

# PRODUCTS and MATERIALS

## Reverse Osmosis

The Econo Pure reverse osmosis and ultrafiltration units are suited for laboratory use. They remove 90 to 95 percent of dissolved solids and organic contaminants over 300 megawatts including bacteria, viruses, and pyrogens. The units produce up to 9 liters of purified water per hour. Osmonics. Circle 788.

## Blood Gas Controls

Gas-Trak controls are aqueous-based, color-coded, liquid-gas systems. They are available in three ranges to represent normal condition, acidosis, or alkalosis with respect to pH and partial pressures of carbon dioxide and oxygen. They are packaged in 1.7-milliliter ampoules and have a shelf life of 18 months at room temperature. Curtin Matheson Scientific. Circle 791.

## Scanning Electron Microscope

The Stereoscan 250 utilizes an Opti-beam electron optical design to provide the effect of a continuously variable final aperture. This allows the user to achieve the best resolution or depth of field under any set of operating parameters. At the touch of a switch the user may change from optimum resolution to optimum depth of field. Secondary resolution is guaranteed to exceed 60 angstroms. The instrument provides split-screen imaging and selected area diffraction. Accelerating voltage may be varied from 1 to 40 kilovolts continuously. Stages will accommodate up to 5-inch samples. Cambridge Instruments. Circle 794.

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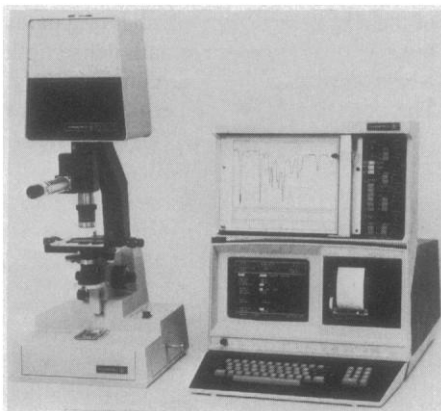
—RICHARD G. SOMMER

## Rotary Vacuum Evaporator

This evaporator is suited to rapid distillation and freeze-drying. It provides processing of heat-sensitive compounds without decomposition, quick evaporation of high-boiling solvents, and dry, solvent-free residues. Speed of rotation is electronically controlled. Control of heat input and speed of rotation minimizes bumping and foaming. Vapors from the pear-shaped flask pass through a vapor tube into a condenser and the distillate is collected in a receiving flask. Liquid and vapor contact only glass and fluorocarbon seals. Pope Scientific. Circle 790.

## Infrared Spectrophotometer

Nanospec/201R is a computerized infrared spectrophotometer. It combines features of a research microscope with those of an infrared spectrophotometer to allow identification of samples as small as 20 micrometers. Scanning range is from 4000 to 690  $\text{cm}^{-1}$ . The instrument utilizes reflecting optics and provides 150-power image viewing in the visible spectrum while it maintains focus in the infrared. The X-Y stage rotates to aid orientation and comparison of samples and selection of best signal-to-noise ratio. A polarizer accessory enables the user to include crystallographic analysis as well. Nanometrics. Circle 789.



## Optical Scanner-Data Processor

The Research Scanning Monochromator, or Rescam, scans the infrared and visible spectrum in reflectance and transmittance modes to determine composition of a sample and the wavelengths that are best to use in further analysis. In operation, a light beam is sent through a patented holographic grating monochromator which emits a beam of single wavelength toward the sample. Changes in wavelength and response of the sample are determined and treated mathematically to obtain the wavelengths which best correlate the sample's properties. Subsequent samples may then be analyzed with use of this information. Neotec. Circle 792.

## Peristaltic Pump

The Rabbit has ten rollers, five of which contact the pump tubing at any given time. Drive speed is continuously adjustable from 1 to 25 revolutions per minute. A three-digit potentiometer and positive electronic control of speed permit the user to return to desired speeds. A high-torque motor and feedback circuitry account for stability even at low rates of flow. The user may select interchangeable one-, four-, or eight-channel pumping heads. Multichannel heads will accommodate tubing of different diameters simultaneously. Rainin Instrument. Circle 793.

## Water Purification System

Water-I is a final filter for preparing ultrapure standards or instrument blanks. Water-I requires no plumbing connections to provide a liter of water with resistance of 10 megohms in 1 to 4 minutes or up to 18 megohms with extended use. Water is circulated constantly to provide 1 liter of Type I water at a time. A disposable capsule contains activated charcoal to remove organic contaminants, a mixed-bed ion-exchange resin for inorganics, and a 0.2-micrometer filter for particulate matter. Gelman Sciences. Circle 795.

## Literature

*Gas Chromatography* is a problem-solving guidebook and troubleshooting manual. Supelco. Circle 796.

*Scintillation Vials* describes containers for liquid scintillation counting. Wheaton Scientific. Circle 797.

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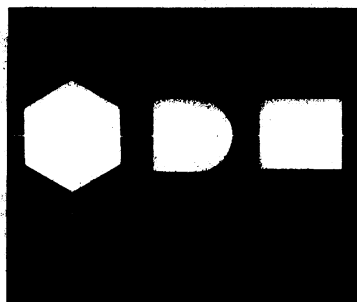
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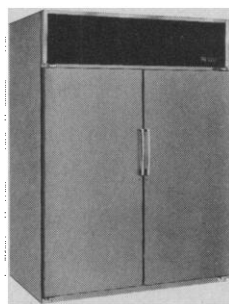


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**Cytogeneticist.** Ph.D. Seeks postdoctoral or research assistant position. Experience: chemical mutagenesis, carcinogenesis, and genetic toxicology of environmental pollutants. Publications. Box 120, SCIENCE. X

**Genetic Counsellor/Dysmorphologist,** Ph.D. 1978; 2 years of postdoctoral experience in dermatoglyphic research and clinical genetics with publications; seeks multifaceted clinical position in medical genetics department. Box 121, SCIENCE. 5/9, 16

## POSITIONS WANTED

Ph.D. (Biochemistry, 1973); postdoctoral, Mt. Sinai, Johns Hopkins Medical Schools; publications. Experience: teaching (U.S. Naval Academy); mutagenesis; proteoliposomes; drug-enzyme kinetics; membrane protein purification; NMR, AA, IR, UV, GLC. Available June 1980. Desires industrial, teaching position. Salary, location negotiable. Box 118, SCIENCE. X

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**Immunologist.** Ph.D. 1970; 8 years of university research experience in cellular immunology, lymphocyte-induced target cell destruction, cellular immunity in infectious diseases, immunosuppressive effects of endotoxin. Numerous publications. Seeking research position in a project studying relationships between the brain and immune system. Box 112, SCIENCE. 5/9, 16

**Phycologist/Limnologist.** Ph.D. 1978; 10 years of college teaching experience, phycology, limnology, ecology, environmental science, general biology, water and wastewater treatment. Ph.D. research involved eutrophication and the ecology of blue-green algae; also some TEM experience with algae; 2 years of experience in aquatic environmental impact studies. Additional responsibilities included chairman of standing faculty committee, environmental technology program, and ad hoc committees. Seeking tenure-track teaching position or responsible position in research or applied field; also interested in summer only employment. Available June 1980. Box 99, SCIENCE. X

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### POSITION IN AQUATIC ECOLOGY

Applications are invited for a professor or associate professor in aquatic sciences (specialty open) at the Appalachian Environmental Laboratory, Center for Environmental and Estuarine Studies, University of Maryland, Frostburg.

The individual must be able to view his/her specialty from a broad perspective and help implement both basic and applied research programs. A significant record of research and educational accomplishment is required of the successful candidate. The applicant should possess an international reputation and be currently administering a strong research program as evidenced by publications and grantsmanship. The person will also be expected to foster existing links and develop new avenues of support for the aquatic ecology program. Teaching responsibilities will be one course per semester and the advising of graduate students. Salary will be competitive. Nominations and inquiries should be forwarded in writing no later than 15 June 1980. Each applicant should submit a summary of present and future goals, names of six potential referees, and curriculum vitae to: **Chairman, Search Committee, University of Maryland, Center for Environmental and Estuarine Studies, Appalachian Environmental Laboratory, Frostburg State College Campus, Frostburg, Maryland 21532.**

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### ASSISTANT PROFESSOR OF BIOCHEMISTRY

The University of British Columbia invites applications for a position beginning after 1 January 1981. The successful applicant will have an M.D. or Ph.D. degree in biochemistry and at least 1 year of postdoctoral research experience. The applicant will have a strong commitment to teaching and research. Applications with complete curriculum vitae, including a list of publications, a brief statement of research interests, and the names of three individuals whom we may contact for references, should be sent before September to: **Search Committee, Department of Biochemistry, University of British Columbia, Vancouver, British Columbia, Canada V6T 1W5.**

