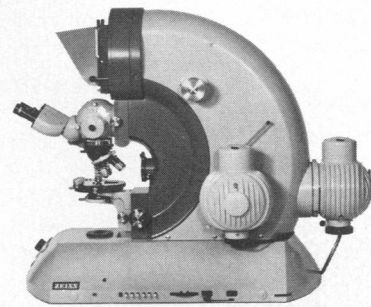
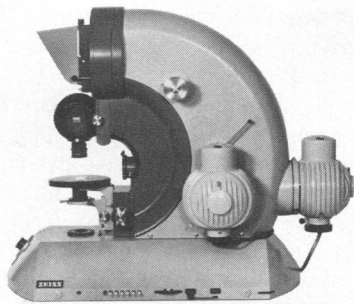


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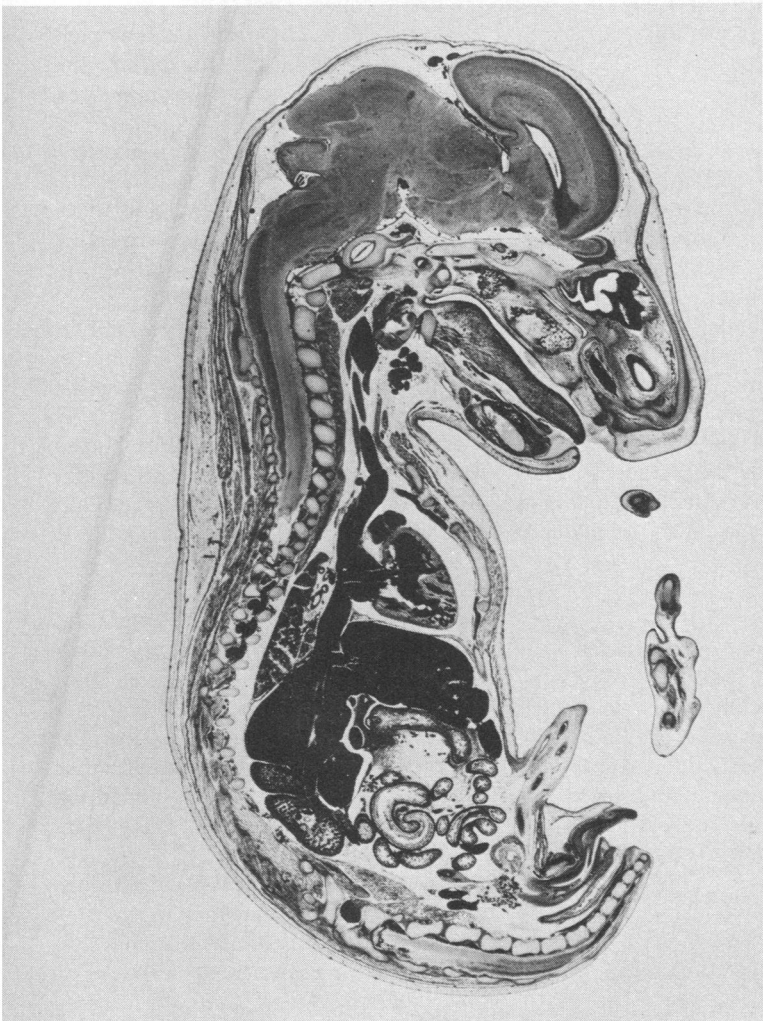
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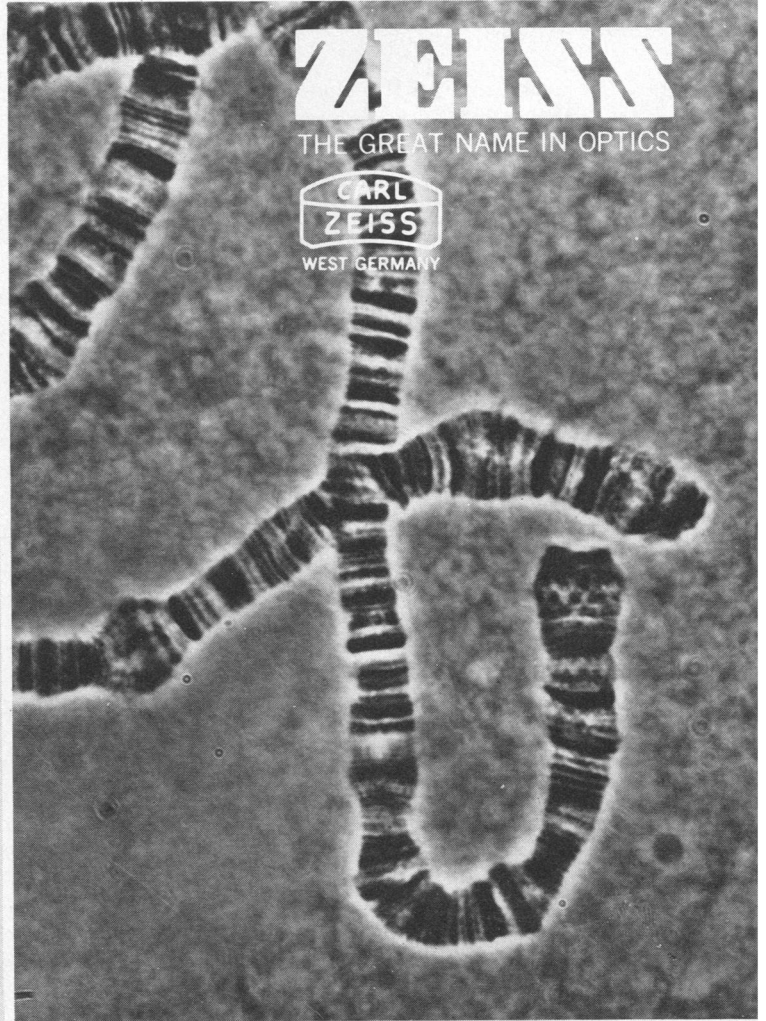
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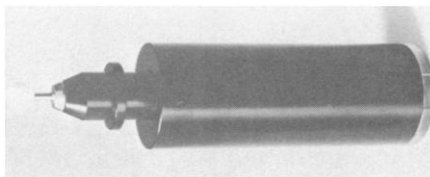
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## Literature

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*GC/LC* is a short-form catalog of gas and liquid chromatographs and data processing systems for these instruments. Tracor Analytical Instruments. Circle 690.

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*Sciences* lists films for science education produced by federal agencies. National AudioVisual Center. Circle 701.

*Bench Recorder* describes the Miniservo III line of potentiometric recorders. Esterline Angus. Circle 702.

*Constant Temperature Circulator* is devoted to the Tempette open-tank instrument for a variety of laboratory applications. Techne. Circle 703.

*Syringe Drive* includes detailed specifications of the model 1001 Micro-jector device for injection of samples into gas chromatographs. Houston Atlas. Circle 704.

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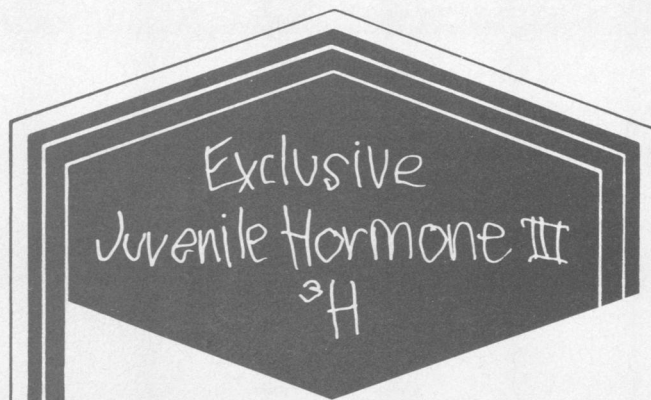
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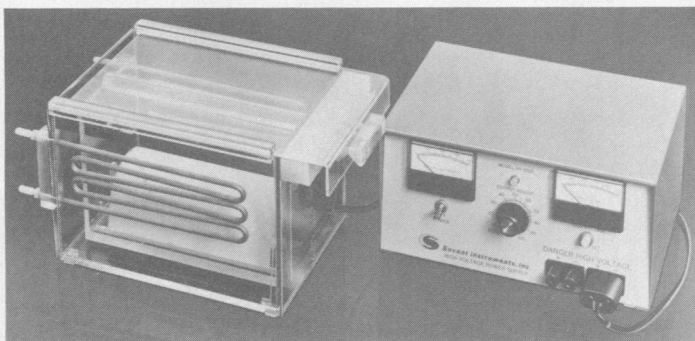
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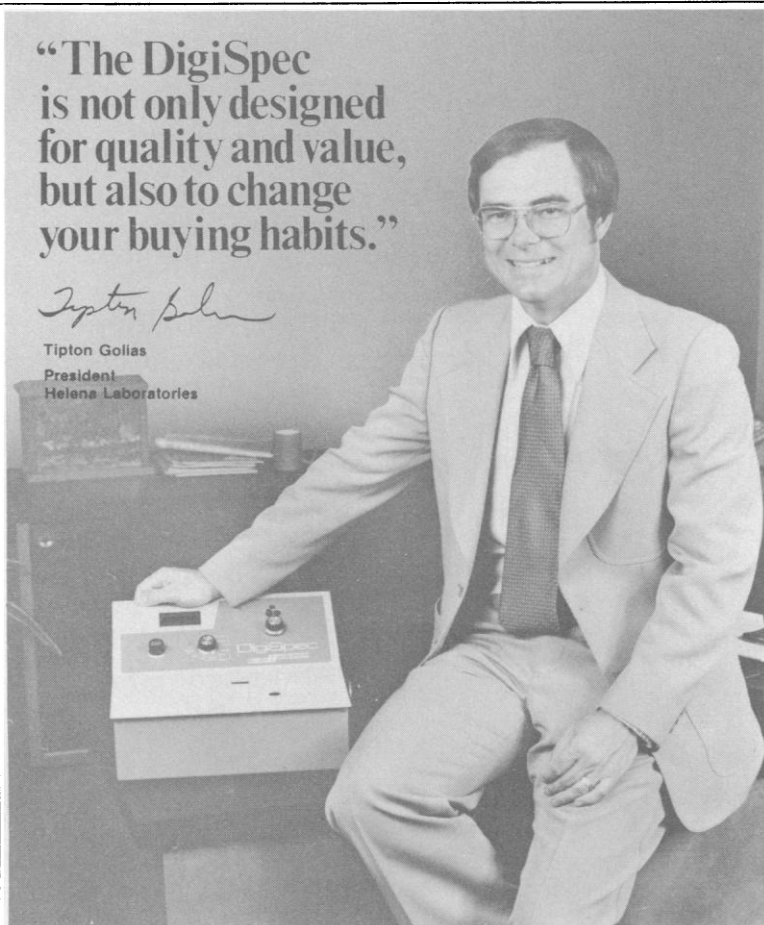
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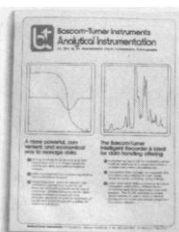
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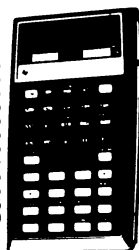
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**ANIMAL VIROLOGIST.** Assistant/associate professorship available August 1979. Two years of postdoctoral experience required. Conduct active research program in area of modern animal virology and participate in the teaching program at the undergraduate and graduate level. Salary competitive and commensurate with experience. Send curriculum vitae and names of three references by 1 January 1979 to: **Dr. Gary L. Smith, School of Life Sciences, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588. Affirmative Action/Equal Opportunity Employer.**

