

In noting what research Bronfenbrenner chooses to cite, it is interesting to note also what is omitted. For example, in discussing the research that has been done on the effect of various institutions on child development, he ignores the entire body of work done with retarded children, which would meet many of the criteria he stipulates, even to the point of being the kind of "transforming experiments" he considers desirable. This work has involved extensive laboratory studies with results that have been generalized to wider and wider aspects of institutional environments and changed the institutions in the process. Perhaps Bronfenbrenner discounts the work because the operant conditioning and behavior modification tradition of this research uses strategies more akin to those of the physical sciences, strategies he rejects for the study of human development. Similarly, there is no reference to animal research such as that done by Denenberg and his colleagues, especially with respect to environmental variables that produce stress and the longitudinal assessment of those effects. The criterion of the assessment of social meaning cannot be so easily invoked in animal research, yet many developmental psychologists find the animal data informative for purposes of theory as well as research strategy and would not assume this work is irrelevant to the understanding of human development.

Also absent from the book is any significant treatment of the currently extensive research efforts concerned with assessment of the environment and with child-adult interaction; there is no reference to several major longitudinal multivariate research programs involving infants and young children in families. Although it is true that some of that work has yet to be published, much of it has been presented at scientific meetings contemporaneous with much of the unpublished work that is cited in the book. The author probably did not intend to minimize the measurement difficulties inherent in interactional and environmental observation research. However, he leaves the impression that the dimensions of functional experience he cites as important have been ignored by other psychologists. That is not the case. Yarow, Wachs, Sameroff, Bakeman, Caldwell, White, Carew, Cornell, and others have contributed to the extensive discussion of how one defines what is a functional environment for a child and for the other individuals in a setting, how one measures that environment, and how one analyzes the data collected. All of this might have been profitably

brought to bear by Bronfenbrenner on his thesis and could have served as the basis for a reasonable claim that there is a convergence of concern in the field.

A number of Bronfenbrenner's conceptions are not unlike those proposed by Erik Erikson. Nor are they unfamiliar to the students of Roger Barker, whose work is cited only briefly, or to those who have been inspired by the contributions of Fritz Heider, who is not mentioned. The importance of dyadic relationships (which characterize many of the behaviors in the microsystem) was stressed a number of years ago in the pioneering writings of Robert Sears, but this work is not noted either. When these omissions are recognized they tend to raise questions concerning Bronfenbrenner's claim to a unique synthesis.

It is the insistence upon what is and is not acceptable as developmental research that is likely to put off many potentially sympathetic readers. Knowledge of child behavior has been remarkably advanced since the observations of the baby biographers at the end of the 19th century. To the extent that we have documented developmental sequences, have identified important variables controlling behavior, and have shown how children learn, think, and perceive, a significant data base has been established. Many of these accomplishments occurred without meeting the criteria Bronfenbrenner has set forth, a fact acknowledged in the book. The investigators who have contributed and are contributing to this data base and who consider themselves developmental psychologists would, if Bronfenbrenner's view prevails, be disenfranchised as developmental psychologists.

Bronfenbrenner has attempted to provide a comprehensive account of all the variables that could possibly influence development, but it is curious that he has almost totally ignored those variables that are associated with the organism: individual differences, temperament, vulnerability. One expects to see the biological-organismic approach more fully developed in the book because of the rather explicit rejection of the physical sciences as a model for psychology. However, the biological factors in development go unmentioned, and the theoretical implications that others have drawn from choosing the biological sciences as the more appropriate model for psychological research are referred to only tangentially.

Despite the problems that have been cited here, a number of Bronfenbrenner's particular observations are thoughtful and provocative. One could

view the book as an extensive exhortation that development is complex, that simple models will not be successful, that environmental variables must be taken seriously, that social meaning is important, that problems of generalizing from the laboratory to more complex environments are still significant for behavioral science. Taken in this manner it provides a welcome antidote to the current spate of premature conclusions about what is and is not important in development. Though many developmental psychologists will find his definition of the field too limiting it is useful to have in one place the ideas that Bronfenbrenner has been discussing from numerous platforms in recent years. If, rather than becoming a new research bible, the book stimulates useful research it will be a contribution to the field.

FRANCES DEGEN HOROWITZ  
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## Books Received

**The Alkaloids.** The Fundamental Chemistry. A Biogenetic Approach. David R. Dalton. Dekker, New York, 1979. xii, 790 pp., illus. \$49.50. Studies in Organic Chemistry, vol. 7.

**American Psychology in Historical Perspective.** Addresses of the Presidents of the American Psychological Association, 1892-1977. Ernest R. Hilgard, Ed. American Psychological Association, Washington, D.C., 1978. x, 558 pp., illus. Cloth, \$18; paper, \$15.

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**Food Engineering.** Principles and Selected Applications. Marcel Loncin and Richard Larry Merson. Academic Press, New York, 1979. xx, 494 pp., illus. \$44. Food Science and Technology.

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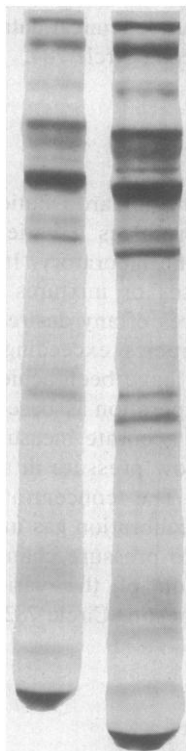
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**The Influence of Ocular Light Perception on Metabolism in Man and in Animal.** F. Hollwich. Translated by Hunter and Hildegard Hannum. Springer-Verlag, New York, 1979. xii, 130 pp., illus. \$37.50. Topics in Environmental Physiology and Medicine.

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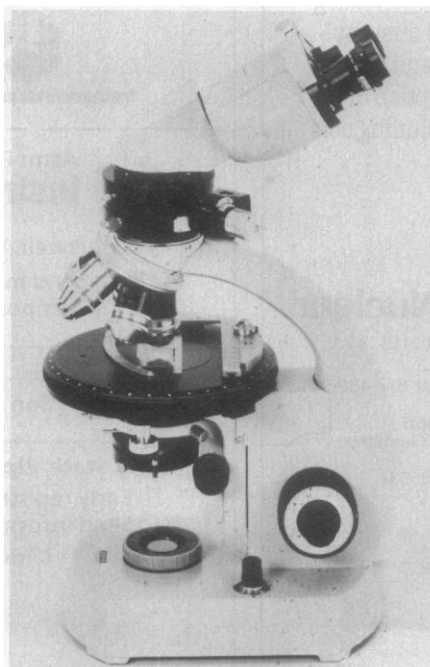
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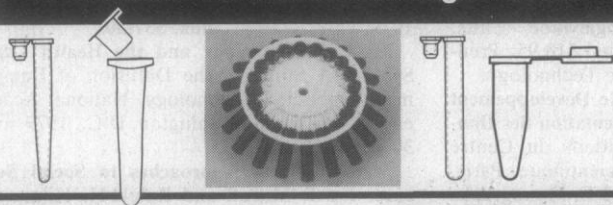
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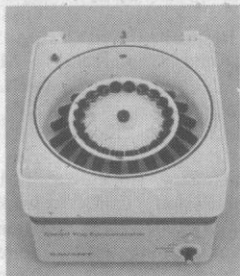
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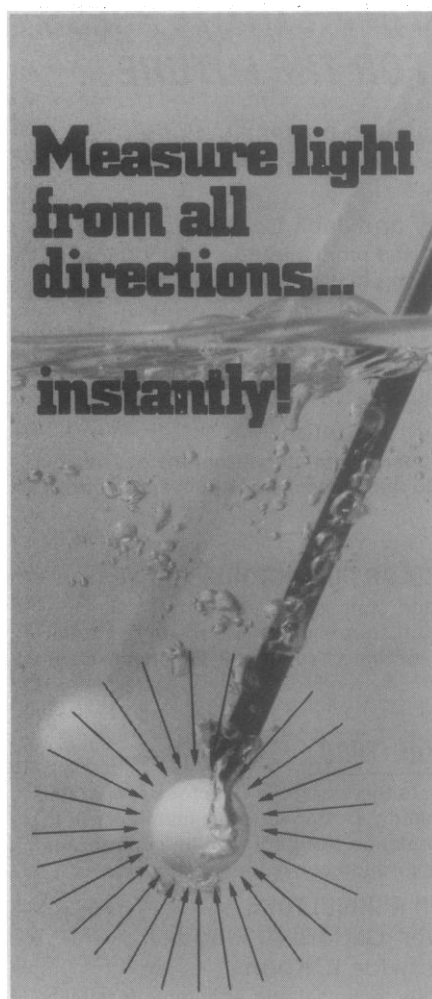
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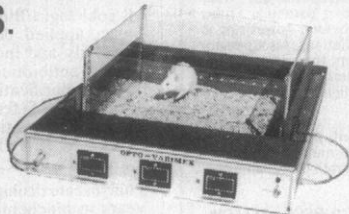
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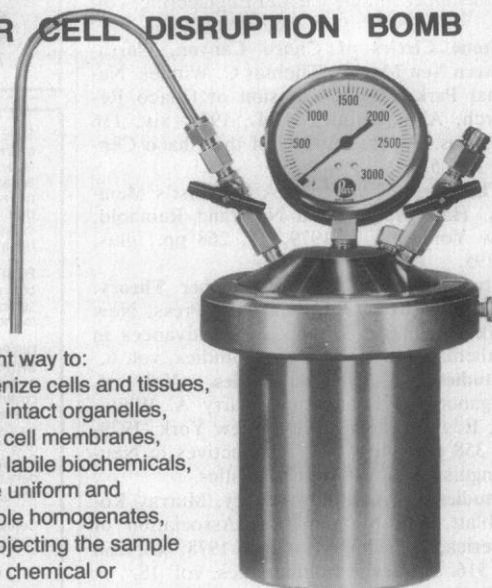
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Send copy for all **Positions Wanted** ads and **Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 207  
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1515 Broadway  
New York, N.Y. 10036  
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