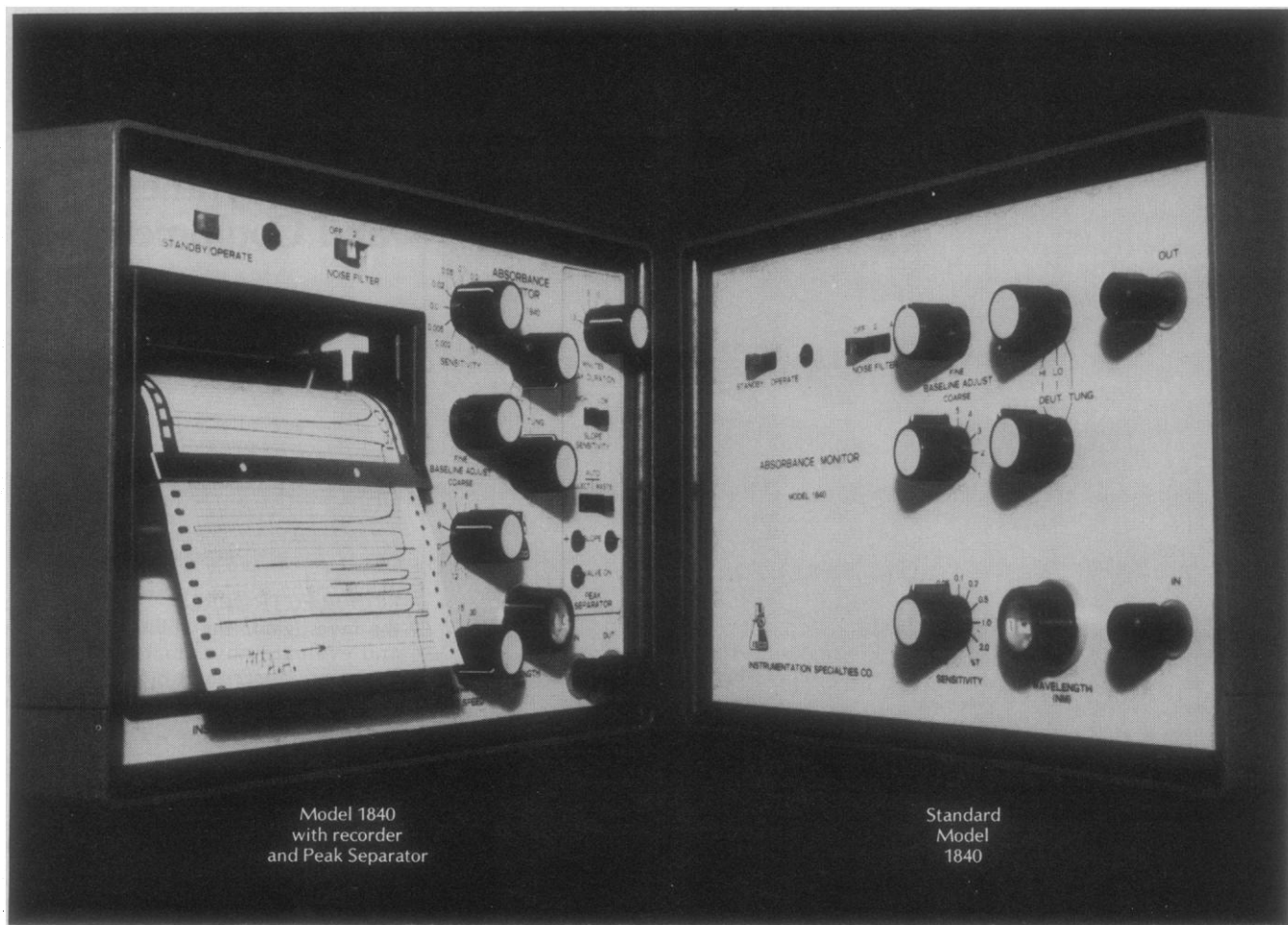
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**Dr. A. H. Warner, Head  
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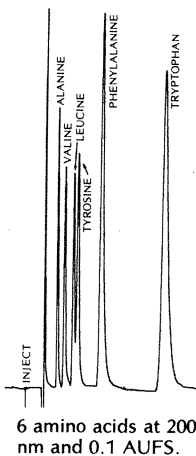
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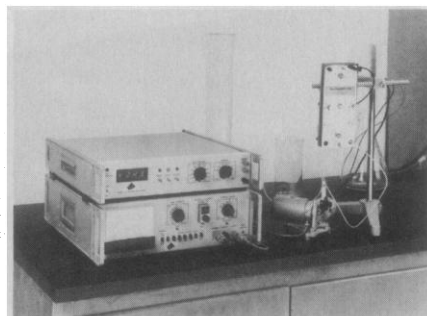
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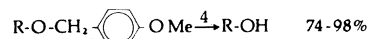


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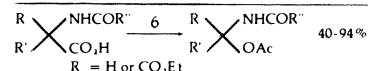
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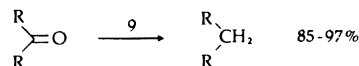
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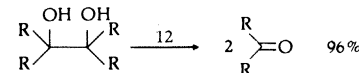
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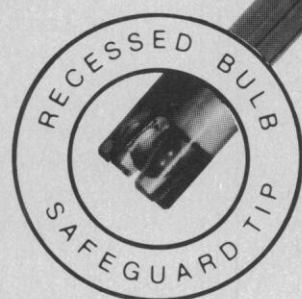
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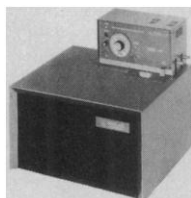
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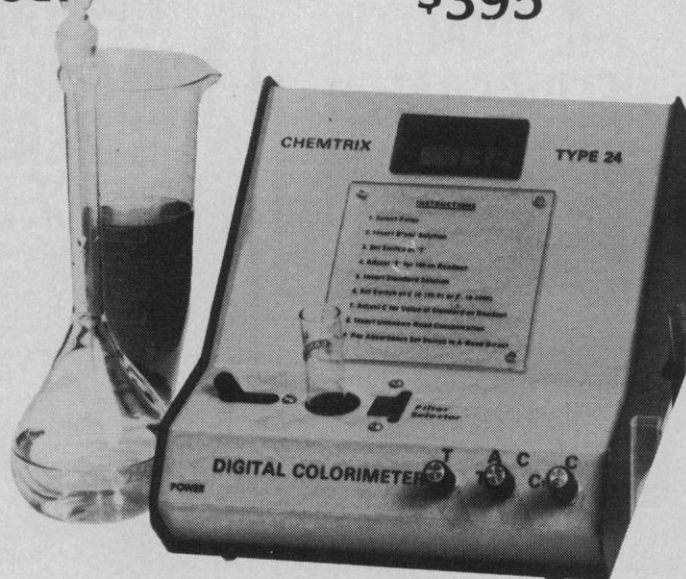
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## POSITIONS OPEN

### VISITING ASSISTANT PROFESSOR OR INSTRUCTOR—MICROBIOLOGY

A nontenure-track faculty position will be available 1 September 1980 for a person with a Ph.D. and a strong background in microbial genetics and molecular biology, to participate in a general microbiology course and in an NIH-sponsored project on experimental microbial evolution in the laboratory of B. G. Hall [*Genetics* 89, 453 (1978)]. Annual appointment, renewable up to 4 years. Rank dependent upon qualifications. Send curriculum vitae and arrange for three letters of recommendation to be sent to: Dr. Barry G. Hall, Microbiology Section, University of Connecticut, Storrs, Conn. 06268 by 1 June 1980.

*An Equal Opportunity Employer*

### ASSOCIATE DIRECTOR IN LABORATORY ANIMAL MEDICINE IN NEW YORK CITY

Cornell University Medical College in New York City invites applications for the position of ASSOCIATE DIRECTOR OF THE UNIVERSITY'S RESEARCH ANIMAL RESOURCE CENTER. The associate director for the Medical College will be based principally in New York City and will be responsible for research animal activities there. He/she will participate jointly, with Rockefeller University, in a resource diagnostic facility. As a member of the University-wide Research Animal Resource Center, the associate director shares diagnostic capabilities, residency and graduate training programs, and collaborative research with Cornell's College of Veterinary Medicine and Graduate School of Arts and Sciences in Ithaca, N.Y.

Applicant should be a D.V.M. and should be Board-certified or eligible in the American College of Laboratory Animal Medicine or Veterinary Pathology (with a special interest in laboratory animals). A Ph.D. in some area of basic science and an interest in independent or collaborative research is desirable. Rank and salary are commensurate with experience. If interested, please submit curriculum vitae to: Dr. Fred Quimby, Cornell University Medical College, Room A736, 1300 York Avenue, New York, New York 10021. Cornell University Medical College is an Equal Opportunity/Affirmative Action Institution.

**ASSOCIATE TO FULL PROFESSOR IN PATHOLOGY:** medical school full-time faculty to participate and coordinate in the pathology course for sophomore medical students and advanced courses for graduate students. An active research program is highly desired. Rank and salary negotiable depending on qualifications and experience. Starting 1 July 1980. Send résumé and three letters of recommendation to: Dr. P. G. Iatridis, Assistant Dean and Director, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, Indiana 46408. Indiana University is an Equal Opportunity/Affirmative Action Employer.

**BLOOD BANK DIRECTOR**—Pathologist with interest in teaching and research to direct blood bank at Los Angeles County—University of Southern California (LAC-USC) Medical Center and section of immunohematology at USC School of Medicine. Salary and academic rank commensurate with qualifications; California license required. Reply by telephone or mail to: S. T. Shaw, M.D., Vice Chairman, Department of Pathology, LAC-USC Medical Center, 1200 North State Street, Room 2900, Los Angeles, California 90033. Telephone: 213-226-7148.

*Equal Opportunity/Affirmative Action Employer*

### FACULTY POSITION IN INDUSTRIAL HYGIENE CHEMISTRY

Tenure-track position as director of Environmental Health Laboratories. To teach undergraduate and graduate students; develop, update, and monitor analytical and quality control methods; conduct research in occupational and environmental health.

Requirements include doctorate in chemistry with major in analytical chemistry; teaching experience and record of research accomplishment necessary; certification in comprehensive industrial hygiene practice or industrial hygiene chemistry with major laboratory experience is mandatory; knowledge of molecular biology, modern genetics, toxicology and/or pharmacology desirable. Position available immediately. Women and minorities are encouraged to reply. Send résumé and references to: Kathryn Shuman, Assistant to the Chairman, Department of Environmental Health SC-34, School of Public Health, University of Washington, Seattle, Washington 98195; telephone: 206-543-6991.

## POSITIONS OPEN

Full-time CHAIRMAN, DEPARTMENT OF RESEARCH, for 600 plus bed, multispecialty, acute care general hospital, affiliated with major university medical school in Midwest. Candidate must be experienced investigator, with ability to coordinate and foster research efforts of other investigators and clinicians. Preferably a medical doctor, candidate must have experience in clinical applications of research, and show ability to obtain grant support. Salary and terms commensurate with qualifications. Box 113, SCIENCE.

**FACULTY POSITION** available: one assistant professor position, Board-qualified (preferably certified) in internal medicine and cardiology. Teaching and research experience necessary in various aspects of cardiology, especially CCU, ambulatory ECG, and arrhythmias. To remain open until filled. Interested persons contact: D. T. Mason, M.D., Section of Cardiology, School of Medicine, University of California, Davis, Calif. 95616. We are an Equal Opportunity Employer. Minority and women applicants encouraged.