### AQUATIC BIOLOGIST

The Illinois State Natural History Survey is seeking applicants for head of its Section of Aquatic Biology. A Ph.D. degree and demonstrated experience in administration and freshwater research are required. Duties include own chosen research activities, modest section administrative responsibilities, and overview of substantial survey or contract-funded aquatic research program at the home laboratories and six field stations. Excellent analytical and field experiment facilities. Possibility of adjunct appointment in appropriate University of Illinois department.

For full consideration, résumés should be received before 1 December 1978, by:

**Dr. George Sprugel, Chief  
Illinois State Natural History Survey  
172 Natural Resources Building  
Urbana, Illinois 61801**

The starting date is 1 June 1979 or earlier if convenient.

An Affirmative Action/Equal Opportunity Employer

### ASSISTANT PROFESSOR, BIOCHEMISTRY

Ph.D. **BIOCHEMIST** experienced in biochemical genetics of bacteria and viruses and/or immunochimistry preferred. Tenure-track position starting as early as spring semester 1979. Individual will contribute to maturation of an NSF-supported undergraduate biochemistry program. Address inquiries to: **Dr. Howard Rosman, Chemistry Department, Hofstra University, Hempstead, N.Y. 11550. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### AQUATIC ENTOMOLOGIST CORNELL UNIVERSITY

Applications invited for position which carries responsibility for teaching senior/graduate course and research on basic biology and ecology of aquatic insects. Prefer to fill at assistant professor level; others will be considered. Send curriculum vitae and names of five references to: **Professor E. H. Smith, Department of Entomology, Cornell University, Ithaca, N.Y. 14853. Deadline for receipt of applications is 1 January 1979. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

**ASSISTANT/ASSOCIATE PROFESSOR,** Ph.D. with teaching and research interest in psychological acoustics to assume academic responsibilities as a member of the faculty of a university center department of hearing and speech dependent on qualifications. Starting date open. Send curriculum vitae and three letters of reference to: **Gerald N. McCall, Chairman, Department of Hearing and Speech Sciences, University of Maryland, College Park, Md. 20742. An Equal Opportunity/Affirmative Action Employer. Women and minority applicants are especially encouraged to apply.**

The Department of Psychobiology, University of California, Irvine, is seeking candidates for the position of **ASSISTANT PROFESSOR IN RESIDENCE** for September 1979. Candidates must have a Ph.D. in biochemistry with postgraduate research experience in neurochemistry and current strong interest in neurochemical mechanisms of synaptic plasticity. Duties include supervision of a common-use departmental facility for neurochemical/biochemical research and responsibility for the instruction of an introductory course including laboratory in neurochemistry to graduate students. The initial duration of this appointment is 2 years, subject to annual review. By 1 November 1978 candidates should send curriculum vitae and summary of research experience and have three letters of recommendation sent to: **Gary S. Lynch, Chair, Department of Psychobiology, University of California, Irvine, Irvine, California 92717.**

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

**BIOCHEMIST-ENDOCRINOLOGIST.** Openings at junior or senior research associate and postdoctoral trainee levels. Salaries competitive. Positions open immediately but starting date negotiable. Problem areas include FSH/LH-gonadal receptor interactions, purification of receptor and related systems, mechanism of hormone action, and chemistry of gonadotropins. Send curriculum vitae and three letters of recommendation to: **Dr. Leo E. Reichert, Jr., Department of Biochemistry, Emory University School of Medicine, Atlanta, Georgia 30322.**

### BIOCHEMIST: IMMUNOLOGY OR MEMBRANES

Appointment, preferably at assistant professor level, to begin July 1979. The department desires candidates with strong biochemical background working on molecular aspects of immunology, cell surfaces, cell-cell interactions, or structure/function of cell membranes. Applicants should submit curriculum vitae, bibliography, representative publications, and a description of current and future research. Candidates should have three reference letters sent. All information should be sent by 15 January 1979 to: **Dr. Gale A. Granger, Department of Molecular Biology and Biochemistry, University of California, Irvine, Irvine, California 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.**

### MOLECULAR OR BIOCHEMICAL GENETICIST

Full professorial appointment to begin 1979 or 1980. The department desires outstanding candidates working with a strong genetic rationale on a molecular or biochemical problem in eukaryotic or prokaryotic organisms. Applicants should be able to teach in genetics and in molecular biology or biochemistry. Applicants should submit curriculum vitae, bibliography, representative publications, and a description of current research area. Three reference letters should be sent. Materials should be sent by 1 February 1979 to: **Dr. K. K. Tewari, Genetics Search Committee, Department of Molecular Biology and Biochemistry, University of California, Irvine, Irvine, California 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.**



## POSITIONS OPEN

### ASSISTANT PROFESSOR ANIMAL PHYSIOLOGY

The Program in Physiology at the University of Houston invites applications for an assistant professorship in a tenure-track position. The successful applicant is expected to develop an active research program and to instruct graduate and undergraduate students. Demonstrated research ability in animal physiology and experience beyond the doctorate are essential. The physiology faculty consists of seven members in a biology department of thirty faculty. The University of Houston has reached a stage of growth (30,000 students) where it is consolidating its commitment to excellence in research and teaching. Send curriculum vitae, three letters of reference, reprints, a statement of research interests, and transcripts to: **Dr. David S. Mailman, Program in Physiology, Biology Department, University of Houston, Houston, Texas 77004.**

*An Equal Opportunity Employer*

### ASSISTANT PROFESSOR OF BIOCHEMISTRY UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

The Department of Biochemistry is seeking applicants for a tenure-track appointment at the assistant professor level to begin August 1979. Applicants should be qualified to teach biochemistry courses at the undergraduate and graduate levels. Only candidates who have demonstrated excellence in research and who are prepared to establish an active research program will be considered. Preference will be given to those who received graduate and postdoctoral training in strong research environments. The starting salary ranges to about \$21,000 for a 12-month appointment. For full consideration, curriculum vitae, list of publications, a brief description of research interests, and three letters of reference should be sent by 1 January 1979 to: **Professor Lowell P. Hager, Head, Department of Biochemistry, 29B Roger Adams Laboratory, University of Illinois, Urbana, Illinois 61801. Telephone: 217-333-3945.**

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

### POSITION ANNOUNCEMENT

**Position:** Sea Grant Director, South Carolina Sea Grant Consortium

**Yearly Salary:** Competitive

**Location:** Marine Resources Research Institute at Fort Johnson, Charleston, South Carolina

**Position Available:** January, 1979 or earlier

**Application Deadline:** October 23, 1978

The South Carolina Sea Grant Program was initiated in 1972 and now involves seven institutions (The Citadel, Clemson University, the College of Charleston, the South Carolina Wildlife and Marine Resources Commission, South Carolina State College, the Medical University of South Carolina, and the University of South Carolina) working cooperatively in the broad areas of marine research, education and advisory services. These institutions were recently constituted by the General Assembly of the State of South Carolina as the South Carolina Sea Grant Consortium. The Director will be employed by this Consortium whose program will have both a state and a regional focus.

**Responsibilities and Duties of the Position:** The Director will: 1) administer all aspects of the program under the general policy of a board of directors in accordance with the founding legislation; 2) be responsible for program development and program advancement; 3) monitor and evaluate research, education and advisory projects; 4) supervise preparation and distribution of publications and releases; 5) act as the primary liaison between the Consortium and the national office for Sea Grant, campus coordinators, and individual investigators; 6) represent the program at appropriate state and national meetings and conferences; 7) maintain close contact with State and Federal agencies involved in marine related activities in South Carolina and neighboring states. It is expected that the administrator have time for his/her own research.