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

### POSITIONS WANTED

**Agronomist.** Ph.D. 1973. University of Wisconsin, Madison. Experience in field crops breeding research and production (4 years at Agricultural Experiment Station); university teaching (5 years); tropical international agriculture. Excellent in French (speaking, writing, and instantaneous translation); fair in German and Spanish. Seeking position in applied research and teaching in United States, Canada, or overseas. Permanent U.S. resident. Availability negotiable. Box 28, SCIENCE. X

**Biochemist/Bio-organic Chemist/Ph.D.,** experience in teaching, nucleic acids biochemistry, and recent experience in membrane chemistry. Interested in research in clinical medical school/hospital department or in industrial laboratory. R. D. Faulkner, Biochemistry Department, University of South Alabama, Mobile, Alabama 36688. Telephone: 205-460-6402. X

**Biochemist-Immunologist.** Ph.D. Cell, sub-cellular fractionation; regulation IgE; membrane receptors; lipid, enzyme, polysaccharide isolation, characterization; electron transport. Prefers immunological research. R. A. Bomstein, 18845 Azure Road, Deephaven, Minnesota 55391. X

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

**Environmental/Biology/Biochemistry.** B.S. plus work towards M.S. Managerial capability and governmental experience. Currently small town chemist. R. Wattinger, Route 1, Box 39-D, Reva, Virginia 22735. X

**General Biology, Genetics, Ecology, Botany, Plant Physiology.** Broad teaching, research experience. M.S., plant physiology. Strong commitment to quality undergraduate education. Prefers 4-year or junior college. J. Mendenhall, 1305 8th Street, Greeley, Colorado 80631. 2/8, 15, 22, 29

### POSITIONS WANTED

**Interferonologist, Virologist, Molecular Biologist.** D.Sc. 1978. More than 4 years of experience in the interferon field. Familiar with all aspects, particularly the characterization, modification, and fragmentation of interferon. Will consider a responsible academic, research, or industrial position. Box 30, SCIENCE. 2/8, 15

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

**Pharmacotoxicologist.** Dr.med.vet. from Germany; 4 years in biochemical pharmacology, teratology, inhalation toxicology, mycotoxins, immunology, electrophoresis, chromatographics, enzymology, development of new drugs, analysis, and 4 years in practice. Seeks any challenging position. Write to: Ghosh, Marschstrasse 9, 2848 Vechta, West Germany. X

**Plant Physiologist.** Ph.D. Research experience with publications. Seeks summer research opportunities in ongoing program. Box 29, SCIENCE. X

**Writer/Editor.** Do you have to publish or perish? This double MENSAN team, educated at Massachusetts Institute of Technology and Millikin University, can make the difference for your group. Published 27 pieces (2073 pages) in 1979. Awards for two books from the Society for Technical Communicators. Box 31, SCIENCE. X

### POSITIONS OPEN

#### ALCOHOL FUELS PROJECT MANAGER

The National Center for Appropriate Technology (NCAT) is seeking an individual to fill this 1-year position to supervise design and construction of several mobile alcohol production units, including cooking, fermentation, and distillation capabilities. B.S. and 1 year of experience, \$20,000.

#### DIRECTOR OF RESEARCH & DEVELOPMENT

Responsible for the direction of 40-person staff researching renewable resources, conservation, agriculture, and related technologies. Salary is \$24,000. Ph.D. or equivalent technologies. Salary is \$24,000. Ph.D. or equivalent experience in physical sciences with strong supervisory experience. Prefer knowledge of federal programs and low-income communities.

Apply to: NCAT, P.O. Box 3838, Butte, Montana 59701. 406-494-4572. Affirmative Action/Equal Opportunity Employer.

**ANATOMIST.** The Department of Physiological Sciences, in the College of Veterinary Medicine at Oklahoma State University, seeks applications for a tenure-track position. Candidates must have a Ph.D. in the anatomical sciences; the D.V.M. degree is desirable but not essential. Teaching responsibility will be a portion of a veterinary medical course in comparative anatomy of domestic animals and some instruction in graduate courses in electron microscopy and/or ultrastructural cytology. A strong interest in and the ability to maintain an active research program is essential. The individual should have demonstrated research capability in electron microscopy and be willing to consult and collaborate with other faculty members. Salary commensurate with experience but not less than \$24,000 per year for assistant and \$25,200 for associate professorship. Position available 1 July 1980. Screening begins 15 March 1980. Applicants should send curriculum vitae and the names of three references to:

Dr. Charlotte L. Ownby, Chairwoman  
Search Committee  
Department of Physiological Sciences  
Oklahoma State University  
Stillwater, Okla. 74078

Oklahoma State University is an Equal Opportunity/Affirmative Action Employer.



## POSITIONS OPEN

### ANATOMIST AND PHYSIOLOGIST

The College of Osteopathic Medicine and Surgery, Des Moines, Iowa, has two faculty positions available for August 1980. Both positions require the Ph.D. or equivalent degree. Prior teaching experience required, and demonstrated research potential desirable. Rank and salary negotiable. *Equal Opportunity Employer.*

- 1) **ANATOMIST:** teaching responsibilities in human gross and microscopic anatomy.
- 2) **PHYSIOLOGIST:** Teaching responsibilities in cardiovascular, renal and/or neurophysiology.