## POSITIONS OPEN

### FACULTY POSITION—INDUSTRIAL HYGIENE

The Johns Hopkins University, School of Hygiene and Public Health, has a position open at the assistant professor level in the Division of Environmental Health Engineering, Department of Environmental Health Sciences. This position involves teaching in the Industrial Hygiene Program and involvement in industrial hygiene research related to field activities of the Center for Occupational and Environmental Health. Applicants should hold an earned doctorate degree in industrial hygiene or a related field and demonstrate ability in laboratory and field evaluation and control of potentially hazardous chemical and physical agents, with an interest in research. Certified industrial hygienists will be given preference. The Johns Hopkins University is an Equal Opportunity Employer and welcomes applications from qualified women and minorities. Send curriculum vitae and references to: Dr. Morton Corn, Department of Environmental Health Sciences, The Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, Md. 21205.

# Biochemist

New England Nuclear is a world leader in the manufacture of radioactive chemicals for medical research and diagnosis.

Working in a growing new area at NEN, you will conduct research directed toward the development of new products. Qualified applicants will have a Ph.D. in Biochemistry or related field with familiarity in the modern techniques of Molecular Biology gained through independent research at a postdoctoral position. Due to our continued growth we're seeking an experienced bench chemist with the motivation to eventually move into a supervisory position.

We offer competitive salaries as well as a comprehensive benefits package, including profit sharing and relocation expenses.

Interested applicants should submit a resume to Ann Magno, New England Nuclear, 549 Albany Street, Boston, MA 02118.



**New England Nuclear**  
... A BETTER WORLD

an equal opportunity employer



## POSITIONS OPEN

### BIOCHEMICAL/FERMENTATION ENGINEER

Experienced engineer required to take charge of fermentation and recovery facilities of the Chemotherapy Fermentation Program at the Frederick Cancer Research Center. The facilities include: a Fermentation and Recovery Production Pilot Plant capable of handling volumes of up to 10,000 L; a cell culture laboratory with 8 x 50 L fermentors; a Development Pilot Plant with 6 x 300 L fermentors in the final stages of construction. The individual chosen will direct an existing staff of approximately 25 people. The Chemotherapy Fermentation Program is concerned with the production of milligram to kilogram quantities of antineoplastic agents for the National Cancer Institute. Production activities of the Chemotherapy Fermentation Program are supported by a fermentation development team involved with strain improvement and media modification, and a Chemistry Section active in assay development, quality control, and improvement of purification procedures.

Please send résumé to:

Personnel  
Position Number 1572  
**FREDERICK CANCER RESEARCH CENTER**  
Litton Bionetics, Inc.  
P.O. Box B  
Frederick, Md. 21701  
*Equal Opportunity Employer, M/F*

### CHAIRPERSON, DEPARTMENT OF FAMILY PRACTICE

The University of Nebraska College of Medicine is conducting an active search for a chairperson of family practice. Applications are sought from Board-certified individuals with established credentials in research and demonstrated leadership in education. Interested applicants should submit curriculum vitae to: Office of the Dean, University of Nebraska College of Medicine, 42 Street and Dewey Avenue, Omaha, Nebraska 68105. *The University of Nebraska is an Equal Opportunity/Affirmative Action Employer.*

## CHAIRMAN Department of Microbiology



The University of Rochester School of Medicine and Dentistry is seeking an individual with an outstanding record of achievement in medical education, graduate education, research, and administration to provide leadership for a large and strong department. Submit curriculum vitae or nominations to: David H. Smith, M.D., University of Rochester School of Medicine and Dentistry, Box 777, 260 Crittenden Boulevard, Rochester, New York 14642.

*An Equal Opportunity Employer, M/F*

Moss Landing Marine Laboratories seeks **TEMPORARY FACULTY** for fall 1980 semester to teach the following marine science courses: quantitative marine science (univariate statistics), zoology of marine vertebrates, marine invertebrate physiology, behavior of marine animals, advanced topics in marine science (topic based on available instructors), and graduate seminar in marine biology. Individuals with adequate background and experience to teach two or more courses are sought, although applicants interested in teaching only one course will be given full consideration. Individuals selected may be considered for a spring 1981 appointment. No commitment on the fall 1980 positions can be made until after 3 June. Salary range: \$1364 to \$2618 per month (full-time). For further information, contact: Dr. John H. Martin, telephone: 408-633-3304 or submit a letter of application and résumé before 1 June to: Dr. John H. Martin, Director, Moss Landing Marine Laboratories, P.O. Box 223, Moss Landing, Calif. 95039. *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### CHAIRMANSHIP DEPARTMENT OF HUMAN GENETICS MEDICAL SCHOOL UNIVERSITY OF CALIFORNIA

The University of Michigan Medical School invites applications for the chairmanship of its Department of Human Genetics. Qualifications must include: national stature as a leader in research in the field of genetics, demonstrated commitment to excellence in teaching, and interest in administration. Respond to: M. J. Coon, Ph.D., Chairman, Human Genetics Search Committee, University of Michigan Medical School, Department of Biological Chemistry, Room 5416 Medical Science I, 1335 Catherine Street, Ann Arbor, Michigan 48109. *A nondiscriminatory, Affirmative Action Employer. Code 100BH.*

### DIRECTOR DIVISION OF MEDICAL PHYSICS COMPREHENSIVE CANCER CENTER

Applications are invited for the post of director of the Division of Medical Physics. This division provides services in radiotherapy physics, diagnostic radiology, nuclear medicine, and radiation protection. The division has six full-time physicists involved in service and research, as well as technical sections of electronics, treatment planning, and machine shop with a total staff of 30 housed in approximately 14,000 feet of space, including large modern research laboratories. The division is part of a comprehensive cancer treatment and research center which includes radiation oncology, medical and surgical oncology, epidemiology and biological and clinical research. The center is located within the campus of the University of Manitoba Medical School and the Primary Teaching Hospitals. Academic appointment, rank, and salary appropriate to appointee.

Application, including curriculum vitae, should be forwarded to: Dr. L. G. Israels, Executive Director, Manitoba Cancer Treatment and Research Foundation, 700 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0V9.

### ENVIRONMENTAL INFORMATION SYSTEMS OFFICER

The Pan American Health Organization is seeking candidates for the position of environmental information systems officer with duty station in Lima, Peru. A university degree in environmental engineering, sciences, or information sciences is required as well as a minimum of 5 years of experience in the organization and management of information systems, including the development of a significant information system, individually or as a team member. Postgraduate training equivalent to a master's degree is desirable.

The selected candidate will be responsible for the implementation and operation of an information and documentation network on environmental engineering and sciences to serve the Latin American and Caribbean countries. Duties include the creation, development, and utilization of a computerized central bibliographic file; implementing technical cooperation and training activities to establish and/or reinforce national collaborating centers; and testing and evaluating of network's operational procedures and tools. Minimum salary and allowances are approximately \$28,000, free of taxes. Send curriculum vitae to: Personnel Department, Pan American Health Organization, 525 23rd Street, NW, Washington, D.C. 20037.

### FACULTY POSITIONS IN PHARMACOLOGY UNIVERSITY OF CALIFORNIA, IRVINE COLLEGE OF MEDICINE

The newly redeveloping Department of Pharmacology of the University of California, Irvine, College of Medicine, invites applications and nominations for five tenure-track or tenured faculty positions. Candidates should be internationally recognized scholars and investigators with demonstrated commitment to medical and graduate education, and should be currently active in one or more of the following fields: biochemical pharmacology, neuropharmacology and neuroendocrinology, immunopharmacology, renal and cardiovascular pharmacology, clinical pharmacology. A Ph.D. in pharmacology or biochemistry or M.D. is required. Level of appointment and salary will be commensurate with achievement and experience.

Curriculum vitae and names of three references should be sent before 15 June 1980 to: Dr. Larry Stein, Chair, Department of Pharmacology, University of California, Irvine, California 92717. *The University of California is an Equal Opportunity Employer.*

## POSITIONS OPEN

### FACULTY POSITION

The Department of Physiology, University of Cincinnati College of Medicine, invites applications for a full-time, tenure-track position at the assistant or associate professor level in neurobiology with emphasis on neurochemistry and transmitter-receptor interaction. The applicant should have postdoctoral training, demonstrated research credentials which merit external support, and a positive commitment to participation in teaching in an integrated neuroscience course. Please submit curriculum vitae and three letters of recommendation to: Dr. Michael Behbehani, Chairman, Search Committee, Department of Physiology, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, Ohio 45267.

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

Applications are being accepted for several tenure-track **FACULTY POSITIONS** (assistant professor to professor) available in active Medical School Microbiology Department. Responsibilities include teaching during respective medical and graduate student courses, develop elective courses, and establish active research program in area such as molecular virology, viral genetics, immunochemistry or immunobiology of infectious microorganisms. Applicants with a doctoral degree should send a résumé and the names of three references to: Dr. Herman Friedman, Professor and Chairman, Department of Medical Microbiology, University of South Florida, 12901 North 30 Street, Box 10, Tampa, Fla. 33612 by 25 May 1980. *An Affirmative Action/Equal Opportunity Employer.*

### FERMENTATION MICROBIOLOGIST

The Chemotherapy Fermentation Program at the Frederick Cancer Research Center has an immediate opening for a Ph.D.-level scientist to join a team involved with fermentation development studies. In particular, we are looking for someone with an interest in strain improvement. Specific experience with actinomycetes in the area of mutation, selection, and genetic recombination is desirable. The Chemotherapy Fermentation Program is involved with the production of milligram to kilogram quantities of antineoplastic agents for the National Cancer Institute. On-site facilities include Fermentation and Recovery Pilot Plants which are capable of handling fermentations up to the 10,000 liter scale. In addition to a fermentation development team, production activities are supported by an active Chemistry Section concerned with analysis, quality control, and the development of purification procedures.

Please send résumé to:

Personnel  
Position Number 1584  
**FREDERICK CANCER RESEARCH CENTER**  
Litton Bionetics, Inc.  
P.O. Box B  
Frederick, Md. 21701  
*Equal Opportunity Employer, M/F*

### IMMUNOLOGY—FACULTY

One junior faculty position is available in immunology (immunogenetics or immunochemistry) with particular emphasis in oncologic or gerontologic problems. Major activities would be in research, but the recruit is expected to participate in the instruction of medical, graduate, and undergraduate students. Excellent facilities and equipment available in expanding immunology research group affiliated with recently established Cancer and Aging Centers. Position to begin 1 September 1980. Candidates having completed at least 2 years of postdoctoral training should submit curriculum vitae and at least three references before 15 June 1980 to: Dr. D. M. Goldenberg, Division of Experimental Pathology, University of Kentucky Medical Center, Lexington, Ky. 40536.

### UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

Two positions available 1 July 1980 at the **INSTRUCTOR THRU PROFESSOR** level in the Department of Radiology. The physician will take part in the program of patient care, teaching, and research carried on in the Department of Radiology. He or she will supervise the activities of the resident staff and aid in the teaching of residents and medical students. Must be Board-eligible or Board-certified. Entering level commensurate with qualifications and experience. Reply to: Box 115, SCIENCE, Code 1300H0, 2600H0. *A nondiscriminatory, Affirmative Action Employer.*

## METABOLISM SCIENTIST

The Agricultural Division of The Upjohn Company has an opening for a scientist in the area of Biochemistry and Residue Analysis. The Division is in the business of developing a variety of products for use in animals and on plants.

The successful candidate will have a Ph.D. in biochemistry, organic chemistry or pharmacology with a background in the characterization of metabolites resulting from the use of radiolabeled Xenobiotics in plants and/or animals. Proficiency in using separation techniques and analytical instrumentation is essential. Experience in the study of the fate of chemicals in the environment is desirable. Candidate should have good communication skills.

Kalamazoo is a pleasant, moderate-sized Southwestern Michigan community offering an excellent mix of cultural/recreational opportunities. Excellent salary, benefits, and a relocation program are available.

Send resume in confidence to:

Kent S. Morgan  
The Upjohn  
Company  
7171 Portage Rd.  
Kalamazoo, MI  
49001

**Upjohn**

An Equal Opportunity Employer M/F

## MARINE SCIENCE LABORATORIES MINISTRY FOR CONSERVATION VICTORIA, AUSTRALIA

The Marine Studies Branch of the Ministry for Conservation has recently moved into new premises at Queenscliff near the entrance to Port Phillip Bay. The laboratories are very well equipped, have two larger and two smaller vessels for research purposes, the largest of which is 63 ft. in length, with access to a further all-weather vessel run by the Ministry.

There are 78 staff in the Branch, excluding visiting scientists, of whom approximately half are professionals. The Branch is responsible for marine and estuarine fisheries research, marine pollution studies, and bioassays related to estuarine and marine waters. The Branch consists of Project Co-ordinators, Chemistry, Fisheries and Biology, Materials and Operations Sections, together with service sections.

### DIRECTOR—(Reference Number 15-50-00018)

**Duties**—To be responsible for the work of the Marine Studies Branch and to advise on and assist in the formulation of policy relating to the marine environment.

**Qualifications**—An approved degree in science or an equivalent qualification; an appropriate higher degree; extensive experience in research relating to the marine environment; demonstrated ability to lead and direct the work of scientific, technical, and administrative staff, and ability to apply research results to the formulation of policy.

### MARINE SCIENTISTS—(Reference Number 15-50-00062)

#### PROJECT CO-ORDINATOR (MARINE ENVIRONMENT)

**Duties**—To assist in the co-ordination and management of marine programs. To liaise with Government Departments and other organizations on the definition of marine research needs, the development of programs and task specifications to meet needs, the progress of tasks and interpretation of results. To advise management on marine research matters and to assist in the formulation of policy relating to the marine environment. Other duties as required.

**Qualifications**—An approved degree in science or an equivalent qualification; an appropriate higher degree. Demonstrated ability and extensive experience in marine ecological research and organizing work related thereto. Ability to supervise staff, work with multidisciplinary groups, and write reports.

#### PROJECT CO-ORDINATOR (FISHERIES)

**Duties**—To assist in the co-ordination and management of research programs related to marine fish species with particular reference to commercial fisheries. To liaise with the Commercial Fisheries Section of the Fisheries and Wildlife Division and with government departments and other organizations on the definition of marine research needs, the development of programs and task specifications to meet needs, the progress of tasks and the interpretation of results. To advise management on marine fisheries research matters and to assist in the formulation of policy relating to the marine environment. Other duties as required.

**Qualifications**—An approved degree in science or an equivalent qualification; an appropriate higher degree. Demonstrated ability and extensive experience in marine fisheries research and organizing work related thereto. Ability to supervise staff, work with multidisciplinary groups, and write reports.

#### PRINCIPAL MARINE SCIENTIST (FISHERIES AND BIOLOGY)

**Duties**—To be responsible for the supervision and direction of scientific and technical staff of the Marine Fisheries and Biology Section of the Marine Studies Branch. To provide research leadership and be responsible for the scientific validity and standard of work and for work allocation, scheduling, and budget control. Other duties as required.

**Qualifications**—An approved degree in science or an equivalent qualification; an appropriate higher degree. Demonstrated ability and extensive experience in marine biology and fisheries research. Ability in research leadership, organizing work, and supervising staff.

### MARINE SCIENTISTS—(Seven Positions)

**Duties**—To plan, conduct, and lead field and laboratory studies in one of the following fields:

**Fisheries**: the biology and population dynamics of molluscs or fish;

**Chemistry**: chemical oceanography as related to water movement or organic chemistry as related to water quality;

**Biochemistry**: biochemical effects of marine pollution including heavy metals;

**Physiology**: either the effects of natural or man-induced stresses on marine animals or algae.

**Qualifications**—An approved degree in science or an approved equivalent qualification; an appropriate higher degree; extensive and demonstrated ability in research as related to one of the above fields; proven ability to provide scientific leadership.

### SALARY

**Director**—A\$27,739 per annum.

**Project Co-ordinator**—A\$23,694 per annum.

**Principal Marine Scientist**—A\$23,694 to A\$24,748 per annum.

**Marine Scientists**—A\$11,913 to A\$24,748 per annum.

Commencing salary for principal marine scientist and marine scientists is dependent on experience and demonstrated research ability. Applicants for marine scientist positions with lesser qualifications and experience than shown, will be considered for appointment towards the lower end of the salary range.

### TERMS OF APPOINTMENT

All positions are permanent but consideration will be given to appointment on a 2- to 3-year contract basis.

### ADDITIONAL INFORMATION

Further details may be obtained from:

**Personnel Officer, Ministry for Conservation**  
240 Victoria Parade  
East Melbourne 3002, Australia

Applications containing full details of qualifications, experience, the names of three professional referees, and quoting the appropriate reference number, should reach:

**The Secretary, Public Service Board**  
1 Treasury Place  
Melbourne 3002, Australia

no later than Wednesday, 4 June 1980.

## POSITIONS OPEN

## POSITIONS OPEN

## POSITIONS OPEN

# PLANT MANAGER

A major Fortune 500 company is seeking a plant manager for one of our veterinary laboratories in Wisconsin. The individual will be responsible for the production of all pharmaceutical products; FDA compliance; related facilities and equipment. Must have training and experience in isolating hormonal products from biological materials. Large-scale protein purification experience is a significant asset. Send résumé and salary requirements to:

## GIBCO DIVISION

The Dexter Corporation  
P.O. Box 200  
Chagrin Falls, Ohio 44022  
Attention: Joyce Coleman

An Equal Opportunity Employer, M/F

### UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

One position at **INSTRUCTOR OR ASSISTANT PROFESSOR** level, July 1980, in the Department of Anesthesiology. Board-certified or eligible anesthesiologist with Michigan licensure. Research, clinical, and didactic experience. Reply to: **Box 114, SCIENCE**. Code 200D0. A nondiscriminatory, Affirmative Action Employer.

### LECTURER IN BIOLOGY

The Department of Biology, University of California, Los Angeles, invites applications for a full-time 9-month position as lecturer to teach introductory biology to nonscience majors. Appointment is subject to renewal. Salary negotiable, depending upon qualifications. Application deadline is 1 June 1980. Please send curriculum vitae, including names and addresses of three references, to:

Dr. John D. O'Connor, Chair  
Department of Biology  
University of California  
Los Angeles, Calif. 90024

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

### MICROBIOLOGY PROGRAM COORDINATOR

Nontenure-track position open for September 1980. Duties include teaching two or three laboratory courses in microbiology and coordinating program development and academic and career counseling for undergraduate majors in microbiology. Opportunities for research available, if desired. Candidate must have Ph.D. or M.S. in microbiology. Prior teaching experience is desirable but not required. Send curriculum vitae and three references by June 1980 to: **Maurice Sussman, Chairman, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, Pa. 15260.**

The University of Pittsburgh, acting in the spirit and the letter of Affirmative Action regulations, actively encourages applications from women, minority members, and other individuals covered by the mandates of Title IX.

**AMAZON POSTDOCTORAL**, 1 September. Work with American/Brazilian research team in limnological/ecological studies of freshwater communities in Central Amazon Basin. Candidate expected to participate in group program and pursue own related research. Preference given to applicants with experience in ecosystem modeling. Must have strong background in freshwater biology, constitution for rigors of fieldwork, ability to learn foreign language. Position up to 2 years, including 12 consecutive months in field starting January 1981 in Manaus, Brazil. Send curriculum vitae and three letters of recommendation to: **Dr. Thomas M. Zaret, Department of Zoology, Institute for Environmental Studies, FM-12, University of Washington, Seattle, Wash. 98195.**

### LECTURER IN BIOCHEMISTRY UNIVERSITY OF CALIFORNIA, DAVIS

The Department of Biochemistry and Biophysics is seeking a qualified full-time lecturer in biochemistry starting on 1 October 1980. The lecturer will be expected (i) to teach undergraduate (junior-senior level) lecture and laboratory courses during each of the three quarters of the academic year and (ii) to participate in the academic and career advising of undergraduate biochemistry majors. A Ph.D. degree (preferably in biochemistry) is required.

This is a 9-month, nontenure-track teaching position with no research responsibilities or facilities. Initial appointment is for 1 year. Possible reappointment for two additional years will be considered on an annual basis.

Applicants should submit a letter describing their qualifications, experience, or potential for teaching, together with a résumé and copies of graduate transcripts. The names and addresses of at least three references should be provided. Send applications to:

Professor E. E. Conn, Chairman  
Lecturer Search Committee  
Department of Biochemistry and Biophysics  
University of California  
Davis, California 95616

Telephone: 916-752-3521 or 752-3611

The deadline for applications is 15 June 1980.