**Qualifications:** Ph.D. in a discipline related to the marine environment; professional experience in a broad spectrum of marine science research, educational activities, and program management and development; specific experience in Sea Grant and advisory programs at the national or state level desirable; experience in management and budgeting and the ability to work with interdisciplinary and multi-institutional groups.

Persons wishing to be considered should submit their resume and credentials and the names of three professional references to:

**Dr. John M. Bevan, Chairman, Board of Directors, South Carolina Sea Grant Consortium, The College of Charleston, Charleston, South Carolina 29401**

*AN EQUAL OPPORTUNITY EMPLOYER*

## POSITIONS OPEN

### NOTICE OF POSITION AVAILABLE

Proposed title: ASSISTANT PROFESSOR OF BIO-CHEMISTRY.

Location: Department of Biochemistry, University of Missouri-Columbia, School of Medicine, Missouri Institute of Psychiatry, 5400 Arsenal Street, St. Louis, Missouri 63139.

Qualifications: Applicants must have the Ph.D. degree or equivalent, and postdoctoral experience is expected. Candidates with promise of exceptional research abilities are being sought for a tenure-track position.

Information and application: curriculum vitae, summary of research plans, and three letters of recommendation should be sent to:

**Dr. Warren A. Thompson  
Missouri Institute of Psychiatry  
School of Medicine  
University of Missouri-Columbia  
5400 Arsenal Street  
St. Louis, Missouri 63139**

*An Equal Opportunity/Affirmative Action Employer*

**ASSOCIATE PROFESSOR FOR BIOMEDICAL RESEARCH** in a Radiation Oncology Center. M.D. and internship; minimum of 5 years of research experience. The candidate has to be a researcher of international status in cell membrane biology of lymphocyte stimulation and in membrane pathobiology of neoplasia and parasitic diseases.

Specifically required is broad and rigorous experience in membrane biochemistry (structure-function relationships), membrane protein chemistry, in membrane biophysics (fluorescence and Raman spectroscopy) hyperthermia, cell culture, small animal work and primates, in subcellular fractionation and membrane purification, in viral oncology, and in the characterization of tumor- and parasite-specific membrane antigens using immunochemical and protein chemistry techniques. Position available immediately. Salary: \$27,500 per year. **Department of Therapeutic Radiology, Tufts-New England Medical Center Hospitals, 171 Harrison Avenue, Boston, Mass. 02111.**

University of California, Los Angeles (UCLA), School of Medicine, seeks appropriate candidates for the **DELLA MARTIN CHAIR IN PSYCHIATRY**, newly endowed professorship for distinguished academic psychiatrist (English-speaking, eligible California licensure) committed to research especially on major mental illnesses of adolescents and young adults. *Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae, letter discussing career goals, and five references to:

**Arnold B. Scheibel, M.D., Chairman  
Della Martin Search Committee  
760 Westwood Plaza  
Los Angeles, California 90024**

### CHAIRPERSON, PSYCHOLOGY DEPARTMENT NORTHEASTERN UNIVERSITY

The department is seeking an experimental psychologist to serve as its chairperson. He or she is also expected to pursue a program of research, supervise doctoral students, and contribute to formal instruction. The candidate must possess excellent qualifications in experimental psychology. A brochure describing the faculty and their research is available on request. Applicants will normally have senior standing in experimental psychology (associate or full professor). The salary is negotiable. Please send résumés to: **Harlan Lane, Chairman, Search Committee, Psychology Department, 234 UR, Northeastern University, Boston, Mass. 02155. Northeastern University is an Equal Opportunity/Affirmative Action Employer.**

### FACULTY POSITION DEPARTMENT OF TECHNOLOGY AND HUMAN AFFAIRS WASHINGTON UNIVERSITY (ST. LOUIS)

A doctoral degree and some background in engineering or applied science is required. Applicants should have a proven record of productivity and support in performing interdisciplinary research concerned with the application of technology to contemporary societal problems, assessment of the impacts of technology, and/or technology policy analysis. Send résumé before 20 November 1978 to: **Dr. Robert P. Morgan, Chairman, Department of Technology and Human Affairs, Box 1106, Washington University, St. Louis, Mo. 63130.**

*Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### UNIVERSITY OF WISCONSIN-MADISON CHAIRPERSON OF THE DEPARTMENT OF MEDICINE

The university is seeking applicants/nominees for the position of chairperson of the Department of Medicine. The qualifications include a background in internal medicine, demonstrated superior skill in administration and medical education, and an established record as a scholar in medical science. It is highly desirable that the candidate be experienced in working with other clinical and basic science disciplines within the School of Medicine as well as with community physicians. *The University of Wisconsin System is an Affirmative Action/Equal Opportunity Employer.*

Applications or nominations should be sent to:

**Henry C. Pitot, M.D., Ph.D.  
Chairman, Search and Screen Committee  
McArdle Laboratory  
University of Wisconsin  
Madison, Wis. 53706**

Closing date for applications/nominations is 15 December 1978.

### CHAIRPERSON, DEPARTMENT OF BIOLOGY

**CHAIRPERSON—BIOLOGY.** Search reopened. Applications and nominations are invited for the position of chairperson of the Department of Biology, University of Nebraska at Omaha. The university is located in a metropolitan area of about 500,000 people and enrolls more than 15,000 students. The department, with 17 full-time faculty, is housed in a new building and offers programs leading to bachelor's and master's degrees. There are approximately 400 majors and 40 graduate students in the department. Candidates should have the Ph.D., experience in university teaching, a strong record of scholarly achievement, and evidence of or potential for academic and administrative leadership. Curriculum vitae, a statement of personal philosophy of teaching, research, and administration, as well as three letters of recommendation, including at least one which assesses administrative skills, should be sent by 30 November 1978 to: **Dr. J. Fawcett, Chairperson Search Committee, Department of Biology, University of Nebraska at Omaha, Omaha, Nebraska 68182. The University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, and the handicapped are encouraged to apply.**

### DEAN—COLLEGE OF ARTS AND SCIENCES

Syracuse University invites applications and nominations for the position of dean of the College of Arts and Sciences.

The College of Arts and Sciences, with approximately 4000 students and with 435 faculty, is the central academic unit of Syracuse University, a private institution with 15,000 undergraduate and graduate students combined.

Qualifications for the position include a record of teaching and research equivalent to that required for appointment to a tenured professorship, a thorough commitment to the importance of the liberal arts, and personal and intellectual qualities necessary for effective leadership and management of a large academic unit.

Applications or nominations must be postmarked no later than 15 December 1978. Materials should be sent to

**Professor Sidney Thomas  
Dean Search Committee  
College of Arts and Sciences  
19 H. B. Crouse Hall  
Syracuse University  
Syracuse, New York 13210**

*An Affirmative Action/Equal Opportunity Employer*

### DIRECTOR OF INPATIENT PSYCHIATRIC SERVICE

Mental Health Services of the Roanoke Valley and the Roanoke Memorial Hospitals are soliciting candidates for the above position. Board-certified or Board-eligible. Outstanding full-time opportunity to direct inpatient service of a general hospital and to participate in the teaching of family practice residents and medical students. University of Virginia faculty appointment available for qualified candidate. Private practice possible. Salary: \$40,000, plus fringe benefits. Must have or be eligible to obtain license to practice in Virginia. Contact: **Marvin E. Perkins, M.D., Medical Director, Mental Health Services of the Roanoke Valley, 920 South Jefferson Street, Suite 500, Roanoke, Va. 24016. Equal Opportunity Employer, M/F.**

## POSITIONS OPEN

**DIRECTOR OF NEPHROLOGY.** The Department of Medicine, University of Alabama Medical Center, is seeking candidates for the position of director for its Division of Nephrology. Qualifications include a substantial background in academic nephrology, with interest and experience in patient care, teaching, research, and administration. Interested persons should submit their curriculum vitae and letters summarizing their qualifications at the earliest possible time to: **Thomas N. James, M.D., Department of Medicine, University of Alabama Medical Center, Birmingham, Alabama 35294.** An Equal Opportunity/Affirmative Action Employer.

## DIRECTOR, BUFFALO MUSEUM OF SCIENCE

Chief administrator of a collection-oriented natural history museum, founded 1861. Major responsibilities include long-range planning for preservation and exhibition of collections; direction and recruitment of professional and nonprofessional staff; budget and fund-raising; and supervision of publication, research, and education programs. Staff of 60; budget: \$1 million.

The Board of Managers is looking for a strong leader with the vision to realize the potential of distinguished collections, an active education program, and a newly renovated building. Experience in museum administration and funding, and an established reputation in a scientific or scholarly research field are desired. Salary commensurate with experience. Applications to: **Search Committee, Buffalo Museum of Science, Buffalo, New York 14211.**

**MOLECULAR VIROLOGIST**—Ph.D. plus a minimum of 2 years of postdoctoral experience, or D.V.M.—Ph.D., together with demonstrated scientific productivity and teaching ability are required. Rank and salary are negotiable. Send curriculum vitae and names of three references to: **Chairman, Molecular Virologist Search Committee, Department of Microbiology and Public Health, Michigan State University, East Lansing, Mich. 48824.** An Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### THE MEDICAL RESEARCH COUNCIL OF NEW ZEALAND DIRECTOR

Applications are sought for appointment to the position of director of the Medical Research Council of New Zealand. The council is seeking a person with proved experience in research and administration. The position is equivalent to an appointment at university professorial level.