Send curriculum vitae to:

**William J. Dyche, Ph.D.**  
Assistant Dean for Pre-Clinical Affairs  
College of Osteopathic Medicine and Surgery  
3200 Grand Avenue  
Des Moines, Iowa 50312

**ANATOMIST.** The Department of Allied Health Education is seeking applications for a tenure-track position at the rank of assistant professor, beginning 1 July 1980. An adjunct appointment with the Department of Anatomical Sciences is also possible. Candidates should have a Ph.D. at the time of appointment, be well-versed in the four subdisciplines of anatomy and be committed to excellence in teaching allied health students. Previous teaching experience and an interest in conducting independent research are desirable. Deadline for applications is 15 March 1980. Send letter of application, curriculum vitae, and three letters of recommendation to: **Dr. Randall B. Grubb, Department of Anatomical Sciences, University of Oklahoma at Oklahoma City, P.O. Box 26901, Oklahoma City, Okla. 73190.** *An Equal Opportunity/Affirmative Action Employer.*

**ANIMAL MOLECULAR GENETICIST.** Associate or full professor position beginning 1 July 1980. The successful applicant will be expected to teach an undergraduate course in human genetics and a graduate course in an area of expertise. Research emphases could include gene expression or regulation, immunogenetics, or genetical and molecular aspects of chromatin structure. Research problems of the candidate should be related to California agriculture. Send curriculum vitae, including research plans, reprints, and three letters of reference, to: **The Search Committee, Department of Genetics, University of California, Berkeley, California 94720.** Application deadline: 28 February 1980. *The University of California is an Affirmative Action Employer.*

**UNIVERSITY OF WASHINGTON.** Tenure-track, **ASSISTANT PROFESSOR** position available in the Animal Behavior Program, Department of Psychology. We are looking for the best possible scientist with interests in one or more of the following areas: computer modeling and quantitative analysis of ethological or sociobiological processes; sociobiology; laboratory ethology; neuroethology; or behavior genetics. Advanced degree need not be in psychology, but candidates must be capable of teaching basic level courses such as statistics. Send brief statement of research interests, curriculum vitae, reprints, and three letters of recommendation to: **Dr. David P. Barash, Department of Psychology, University of Washington, Seattle, Washington 98195.** *Women and minorities are urged to apply.* Application deadline: 1 March 1980. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR

We have an opening for a Ph.D. basic scientist. The individual must have proven experience in the area of biotransformation of the volatile anesthetics. The individual will be expected to pursue independent research and assist other members of the department in their research endeavors. To that end, intimate knowledge of federal funding procedures and grant preparation is necessary. Please send inquiries to: **Phillip O. Bridenbaugh, M.D., Professor and Chairman, Department of Anesthesia, University of Cincinnati, 231 Bethesda Avenue, Cincinnati, Ohio 45267.** *An Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR, BIOCHEMISTRY.** Tenure-track position, available fall 1980. Ph.D. required; postdoctoral research experience highly desirable. Submit a letter of application, curriculum vitae, and an outline of research plans, and arrange for three letters of recommendation to be sent to: **Dr. Anthony Fratiello, Chair, Department of Chemistry, California State University, Los Angeles, Los Angeles, Calif. 90032.** *The University is an Equal Opportunity/Affirmative Action/Handicapped/Title IX Employer.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR

Research position available for M.D. or Ph.D. with a minimum of 2 years of experience and 2 years of training in tissue culture methodology, human cellular immunology, both serological and cellular aspects of human histocompatibility antigens, HLA-D typing by the use of homozygous typing cells, familial and population aspects of human genetics, somatic cell hybrids, and biochemical characterization of cell-surface antigens. Starting salary: \$22,000 to \$25,000, commensurate with experience and training. Reply to: **Box 26, SCIENCE.**

### ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology is seeking a candidate holding an M.D. or a Ph.D. degree with experience and interest in membrane transport processes. Field of interest can include theoretical, artificial model, cellular, or epithelial membrane transport systems.

Opportunities are available for both collaborative and independent research and for graduate and medical student teaching.

Please send complete curriculum vitae including publications and the names and addresses of three references to:

**Chairman, Membrane Transport Search Committee**  
Department of Physiology  
Yale University School of Medicine  
333 Cedar Street, SHM B-107  
New Haven, Conn. 06510

*Applications from women and members of minority groups are encouraged. An Equal Opportunity/Affirmative Action Employer.*

### BIOLOGISTS (THREE)

The School of Biological Sciences at Oklahoma State University is seeking candidates for tenure-track assistant or associate professor appointments beginning 18 August 1980. Successful applicants would develop an active research and graduate program and instruct undergraduate and graduate courses. Postdoctoral experience preferred. Applications deadline: 1 March 1980. Send résumé, transcripts, letter describing your goals and research plans, and names of three references to individual named below.

**EVOLUTIONARY BIOLOGIST**—Involves teaching introductory courses stressing genetics, evolution, and ecology; expected to teach upper division or graduate courses and develop a research program in evolutionary biology.

Apply to: **Dr. John W. Thornton, Acting Chairman, Department of General and Evolutionary Biology.**

**MICROBIOLOGIST/CELL BIOLOGIST**—Teach introductory microbiology, advanced core biology, and graduate microbial genetics. Develop research program in microbial genetics and interact with workers in eukaryotic genetics.

Apply to: **Dr. E. A. Grula, Chairman, Cell, Molecular and Developmental Biology** (request three letters of recommendation).

**WILDLIFE ECOLOGIST** (associate professor level preferred)—Ph.D. in wildlife ecology or closely related field with teaching and research experience in avian biology and wildlife management. Prior involvement with governmental agencies desirable.

Apply to: **Dr. Jerry Wilhm, Chairman, Department of Ecology, Fisheries, and Wildlife.**

**SCHOOL OF BIOLOGICAL SCIENCES**  
**OKLAHOMA STATE UNIVERSITY**  
**STILLWATER, OKLAHOMA 74074**

*An Equal Opportunity/Affirmative Action Employer*

### UNIT LEADER OKLAHOMA COOPERATIVE WILDLIFE RESEARCH UNIT

Full-time position of the U.S. Fish and Wildlife Service established at Oklahoma State University. Ph.D. in wildlife ecology or closely related field with demonstrated ability to supervise a wide variety of research projects, publish in national journals, work with governmental agencies and the general public. Must qualify for associate or full professorial status and would be expected to teach at the graduate level. Salary: GS-13. Position open until suitable candidate is found.

Send letters of transmittal, résumé, Standard Form 171, and names of three references to: **Glenn W. Todd, Director, School of Biological Sciences, Oklahoma State University, Stillwater, Okla. 74074,** and a copy of these materials to: **Dr. Rollin Sparrowe, Chief, Office of Cooperative Units, U.S. Fish and Wildlife Service, Washington, D.C. 20240.**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**ASSISTANT PROFESSOR: BIOLOGY.** Tenure-track opening anticipated 1 September 1980. Ph.D. required. Must be able to teach physiology and introductory biology (organismal) and have expertise in at least two of the following: developmental, cellular or molecular biology, invertebrate or vertebrate zoology. Send résumé and names of three references by 21 March to: **Dr. C. Burch, Department of Biology, Wells College, Aurora, N.Y. 13026.** *Wells College is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF BIOLOGY.** Temporary 9-month position beginning 15 August 1980. Primary interests in human anatomy, human physiology, and zoology. Secondary interests in genetics and evolution desirable but not required. Ph.D. required. Liberal arts college with 2,000 students and strong allied health curriculum. Send application, curriculum vitae, and names and addresses of three references to: **Dean G. Richard Scott, Avila College, 11901 Wornall Road, Kansas City, Mo. 64145.** *Equal Opportunity Employer.*

### ASSOCIATE PROFESSOR

A position is available at the rank of associate professor for research in inhalation toxicology with emphasis on physiology of toxicant transport and removal, and pulmonary immunology. Requirements include a doctoral level degree, formal postdoctoral study of pulmonary physiology and toxicology, and demonstrated research ability as evidenced by a funded independent research program and meritorious publications.

Applicants should submit curriculum vitae, a description of research interests, and names of three references to: **Dr. P. L. La Celle, Department of Radiation Biology and Biophysics, University of Rochester, School of Medicine and Dentistry, Rochester, N.Y. 14642.** Applications must be received by 1 March 1980. *The University of Rochester is an Equal Opportunity/Affirmative Action Employer.*

### BIOCHEMICAL GENETICIST CENTER FOR DISEASE CONTROL ATLANTA, GEORGIA

The Center for Disease Control is recruiting a biochemical geneticist to serve as chief of a new Biochemical Genetics Activity, located in the Genetics Laboratory, Pathology Division, Bureau of Laboratories. The position will involve applied and basic research in biochemical genetics, provide consultation and limited diagnostic service, and conduct both classroom and bench training.

Applicants must have substantial experience in research and teaching, preferably gained at a major medical center. The position requires demonstrated ability to communicate with persons at all organizational and educational levels. The position requires an M.D. or Ph.D. degree, and may be filled in either the Career Civil Service or the Public Health Service Commissioned Corps. Salary will be commensurate with qualifications.