The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

**POSTDOCTORAL POSITIONS**—Available under combined program of viral oncology and immunology, supported by NIH Training Grant. Areas of research of participating staff: (i) mechanism of integration and expression of DNA and RNA tumor viruses; (ii) immunocytochemistry of tumor antigens, immunoglobulin surface receptors; (iii) cellular immunology, with particular emphasis on macrophages and thymic cells; and (iv) genetics of cell differentiation and growth regulation. Background in cell biology, biochemistry, or immunology desirable. Candidates must be U.S. citizens or permanent residents; stipend level based on experience. Send curriculum vitae and references to: **V. Defendi, M.D., Department of Pathology, NEW YORK UNIVERSITY SCHOOL OF MEDICINE, 550 First Avenue, New York, N.Y. 10016.** An Equal Opportunity Employer, M/F.

**POSTDOCTORAL POSITION** for nucleic acid chemist or enzymologist or bacterial-phage geneticist to join research program on the DNA sequence and genetic control mechanism of the histidine operon. This is an opportunity to learn current and future methods of genetic engineering with single-stranded phage vectors, and DNA sequencing by the dideoxy method. Salary: \$15,000 to \$20,000, depending on background. A physical scientist with a genuine interest in orienting toward molecular biology is also encouraged to apply. Reply with curriculum vitae and names of three or more references to: **Dr. Wayne M. Barnes, Assistant Professor, Department of Biological Chemistry, Washington University School of Medicine, St. Louis, Missouri 63110.**

### PHYSIOLOGY LABORATORY INSTRUCTOR AND COORDINATOR, University of California, Los Angeles, California, beginning 1 July 1980.

Full-time, 9-month appointment. Requires M.A. or Ph.D. degree in biology or physiology with experience in a broad range of animal and cell physiology laboratory experiments. Responsibilities include preparation and supervision of laboratory sessions in cooperation with the faculty member in charge. Appointment is subject to renewal. Salary negotiable depending upon qualifications.

Applications should be received by 30 May 1980. Send three letters of reference and curriculum vitae to:

Dr. Larry Simpson  
Department of Biology  
University of California  
Los Angeles, Calif. 90024

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

**PLANT CELL CULTURE and SECONDARY PRODUCTS**—Research specialist for ongoing program. Experience with plant cell cultures and/or plant biochemistry desirable. Position begins 1 July 1980. Send résumé and three reference letters to: **E. John Staba, Ph.D., College of Pharmacy, University of Minnesota, 128 Pleasant Street, SE, Minneapolis, Minn. 55455** by 30 May.

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT), POSTDOCTORAL ASSOCIATE**: a postdoctoral position is open at MIT. The research program centers on interfacing a M.S. with a liver perfusion apparatus to study on-line the metabolism of volatilizable substrates and drugs. Candidates should have surgical skills and some experience with metabolite assays. Contact: **Dr. H. Brunengraber, Massachusetts Institute of Technology, Department of Nutrition and Food Science, Room 56-229, 77 Massachusetts Avenue, Cambridge, Massachusetts 02139.** Telephone: 617-253-6783. MIT is an Equal Opportunity/Affirmative Action Employer.

Two **POSTDOCTORAL ASSOCIATES**, having interest and background in molecular biology of gene expression and neoplastic transformation, are needed for an ongoing research program on hormone-mediated specific gene action during normal and neoplastic development of murine mammary gland in vitro. Start 18 August, \$10,000 to \$12,000. Curriculum vitae with names of references should be sent by 30 June to: **Dr. M. R. Banerjee, Tumor Biology Laboratory, School of Life Sciences, 201 Lyman Hall, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588.** Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL POSITION IN VISION RESEARCH** available now in Northwestern University, Department of Psychology, to work on motion perception as relates to aviation and visual function in aging humans. Practical skills in electronics and computers are essential. Good salary; renewable for 2 or 3 years. Send résumé to: **Dr. Robert Sekuler, Cresap Neuroscience Laboratory, Northwestern University, Evanston, Illinois 60201.** Northwestern University is an Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL POSITION IN BIOCHEMISTRY

Position immediately available for Ph.D. biochemist or organic chemist with background in natural products chemistry to work on one of several research projects in the department. Send curriculum vitae and names of three references to: **Dr. Robert E. Olson, Personnel Services, St. Louis University Medical Center, 1402 South Grand, St. Louis, Mo. 63014.** An Equal Opportunity/Affirmative Action Employer, M/F/H.

**POSTDOCTORAL RESEARCH ASSOCIATE/BIOCHEMISTRY**. Position available for Ph.D. in biochemistry to investigate the effect of interferon on DNA, poly(ADP-ribose), 2', 5'-oligo (A), and histone synthesis in tissue culture. May include CD studies of chromatin. Competitive salary and excellent benefits. Send curriculum vitae to: **Dr. Robert J. Suhadolnik, Department of Biochemistry, Temple University School of Medicine, Philadelphia, Pa. 19140.** Equal Opportunity Employer.



## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** in molecular biology of eukaryotic replication and chromatin functions. One position open immediately, and one in early 1981. Applicants please contact: **Dr. Ronald L. Seale, Department of Cellular Biology, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, Calif. 92037.**

**POSTDOCTORAL POSITION** available 1 July 1980 for a 3-year project studying dust accumulation in occupational lung disease and dust-clearance mechanisms using magnetic tracers. Includes human and animal studies. Onsite field studies are also involved. Background preferred in biophysics, biomedical engineering, or pulmonary physiology. Faculty rank at Hahnemann Medical College. Send curriculum vitae to: **Allan P. Freedman, M.D., Division of Pulmonary Disease, 230 North Broad Street, Mail Stop Number 107, Philadelphia, Pa. 19107.**

**POSTDOCTORAL POSITION IN COMPARATIVE BIOCHEMISTRY** available 1 August 1980. Background preparation in enzymology and cell fractionation techniques. Interest in invertebrate and vertebrate biochemistry. Send résumé and names of three references to: **Dr. Jean Vorhaben, Department of Biology, Rice University, Houston, Texas 77001. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** to study Golgi glycosylation of proteins and isolation of glycoprotein mutants [see *Cell* 19, 597 (1980) and *J. Cell Biol.* 83, 453a (1979)]. Strong background in biochemistry or cell biology required. **Dr. C. B. Hirschberg, E. A. Doisy Department of Biochemistry, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, Mo. 63104.**

### POSTDOCTORAL POSITIONS (TWO)

Available 1 July 1980 for 2 to 3 years to study biochemical genetics of human disease using cultured cells in ongoing projects in cystic fibrosis and DNA repair disorders. Contact: **Dr. M. Buchwald, Department of Genetics, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario Canada M5G 1X8.**

## POSITIONS OPEN

Oregon State University **POSTDOCTORAL POSITIONS** available 1 June 1980 to study luminescence of DNA and related compounds. Experience in luminescence spectroscopy of biological materials is desirable. Salary is \$15,000 for 12 months. Deadline for applications is 30 May 1980. Later graduates may be considered. Send curriculum vitae and names of three references to: **Dr. Malcolm Daniels, Chemistry Department, Oregon State University, Corvallis, Oregon 97331. Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973.**

### POSTDOCTORAL POSITION

A research associate position is available in the laboratory of Dr. Peter F. Hall to study intracellular transport of cholesterol and microfilaments using fluorescence and electron microscopy. Send curriculum vitae, synopsis of Ph.D. thesis research, and list of three references to: **Dr. Peter Hall, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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**POSTDOCTORAL POSITION** available July 1980 for neurobiologists and biochemists interested in multidisciplinary investigations of the basic mechanisms underlying injury and regeneration in the CNS and PNS; \$14,000 to \$17,000; 2 years. Applicants should send résumé and names, addresses, and telephone numbers of three references to: **Dr. Donald Price, or Dr. Jack Griffin, Neuropathology Division (Pathology), Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, Md. 21205. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available 1 July 1980 for work on problems of electrical excitation in internally perfused voltage-clamped giant axons. Renewable. Experience in membrane biophysics desirable but not essential. Candidates with Ph.D. in physical sciences will be considered. Send curriculum vitae and names of three references to: **Dr. L. Goldman, Department of Physiology, School of Medicine, University of Maryland, Baltimore, Maryland 21201.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** in gynecologic oncology available for qualified applicant with Ph.D. to carry out research in diagnosis of gynecologic malignancies. Applicant should have a strong background in immunology, biochemistry, genetics, virology, or other area related to early diagnosis. Send curriculum vitae and a list of three or more persons who may be contacted for references to: **Dr. John T. Queenan, Professor and Chairman, Department of Obstetrics and Gynecology, Georgetown University Hospital, 3800 Reservoir Road, NW, Washington, D.C. 20007. Georgetown University is an Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Position available 1 July 1980 for studying somatic cell hybridization in malignancy. Candidate with background in genetics and cell hybridization desired. Experience in hybridoma antibodies helpful. Excellent facilities available. Salary: \$15,000 to \$18,000. Apply with curriculum vitae and references to: **Dr. David M. Goldenberg, MS 409 Medical Center, University of Kentucky, Lexington, Ky. 40536 by 20 May 1980.**

**POSTGRADUATE RESEARCH GENETICIST** position is currently available in the Department of Pomology, University of California, Davis. A Ph.D. is required in plant genetics. Applicants should have a strong background in strawberry genetics as it applies to evolutionary relationships, population dynamics, and breeding. A working familiarity with DNA biochemistry is essential. Duties will include the characterization of the genome organization in the *Fragaria* spp. complex, isozyme fingerprinting, field experimentation, and data analysis. Salary commensurate with experience. Applicants should send their résumé along with two letters of recommendation to: **Dr. Royce S. Bringham, Department of Pomology, 1039 Wickson Hall, University of California, Davis, Calif. 95616. Final filing date is 31 May 1980.**

*The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

## DEAN, TUFTS UNIVERSITY SCHOOL OF MEDICINE

The last dean having accepted a university presidency, Tufts University announces a search for a dean of its School of Medicine. The search committee seeks candidates who:

- have achieved distinction in medical education and research;
- can give strong and effective leadership to the faculty in the development of educational and research programs in the biomedical sciences and in the management of the basic science departments in a prestigious health center of growing complexity, involving the School of Dental Medicine, the new School of Veterinary Medicine, and a new federally funded Nutrition Research Center.
- can bring vision and judgment to assist the faculty of a distinguished and diverse group of teaching hospitals to evolve the most productive relationships to the School and to each other;
- can augment both public and private financial support for the School and its activities;
- can elicit respect and cooperation in planning for and managing a complex enterprise.