The council aims to support the balanced development of medical and related biological research in hospitals, universities, or the council's own units, from funds largely provided from a government grant.

Intending applicants are invited to write to: **Secretary of the Council** for further information. Applications should reach: **Secretary of the Council, P.O. Box 6063, Dunedin, New Zealand,** not later than 31 January 1979.

**ENTOMOLOGIST.** Conduct research on parasitoid behavior. Experience in insect behavior and design of field experiments desirable. Two-year postdoctoral appointment available immediately. Salary: \$14,064. Send transcripts and three letters of recommendation before 10 November 1978 to: **Richard L. Jones, Department of Entomology, Fisheries, and Wildlife, 219 Hodson Hall, 1980 Folwell Avenue, University of Minnesota, St. Paul, Minn. 55108.**

Tenure-track **ENVIRONMENTAL STUDIES FACULTY POSITION** begins January or August 1979. Appointee will share responsibility for building teaching and research program of small, developing department. Program focuses on man/environment interaction. Doctorate required; college teaching experience desirable; documentation of environmental orientation essential. Rank and salary open. Send résumé and references to: **Administrator, Program in MPS, School of Human Ecology, Howard University, Washington, D.C. 20059.**

## POSITIONS OPEN

### ENERGY ENGINEERING STAFF OFFICER

Exceptional opportunity in a national scientific organization to take primary responsibility for a study on future energy alternatives for Puerto Rico. This will be an intensive effort for considering all alternatives to dependence on oil. Candidate should have an M.S. degree or equivalent experience in energy systems engineering, including specific knowledge of electricity generation technology, solar, and other alternative energy forms. Please submit résumé in strictest confidence to: **Box 317, SCIENCE.** An Equal Opportunity Employer.

### FACULTY POSITION COMPARATIVE PATHOLOGY

The University of Florida, College of Veterinary Medicine, is seeking applications for a faculty position in the Division of Comparative Pathology. Duties will include instruction of veterinary students, necropsy and biopsy service functions, and independent research. Candidates should desire involvement in a growing veterinary college and have a commitment to teaching veterinary medical students. Academic rank will be at the assistant or associate professor level and salary will be commensurate with the training and experience of the successful applicant.

Applicants should possess the D.V.M. (or equivalent) degree; Board-certification by the American College of Veterinary Pathologists or advanced degree; and demonstrated research experience. Academic teaching experience is desired.

Letters of application or nomination should include curriculum vitae, research and teaching goals, and names of persons who will provide letters of reference. Application deadline date is 1 November 1978. Address correspondence to:

**Dr. J. C. Woodard**  
Head, Division of Comparative Pathology  
College of Veterinary Medicine  
Box J 145, JHMHC  
University of Florida  
Gainesville, Florida 32610

# Cellular Immunologist

## Hypersensitivity Disease Research

In its newly renovated and expanded facilities, this highly regarded Westchester-based pharmaceutical company has immediate opening for PhD in Cellular Immunology with 2 years postdoctoral or industrial experience. Will evaluate potential drugs using in vitro and in vivo immunological models.

Ideal candidate will also have basic familiarity with pharmacologic principles and be capable of developing cytotoxicity assay and expertise in separation of T&B cells.

We offer excellent starting salary, commensurate with experience. Please send curriculum vitae with salary requirements to: **Manager, Selection and Placement**

**USV  
LABORATORIES**

One Scarsdale Road,  
Tuckahoe, New York 10707  
An Equal Opportunity Employer M/F

## DIRECTOR TOXICOLOGY LABORATORY

The Chemical Hygiene Fellowship of the Carnegie-Mellon Institute of Research is seeking a director with recognized expertise in toxicology or a related field. Continued growth of our multidisciplinary research program will require a decision maker who is people oriented, and who has professional administrative experience and a record of attracting research funds.

This University-associated laboratory, located 20 miles east of Pittsburgh, has developed an excellent reputation in the field of toxicology over the past 40 years. The professional staff of 88 including 25 with advanced degrees is engaged in both basic and applied research programs.

Competitive salary and benefits, modern facilities and challenging opportunities for growth make this an exceptional opportunity for a dynamic and qualified leader.

Please submit resumé and references, in confidence to:

**Dr. G. A. Webb, Chairman, Search Committee**  
Chemical Hygiene Fellowship  
Carnegie-Mellon Institute of Research  
4400 Fifth Avenue  
Pittsburgh, PA 15213

A DIVISION OF CARNEGIE-MELLON UNIVERSITY  
AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION  
EMPLOYER

## POSITIONS OPEN

**HEAD, BOTANY DEPARTMENT.** Clemson University invites applications for position available 1 July 1979. Applicants should have a Ph.D. in botany or a closely allied field, recognized professional stature in teaching and research and evidence of potential as an effective administrator. The Botany Department emphasizes undergraduate/graduate education and research in fundamental areas of plant science. Telephone or send résumé and three letters of reference to: **T. M. McInnis, Chairman, Search Committee, Botany Department, Clemson University, Clemson, S.C. 29631. Telephone: 803-656-3452. Clemson University is an Equal Opportunity/Affirmative Action Employer.**

**MEMBRANE RESEARCH. POSTDOCTORAL POSITIONS and PREDOCTORAL ASSISTANTSHIPS** available immediately for qualified persons interested in membrane biophysics relating to bioenergetics, immunology, receptor physiology, and photosynthesis. Please send curriculum vitae and three letters of recommendation to: **Chairman, Department of Biophysics, Michigan State University, East Lansing, Michigan 48824.**

**METABOLISM—Postdoctoral position** in xenobiotic metabolism devoted to prediction of metabolites using computer-assisted methods. Available immediately. Training and experience in metabolism required. Computer experience desirable but not required. Send résumé to: **Professor W. T. Wipke, Board of Studies in Chemistry, University of California, Santa Cruz, Santa Cruz, Calif. 95064. An Affirmative Action/Equal Opportunity Employer.**

### MICROBIOLOGIST

A Department of Biochemistry, responsible for the undergraduate program in microbiology, is seeking a person with a strong background in microbiology and biochemistry to develop and teach a good course in microbial physiology. This person is also expected to develop an active program of research, not necessarily related to the basic teaching responsibilities of the position. Minimum requirements: Ph.D. and some pertinent postdoctoral experience. Those interested in this position should send complete applications (curriculum vitae, three letters of recommendation, résumé of research interests, reprints, and so forth) to: **Dr. Jean-Louis Lavoie, Directeur, Département de Biochimie, Faculté des Sciences et de Génie, Université Laval, Québec, Québec, Canada G1K 7P4.** Actual (or eventual) fluency in French is required of all candidates. Salary range (assistant professor): \$19,000 to \$31,000. We are hoping to fill this position with a minimum of delay.

### PHARMACOLOGIST

Position available in the Department of Basic Sciences, Peoria School of Medicine, one of the four clinical schools within the University of Illinois College of Medicine. Applicants must have a Ph.D. in pharmacology and experience beyond the doctor's degree. Duties will include instructing medical and associated health sciences students, and conducting an independent research program. Must have demonstrated potential for research. Salary to be commensurate with experience and qualifications, with academic rank of assistant professor. Starting date as soon as possible. Send application and names of three individuals for references before 15 November 1978 to: **Dr. F. J. Grundbacher, Department of Basic Sciences, Peoria School of Medicine, 123 S.W. Glendale Avenue, Peoria, Illinois 61605. The University of Illinois is an Affirmative Action/Equal Opportunity Employer and encourages applications from members of minority groups and women.**

**PLANT BIOCHEMISTS.** Postdoctoral and graduate research positions available to study in the areas of amide metabolism and glycoprotein synthesis in peas. Applicants should forward curriculum vitae, reprints of research papers, and two letters of recommendation by 4 November to: **Leonard Beevers, Department of Botany and Microbiology, University of Oklahoma, Norman, Oklahoma 73019.**

**POSTDOCTORAL POSITION** available this fall for a recent Ph.D. (immunology/biochemistry/biophysics) to study conformation of lymphocyte antigen receptors and molecular mechanisms of cell triggering. Prior experience with techniques in cell handling, cell proliferation, and some organic synthesis desirable. Please send résumé and references to: **Dr. Renata E. Cathou, Department of Biochemistry and Pharmacology, Tufts University School of Medicine, Boston, Mass. 02111. Tufts University is an Equal Opportunity Educator and Employer.**

## POSITIONS OPEN

**POSTDOCTORAL ASSOCIATE—Ph.D.** with background and experience in cellular immunology. Knowledge of immunology, biochemistry, and molecular biology is preferable to study the action of antitumor vaccine and immune regulation. Available immediately. Contact: **K. M. Hwang/M. S. Mitchell, telephone: 213-226-4822. Los Angeles County—University of Southern California Cancer Center, 1303 North Mission Road, Los Angeles, Calif. 90033.**

**POSTDOCTORAL ASSOCIATE.** For theoretical studies on reactions of chemical carcinogens with nucleic acids. Must be highly qualified in computer application of semi-empirical SCF-MO theory, and capable of moving into ab initio methods. Experience with minicomputers desirable. Reply to: **Dr. John Scribner, Pacific Northwest Research Foundation, 1102 Columbia Street, Seattle, Wash. 98104.**

Position available immediately for **POSTDOCTORAL FELLOW or TECHNICIAN** interested in studying glucocorticoid receptors and steroid action in experimental and human leukemia. Broad tissue culture experience essential. Send résumé and name of three references to: **J. Stevens, M.D., Research Institute, Hospital for Joint Diseases and Medical Center, 1919 Madison Avenue, New York, N.Y. 10035. An Equal Opportunity Employer.**

### THE MAX-PLANCK-INSTITUTE FOR MOLECULAR GENETICS, BERLIN

Applications are invited for a **POSTDOCTORAL POSITION** available for a colleague with experience and/or great interest in the field of molecular biology of DNA, especially gene isolation and gene organization.