Further inquiries should be directed to: **Dr. Andrew T. L. Chen, Chief, Genetics Laboratory, Pathology Division, Center for Disease Control, 1600 Clifton Road, NE, Atlanta, Georgia 30333; telephone: 404-329-3213.** Applicants should submit résumé to: **David F. Rogers, Personnel Management Office, Center for Disease Control, 1600 Clifton Road, NE, Atlanta, Georgia 30333.** *The Center for Disease Control is an Equal Opportunity Employer.*

**BIOCHEMIST.** B.S. minimum. Background of protein chemistry and enzymes. Microbiology experience desirable. Some quality control related responsibilities. Upstate New York. Excellent area for family. *Dellwood Foods is an Equal Opportunity/Affirmative Action Employer, M/F.* Reply to:

**Box 23, SCIENCE**

**DUKE BIOCHEMIST**—Position available (M.D. or Ph.D.) to study regulation of collagen biosynthesis in human cell culture including effects of cellular aging. Please send curriculum vitae and three letters of reference to:

**Sheldon R. Pinnell, M.D.**  
Professor of Medicine (Dermatology)  
Box 3135  
Duke University Medical Center  
Durham, North Carolina 27710

*Duke University is an Equal Opportunity Employer.*

## POSITIONS OPEN

### UNIVERSITY OF ROCHESTER DEPARTMENT OF ORTHOPAEDICS ASSISTANT PROFESSOR

A tenure track position is available beginning July to September 1980. Primary responsibility will be the development of an independent program in basic musculoskeletal research. Candidates with an M.D. and/or Ph.D. degree and postdoctoral experience in the biochemistry, cell biology, physiology, or endocrinology of hard tissue are encouraged to apply. Applicants should submit curriculum vitae with a description of research interests and the names of three references to:

**Dr. John S. Brand**  
Department of Orthopaedics  
University of Rochester Medical Center  
Rochester, New York 14642

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

### ASSISTANT PROFESSOR

The faculty of the Department of Biological Sciences have active research programs emphasizing cell biology and genetics, and teach related courses at the undergraduate and graduate levels. We are seeking applicants with postdoctoral experience and complementary interests for a tenure-track assistant professor position in the areas of **developmental genetics and cell biology**. Applicants should submit curriculum vitae, reprints, and bibliography. A cover letter should include a description of research plans and an indication of areas of teaching competence. Letters of reference should be sent by three referees. **Dr. K. W. Fisher, Department of Biological Sciences, Douglass College, Rutgers-The State University of New Jersey, New Brunswick, N.J. 08903.** *An Affirmative Action/Equal Opportunity Employer.*

### BIOCHEMISTRY FACULTY POSITIONS UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES (USUHS)

Applications are invited for junior and senior tenure-track positions (two) to be filled during fiscal year 1980. Responsibilities include medical and graduate level teaching, and an independent research program. Ph.D. or M.D. degree and appropriate postdoctoral experience required. Preference will be given to applicants with research interests in immunology and immunobiology, biophysical chemistry, and eukaryotic molecular biology. Submit curriculum vitae (including names of three professional references) and brief statement of research interests. Send to:

Personnel/Manpower Division  
**F. J. Bollum, Biochemistry**  
Uniformed Services University of the  
Health Sciences  
4301 Jones Bridge Road  
Bethesda, Md. 20014

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

**BIOLOGIST** to teach vertebrate zoology, invertebrate zoology, and participate in general biology. Instructor or assistant professor level, beginning 1 July 1980. This is a 1-year appointment for a sabbatical replacement and is nontenurable. *An Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae, transcripts, and three letters of evaluation to: **Dr. Richard M. Lane, Chairman, Department of Biology, Dickinson College, Carlisle, Pennsylvania 17013.** Telephone: 717-245-1329.

### BIOCHEMISTRY CHAIRPERSON

The Ohio State University is seeking a chairperson for its new, unified Department of Biochemistry. This department, combining the Departments of Biochemistry and Physiological Chemistry, will be formed 1 July 1980, will comprise approximately 70 graduate students and 30 faculty, and will have the responsibility for graduate programs in biochemistry and for all undergraduate and professional biochemistry instruction. The new chairperson will be expected to provide leadership in the development of this newly combined department and to foster an atmosphere conducive to excellent research and teaching in biochemistry. The individual sought will qualify for the rank of professor, have a distinguished record of research and teaching, and be pursuing an active, ongoing research program which would be continued at Ohio State. Applications and nominations should be sent by 15 March 1980 to: **Chairman, Biochemistry Search Committee, The Ohio State University, 203 Administration Building, 190 Oval Mall, Columbus, Ohio 43210.**

## POSITIONS OPEN

**BIOLOGIST.** Continuing appointment in the Department of Biology, The Pennsylvania State University, DuBois Campus, DuBois, Pa. Position available September 1980; appointment is expected to be at rank of assistant professor. The position requires teaching introductory courses in general biology, general botany, general zoology, and intermediate level courses in genetics or physiology. Microbiology background desirable. Continuing scholarly activity, including research and publication, will be required. Candidate must have Ph.D. degree. Salary commensurate with qualifications. Application deadline: 15 March. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. William H. Neff, Box G, 208 Mueller Building, University Park, Pa. 16802.** *The Pennsylvania State University is an Affirmative Action/Equal Opportunity Employer.*

**BIOLOGIST.** Continuing appointment in the Department of Biology, The Pennsylvania State University, Wilkes-Barre Campus, Wilkes-Barre, Pa. Position available September 1980; appointment is expected to be at rank of assistant professor. The position requires teaching introductory courses in general biology, general botany and general zoology, and intermediate level courses in physiology or genetics. Continuing scholarly activity, including research and publication, will be required. Candidate must have Ph.D. degree. Salary commensurate with qualifications. Application deadline: 15 March. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. William H. Neff, Box G, 208 Mueller Building, University Park, Pa. 16802.** *The Pennsylvania State University is an Affirmative Action/Equal Opportunity Employer.*

### BIOPHYSICIST DEPARTMENT OF PHYSICS UNIVERSITY OF MICHIGAN

A tenure-track position at the assistant professor level is available in the Department of Physics for September 1980. Candidates are expected to pursue an independent research program in molecular or cellular biophysics. Teaching will be done in the Department of Physics, whose four present members working in biophysics continue a long tradition of departmental commitment to this field. The research will be housed in the laboratories of the Biophysics Research Division, where 11 faculty members from 5 departments are engaged in a broad range of biophysical research.

Applications should include curriculum vitae, relevant reprints, a statement of future research plans, and names of three references. These should be sent by 15 March 1980 to: **Richard H. Sands, Chairman, Department of Physics, University of Michigan, Ann Arbor, Mich. 48109.**

*The University of Michigan is a nondiscriminatory, Affirmative Action Employer.*

### CELL BIOLOGISTS—ANATOMISTS

The University of North Carolina at Chapel Hill invites applications for junior and senior faculty positions in the Department of Anatomy and Laboratories for Cell Biology. Applicants must have postdoctoral research experience and goals in cell surface or membrane biology, cellular immunobiology, cancer cell biology, somatic cell genetics, cellular neurobiology, or the biology of cytoskeleton or cell motility. Teaching opportunities will be in medical histology, neurobiology, human gross anatomy or in graduate level courses in cell biology. Send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, 111 Swing Building 217H, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27514.**

*An Equal Opportunity/Affirmative Action Employer*

### CELL BIOLOGIST/BIOCHEMIST for Mutagenesis/Carcinogenesis Research

Active research group seeking postdoctoral associates for research involving one of the following topics: (i) mutation and transformation as a function of: (a) nature, dose, or metabolism of the mutagen, (b) DNA repair capabilities, or (c) cell cycle position; (ii) characterization of the surface of transformed cells; (iii) transcriptional ability of damaged chromatin; or (iv) metabolic factors influencing the activation and deactivation of mutagens.

Position available immediately. Must be U.S. citizen or possess permanent residence visa. Contact: **Dr. Helen Evans, Division of Radiation Biology, Case Western Reserve University, Cleveland, Ohio 44106;** telephone 216-444-3530.