**Send nomination or resume, before May 30, 1980 to:**

**Medical Dean Search Committee  
President Jean Mayer, Chairman  
Tufts University  
Medford, MA 02155**

*An Equal Opportunity/Affirmative Action Employer*

**TUFTS UNIVERSITY**



# Princeton University

## PLASMA PHYSICS LABORATORY

## POST-DOCTORAL RESEARCH APPOINTMENTS IN THEORETICAL PLASMA PHYSICS...

The Theoretical Division of Princeton University's Plasma Physics Laboratory plans to offer Research Positions at the Post-Doctoral level beginning about SEPTEMBER 1ST, 1980. The term is for one year and is usually renewed for a second year. Recent Graduates of exceptional ability with a Ph.D. Degree or its equivalent in Theoretical Physics, Applied Mathematics, or other relevant disciplines are encouraged to apply.

The Plasma Physics Laboratory is supported by contract with the United States Department of Energy. Its purpose is to investigate problems in plasma physics related to the development of magnetically confined, toroidal, controlled fusion reactor. The Theoretical Division conducts analytical and computational studies of hydromagnetic and kinetic models of plasmas, including such topics as equilibrium, transport, stability, nonlinear behavior, stochasticity, and turbulence.

Appointments will be made on the basis of the applicant's interest, experience, academic record, and letters of recommendation. U.S. citizenship is not required. Applications, including personal and academic details, experience, and publications should be sent to: **PERSONNEL MANAGER. Refer to POSITION PD-8081.**

**PRINCETON PLASMA PHYSICS  
PLASMA PHYSICS LABORATORY  
Post Office Box 451 Princeton, N.J. 08544**

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## POSITIONS OPEN

**POSTDOCTORAL RESEARCH POSITION** in pulmonary cell biology. Biochemical or ultrastructural background with tissue culture expertise desired. Commences 1 July 1980. Send curriculum vitae and names of referees to: **Dr. John Hayes, Mallory Institute of Pathology, 784 Massachusetts Avenue, Boston, Mass. 02118. Telephone: 617-424-5316.**

### INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE UNIVERSITE DU QUÉBEC

#### PROFESSEUR

**FONCTIONS:** Faire de la recherche principalement dans le domaine du confinement magnétique des plasmas. S'insérer dans une équipe de recherche et contribuer à l'étude et au développement de diagnostics plasmas (fluorescence, laser sous milli-métrique, spectroscopie U.V.). Donner des cours au niveau gradué en physique des plasmas. Diriger des étudiants au niveau de la maîtrise et du doctorat.

**EXIGENCES:** Doctorat et expérience pertinente en physique expérimentale des plasmas.

**LIEU DE TRAVAIL:** INRS-Energie, Varennes (près de Montréal), Québec.

**SALAIRE:** Selon la convention collective des professeurs et en fonction des qualifications et de l'expérience.

Faire parvenir votre curriculum vitae en indiquant le numéro du concours SP 80-05 avant le 31 mai 1980 au:

Directeur du personnel  
Institut National de la Recherche Scientifique  
2700 rue Einstein  
Case postale 7500  
Sainte-Foy, Québec, Canada G1V 4C7

**QUANTITATIVE ECOLOGY/INSECT POPULATION DYNAMICS.** Faculty, tenure-track. Incumbent to develop program to complement pest management programs on agricultural pest problems. Opportunity to teach. Salary and rank commensurate with education and experience. Application deadline: 1 June 1980 or until suitable candidate is found. Submit résumé and three letters of recommendation to: **Dr. Eldon E. Ortman, Head, Department of Entomology, Purdue University, West Lafayette, Ind. 47907. Telephone: 317-493-9185. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH AGRONOMIST,** Career Federal Service. Plans and conducts a comprehensive weed-control research program in field and horticultural crops in Alaska. Incumbent conducts research to develop a better understanding of the biology, life cycles, and ecology of the most important weeds; develops improved integrated weed management systems; and develops an understanding of the behavior, fate and effects of herbicides in soils. Location: Palmer, Alaska; GS-11/12-level position. Salary range: \$20,611 to \$24,703, plus 20 percent Cost of Living Allowance. *Equal Opportunity Employer.* Contact: **Barbara Lamm, USDA-SEA/AR-NCR-8, 2000 West Pioneer Parkway, Peoria, Ill. 61615. Telephone: 309-671-7319.**

## RESEARCH ASSOCIATE

Ph.D. with postdoctoral experience and expertise in recombinant DNA technology for position in tumor virus laboratory. Position available immediately. Send résumé and the names of three references to:

**MARY T. DIXON**  
Personnel Manager

### THE INSTITUTE FOR CANCER RESEARCH

7701 Burholme Avenue  
Philadelphia, Pa. 19111

*The Institute for Cancer Research is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### RECOMBINANT DNA STUDIES ON PLANT GENES

The Department of Bacteriology, University of California at Davis, invites applications for a position at the assistant professor level with teaching responsibilities in the Bacteriology Department (33 percent) and with research responsibilities assigned to the Plant Growth Laboratory (67 percent). The teaching would involve a course in molecular cloning and associated techniques plus other teaching in bacteriology. Candidates who are committed to developing a research program on the application of recombinant DNA technology to the structure, modification, or expression of plant genes will be considered. The research should include, but is not limited to, problems of direct agricultural importance. Previous experience with plant systems is preferred but is not essential.

Send curriculum vitae, including a brief description of research experience, a brief statement of proposed research, and names of three references, by 1 July 1980 to: **Chairman, Search Committee, Department of Bacteriology, University of California, Davis, Calif. 95616.**

*In compliance with federal and state laws and University policy, the University of California does not discriminate on the basis of race, color, national origin, religion, sex, handicap, age, or against disabled veterans or veterans of the Vietnam era. The University of California is an Affirmative Action/Equal Opportunity Employer.*

**RESEARCH ASSOCIATES—Molecular biology.** Research involves working with phages and nucleic acids, DNA sequencing and cloning. Stimulating projects in DNA repair, replication, and development of new methods for in vitro and in vivo genetic manipulation. Ph.D. required. Relevant experience desirable but will train the right candidates. Superbly equipped, stimulating and rapidly growing department 10 miles from downtown Manhattan and minutes from pleasant suburbs. Apply to: **Dr. Zafri Humayun, Department of Microbiology, COLLEGE OF MEDICINE & DENTISTRY OF NEW JERSEY—New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103, or telephone: 201-456-5217. Equal Opportunity/Affirmative Action Employer.**

### UNIVERSITY OF ARIZONA

A position as **RESEARCH SCIENTIST** is open at the NSF Regional Instrumentation Facility at the University of Arizona. The facility will use a tandem accelerator and associated equipment to perform charge and mass spectrometry on long-lived radioisotopes such as  $^{10}\text{Be}$ ,  $^{14}\text{C}$ , and  $^{36}\text{Cl}$ . The appointment will be for 2 years, with the possibility of extension. The starting date is about 1 October, and the salary is in the range from \$18,000 to \$22,000, depending on qualifications and experience. Applicants should be at the postdoctoral level. It is desirable, though not necessary, that they be familiar with electrostatic accelerators, computers, programming, nuclear-physics instrumentation, and target fabrication.

The successful applicant will play an important role in the establishment of the NSF-Arizona radioisotope dating facility, and will deal with scientists of many disciplines from around the world.

Send résumé and names of references by 31 July 1980 to: **D. J. Donahue, Department of Physics, University of Arizona, Tucson, Arizona 85721.**

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

### RESEARCH ASSOCIATE

**Atmospheric Kinetics and Photochemistry**

**National Research Council—National Aeronautics and Space Administration**

Postdoctoral or Senior Postdoctoral Resident Research Associateships at the Jet Propulsion Laboratory, California Institute of Technology, are being offered in the Molecular Physics and Chemistry Section. These appointments are available for laboratory studies of homogeneous kinetic and photochemical processes of atmospheric importance involving transient species. Awards will be made on a competitive basis, with completed applications due by 15 August 1980. Further details on the research can be obtained from: **R. T. Watson (telephone: 213-354-2231), or W. B. DeMore (telephone: 213-354-2436), Building 183-601, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, Calif. 91103.** General Associateship Program information and application materials can be obtained from: **The National Research Council, Associateship Office (JH608-J2), 2101 Constitution Avenue, NW, Washington, D.C. 20418.**

## POSITIONS OPEN

### RESEARCH ASSOCIATE LASER LIGHT SCATTERING IN SEMICONDUCTORS

The Department of Physics at Kansas State University expects to have a postdoctoral position available beginning 1 July 1980 to participate in a program of inelastic light scattering studies of laser annealing mechanisms in semiconductors. Techniques will include ion implantation and Raman scattering with tunable pulsed and cw lasers. A background in semiconductor physics and/or laser light scattering is desirable. The initial appointment will be for 1 year but by mutual agreement may be extended for a second year. Applications should be sent prior to 1 June 1980 to: **Professor A. Compaan, Department of Physics, Kansas State University, Manhattan, Kansas 66506. Kansas State University is an Equal Opportunity/Affirmative Action Employer.**

**A RESEARCH ASSOCIATE (POSTDOCTORAL) POSITION** is available immediately for 1 to 2 years to study the relationship of intracellular lysosomal enzymes to bacterial inactivation using quantitative cytospectrophotometry. Experience in histochemistry and cytophotometry is highly desirable. Salary is \$13,000 to \$15,000. Send curriculum vitae and references to: **Dr. Elliot Goldstein, Department of Medicine, University of California at Davis, School of Medicine, Davis, California 95616. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE.** Position in chemistry available 1 July 1980 to study the regulation of protein synthesis initiation. Ph.D. required with strong background in protein chemistry and enzymology; \$10,000 annually. Curriculum vitae and three references should be sent by 15 June to: **Dr. N. K. Gupta, Department of Chemistry, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588. Affirmative Action/Equal Opportunity Employer.**

**RESEARCH ASSOCIATE** position open 1 September 1980, to study the neuropharmacological basis of rewarding properties of abused drugs; \$12,000 to \$15,000 per year. Background in biochemical, histological, and behavioral methods essential. Send curriculum vitae and names of three references to: **Dr. S. A. Lorens, Building 135, Neuropharmacology, Loyola University Medical Center, 2160 South First Avenue, Maywood, Ill. 60153.**

**RESEARCH SPECIALIST** for collaborative research in the circulatory system. M.S. in physical or biological science or equivalent work experience with supervisory responsibilities. Train others in laboratory in research techniques, develop and modify research protocols; analyze experimental data and prepare initial drafts of manuscripts for publication; plan experiments for laboratory. Apply to: **Paul C. Johnson, Ph.D., Professor and Head, Department of Physiology, College of Medicine, University of Arizona, Tucson, Ariz. 85724. An Equal Opportunity/Affirmative Action Employer.**

### RESEARCH TRAINING IN SALIVARY SECRETION

Positions are available 1 July 1980 for research training in the biochemistry, microbiology, nutrition, physiology, and pathology of salivary secretion. Applicants should have Ph.D. or a professional degree (M.D., D.D.S., D.V.M., or equivalent) and must be U.S. citizens or have permanent visas. Graduate programs leading to Ph.D. or M.S. are available. Stipends: \$13,380 to \$17,040, depending on experience.

