardiovascular research. Stipends are \$5,040 (predoctoral) and \$13,380 to \$17,040 (postdoctoral), tuition and other expenses. Contact: **Dr. M. Clinton Miller, Department of Biometry, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29403,** telephone: 803-792-2261. *An Equal Opportunity/Affirmative Action Employer, M/F.*

## FELLOWSHIPS

### Université du Québec à Montréal Département des Sciences Biologiques POSTDOCTORAL FELLOWSHIP

Applications are invited for postdoctoral fellowships for the study of the ecological control of nuisance aquatic plants.

Candidates are invited from good experimentalists with knowledge of plant ecology and physiology, preferably with experience in aquatic plants. Tenure is 2 years, with appointment as soon as possible. Salary: \$15,000 per annum. Send curriculum vitae to: **Dr. F. Sarhan, Département des Sciences Biologiques, Université du Québec à Montréal, Montréal, Québec, Canada H3C 3P8.**

### MEMORIAL UNIVERSITY OF NEWFOUNDLAND DEPARTMENT OF GEOLOGY

A postdoctoral fellowship is available for research on ophiolite emplacement mechanisms and mélange development. The successful applicant will have had previous field experience in such geological terrains and will be required to participate in a study of Appalachian-Caledonian ophiolites with Dr. J. G. Malpas and Dr. R. K. Stevens. Limited teaching duties may also be required.

The appointment will be effective 1 June 1980 at a salary of \$12,900 and will be for 1 year in the first instance, but with opportunity for extension.

Applications, including curriculum vitae and the names and addresses of two referees, should be sent by 1 March 1980 to:

**Head, Department of Geology  
Memorial University of Newfoundland  
St. John's, Newfoundland, Canada A1B 3X5**

**POSTDOCTORAL FELLOWSHIPS** available for research in alcoholism; 2-year appointment begins July 1980, contingent on renewal of funding. Requires doctorate in health, biological, or behavioral science. Stipend: \$13,380 to \$17,040, depending on experience, plus allowances for travel, research expenses. For details and application instructions write: **Karen Place, Alcoholism and Drug Abuse Institute, University of Washington, 3937 15th Avenue, NE, Seattle, Wash. 98105.** Application deadline: 10 March 1980. *Affirmative Action/Equal Opportunity Employer.*

### OPHTHALMIC PATHOLOGY FELLOWSHIP DEPARTMENT OF OPHTHALMOLOGY UNIVERSITY OF PENNSYLVANIA SCHEIE EYE INSTITUTE PRESBYTERIAN-UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER

Applications are invited for a National Eye Institute training fellowship in experimental ophthalmic pathology, starting 1 July 1980. The fellowship program runs for 2 years. Emphasis is placed on acquiring skills in the performance of experimental ocular pathology. Concurrently, a broad understanding of ophthalmic pathology is fostered. All facilities at the Scheie Eye Institute, the Presbyterian-University of Pennsylvania Medical Center and the University of Pennsylvania are available for training and learning of specialized research skills. Those interested should direct inquiries, and send up-to-date curriculum vitae and bibliography to:

**Myron Yanoff, M.D.  
Director, Scheie Eye Institute  
Chairman, Department of Ophthalmology  
University of Pennsylvania-  
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51 North 39 Street  
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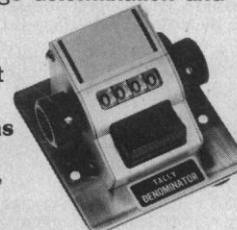
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## FELLOWSHIPS

### 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 40536.**

**POSTDOCTORAL FELLOWSHIPS** available for research in biophysics on subjects of: metabolic studies with labeled compounds, radiopharmaceutical chemistry, radiobiology, or radiation physics. Applicants should have physics, chemistry, or biochemistry majors and mathematics or biology minors. Send curriculum vitae, bibliography, transcript of grades, and three references to: **Dr. John S. Laughlin, Biophysics, Sloan-Kettering Institute, 1275 York Avenue, New York, N.Y. 10021.**

### Interdisciplinary Postdoctoral Research Fellowships in the Biomedical and Behavioral Sciences

A training program has been funded to promote interdisciplinary research in mental retardation, autism, and other developmental disabilities. Fellows collaborate with research scientists on human and nonhuman research in neuroanatomy, neurochemistry, neuroendocrinology, psychopharmacology, neurology, genetics, and behavioral psychology. Available 1 September 1980 for 1 to 3 years. Ph.D. or M.D. plus evidence of interdisciplinary research potential required. Send curriculum vitae, representative reprints, and three references to: **Dr. Stephen R. Schroeder, Biological Sciences Research Center, 136 DDDL/BSRC 220H, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514.** Application deadline is 1 March 1980.