## POSITIONS OPEN

**BOTANIST/assistant professor.** Nontenure-track position for botanist will be available starting the fall 1980 semester in the Wilkes College Department of Biology. Ph.D. required. Teaching responsibilities include introductory biology to majors, general botany, and plant physiology. The department emphasizes quality teaching and a commitment to a modest research program appropriate to a small, liberal arts college. Forward curriculum vitae, publications, transcripts, three letters of reference, and a statement of career goals to: **Dr. Lester Turocz, Chairman, Department of Biology, Wilkes College, Wilkes-Barre, Pa. 18766.** *An Equal Opportunity/Affirmative Action Employer.*

### BISHOP MUSEUM—BOTANIST

The Museum anticipates early opening for senior systematist in botany. Ph.D. with minimum of 8 years of research, significantly in tropics. Herbarium curatorial experience essential. Duties divided among administration, curating, and research. Send résumé and three letters of reference by 15 March to: **E. Creutz, Director, Bishop Museum, P.O. Box 19000-A, Honolulu, Hawaii 96819.** *The Bishop Museum is an Equal Opportunity/Affirmative Action Employer.*

**CELL PHYSIOLOGIST—ASSISTANT PROFESSOR.** We invite applications for a tenure-track position, available in September 1980, from broadly trained persons with research interests in eukaryotic cell physiology. The successful applicant will complement and supplement our teaching and research program in experimental zoology, possess postdoctoral experience, be able to attract grant funds, and have high teaching ability. Send curriculum vitae, statement of research goals, reprints, and names of three references to: **Larry S. Roberts, Professor and Chairperson, Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409.** *Affirmative Action/Equal Opportunity Employer.*

### DEVELOPMENTAL NEUROBIOLOGY COLUMBIA UNIVERSITY

The Department of Biological Sciences at Columbia University in New York City is forming a nucleus of a number of independent faculty members within the department whose interests lie in various areas of the development of the nervous system. Space and modern facilities are presently available for two of three new appointments in the recently completed Sherman Fairchild Center for the Life Sciences. The appointments will be made at a level appropriate to the qualifications of the successful candidates. The successful candidates will be individuals who can demonstrate a high level of scientific excellence and productivity along with superior teaching ability and commitment to teaching at both undergraduate and graduate levels. Applications should include curriculum vitae, copies of most significant publications, and a summary of research goals. Junior applicants should also request that letters from three references be sent in support of their application. Send inquiries by 1 March 1980 to: **Professor John Hildebrand, Chairman, Neurobiology Search Committee, Department of Biological Sciences, 600 Sherman Fairchild Center, Columbia University, New York, N.Y. 10027.** *Women and members of minority groups are especially encouraged to apply. Columbia University is an Equal Opportunity/Affirmative Action Employer.*

**DIRECTOR OF NEPHROLOGY SECTION—**The Department of Medicine, St. Francis Hospital and Medical Center, seeks nephrologist with post-fellowship experience and preferably clinical research interests to direct a Nephrology Section that includes several Board-certified practicing nephrologists and a newly expanded, modern, 15-station dialysis unit that includes generous office space, conference rooms, and research laboratory space. The hospital is a 658-bed, major teaching hospital of the University of Connecticut School of Medicine with full-time physicians, excellent medical house staff, and active private medical staff. Full-time physicians in medicine have full faculty appointments at the University of Connecticut. There is a nephrology fellowship program integrated with University of Connecticut. Applicant should have interests in administration of dialysis unit, clinical research, teaching, and limited consultation activities. Salary negotiable, based on credentials. For further information, reply in confidence to: **Thomas J. Godar, M.D., Director, Section of Pulmonary Diseases, Chairman, Nephrology Search Committee, St. Francis Hospital and Medical Center, 114 Woodland Street, Hartford, Conn. 06105.**

## POSITIONS OPEN

### CHAIRMAN, DEPARTMENT OF MICROBIOLOGY AND CELL SCIENCE (IFAS) University of Florida

The Institute of Food and Agricultural Sciences (IFAS) of the University of Florida invites nominations and applications for the position of **CHAIRMAN** of the Department of Microbiology and Cell Sciences. The candidate should qualify for the rank of professor, and those with the proven ability to initiate, organize, and direct programs are especially encouraged to apply. The individual is also expected to have successful experience in research and teaching. The chairman must lead and administer a strong statewide program with the aim of developing national excellence. The deadline date for applications has been extended to 1 March 1980. Nominations or applications should be submitted to: **Professor Edward M. Hoffman, Chairman, Search and Screen Committee, 1059 McCarty Hall, University of Florida, Gainesville, Florida 32611.**

### CHEMICAL/NUTRITIONAL CARCINOGENESIS

The Assembly of Life Sciences of the National Academy of Sciences is seeking an associate scientist to assist a study group in analyzing and evaluating scientific data concerning the relationship of dietary components (nutrients and toxic contaminants), metabolic processes, and cancer. In addition, the individual will maintain liaison with multiple sources of ongoing research in the United States and abroad and assist in developing recommendations for future research. A doctoral degree in the biological sciences, or equivalent, is required. Emphasis will be placed on broad experience in chemical carcinogenesis including mechanisms of tumor induction, physiology, pathology, and carcinogenesis testing techniques. Applicants should submit curriculum vitae to: **Dr. Sushma Palmer, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418. An Equal Opportunity Employer.**

### DEVELOPMENTAL BOTANIST

The Department of Biology, Virginia Polytechnic Institute and State University (VPI and SU), invites applications for a tenure-track position at the assistant professor level. Applicants should have the Ph.D. degree. The candidate will be expected to develop an active research program in developmental botany and offer training to undergraduate and graduate students in both the morphology and development of higher plants. The applicant may also be asked to assist in the general biology program. Salary is competitive and commensurate with experience. Letters of application, curriculum vitae, a brief description of career goals and proposed research program, and three letters of recommendation must be received by 7 March 1980. Address to: **Dr. Orson K. Miller, Jr., Chairman Search Committee, Department of Biology, VPI and SU, Blacksburg, Va. 24061.**

*An Equal Opportunity/Affirmative Action Employer*

**FACULTY POSITION IN POLYMER SCIENCE AND ASSOCIATE DIRECTOR OF POLYMER RESEARCH INSTITUTE (tenure-track), September 1980.** Academic rank commensurate with qualifications and experience. Expertise preferred in structure/property relationships, rheology, mechanical properties, morphology, or adhesion. Extensive interaction with polymer-based industries desirable. Responsibilities include teaching, research, and leadership in developing industrial-academic interrelationships. Submit résumé, including research plans and names of three references, to: **Professor Johannes Smid, Chairman, Search Committee, Chemistry Department, State University of New York College of Environmental Science and Forestry, Syracuse, N.Y. 13210 before 31 March 1980. Equal Opportunity/Affirmative Action Employer.**

### GENERAL ECOLOGIST ASSISTANT PROFESSOR OF BIOLOGY

Applications are invited for a tenure-track position in the Department of Biology to begin in August 1980. Assistant professor, Ph.D., general ecologist with additional training in botany, zoology, and microbiology. Will teach ecology, introductory biology, plus other upper-division courses. A field orientation to the study of biology is desired in order to take advantage of our biological field station. Send résumé, complete transcripts, description of research interests, and three letters of recommendation to: **Chairman, Department of Biology, Muskingum College, New Concord, Ohio 43762. Applications from women and minority candidates are particularly welcome.**

## POSITIONS OPEN

### DIRECTOR PROGRAM IN SOCIAL ECOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

The Program in Social Ecology, an interdisciplinary program of the University of California, Irvine, invites applications for director of the program and professor or associate professor of social ecology. Candidates for the position should have a strong background in research and teaching suitable for tenured appointment in the University of California. Demonstrated experience in academic administration is desirable. Area of expertise of the director is open but must reflect the interdisciplinary goals of the program. Preference: desire those whose research interests complement those of the existing faculty.

The director's responsibilities include the leadership of a faculty of 27 and more than 70 graduate and 700 undergraduate students. The program seeks to apply insights and techniques drawn from both the social and life sciences to the analysis and solution of major social and environmental problems. Current faculty include urban sociologists and planners, criminal justice specialists, community psychologists, environmental psychologists, lawyers, environmental health experts, and developmental psychologists.

The campus, located 40 miles south of Los Angeles, is close to the beach, mountain, and desert recreational areas.