Send curriculum vitae and statement of research interests to: **Dr. Patricia Keller, Department of Oral Biology, SB-22, University of Washington School of Dentistry, Seattle, Wash. 98195.**

*University of Washington is an Equal Opportunity Employer.*

### VOLUNTEERS IN TECHNICAL ASSISTANCE (VITA), INC. SENIOR TECHNICAL ADVISERS

Staff sought for renewable energy program. Qualifications: commitment to appropriate technology, project development skills, field experience in developing countries especially low-income groups, fluency in English and Spanish/French/Arabic, extensive travel. Other requirements: Ph.D. or equivalent experience in one or more: solar and wind energy applications, biomass conversion, micro hydro-power, small industry management, interdisciplinary social science. Send résumé and expression of interest to: **Senior Program Staff, VITA, 3706 Rhode Island Avenue, Mt. Rainier, Md. 20822. Equal Opportunity Employer.**

## NOMINATIONS INVITED FOR THE 1980 BROOKDALE AWARDS FOR RESEARCH IN GERONTOLOGY

The Gerontological Society is pleased to announce the 1980 Brookdale Awards for Research in Gerontology. Two awards will be made: one in biological and clinical research and the other in social and behavioral research. The amount of each award will be \$20,000.

### Criteria for Eligibility

The nominees must be citizens of the United States and have been recognized both nationally and internationally for their distinguished scholarly and scientific contributions to research in gerontology.

### Nominations

- 1) Nominations may be made by Members and Fellows of either the Gerontological Society or of the professional society of the nominee's own discipline. Each nomination must be endorsed by three additional persons, one of whom must be a Member or Fellow of the Gerontological Society.
- 2) Nominations must be made in the form of a letter setting out in detail the significance of the work upon which the nomination is based. Accompanying the nomination must be three letters of endorsement, curriculum vitae, a bibliography, and reprints of three articles published in refereed journals and/or other relevant publications. Eleven copies of all these materials must be submitted.

### Screening and Selection

- 1) **Screening:** the Screening Committee will consist of representatives of the four sections of the Gerontological Society as well as representatives of other organizations related to aging. The chair of the Screening Committee will be appointed by the President of the Gerontological Society.

- 2) **Selection:** the recipients of the awards will be announced by the Awards Committee Chair. The awards will be conferred at a ceremony at the Annual Scientific Meeting of the Gerontological Society in San Diego, California, 21 to 25 November 1980.

### Deadline for Receipt of Nominations

Nominations must be postmarked no later than 12 August 1980. Send to:

**Chairperson, Brookdale Awards Screening Committee**  
The Gerontological Society  
Suite 305, 1835 K Street, NW  
Washington, D.C. 20006

**AQUATIC ORGANIC CHEMIST:** The U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), Great Lakes Environmental Research Laboratory, is seeking an organic biogeochemist to work within its program designed to advance the state of the art in numerically simulating the transport, cycling, and fate of toxic organic compounds in the aquatic ecosystem. Candidates should have proven research experience in some area of ecosystem chemical processes and interest in applying process information to numerical modeling. The position includes laboratory, field, and numerical modeling responsibilities, tailored (within the constraints of the program) to the capabilities and interests of the candidate. Candidates should be familiar with the fields of limnology/oceanography and ecology. This position is in the competitive Civil Service and may be filled at the GS-12, GS-11, or GS-9 levels. Entrance-level salaries are \$24,703, \$20,611, and \$17,035 per annum, respectively. **QUALIFICATIONS:** B.S. or higher degree in physical or like sciences or engineering. This course study must have included 30 semester hours in chemistry consisting of lectures, recitations, and appropriate laboratory work. The course of study in chemistry must have included quantitative analysis, inorganic, organic, and physical chemistry. In addition, candidates must have had at least six semester hours of physics and also mathematics through differential and integral calculus. Candidates must also show 3 years of professional experience at the GS-11 and GS-12 levels and 2 years of professional experience at the GS-9 level. Professional experience is defined as experience directly related to the field of research chemistry. **SELECTIVE FACTORS:** Applicants must have academic preparation and/or experience in organic chemistry of aquatic systems. Additional technical information may be obtained from: **Dr. Andrew Robertson, telephone: 313-668-2281 or FTS 378-2281. TO APPLY:** current or former federal employees should submit SF-171, CD-332 (Employee Appraisal), and a transcript. Form CD-332 may be obtained by calling: 303-499-1000, extension 6332 or FTS 323-6332. Applicants not employed by the federal government should submit a complete application package for "Physical Science Positions-1300." These forms may be obtained from the nearest Office of Personnel Management (formerly U.S. Civil Service Commission). All applications should be submitted to: **NOAA/NTIA, Personnel Services Division (R566), Attention: Mert Leeper, Boulder, Colorado 80303.** Reference vacancy number NOAA/ERL 80-122ML. Applications must be postmarked no later than 30 May 1980, to receive consideration. *An Equal Opportunity Employer.*

## MICROBIOLOGIST

The Upjohn Company's Veterinary Therapeutics area is seeking an individual with a Ph.D. in Microbiology with training in infectious animal diseases. A D.V.M. degree would be an asset. In this position, the incumbent will plan and conduct lead evaluation research to develop new antibiotics for animals; conduct a laboratory antibiotic screening program and develop and improve animal disease models for use in drug evaluation studies.

Kalamazoo is a medium-sized, southwestern Michigan community with local colleges, a moderate cost of living, an attractive housing market, progressive school systems and easy access to a good mix of cultural/recreational options.

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## POSITIONS OPEN

Applications from Ph.D.'s are invited for **TEACHING POSITIONS** in the following courses:

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The University is located in the West Indies. Please send curriculum vitae to:

St. George's University  
c/o Foreign Medical School  
Service Corp.  
One East Main Street  
Bay Shore, New York 11706

## AWARD

**THE BEDFORD INSTITUTE  
OF OCEANOGRAPHY**  
Dartmouth, Nova Scotia, Canada  
announces the

**A. G. HUNTSMAN AWARD & SILVER  
MEDAL IN OCEANOGRAPHY**

### 1980 Recipients:

Biological Oceanography—R. Margaleff  
University of Barcelona  
Barcelona, Spain

Physical/Chemical Oceanography—H. Stommel  
Woods Hole Oceanographic Institution

Marine Geoscience—D. P. MacKenzie  
Cambridge University  
England

The A. G. HUNTSMAN AWARD & MEDAL is awarded annually in recognition of excellence of research and contribution to international oceanography. Selections are made from nominations from the Canadian marine scientific community by marine scientists at the Bedford Institute.

The A. G. HUNTSMAN SILVER MEDAL has been struck specially for this award. It is a three-inch silver medal and features in bas-relief an image of the Canadian oceanographic research vessel *Hudson*, famous for its circumnavigation of the North and South American continents in 1970.

The awards will be presented at a special ceremony on 22 May 1980.

For further information, write: A. G. HUNTSMAN Award Committee, c/o Dr. J. H. Vandermeulen, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada B2Y 4A2.

## WORKSHOP

**FORUM AND WORKSHOP ON BARRIER ISLAND MANAGEMENT**—27 to 30 May 1980. The National Park Service and the Provincetown Center for Coastal Studies are sponsoring a Public Forum and Workshop for Land Managers on Barrier Islands, to be held at the Provincetown Inn, Provincetown, Mass., adjacent to Cape Cod National Seashore. Local scientists and environmentalists will address coastal zone management, barrier island development and recreational uses, coastal engineering and storm preparedness, augmented by field trips. Attendance and participation is by reservation only on a first-come, first-served basis. Write: Provincetown Center for Coastal Studies, 59 Commercial Street, Provincetown, Mass. 02657, or telephone 617-349-3785.

## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIPS, BIOCHEMISTRY/BIOPHYSICS.** To study mechanisms of metalloprotein oxygenases, oxidases. Experience with related systems important. Send résumé and three letters of recommendation to: Professor Howard Mason, Department of Biochemistry, School of Medicine, University of Oregon Health Sciences Center, Portland, Oregon 97201. Equal Opportunity/Affirmative Action Employer.

## FELLOWSHIPS

**ASSISTANTS—TWO POSTDOCTORAL VIROLOGY FELLOWSHIPS** available in Department of Microbiology, The Mount Sinai School of Medicine, City University of New York. Immediate starting date. Résumés only to: Dr. E. D. Kilbourne, Professor and Chairman, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029. An Equal Opportunity Employer.

**POSTDOCTORAL FELLOWSHIP** funded by NIH, available 1 July 1980, for 1, 2, or 3 years. Research areas include culture of differentiated epithelial cells from trachea and prostate. These systems are used to study metabolism, secretion, hormonal regulation, influence of exogenous agents, and fine structure of cells growing in monolayer and on various culture matrices. Send curriculum vitae, statement of research interest, and three letters of reference to: Dr. William H. J. Douglas, Tufts University School of Medicine, Department of Anatomy, 136 Harrison Avenue, Boston, Mass. 02111.

Affirmative Action/Equal Opportunity Employer

### TEACHING—RESEARCH POSTDOCTORAL FELLOWSHIP UNIVERSITY OF CALIFORNIA, DAVIS

The Department of Biochemistry and Biophysics invites applications from qualified individuals for a Teaching-Research Postdoctoral Fellowship. This is an 11-month, nontenure-track position that will provide the fellow an opportunity to obtain teaching experience and further training in research. The position, which will remain open until filled, is on an annual basis but reappointment is possible for two additional years. The salary will be commensurate with experience.