The position is available immediately. Applications to:

**Dr. G. Schütz  
Max-Planck-Institut für Molekulare Genetik  
1 Berlin 33, Innestrasse 63  
Germany**

Two **POSTDOCTORAL POSITIONS** (1 to 3 years) available fall 1978. (i) Study of mammalian lipid metabolism in laboratory of Dr. Joseph L. Rabinowitz. Salary about \$15,000 per year. Experience in membranes, steroids, and other lipid techniques desirable. (ii) Study of structure and function of transfer RNA methylation in laboratory of Dr. Phoebe S. Leboy. Salary: \$12,000 to \$16,000 per year. Experience in nucleic acid biochemistry and enzymology desirable. Send curriculum vitae and references to: **Anne C. Christiansen, Department of Biochemistry, University of Pennsylvania, School of Dental Medicine, Philadelphia, Pa. 19104. Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available (2 years) for biochemist for studies on glycoproteins, lectins, and membrane reconstitution. Emphasis on structural analysis. Recent graduate with experience preferred. Please send résumé and letters of references to: **Dr. David C. Yang, Department of Chemistry, Georgetown University, Washington, D.C. 20057. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** starting December 1978 for 1 year with yearly renewal possible at a salary of \$12,000 per year plus fringe benefits. Resonance Raman investigations of flavins and flavoproteins; some experience in organic synthesis and biochemical preparation desirable as well as a good background in vibrational spectroscopy. Send curriculum vitae and three letters of reference to: **Dr. James T. McFarland, Department of Chemistry, University of Wisconsin—Milwaukee, Milwaukee, Wisconsin 53201. The University of Wisconsin—Milwaukee is an Equal Opportunity Employer acting under an Affirmative Action Program.**

### ORAL ROBERTS UNIVERSITY MEDICAL SCHOOL

**POSTDOCTORAL POSITION** in neural control of the circulation available fall 1978. Candidates must have experience in whole animal peripheral nerve recording techniques or cardiovascular recording techniques. Applicant's life-style should be compatible with a Christian environment. Send curriculum vitae and names of three references to:

**Dr. D. Fred Peterson  
Department of Physiology  
Oral Roberts University Medical School  
Tulsa, Oklahoma 74171**

*Oral Roberts University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately on the characterization and isolation of ion carriers of the inner mitochondrial membrane. Salary about \$11,000 for 1 year with possibly a 1-year extension. Send curriculum vitae and names of three references to: **Dr. Hartmut Wohlrab, Department of Cell Physiology, Boston Biomedical Research Institute, 20 Staniford Street, Boston, Massachusetts 02114. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION—Available** immediately for 2 years. Research is on the biochemical and molecular basis of antidiuretic hormone action. Experiments involve identification of relevant cellular protein components and selective monitoring of membrane transport proteins. Send curriculum vitae and three recommendation letters to: **Dr. Murray J. Ettinger, Department of Biochemistry, State University of New York at Buffalo, Cary 102, Buffalo, New York 14214. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION—Biochemist** (or equivalent training) to study the biochemical effects of halogenated compounds on mammalian systems (particularly membranes). Background in biochemical toxicology desirable. Salary: \$11,500 to \$14,500. Send curriculum vitae and names of three references before 27 October 1978 to: **Dr. Terry L. Miller, Department of Agricultural Chemistry and Environmental Health Sciences Center, Oregon State University, Corvallis, Oregon 97331. An Affirmative Action/Equal Opportunity Employer, in compliance with Section 504 of the Rehabilitation Act of 1973.**

**POSTDOCTORAL POST IN DEVELOPMENTAL BIOLOGY-BIOCHEMISTRY** is available January 1979. Emphasis on regulation of metabolism at fertilization and control of cell function by  $Ca^{2+}$  and pH. Applicants should have good biochemical training and be strongly interested in regulation of development. Curriculum vitae and three references to: **Dr. David Epel, Hopkins Marine Station, Department of Biological Sciences, Stanford University, Pacific Grove, California 93950.**

**POSTDOCTORAL RESEARCH ASSOCIATE—To** produce and characterize cell mutants derived from established mosquito cell lines and use such mutants to study the replication of alphaviruses. Related projects are concerned with molecular biology of persistent viral infections and DI particles. Position available immediately. Please submit curriculum vitae to: **Dr. Victor Stollar, Department of Microbiology, College of Medicine & Dentistry of New Jersey, Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854. Equal Opportunity/Affirmative Action Employer, M/F.**

### POSTDOCTORAL RESEARCH ASSOCIATE

Position available now for coal chemical studies and characterization of coal liquids using HPLC, FT-NMR, and so forth. This is a temporary, full-time position and may be renewable. State-of-art instrumentation available. Close interaction with the Institute for Mining and Mineral Research. Salary competitive. Applicants send résumé, salary history, and transcripts to: **Professor John L. Wong, Department of Chemistry, University of Louisville, Louisville, Kentucky 40208, by 30 November 1978.** Two letters of recommendation should be sent directly from persons who will write for you. *An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL RESEARCH ASSOCIATE

To study **insulin receptors** in human tissues, mainly blood. Prior experience with peptide hormone receptors and tissue culture preferred. Position (1 or 2 years) available immediately. Only U.S. citizens or permanent residents need apply. Salary not less than \$13,000. Please send résumé and names of three references to: **Dr. John C. M. Tsibris, University of Florida College of Medicine, Box J-294, Gainesville, Florida 32610.**

**POSTDOCTORAL RESEARCH POSITIONS** available immediately for studies on the control of protein synthesis during the early embryonic development of sea urchin and *Artemia salina*. Starting salary approximately \$11,000 to \$12,000 per year, for a minimum of 2 years. Send curriculum vitae and names of three references to: **Dr. Lawrence I. Slobin, Department of Biochemistry, School of Medicine, University of Mississippi Medical Center, 2500 North State Street, Jackson, Miss. 39216. Equal Opportunity Employer, M/F.**



# Geophysics

(One Position)

**\$21,883 to \$28,444**

(Depending upon Qualifications)

Fosters, initiates, coordinates and reviews contract research programs involving the geophysical sciences.

PhD or equivalent experience in an earth science coupled with training or experience in the fields of data processing in earth sciences, meteorology, graphics and physical oceanography, scientific administrative ability, professional stature and scientific judgment.

Send resume or SF-171 by 30 October 1978 to:

**Office of Naval Research  
Branch Office  
536 South Clark Street  
Chicago, Illinois 60605  
ATTN: Mr. Orlando**

*An Equal Opportunity Employer*

## DIRECTOR TOXICOLOGY LABORATORY

The Chemical Hygiene Fellowship of the Carnegie-Mellon Institute of Research is seeking a director with recognized expertise in toxicology or a related field. Continued growth of our multidisciplinary research program will require a decision maker who is people oriented, and who has professional administrative experience and a record of attracting research funds.

This University-associated laboratory, located 20 miles east of Pittsburgh, has developed an excellent reputation in the field of toxicology over the past 40 years. The professional staff of 88 including 25 with advanced degrees is engaged in both basic and applied research programs.

Competitive salary and benefits, modern facilities and challenging opportunities for growth make this an exceptional opportunity for a dynamic and qualified leader.

Please submit resumé and references, in confidence to:

Dr. G. A. Webb, Chairman, Search Committee  
Chemical Hygiene Fellowship  
Carnegie-Mellon Institute of Research  
4400 Fifth Avenue  
Pittsburgh, PA 15213

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## New releases from Mercury Communications:

### *Getting Your Share of the R&D Funds — \$37.50*

... a complete guide to U.S. government R&D funding sources that tells you:

- **Where the R&D funds are, and**
- **How to get your share of them.**

In view of the government's increased interest in R&D activities, the timing of this new book from Mercury is extremely appropriate. Written by the authors of *How to Create a Winning Proposal*, *Getting Your Share of the R&D Funds* offers a wealth of valuable information to R&D firms seeking contracts, grants, awards and project funding.

Fully indexed for easy reference, "Getting Your Share" provides a comprehensive survey of the U.S. government R&D market. It includes in-depth coverage of both military and civilian agency funding activities — with a complete breakdown of the R&D funding sources, what types of projects they fund, where they are located, who to contact, and how to sell your project to them.

Excellent guidelines are given on preparing and submitting government R&D proposals and grant applications. The book also provides current patent information, and explains how to protect your inventions or ideas from unauthorized use or disclosure.

### *Info-Sources Directory — \$44.50*

Mercury's *Info-Sources Directory* contains a complete listing of the prime sources of scientific and high-technology information currently available in the U.S., including all of the major government data banks. The sources are detailed by areas of specialization — with descriptions of the information, documents, services, and technical assistance available from each one.