### POSTDOCTORAL FELLOWSHIPS—Visual Science

Applications for NRSA fellowships in the 1980-1981 academic year are being accepted in the Department of Retina Research of the Eye Research Institute of Retina Foundation. Preceptors and programs are: A. R. Adolph, pharmacology of vertebrate retina; B. Chakrabarti, physicochemical properties of vitreous; P. H. Hartline, kinetics of transduction and adaptation in photoreceptors; L. Reif-Lehrer, control mechanisms in vertebrate retina; M. Snodderly, human psychophysics, effects of eye movements, and monkey electrophysiology. Write to the preceptor of interest at: **Eye Research Institute of Retina Foundation, 20 Staniford Street, Boston, Mass. 02114.**

**POSTDOCTORAL FELLOWSHIP** (National Institute on Aging-supported) for research training in the demography of aging. Previous training in demography and Ph.D. in demography, sociology, economics, or other social science field. Trainee will develop skills in gerontology and participate in ongoing work on the demography of the older U.S. population. Applicants must be U.S. citizens or permanent residents. Please write to: **Maurice D. Van Arsdol, Jr., Director, Department of Sociology, Population Research Laboratory, Research Annex 368, University of Southern California, Los Angeles, California 90007.** Affirmative Action/Equal Opportunity Employer. Minority and women candidates are encouraged to apply.

**A Congressional Science and Engineering Fellowship**, sponsored by the American Geological Institute (AGI) and the American Association for the Advancement of Science (AAAS), is being offered to postdoctoral scientists or professionals in the geological field. The fellow will spend 1 year, beginning 1 September 1980, working as a special legislative assistant on the staff of a member of Congress or congressional committee. Stipend is \$19,500; an additional \$1,500 is available for travel and moving expenses. The fellow should be exceptionally competent in the field and strongly committed to applying scientific knowledge to the solution of societal problems. Application deadline is 15 March 1980; applicants must be a member of one of AGI's member societies. For further details, including application information, write: **A. G. Unklesby, American Geological Institute, 5205 Leesburg Pike, Falls Church, Virginia 22041.**

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIPS IN VIRAL ONCOLOGY** are available at Duke University for investigators interested in postdoctoral experience in viral oncology. Training opportunities are available in avian and murine RNA tumor viruses, immunology, basic virology, cell biology, biochemistry, and molecular biology. Fellowships are open to American citizens and foreign nationals with permanent U.S. resident visas holding the Ph.D., M.D., or equivalent degree who have had less than 3 years of postdoctoral experience. For further information, write to: **Dr. Ralph E. Smith, Associate Professor, Department of Microbiology and Immunology, Duke University Medical Center, Durham, N.C. 27710.** Duke University is an Equal Opportunity/Affirmative Action Employer.

### CARDIOVASCULAR RESEARCH FELLOWSHIP

A 2-year NIH-funded postdoctoral (Ph.D. and/or M.D.) research fellowship position is currently available starting no later than 30 June 1980. Research involves development of animal models of heart failure for the study of the peripheral circulation at rest and during exercise as well as the therapeutic effects of vasodilators and calcium antagonists. Background in cardiovascular and/or vascular smooth muscle physiology desirable but not required. The successful applicant will gain valuable experience as part of a vigorous and diversified program of basic and clinical cardiovascular research. Send inquiries, curriculum vitae, and names of three references to: **Robert Zelis, M.D., Professor of Medicine and Physiology, Chief, Division of Cardiology, The Milton S. Hershey Medical Center, The Pennsylvania State University School of Medicine, Hershey, Pa. 17033.**

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**POSTDOCTORAL FELLOWSHIP in clinical laboratory immunology.** Applications are invited for a 2-year fellowship in clinical laboratory immunology at North Carolina Memorial Hospital (NCMH) and the University of North Carolina (UNC). Fellowship provides residency-type training in laboratory immunology through laboratory experience, conferences, and research. Send curriculum vitae and three letters of reference before 1 March 1980 to: **Dr. James D. Folds, Clinical Immunology Laboratory, Department of Hospital Laboratories, North Carolina Memorial Hospital, University of North Carolina, Chapel Hill, N.C. 27514.** UNC/NCMH is an Equal Opportunity/Affirmative Action Employer.

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP (NIH).** Immediate opening for a candidate with either a cell biology or a pharmacology background. Study involves the interaction of liposomes with macrophages and the development of liposomal drug delivery systems. Send résumé and letter of reference to: **Dr. R. L. Juliano, Department of Pharmacology, University of Texas Medical School, Houston, Texas 77025.** An Equal Opportunity Employer.