*An Affirmative Action Employer.*

Please submit curriculum vitae and names of three references as soon as possible to:

**Chair  
Search Committee for New Director  
Program in Social Ecology  
University of California, Irvine  
Irvine, California 92717**

### DIRECTOR, OREGON REGIONAL PRIMATE RESEARCH CENTER

The University of Oregon Health Sciences Center is seeking a director for the Oregon Regional Primate Research Center. The center has 230 employees and an operating budget of \$5.5 million. The director is responsible for establishing and maintaining a purposeful, balanced scientific program conducive to achievement of its research objectives.

Qualifications for this position include a doctorate degree and a strong record in research, administration, and education. Interested persons should send curriculum vitae, the names and addresses of three references, and a description of professional interests to: **James Metcalfe, M.D., Medical Research Foundation of Oregon, P.O. Box 449, Portland, Oregon 97207. Deadline for receipt of applications is 15 April 1980.**

*The University of Oregon Health Sciences Center is an Equal Opportunity/Affirmative Action Employer.*

### ECOLOGIST

Assistant professor, tenure-accruing, to start September 1980. Research emphasizing experimental approach to plant community and ecosystem-level problems preferred. Duties include teaching advanced ecology courses plus introductory biology. Academic year (9-month) salary negotiable based on qualifications. Send curriculum vitae, description of research and teaching interests and experience, four letters of recommendation, and transcripts or coursework summary before 10 March to: **Dr. Jack Ewel, Botany Department, Bartram Hall, University of Florida, Gainesville, Fla. 32611. An Equal Opportunity/Affirmative Action Employer.**

**ELECTRICAL OR BIOMEDICAL ENGINEER** is being sought for full-time appointment in a large academic department of anesthesiology. Ph.D. required. Duties include support of anesthesia faculty in clinical and laboratory research, particularly in the areas of instrumentation and computer applications for patient monitoring. Faculty appointment possible for qualified individual. Contact: **Betty L. Grundy, M.D., 1060E Scaife Hall, University of Pittsburgh, Pittsburgh, Pennsylvania 15261. Telephone: 412-624-1481.**

### ENVIRONMENTAL SCIENTIST

Active Environmental Protection Bureau seeks an individual with an advanced degree in a health or biological science to initiate and develop cases covering a broad range of issues including health effects of toxics, waste dumps, and air and water pollution. Send résumé to: **Dan D. Levy, New York State Law Department, 2 World Trade Center, New York, N.Y. 10047.**

## POSITIONS OPEN

### FACULTY POSITION, PEDIATRIC NEUROLOGY

The Section of Pediatric Neurology and Center for Human Growth and Development, University of Michigan, announce a joint position for a pediatric neurologist at the assistant or associate professor level. Candidates should have appropriate clinical qualifications and a vigorous research program in some area of developmental neurobiology.

Apply: **Gary Goldstein, M.D., Director, Section of Child Neurology, University Hospitals, Ann Arbor, Michigan 48109. An Equal Opportunity/Affirmative Action Employer.**

### SAN FRANCISCO STATE UNIVERSITY SCHOOL OF SCIENCE

Eleven tenure-track faculty positions available at the assistant professor level in the following areas:

**Biology:** marine biologist, plant ecologist (to be also director of the Sierra Nevada Field Campus), vertebrate ethologist; **Chemistry:** synthetic inorganic or organometallic chemist, membrane biochemist; **Engineering:** computer engineer, electronics engineer; **Mathematics:** director, Center for Math Literacy; **Computer Science:** operating systems/performance evaluation, data base design; **Physics and Astronomy:** astrophysicist. A 1 year, temporary, non-tenure-track position in the area of hematology is available in the Clinical Science Department. Temporary full- and part-time non-tenure-track positions are also available in the areas of engineering and physics/astronomy. Applicants for these positions will be expected to participate in the undergraduate teaching program and to teach advanced courses in their specialty. Successful candidates will be expected to develop active research programs in one of the several areas of activity within the school. Interested candidates should submit curriculum vitae, bibliography, a statement of research interests, and three references to: **Dr. James C. Kelley, Dean, School of Science, San Francisco State University, 1600 Holloway Avenue, San Francisco, Calif. 94132. San Francisco State University is an Equal Opportunity/Affirmative Action Employer. Closing date for application is 1 March 1980.**

### DEPARTMENT OF BIOLOGICAL SCIENCE FLORIDA STATE UNIVERSITY ASSISTANT PROFESSORSHIPS

Special "quality improvement" funds will allow the recruitment of several faculty during 1980. Emphasis will be given to the following areas of strength and particularly to interfaces between those areas:

### GENETICS AND CELL BIOLOGY PHYSIOLOGY AND PSYCHOBIOLOGY ECOLOGY AND ORGANISMA BIOLOGY

Interface appointments under consideration include molecular genetics/engineering, microbiology/microbial immunology, membrane biology, plant cell culture/developmental biology, single-species ecology, marine/aquatic biology, extreme environment ecology, biochemical systematics/chemical ecology, and invertebrate behavioral genetics.

Research associate or research assistant professorship positions are also anticipated in each of the major areas, some of which may lead to tenure-track appointments.

The department is a large, broad-based Biological Science Unit with a large undergraduate program and a strong commitment to graduate education and independent research. We fully occupy two buildings as well as portions of others. Extensive special instrument and field facilities exist including a marine laboratory and a field station. Both technical and clerical staff is being expanded to support the research programs.

Applicants should send curriculum vitae, reprints, support letters, and a brief statement of research interest to: **A. Gib DeBusk, Chairman, Department of Biological Sciences, Florida State University, Tallahassee, Florida 32306. We are in Affirmative Action/Equal Opportunity Employer and welcome applications from women and minority group members.**

## POSITIONS OPEN

### SCIENTIFIC DIRECTOR FOR BLOOD CENTER

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

### UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Applicants are solicited for **FACULTY POSITIONS** in the following departments: **PEDIATRICS**: (number 204) **adjunct assistant professor**—Perform purification and labeling of proteins, enzymatic assays, binding assays, data processing, and calculations. Ph.D. in biochemistry or pharmacology. **RADIOLOGICAL SCIENCES**: (number 207) **assistant professor**—Diagnostic radiology and diagnostic ultrasound. In addition to teaching, the position includes duties in service and research. Certified by American Board of Radiology or eligible, 4 years of postdoctoral training in diagnostic radiology, and subspecialty training in diagnostic ultrasound, computerized tomography, and special procedures.

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

Two **FACULTY POSITIONS** available immediately in neuropharmacology, biochemical endocrinology, or drug metabolism/toxicology. Appointment level and salary ranges are open. Send curriculum vitae and names of three references to: **Personnel Manpower Division, Chairman, Department of Pharmacology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20814.** An Equal Opportunity/Affirmative Action Employer.

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

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

An Affirmative Action/Equal Opportunity Employer

### IMMUNOCHEMIST-IMMUNOBIOLOGIST

Ph.D. or M.D. for new immunotherapeutic cancer project at Baylor College of Medicine. Postdoctoral experience desirable. Please send curriculum vitae and bibliography to: **Box 22, SCIENCE.**

### MICROBIAL ECOLOGIST

The Institute of Marine Science at the University of Alaska will fill at the rank of assistant professor a tenure-track position in one of the several areas related to marine microbial processes. The successful applicant will provide evidence of a strong background in fundamentals and of experience related to natural processes. Participation in interdisciplinary studies is encouraged. A letter of application, curriculum vitae, and the names of three referees should be sent to: **Dr. Vera Alexander, Acting Director, Institute of Marine Science, University of Alaska, Fairbanks, Alaska 99701.** The University of Alaska is an Affirmative Action/Equal Opportunity Employer and Educational Institution. Closing date: 2 May 1980.