*Info-Sources Directory* is a critical desk-top reference for scientists, engineers, researchers, project managers — anyone who requires quick and easy access to state-of-the-art information in a given field. The book also provides the most current information available on government-sponsored assistance programs. Other topics include:

- **Where to get reports** on on-going government-sponsored research and engineering projects
- **How to gain access** to the NASA and DOE data banks
- **Who to contact** for a listing of government-patented inventions available for sale or licensing
- **Where to get free assistance** developing and marketing new high-technology products

*Info-Sources Directory* also features prime sources of English-language translations of scientific and technical information from around the world.

### Ordering information:

Copies of these publications are available prepaid from Mercury Communications Corp. Prices include shipment inside the U.S. Foreign orders, please add \$3.00 postage and handling per title. In Calif. add 6% sales tax. Payment must accompany all orders. Master Charge and VISA orders accepted. Please state card no. and exp. date. C.O.D. orders call 408/425-8444.

**Mercury Communications  
730 Mission St., Suite 200  
Santa Cruz, CA 95060**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study globin gene expression during chicken ontogeny. Candidates must have had experience with messenger RNA, hnRNA, and/or recombinant DNA. Send résumé and three references to: **Dr. Allan J. Tobin, Department of Biology, University of California, Los Angeles, California 90024.**

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL RESEARCH POSITIONS** available December 1978 for pharmacologic/toxicologic studies of psychotropic drugs. Salaries negotiable. Preferable training: **Positions 1 and 2**—animal behavior-EEG analyses, neuropsychopharmacology; behavioral genetics; **Position 3**—biogenic amine-amino acid analyses/kinetics, receptor kinetics. Send résumé to: **Dr. Consroe, Department of Pharmacology/Toxicology, College of Pharmacy, University of Arizona, Tucson, Ariz. 85721.** *An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

### PROFESSOR OF PATHOLOGY

Applications are sought for the position of professor of pathology in the Eastern Virginia Medical School. We seek a candidate with M.D. degree and experience in anatomical pathology both at the academic- and hospital-practice level to participate in an active educational program for the teaching of medical students and residents. Excellent department research facilities available, including electron microscopy. Applications should include curriculum vitae, bibliography, and letters of recommendation. Please send to: **Robert J. Faulconer, M.D., Chairman, Department of Pathology, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, Virginia 23501.** *An Equal Opportunity/Affirmative Action Employer.*

### CARNEGIE-MELLON UNIVERSITY Metallurgy and Materials Science

The Department of Metallurgy and Materials Science is seeking to fill a tenured position as the **R. F. MEHL PROFESSOR OF METALLURGY AND MATERIALS SCIENCE**

Applicants should have a strong interest in teaching and a record of outstanding research, preferably in the area of physical metallurgy.

Interested applicants are invited to send résumés and details before 15 December 1978, to:

**R. F. Mehl Professorship Search Committee**  
c/o H. L. Toor, Dean  
Carnegie Institute of Technology  
101 Scaife Hall  
Carnegie-Mellon University  
Pittsburgh, Pennsylvania 15213

*Equal Opportunity/Affirmative Action Employer*

**RESEARCH ASSOCIATE IN BIOCHEMISTRY OR BIOCHEMICAL PHARMACOLOGY**, to work on 5-year grant on the purification and study of microsomal enzymes from the liver. Salary: \$13,000 to \$17,000; no postdoctoral experience necessary. Contact: **Jordon L. Holtzman, M.D., Ph.D., Clinical Pharmacology, VA Hospital, Minneapolis, Minnesota 55417.**

### RESEARCH ASSOCIATE

Ph.D. in physiology or biochemistry to study control of salivary fluid secretion in ixodid ticks. Familiarity with cyclic nucleotide systems desirable. Position available immediately. Send credentials, reprints, and three letters of reference to: **Dr. John R. Sauer, Department of Entomology, Oklahoma State University, Stillwater, Oklahoma 74074.** *Oklahoma State University is an Equal Opportunity/Affirmative Action Employer.*

### RESEARCH ASSOCIATE

**Mammalian DNA repair processes.** Research involving the study of interactions of radiation and chemical agents with DNA, and their correlation with DNA repair processes and with malignant transformation and mutagenesis in mammalian cells. Requires Ph.D. in physical biochemistry with at least 2 years of postdoctoral research experience in molecular DNA repair processes and nucleic acid biochemistry. Must have expertise in mammalian cell culture techniques including karyotyping, synchronization and autoradiography, and demonstrated competence in BND-cellulose chromatography, alkaline and neutral gradient analyses, and analytical ultracentrifugation. Salary: \$18,000 to \$20,000. Please send résumé to: **Dr. Ann R. Kennedy, Department of Physiology, Harvard School of Public Health, Boston, Massachusetts 02115.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**RESEARCH ASSOCIATE—METALLURGY.** Conduct independent investigation of rapidly solidified iron-base alloys, examining basic and applied aspects. Requires Ph.D. in metallurgy or physics with experience in physical metallurgy and industry. Background in Auger spectroscopy and ion implantation studies desirable. Salary: \$15,000 to \$17,000. Apply by 20 October 1978 to: **P. R. Strutt, U-136, University of Connecticut, Storrs, Conn. 06268.** *An Equal Opportunity Employer.*

**RESEARCH POSITION** available immediately at Sloan-Kettering Institute for studies of chemotherapy drugs on cell cycle using flow cytometry as the principal means of evaluation. Applications from recent Ph.D. or M.D. to assistant professor level will be considered. Salary commensurate with experience. *Equal Opportunity Employer.* Applications containing a résumé and names of three references should be sent to: **Myron R. Melamed, M.D., Sloan-Kettering Institute, 410 East 68th Street, New York, New York 10021.**

**SENIOR PSYCHIATRIC RESIDENT, PG 04**, with strong research interest needed for Psychiatric Service, Memphis VA Hospital. Resident will be enrolled in University of Tennessee, Department of Psychiatry Training Program. In addition to duties as PG 4 resident, the position calls for participation in a major schizophrenia research program focusing on phenomenological, nosological, cognitive-developmental, socio-ethological, pharmacotherapeutic, and nutritional aspects. Excellent opportunity for advanced clinical research training and fulfilling residency requirements. Six-month assignment possible.

Contact: **Man Mohan Singh, M.D., Professor of Psychiatry, Chief, Schizophrenia Program, VA Hospital, 1030 Jefferson Avenue, Memphis, Tenn. 38104.** Telephone: 901-523-8990, ext. 5713.

**THE AUSTRALIAN NATIONAL UNIVERSITY** invites applications for the position of **SENIOR TUTOR IN MICROBIOLOGY** in the Department of Biochemistry, Faculty of Science. Applicants should have a higher degree and teaching interests in microbiology. The appointee will be expected to contribute to the teaching programme and to assist in preparation, supervision, and assessment of practical classes in second-year general microbiology and third-year classes in microbiology, immunology, and molecular genetics. The appointee will be required to participate in training Ph.D. and honours students in the research of the department (primarily in collaborative ventures with the other staff). Research in the department (head: Professor J. F. Williams) includes studies of the molecular basis of motility in slime molds; protein and nucleic acid synthesis in arbovirus-infected cells; hydrogen generation by blue-green algae; R-plasmids in enteric bacteria, *Drosophila* genetics, intermediary metabolism, membrane structure and function; lymphocyte transformation. Appointment as senior tutor is normally for one year in the first instance with the possibility of yearly renewal up to 5 years. Salary will be in accordance with qualifications and experience within the range A\$13,083 to A\$14,987 per annum. Current exchange rates A\$1=US\$1.15. Superannuation benefits. Removal expenses and air fares cannot be paid to senior tutors appointed from overseas except from New Zealand. Further information from: **Academic Registrar, Australian National University, P.O. Box 4, Canberra, ACT 2600, Australia**, with whom applications close 17 November 1978.

### TERRESTRIAL ECOLOGIST

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

### VETERINARIAN FOR NONHUMAN PRIMATES AT ORPRC

The Oregon Regional Primate Research Center (ORPRC) is searching for a veterinarian to manage its extensive primate animal colonies and be responsible for the health of the animals. Applicants must have managerial experience and wide experience and interest in nonhuman primate medicine. Submit curriculum vitae and letters of reference to: **Director, Oregon Primate Research Center, 505 N. W. 185 Avenue, Beaverton, Oregon 97005.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### STAFF TOXICOLOGIST

A growing, independent testing laboratory is seeking a Ph.D. in toxicology or a biologically related field with extensive biostatistical training or experience. The position will involve design and analysis of data from safety studies in laboratory animals, as well as bioavailability studies in humans. An ability to present results in written form will be important. Send résumé to:

**Dr. Kent R. Stevens**  
Food and Drug Research Laboratories, Inc.  
P.O. Box 107  
Waverly, N.Y. 14892

**Department of Health, Education, and Welfare, Public Health Service, Food and Drug Administration (FDA), Bureau of Veterinary Medicine, Division of Veterinary Medical Research, Beltsville, Maryland 20705.**

**SUPERVISORY INTERDISCIPLINARY POSITION:** appropriate for veterinary medical officer, biologist, chemist, husbandman (animal/dairy/poultry), statistician. Professional Civil Service opportunity available in the Bureau of Veterinary Medicine, Division of Veterinary Medical Research, FDA, Beltsville, Md. The individual selected will serve as a supervisor in the Pharmacology and Toxicology Branch. The incumbent will be responsible for conceiving, planning, supervising, and executing applied research in areas of veterinary pharmacology/toxicology. Starting salary is \$30,750 (GS-14) depending on the experience and other qualifications of the candidates. Interested applicants should send their curriculum vitae, Standard Form 171 (Personal Qualifications Statement), and notice of rating establishing your eligibility from the U.S. Civil Service Commission, to: **Dr. Marvin A. Norcross, Director, FDA, Agricultural Research Center, Building 328A, Beltsville, Md. 20705.**