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**GRADUATE STUDY** in physiology, biochemistry, or pharmacology-toxicology. Cornell University has openings for research and training leading to M.S. or Ph.D. degrees. Specific area include digestive physiology, metabolism, enzymology, behavioral physiology, food intake, neuropharmacology, and toxicology. Salary for those with D.V.M. is \$11,000 to \$12,500 per year. Salary for those with B.S. is \$6037 to \$6312. Tuition and fees are waived in all cases. Send letters of inquiry, curriculum vitae, and transcripts to: **Dr. E. N. Bergman, Department of Physiology, Biochemistry and Pharmacology, New York State College of Veterinary Medicine, Cornell University, Ithaca, N.Y. 14853.**

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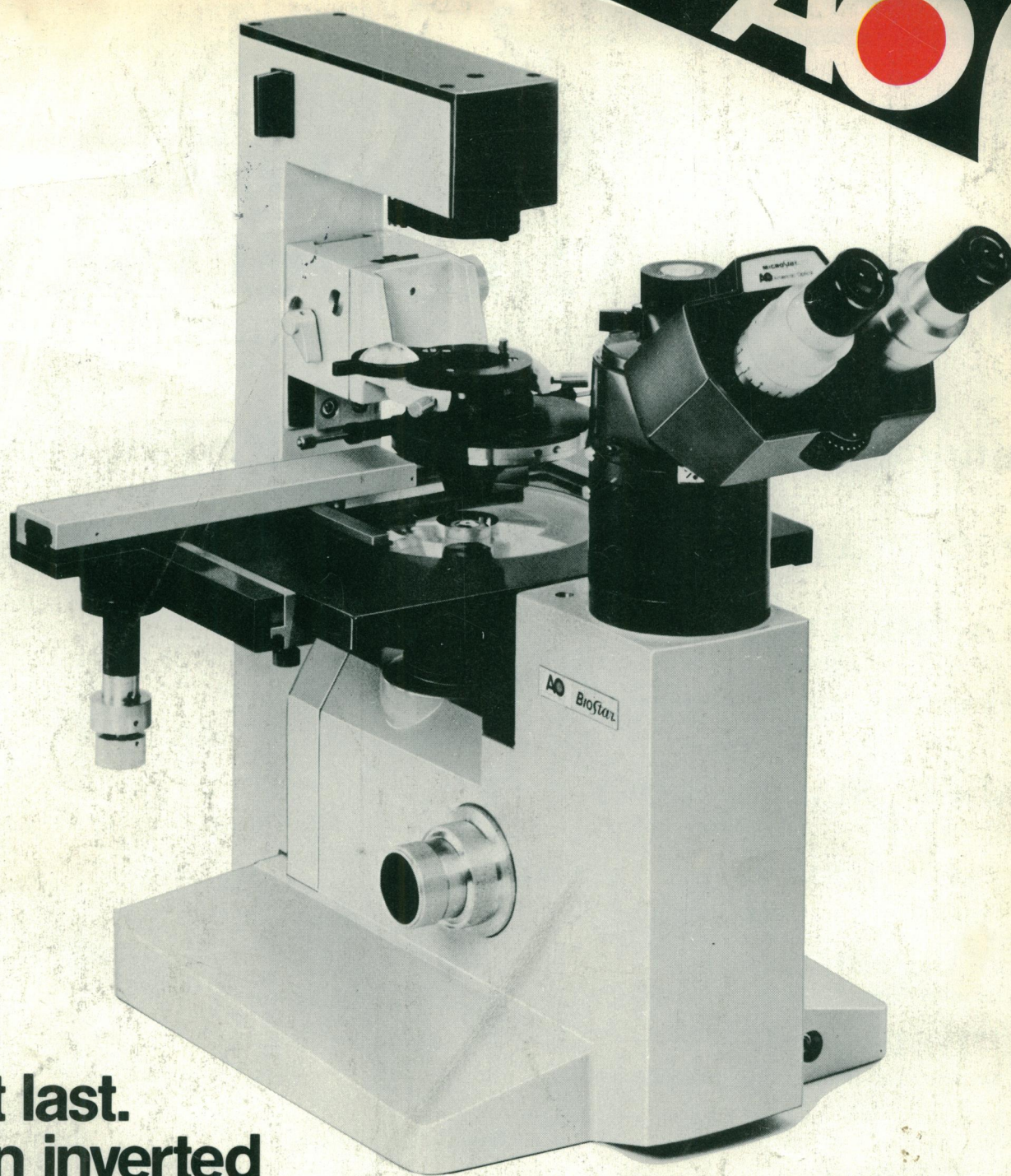
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