## POSITIONS OPEN

### IMMUNOLOGY—FACULTY

Two junior faculty positions available in immunology (immunogenetics or immunochemistry) with emphasis on oncologic or gerontologic problems. Major activities research but will participate in instruction of medical, graduate, and undergraduate students. Excellent facilities and equipment with expanding group affiliated with cancer and aging centers. Two years of postdoctoral training necessary. Submit curriculum vitae and three references before 1 March 1980 to: **Dr. D. M. Goldenberg, Division of Experimental Pathology, University of Kentucky Medical Center, Lexington, Ky. 40536.**

**INSECT TAXONOMIST**—Assistant professor to work with taxonomy and biology of insects of economic importance in developing countries. Teaching proficiency in insect classification, taxonomic principles, and museum techniques. Knowledge of tropical ecology and fluency in Spanish and French preferred. Position will include foreign travel. Ph.D. in entomology required. Send résumé, transcripts, and references to: **Dr. H. T. Streu, Department of Entomology and Economic Zoology, Cook College, P.O. Box 231, Rutgers-The State University, New Brunswick, N.J. 08903.**

**EXPERIENCED SECONDARY SCIENCE INSTRUCTOR** needed to teach biology and a science elective at highly competitive, rural, Roman Catholic, college-preparatory boarding school for boys. Elective need not be biology-related. Some graduate work and experience required. Extracurricular interests desirable. Send résumé and references to: **Headmaster, Portsmouth Abbey School, Portsmouth, R.I. 02871.**

### INTEGRATED PEST MANAGEMENT SPECIALIST

Statewide extension specialist to initiate, coordinate, and conduct integrated pest management implementation and educational programs on selected California crops. University of California, Davis, headquarters. Career opportunity available now. Ph.D. in pest management-related discipline plus 3 years of experience desired. Closing date: 7 March 1980. Contact: **Personnel Administrator, Cooperative Extension, 331 University Hall, University of California, Berkeley, Calif. 94720.** Refer to No. 7957

An Affirmative Action/Equal Opportunity Employer

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

**MEDICAL ONCOLOGIST** for July 1980. The newly established Division of Medical Oncology at the University of Louisville is seeking a Board-eligible or -certified medical oncologist for faculty appointment at the rank of assistant or associate professor. Applications are sought from persons with an interest in teaching, research, and clinical medicine who wish to join a growing division of medical oncology. If you are interested in contributing to the development of this rapidly expanding program, please reply with curriculum vitae to: **Leo G. Horan, M.D., Department of Medicine, University of Louisville, Louisville, Kentucky 40232.** The University of Louisville is an Equal Opportunity/Affirmative Action Employer.

### PATHOLOGY HEAD

The Department of Pathology at the New York University Medical Center is seeking a director for its University Hospital Division. Candidates should be experienced in anatomical pathology, active in research, and desirous of fostering an academic residency program.

Interested persons should send a letter describing their qualifications plus curriculum vitae, bibliography, and the names of three references to:

Search Committee  
Department of Pathology  
New York University School of Medicine  
550 First Avenue  
New York, New York 10016

## POSITIONS OPEN

### MEMBRANE BIOCHEMISTRY

Postdoctoral position available immediately for a recent Ph.D. to participate in research on the structure and function of eukaryote surface membranes. Reply with curriculum vitae and names of three references to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, The University of North Carolina, Chapel Hill, North Carolina 27514.** Equal Opportunity Employer.

### University of Alberta Department of Genetics MOLECULAR GENETICIST

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

### NEUROPHARMACOLOGIST

A research associate position immediately available to a person trained in microelectrode voltage clamp techniques. In near future we plan to use these techniques to voltage clamp neuroblastoma cells in tissue culture. Some interest in ion sensitive microelectrodes will be useful. Send curriculum vitae and two letters of reference to: **Dr. Brij B. Shrivastav, Box 3813, Duke University Medical Center, Durham, N.C. 27710.** Duke University is an Affirmative Action/Equal Opportunity Employer.

**NEUROSCIENTIST** position immediately available. Research involves the localization of cholinergic neurons with its marker enzyme choline acetyltransferase by an already established immunocytochemical method. Strong background in neuroanatomy and experience in electron microscope are essential. Salary range: \$14,000 to \$17,000. Send résumé and the names of three references to: **Dr. Lipen Chao, Department of Neurology, Reed Neurological Research Center, University of California, Los Angeles, Los Angeles, California 90024.**

**ORAL MICROBIOLOGIST**—University of Washington, primary appointment in Department of Oral Biology, School of Dentistry, with a joint appointment in the Department of Microbiology, School of Medicine, and an affiliate appointment in the Center for Research in Oral Biology. Rank and salary to be negotiated on basis of previous rank and experience. We are looking for an individual with demonstrable research contributions as well as teaching experience in the field of microbiology, especially as related to the oral cavity. The candidate should be able to develop, coordinate, and participate in appropriate courses (for example, cariology) for both professional degree and graduate students and to coordinate the basic science and clinical aspects of microbiology within the dental school curriculum. This individual will also be expected to initiate and sustain a productive research program and advise graduate students. Please send curriculum vitae and names of four references to: **Dr. A. Tamarin, Professor of Oral Biology, Department of Oral Biology SB-22, University of Washington, Seattle, Wash. 98195.** Applications received after 31 March 1980 may not be considered. The University of Washington is an Equal Opportunity Employer.

### PHYSICAL OCEANOGRAPHER

Faculty training and research position, Institute of Marine Science, University of Alaska, Fairbanks. Research interests should include estuarine, coastal, or open-ocean investigations in subpolar oceanography. Participation in interdisciplinary studies is encouraged. Ph.D. degree in physical oceanography is preferred (or its equivalent in training or experience). Rank and salary will be determined by experience. Candidates should send résumé and names of three references to: **Dr. Vera Alexander, Acting Director, Institute of Marine Science, University of Alaska, Fairbanks, Alaska 99701.** The University of Alaska is an Affirmative Action Equal Opportunity Employer and Educational Institution. Closing date: 2 May 1980.



**DEAN OF THE OGDEN COLLEGE  
OF SCIENCE AND TECHNOLOGY  
WESTERN KENTUCKY UNIVERSITY**

The Ogden College of Science and Technology of Western Kentucky University invites nominations and applications for the position of dean. The dean reports to the vice president for academic affairs and is responsible for the operation of a college with 145 faculty members. The college provides courses of study leading to 31 undergraduate and 14 graduate degrees in the Departments of Agriculture, Biology, Chemistry, Engineering Technology, Geography and Geology, Mathematics and Computer Science, and Physics and Astronomy. Western Kentucky University is a state-supported institution with an enrollment of more than 13,000.

The successful candidate must have a Ph.D. in a discipline appropriate to the college, administrative experience, and a long-term, full-time commitment to professionalism. In addition, the candidate is expected to have a record of sustained scholarly research and publication, a history of distinguished teaching, and a record of obtaining grants and contracts in support of research.

This is a 12-month position available in the summer of 1980. The successful candidate will qualify for tenure with the rank of professor in the appropriate department. Salary will be commensurate with the responsibilities of the position and the qualifications of the successful applicant.

Applications together with complete résumés and three letters of reference must be received by 15 March 1980. Applications should be sent to: Dr. Elmer Gray, Chairman, Search Committee, The Graduate College, Western Kentucky University, Bowling Green, Ky. 42101.

*Western Kentucky University is an Equal Opportunity/Affirmative Action Employer.*

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

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

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

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

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

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

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

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

OR

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

**POSTDOCTORAL RESEARCH AWARDS**  
Sponsored by the  
**BALLISTIC RESEARCH LABORATORY**  
in association with  
**THE NATIONAL RESEARCH COUNCIL**

The National Research Council will make awards in 1980 for research under the Resident Associateship Program which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in fields of:

Applied Computer Sciences  
Applied Mathematics  
Combustion Research  
Continuum Mechanics  
Fluid Mechanics  
Materials Sciences  
Nuclear and Radiation Physics  
Physical Chemistry  
Probability Theory and Stochastic Processes  
Quantum Chemistry

in the laboratory complex located at the head of the beautiful Chesapeake Bay country of Maryland, within easy driving distance of the metropolitan centers of Philadelphia, Baltimore, and Washington, D.C.

Some programs are open to senior investigators as well as recent doctorates. Further details on research programs can be obtained from: Dr. L. J. Puckett, Ballistic Research Laboratory, Aberdeen Proving Ground, Md. 21005; telephone: 301-278-2236.