*FDA is an Equal Opportunity Employer*

Applications from Ph.D.'s with medical school teaching experience are invited for **TEACHING POSITIONS** in the following courses:

**Medical Writing Techniques**  
**Biochemistry**  
**Human Anatomy**  
**Physiology**  
**Hematology**  
**Parasitology**  
**Epidemiology**  
**Pharmacology**

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

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

**VETERINARY PARASITOLOGIST—D.V.M. and/or Ph.D. (in parasitology) required.** Responsibilities: teaching parasitology to veterinary students in a series of systems-oriented medical courses; developing an active research program in parasitology including graduate training; and advising veterinary practitioners on parasitic problems. Rank and salary: negotiable. Send curriculum vitae and names of three references to: **Chairman, Veterinary Parasitologist Search Committee, Department of Microbiology and Public Health, Michigan State University, East Lansing, Mich. 48824.** *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

**VIROLOGY.** The Cell Biology Group of the Worcester Foundation for Experimental Biology announces faculty-level positions in animal cell virology. We are seeking individuals with outstanding research potential. Inquiries should be directed to Drs. Ronald Luftig, Harriet Robinson, or Thoru Pederson through the **Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Massachusetts 01545.** *The Worcester Foundation for Experimental Biology is an Affirmative Action, Equal Opportunity Employer.*

# PHARMACEUTICAL RESEARCH

Anticipating completion of our research complex expansion (more than doubling laboratory space) early next year, we have determined those staff additions for the first quarter 1979:

- **SR. RESEARCH PHARMACOLOGIST (Ph.D.)**  
Evaluation of anti-arthritis drugs in animal models. Cartilage alterations, synovial fluid and enzyme determinations. In vivo/in vitro immunological methodologies. Requires significant lab experience beyond Doctorate, with demonstrated ability to develop new procedures. Training in pharmacology, immunology, biochemistry.
- **SR. PHARMACOLOGIST (MS/BS)**  
Renal and anti-inflammatory programs. To screen compounds and evaluate data. Training in pharmacology, physiology, or biology. Direct experience in renal and rheumatoid arthritis studies advantageous.
- **PHARMACOLOGIST (BS)**  
Entry level openings for well trained biologists to engage in broad spectrum of our programs—above plus GI, CNS, Pulmonary.
- **RESEARCH BIOANALYTICAL CHEMIST (MS/BS)**  
Drug Metabolism unit. Three years industrial experience methods development. Competence in Pharmacokinetic treatment of toxicological data. GC/MS experience desirable.
- **RESEARCH BIOCHEMIST (MS/BS)**  
Experience in drug metabolism with emphasis on in vitro biotransformation studies. To isolate and identify new metabolites from in vitro studies.
- **BIOCHEMIST (MS/BS)**  
Routine chemical determinations/interpretations of clinical pathology and hematology lab results. Instrument maintenance—pH Meter, Spectrophotometer, Atomic Absorption. Documentation of data for regulatory authorities.
- **INFORMATION SCIENTIST (TOXICOLOGY) (MS/BS)**  
Collate protocol/report information from Safety Evaluation laboratories. Collect, file and transfer study data to archives. Present tabulations/graphs for reports and meetings. Contribute to lab SOP's. Relevant experience should include fertility reproduction, teratogenic tests, and pathologic techniques. Preparation of protocols essential. Knowledge of GLP expected.

Also, our MEDICINAL CHEMISTRY section has determined manpower needs for scientists of varying degrees of drug experience to engage in anti-arthritis, bronchodilator, diuretic, and anti-motility discovery and development.

Corporation is diversified American subsidiary of world leader in pharmaceuticals which has introduced anti-hypertensives, anti-arrhythmics, hypolipodemics, psychotropics, anti-bacterials, corticosteroids, and anesthetics. Expanded North American program will be ICI's largest research effort outside United Kingdom and will emphasize Central Nervous System, Gastrointestinal, Immunologic, and Renal disorders.

Campus setting in suburban community, equidistant to New York and Washington, D.C., 25 miles south of Philadelphia. Competitive salaries and benefits include unique deferred compensation/investment program. Please submit detailed C.V. in confidence, stating salary expectation.

**Charles T. Brodigan**

Employee Relations



**ICI Americas Inc.**

Wilmington, Delaware 19897

An Equal Opportunity Employer M/F

## Vertebrae Ecologist/Pathologist

Envirosphere Company, a division of EBASCO Services, Incorporated, an environmental consulting firm with offices nationwide, is looking for terrestrial vertebrae ecology and toxicology/pathology professionals to participate in large monitoring programs and industrial research projects. Responsibilities will include design and implementation of diverse scientific programs. Applicants should have a Ph.D. degree or M.S. degree with extensive experience in appropriate disciplines. We offer outstanding starting salaries and a comprehensive benefits package. To apply, forward your resume including salary history and requirements to: P. Domingo, Dept. 919



**envirosphere company**

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New York, N.Y. 10006

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### CSIRO RESEARCH SCIENTIST OR POSTDOCTORAL RESEARCH FELLOW DIVISION OF FISHERIES AND OCEANOGRAPHY PERTH, WESTERN AUSTRALIA

CSIRO has a broad charter for research into primary and secondary industry areas. The organization has approximately 7000 employees, 2300 of whom are research and professional scientists, located in divisions and sections throughout Australia.

**FIELD: BIOLOGICAL OCEANOGRAPHY.**

**GENERAL:** the division is Australia's principal marine research institution with about 70 scientists investigating the physical, chemical, and biological features including fisheries of the oceans around Australia. Headquarters of the divisions are at Cronulla, Sydney, with regional laboratories in Perth, Brisbane, and a field laboratory in Karumba. On-line access to a Cyber 76 computer is available. Two well-equipped medium sized chartered vessels are available for oceanographical research and there are several smaller CSIRO vessels. (Generous removal and resettlement costs including rental assistance for a reasonable period will be paid.)

**DUTIES:** to initiate and carry out research in coastal marine ecology, as part of a research team investigating the production kinetics of a limestone reef.

**QUALIFICATIONS:** marine ecologist with experience in community ecology of reef ecosystems. Some special knowledge of nutrient cycling and fisheries within such systems would be an advantage. Minimum qualifications are a Ph.D. or equivalent qualification in a relevant field of marine biological research, together with appropriate postdoctoral experience.

Prospective applicants should contact D. J. Rochford, the chief of the division (telephone: Sydney 523.6222), if further details are required.

**SALARY:** dependent upon experience within the ranges: research scientist: A\$14,829 to A\$18,177 per annum, or senior research scientist: A\$18,819 to A\$21,534 per annum.

**TENURE:** an indefinite appointment or a fixed-term appointment of 3 to 5 years may be negotiated. Both carry superannuation benefits.

Applications quoting reference number 320/604 and stating full personal and professional details and the names of at least two referees should reach:

The Chief  
Division of Fisheries and Oceanography  
CSIRO  
P.O. Box 21  
Cronulla, New South Wales, Australia

by 17 November 1978.



## SUMMER PROGRAM

### SIXTH SUMMER PROGRAM IN METHODS OF IMMUNOLOGIC RESEARCH AND DIAGNOSIS

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

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

## GRADUATE STUDY

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

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

## TRAINEESHIPS

**POSTDOCTORAL TRAINEESHIPS IN NEUROPLASTICITY.** Positions are available for training in research related to the development and regeneration of the nervous system. The traineeships, supported by an NINCDS training grant, are available to individuals with the Ph.D. or M.D. degree beginning 1 January or 1 July 1979. This multidisciplinary program has as available preceptors Doctors N. Bertram, T. Cunningham, M. Goldberger, H. Murphy, M. Murray, L. Pubols, L. Ross, and B. Weiss. Applications, consisting of a statement of research interests, curriculum vitae, and three references, should be sent to: **Dr. Leonard L. Ross, Department of Anatomy, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129.** An Equal Opportunity/Affirmative Action Employer.