The teaching responsibility involves lecturing in one section for one quarter of a two-quarter upper-division course in general biochemistry and supervision of one section (one quarter) of an upper-division laboratory course. The research component involves participation in the research program of one of the ladder faculty in the Department of Biochemistry and Biophysics. A Ph.D. degree (preferably in biochemistry) is required.

Applicants should submit a letter describing their qualifications, a résumé, undergraduate and graduate transcripts, and the names and addresses of three references to:

Professor Eric E. Conn, Chairman  
Teaching Postdoctoral Fellow Search Committee  
Department of Biochemistry and Biophysics  
University of California  
Davis, California 95616

Telephone: 916-752-3521 or 752-3611

The deadline for applications is 1 July 1980.

The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

### POSTDOCTORAL FELLOWSHIPS IN PATHOBIOLOGY

The Department of Veterinary Microbiology and Pathology and the Department of Biochemistry at Washington State University are offering interdisciplinary training opportunities in biomedical research. Persons with a Ph.D. in biologic or chemical sciences and persons with D.V.M., M.D., or equivalent training are eligible. Positions are available 1 July 1980 with stipends of at least \$14,000. Research training will involve interaction with a member of the Microbiology and Pathology Department and a member of the Biochemistry Department. All participating faculty have research support that encompasses a variety of research areas, including: (i) virologic and immunologic mechanisms of viral persistence, (ii) immunopathology of viral induced arthritis and encephalitis, (iii) biochemistry and pathology of nutritional diseases including arthrosclerosis and vitamin deficiency syndromes, (iv) biochemistry and hormonal control of male reproduction, (v) abnormalities of contractile proteins and effects of electrolyte imbalances on muscle disease, (vi) immunology and biochemistry of immunodeficiency disorders, (vii) physical and biochemical studies on the structure of cell membrane proteins, (viii) pathology and biochemical mechanisms of chemically induced respiratory diseases, and (ix) biochemical characterization of genetic disorders that are animal models of human disease.

Send curriculum vitae, including area of research interests and the names of three references, to: Dr. Travis McGuire, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Wash. 99164. Washington State University is an Equal Opportunity/Affirmative Action Employer.

## FELLOWSHIPS

**POSTDOCTORAL TRAINING FELLOWSHIP IN PULMONARY RESEARCH** available to M.D. or Ph.D. interested in joining a group working on biochemical and physiologic aspects of chronic airways obstruction and emphysema. Contact, with curriculum vitae: Allen B. Cohen, M.D., Ph.D., Temple University Health Sciences Center, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL FELLOWSHIP** available in Division of Molecular Genetics, University of California, San Diego (UCSD), Department of Pediatrics. Studies include characterization of eukaryotic and viral origins of DNA replication and promoters, isolation and characterization of mammalian genes by molecular cloning techniques. Send inquiries, curriculum vitae, and letters of recommendation to: Dr. T. Friedmann, Department of Pediatrics/M-009H, UCSD School of Medicine, La Jolla, Calif. 92093.

M.D. or Ph.D. position open for 2-year FELLOWSHIP in clinical and research programs with interest in biochemistry of basement membrane component in normal and diabetic animals. An Affirmative Action/Equal Opportunity Employer. Send résumé to:

Mrs. A. D. Pyche  
Diabetes Research and Training Center  
University of Alabama in Birmingham  
1908 7th Avenue, South  
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## MARKETPLACE

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**INTERNATIONAL CENTRE FOR DIARRHOEAL  
DISEASE RESEARCH, BANGLADESH**

**WANTED**

The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), formerly Cholera Research Laboratory) is an international institution situated in Dacca, Bangladesh for research and training in diarrhoeal diseases and directly related subjects of nutrition and fertility to develop improved health programmes for control of diarrhoeal diseases in developing countries.

Applications are invited for Senior Scientific positions including that of Deputy Director (equivalent to Professor) with twelve years of experience in research.

Candidates should have the capability of leading a team of Scientists and supervising scientific support services in the following six programmes:

- (1) *Pathogenesis and Therapy* of diarrhoeal diseases requiring strong clinical skills in internal medicine/paediatrics with collateral knowledge of physiology/biochemistry/microbiology/infectious diseases/gastroenterology.
- (2) *Host Defense against Diarrhoea* requiring strong clinical skills in medicine/paediatrics with deep collateral knowledge in immunology.
- (3) *Transmission of Diarrhoea* requiring strong epidemiologic microbiological or environmental skills with excellent knowledge of infectious particularly enteric diseases.
- (4) *Nutrition* as related to diarrhoea requiring strong clinical/epidemiology skills with a depth of experience in nutrition.
- (5) *Community Services Research* requiring skills in demography, social sciences, biometrics and health services research.
- (6) *Training* diarrhoea prevention, therapy and health care requiring experience in curriculum development, also ability to develop practical field and/or laboratory courses necessary.

Compensation at competitive international levels comparable to highest UN professional scale including the following: salary, benefits, utilities, travel, transport of household effects, home leave and other customary benefits. Starting date negotiable but positions immediately available, preference for 2-4 years contract.

Junior Scientists with parallel interest are also invited to apply for programme participant positions on a minimum of 2 years contract, remuneration is comparable to UN professional scale according to qualification. Senior Scientists in these areas with sabbatical or equivalent leave opportunity are also invited to apply for visiting positions at a UN professional remuneration.

Three Administrative positions for Administration and Finance, Resources Development and Training/Extension available to candidates with more than ten years experience in top management positions. A post-graduate degree is preferable.

All applications (with complete C.V.) to be forwarded prior to June 30, 1980 to the Director, ICDDR,B, G.P.O. Box No. 128, Dacca-2, Bangladesh.

## **DIRECTOR NATIONAL MEDICAL AUDIOVISUAL CENTER**

The National Library of Medicine is seeking a creative experienced health sciences educator-manager with an understanding of the use of educational technology in the health sciences to serve as Director of its National Medical Audiovisual Center. Applicants should have made recognizable contributions to health sciences education and must demonstrate an ability to involve the health sciences community in the programs of the Center.

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Send resume or SF-171 by May 30, 1980 to Personnel Officer, National Library of Medicine, NATIONAL INSTITUTES OF HEALTH, Public Health Service, 8600 Rockville Pike, Bethesda, MD 20209. An Equal Opportunity Employer.

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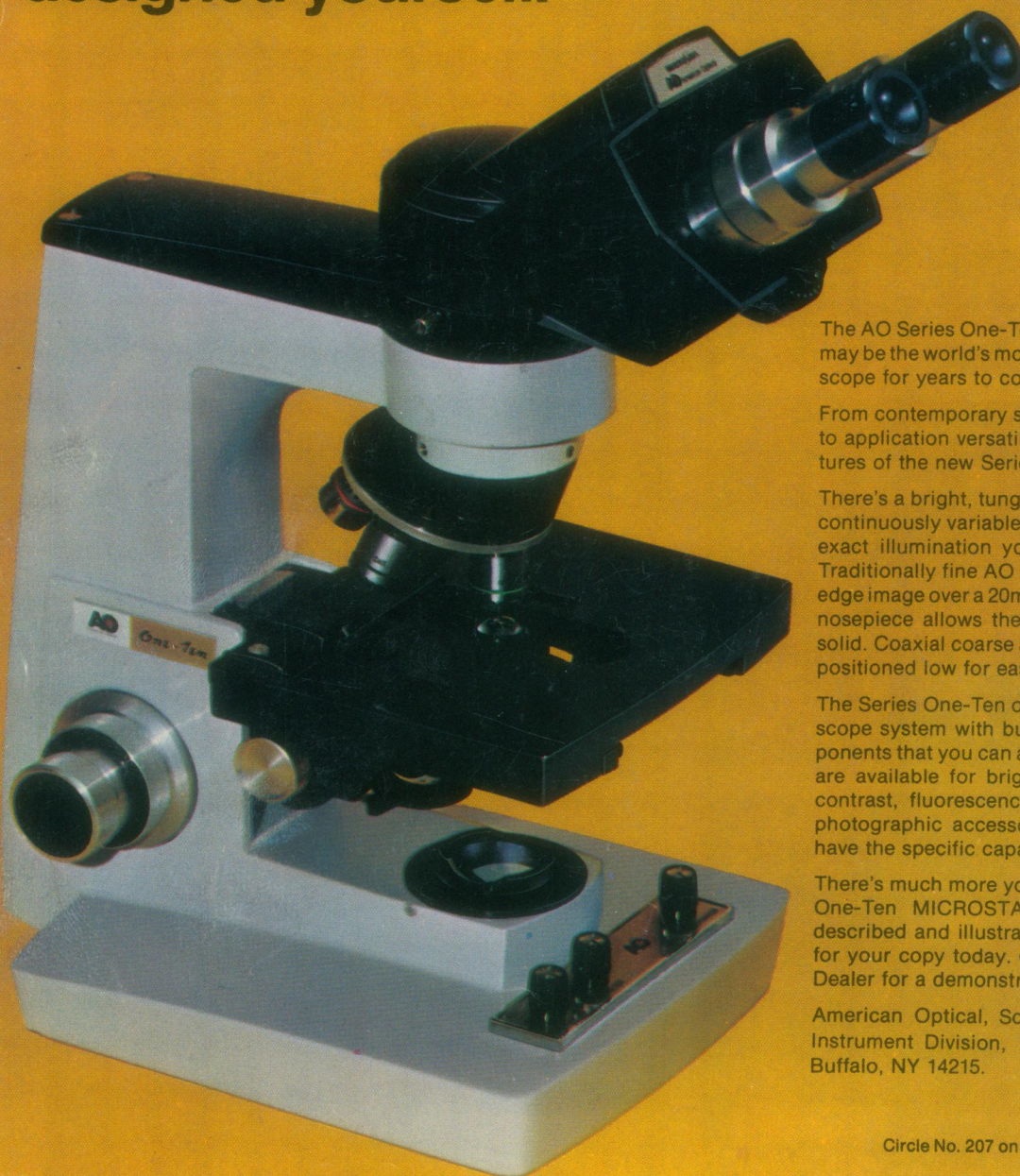
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