### TRAINING IN METABOLISM

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

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

## FELLOWSHIPS

**POSTDOCTORAL RESEARCH FELLOWSHIPS** available in the areas of diabetes, hormone action, and cyclic nucleotides. This is a multidepartmental program with research training by faculty preceptors in basic and/or clinical areas. Interested applicants with M.D., M.D.-Ph.D., or Ph.D. degrees with or without residency training should send curriculum vitae to: **Dr. Ferid Murad, Program Director, Departments of Medicine and Pharmacology, Box 419, University of Virginia, Charlottesville, Virginia 22908.**

An Affirmative Action/Equal Opportunity Employer

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS IN NEUROENDOCRINE PHYSIOLOGY

Emphasis on brain-renin interactions and regulation of ACTH and growth hormone secretion. Supported by NIH training grant. Send curriculum vitae and references to:

**William F. Ganong, M.D.  
Department of Physiology  
University of California  
San Francisco, Calif. 94143**

An Equal Opportunity/Affirmative Action Employer

### POSTDOCTORAL FELLOWSHIPS FOR RESEARCH TRAINING IN HYPERTENSION AND CARDIOVASCULAR DISEASE

Two-year postdoctoral fellowships starting in 1979 are available for qualified applicants with the M.D. or Ph.D. degree as part of a multidisciplinary training program. Possible areas for intensive research experience will include biochemical, physiological, pathological, and epidemiological approaches to studying the cardiac, renal, adrenal, and neural components of vascular regulation. For further information write to: **Dr. R. L. Soffer, Departments of Biochemistry and Medicine, Cornell University Medical College, 1300 York Avenue, New York, New York 10021.**

### FELLOWSHIPS

**POSTDOCTORAL INTERDISCIPLINARY TRAINING PROGRAM IN THE NEUROSCIENCES.** The Department of Psychiatry at the Johns Hopkins School of Medicine is accepting applicants for its NIMH Postdoctoral Interdisciplinary Training Program in the Neurosciences. The program offers training in basic research in the fields of behavioral biology, neurochemistry, neuropsychopharmacology, and neuroanatomy. Applicants should be M.D.'s, preferably with training in psychiatry or neurology, or Ph.D.'s in psychology, pharmacology, neurobiology, or related disciplines. Please send curriculum vitae and description of interests to: **Joseph T. Coyle, M.D., Department of Psychiatry and Behavioral Sciences, Johns Hopkins School of Medicine, Baltimore, Maryland 21205.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL FELLOWSHIPS

The Department of Human Genetics and Development of Columbia University, New York, is seeking candidates for NIH postdoctoral fellowships in all major areas of cellular, molecular, and clinical genetics. Fellowships are available as of summer 1979. Send letters of inquiry with curriculum vitae, by 15 November 1978, to: **Dr. Arthur D. Bloom, Chairman, Training Committee, Department of Human Genetics and Development, Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

**POSTDOCTORAL TRAINING FELLOWSHIPS IN MEDICAL GENETICS** available to individuals with advanced degrees altering career objectives towards medical genetics. Stipend: \$10,000 to \$13,000 per year. Write: **Dr. James V. Neel, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Michigan 48109.** Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL FELLOWSHIPS IN MICROBIOLOGY/CANCER BIOLOGY AND CARDIOVASCULAR RESEARCH

Postdoctoral fellowships for candidates with Ph.D. degree in microbiology, cell biology, biochemistry, genetics, or related fields. One-year fellowships are renewable. Cancer research concerns mechanism of nutrient transport into cultured mammalian cells, uptake and mode of action of potential anticancer agents, growth properties of preneoplastic cells, and related areas. Cardiovascular research concerns host-toxin interactions among group A streptococci, genetics of pathogenesis in streptococci, and related areas. Send curriculum vitae and three letters of recommendation to: **Professor Peter G. Plagemann, Department of Microbiology, University of Minnesota, Box 196 Mayo, Minneapolis, Minn. 55455.**

**POSTDOCTORAL RESEARCH FELLOWSHIP** in experimental ophthalmic pathology available immediately at Jules Stein Eye Institute, University of California, Los Angeles (UCLA). This 2-year fellowship is sponsored by NIH. Applicant must have prior training in immunology. Must be U.S. citizen. Send résumé and three references to: **Alan L. Shabo, M.D., Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, Calif. 90024.** An Equal Opportunity/Affirmative Action Employer.

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIP— BIOCHEMISTRY

To study assembly and posttranslational modification of human hemoglobin. Ph.D. or M.D. with strong background in protein structure-function. Available: 1 January 1979. Salary: \$14,500. Send curriculum vitae and names of three references to: **Dr. H. Franklin Bunn, Peter Bent Brigham Hospital, Harvard Medical School, 721 Huntington Avenue, Boston, Mass. 02115.** Affirmative Action/Equal Opportunity Employer.

**PREDOCTORAL FELLOWSHIPS** in physiology and biophysics. Training in cardiovascular, cell, endocrine, muscle, neuro-, renal, and respiratory physiology. Applicants must submit GRE scores (verbal, quantitative, and one advanced test). Deadline for application is 16 April 1979. For application materials write: **Department of Physiology and Biophysics, West Virginia University Medical Center, Morgantown, West Virginia 26506.**

Nominations are open.

Deadline: 15 November 1978

### THE ROBERT WOOD JOHNSON HEALTH POLICY FELLOWSHIPS

A year of study and congressional working assignments in Washington, D.C., for midcareer faculty of academic health centers. Six fellowships are available for the year beginning in September 1979. Stipends and benefits included. More information available from your executive officer for health affairs, or:

**Institute of Medicine  
National Academy of Sciences  
2101 Constitution Avenue, NW  
Washington, D.C. 20418**

**POSTDOCTORAL RESEARCH FELLOWSHIP** in Dermatology Research Laboratories, Department of Medicine, Duke University Medical Center. Available 1 January 1979. Purification and characterization of proteinases. Role of proteinases in chemotaxis, inflammation, and cellular metabolism. Some experience with membranes helpful. Send curriculum vitae to: **Gerald S. Lazarus, M.D., J. Lamar Callaway Professor of Dermatology, Chairman, Division of Dermatology, Duke University Medical Center, Durham, N.C. 27710.** Duke is an Equal Opportunity Employer.

### FELLOWSHIPS MARINE BIOLOGICAL LABORATORY Woods Hole, Massachusetts

invites applications from faculty members without tenure for participation in its

#### STEPS TOWARD INDEPENDENCE PROGRAM

This flexible, individually tailored program furnishes support for study and research at the Marine Biological Laboratory and is designed to provide the facilities, associations, and training that will enable scientists in their immediate postdoctoral years to develop into independent, competitive investigators. More detailed description and application materials

for entry into the program beginning in 1979 may be obtained from: **Admissions Office, Marine Biological Laboratory, Woods Hole, Mass. 02543; telephone: 617-548-3705.**

An Equal Opportunity/Affirmative Action Institution



## MARKET PLACE

Yes, Virginia  $1 + 1 = 4$

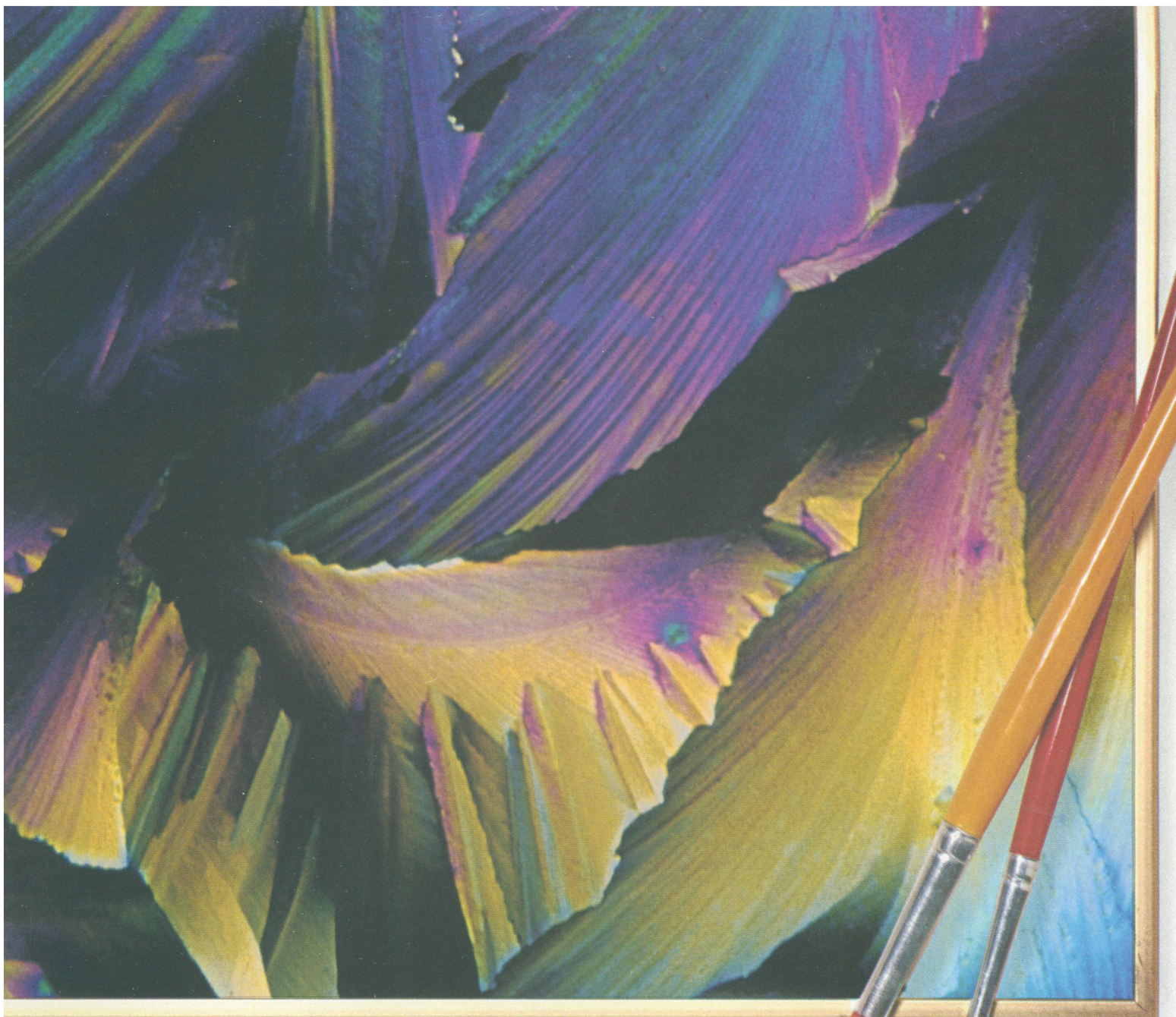


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Photomicrograph by John Delly, McCrone Research Institute

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