For application materials and details on specific research opportunities, write promptly, giving research areas of interest, to:

Associateship Office (JH 608-H2)  
**NATIONAL RESEARCH COUNCIL**  
2101 Constitution Avenue, NW  
Washington, D.C. 20418

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

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

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

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

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

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

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

**Dr. Tawfig Tamimi**  
Dean, College of Medicine  
King Faisal University  
c/o Saudi Arabian  
Educational Mission  
2221 West Loop South  
Houston, Texas 77027

OR

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

**COURSES IN BIOLOGICAL SCIENCES  
AT THE HOPKINS MARINE STATION  
SUMMER 1980**

**First Session—16 June to 19 July**

**100H. Marine Algae, I. Abbott**

An introduction to the marine algae of the Pacific Coast with emphasis on morphology and taxonomy; fieldwork is emphasized. Prerequisite: elementary botany or general biology.

**105H. Subtidal Communities, C. Baxter**

Lecture, laboratory, and diving field trips treating the ecology of local shallow-water marine communities.

**111H. Marine Invertebrates, D. Abbott**

Survey of the lower marine invertebrates, echinoderms, and protochordates.

**130H. Biological Clocks, C. Pittendrigh**

The comparative physiology of innate circadian, circa-tidal, and circa-annual rhythmicity in animals, plants, and unicells. Specific attention is devoted to: (i) the role of clocks in navigation and photoperiodism, (ii) the *Drosophila* system, (iii) the localization of circadian pacemakers within nervous systems, and (iv) the genetics and molecular biology of the clock.

**165H. Experimental Neurobiology, S. Thompson and additional staff**

An intensive laboratory and lecture course in cellular and organismal neurophysiology. Lectures emphasize (i) cellular processes such as membrane excitability, synaptic transmission, neuronal metabolism, and neuropharmacology and (ii) the organization of sensory, motor, and integrative systems. The laboratory offers experience with several marine invertebrate preparations and a wide range of investigative techniques. This course is offered to advanced undergraduates, graduate students, and postdoctoral students.

**Second Session—21 July to 23 August**

**112H. Marine Invertebrates (continued), D. Abbott**

Continuation of Course 111H, covering the mollusks, annelids, arthropods, and allied lesser phyla. While the two courses form a continuous sequence, either half may be taken separately when space permits.

**113H. Introduction to Oceanic Biology, E. Haderlie**

Introduction to the ocean as an environment; to its major categories of inhabitants, producer and consumer, benthic and pelagic, invertebrate and vertebrate; and to its functioning of the oceanic ecosystem.

**125H. Developmental Biology, D. Epel and R. Quatrano**

An intensive workshop-type course focusing on early development. Guest lecturers will include W. Briggs, E. Davidson, P. Green, D. Mazia, R. Nuccitelli, P. Ray, R. Schimke, R. Steinhardt, W. Thompson, V. Vacquier, N. Wessells, and F. Wilt.

**160H. Problems in Subtidal Ecology, C. Baxter**

Field problems in subtidal ecology. Normally participants continue from 105H.

For more information and an application form please write to: **The Academic Secretary, Hopkins Marine Station, Pacific Grove, California 93950.** Applications for the summer session close on 31 March 1980.

## POSITIONS OPEN

M.D. or Ph.D. **PEDIATRIC BIOCHEMIST**, assistant professor level, needed for a Brown University affiliated hospital. Postdoctoral training in pediatric chemistry with minimum of 2 years of experience in a university setting preferred with special interest in metabolic diseases. Submit curriculum vitae to: **Horace F. Martin, M.D., Ph.D., Chairman, Search Committee, Director, Clinical Chemistry, Rhode Island Hospital, Providence, R.I. 02902.** Deadline: 30 March 1980.

**PHYSICAL CHEMIST**—Ph.D. with an interest in biological research to study driving forces and kinetics of mineralization and demineralization of hard tissues (teeth and bone). Experience in heterogeneous equilibria of inorganic systems and crystal growth kinetics desirable. Salary commensurate with qualifications and experience. Send résumé to: **Dr. E. C. Moreno, Forsyth Dental Center, 140 Fenway, Boston, Mass. 02115.** An Equal Opportunity/Affirmative Action Employer.

### PLANT PATHOLOGY AND PHYSIOLOGY DEPARTMENT HEAD

The successful candidate will be expected to provide leadership and assume management responsibilities for the department, including teaching, research and extension programs. Applications will be received until 15 March 1980, or until the position has been filled. Send complete résumé and the names of three references to: **Dr. James R. Nichols, Dean, College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.** An Affirmative Action/Equal Opportunity Institution.

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. Salary: \$10,000–\$12,000. Curriculum vitae with names of references should be sent by 28 February to: **Dr. M. R. Banerjee, Tumor Biology Laboratory, School of Life Sciences, 201 Lyman Hall, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588.** Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL POSITION MEDICAL ULTRASOUND

The research involves collecting and analyzing clinically derived ultrasound signals. The overall goal is to develop methods for computer-aided diagnosis of breast disease.

Candidates should possess an appropriate background in medical physics and have FORTRAN expertise. The position is funded by an NIH research grant which is renewable annually through February 1982. Salary is \$18,000 per annum, with cost of living increases in July. Applications, including résumés and the names of four professional references, should be sent immediately to:

**Dr. William Swindell  
Radiology Department  
Arizona Health Sciences Center  
Tucson, Arizona 85724**

Telephone: 602-626-7848, for further information.

The University of Arizona is an Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.

**POSTDOCTORAL POSITION.** Available 1 July 1980 to study ocular secretory IgA mechanisms in humans and animals. Desirable that applicant has background in secretory IgA immunobiology with emphasis on immunization procedures to elicit secretory IgA, measurement of secretory IgA antibody, and immunofluorescence localization of secretory component and various immunoglobulins. Fellowship is for 2 years in the Department of Ophthalmology, Harvard Medical School, and the Department of Cornea Research, Eye Research Institute of Retina Foundation. Send curriculum vitae and three letters of recommendation to: **Mathea R. Allansmith, M.D., 20 Staniford Street, Boston, Mass. 02114.**

**POSTDOCTORAL POSITION** available for studies on isolation and analysis of mRNA(S) coding for major proteins found in bacterial spores. Starting date: 1 April 1980 or thereafter. Send curriculum vitae together with two references to: **Dr. Peter Setlow, Department of Biochemistry, University of Connecticut Health Center, Farmington, Conn. 06032.** An Equal Opportunity Employer.

## POSITIONS OPEN

### POSTDOCTORAL FELLOW Psychology Department Northeastern University

Two positions will be available beginning June 1980 for individuals to conduct experiments and participate in training in human electrophysiology and psychophysics of visual system and any aspect of eye movement control and its visual consequences.

The qualified individuals will have a Ph.D., M.D., O.D., or Sc.D. Salary range: \$10,400 to \$13,000.

Please send résumé to: **Dr. John Armstrong, 324 Nightingale, Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115.** An Equal Opportunity/Affirmative Action/Title IX University.

**Northeastern  
University**

### POSTDOCTORAL POSITIONS— mRNA PROCESSING

Postdoctoral positions will be available in the laboratory of Dr. Thoru Pederson to participate in molecular studies of the relationships between nuclear structure, gene transcription, and hnRNA <mRNA processing. Send curriculum vitae, synopsis of Ph.D. thesis research, and names of three references to: **Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Massachusetts 01545.**

An Equal Opportunity/Affirmative Action Employer

### POSTDOCTORAL POSITIONS

Applications are invited from M.D. or Ph.D. scientists who can benefit from and contribute to our research and teaching programs in anatomy. Areas of active research include developmental and reproductive biology, erythroid and lymphoid cell biology, stereology, and molecular structure. Duties will begin on or about 1 July 1980 at salaries consistent with NIH postdoctoral stipends. Appointments will be for a 1-year period with possibility of renewal. Send applications complete with curriculum vitae and names of three references to: **Chairman, Research Review Committee, Department of Biological Structure, University of Washington, School of Medicine, Seattle, Wash. 98195.** The University of Washington is an Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL POSITION** available immediately, to study the regulation of heart glycogen synthase by phosphoprotein kinases and phosphatases. The initial appointment is for 1 year but may be extended for an additional year. Experience in protein purification and enzymological techniques required. Experience in protein structural techniques desirable but not essential. Send curriculum vitae and references to: **Dr. S. D. Killilea, Department of Biochemistry, North Dakota State University, Fargo, North Dakota 58105.**

North Dakota State University is an Equal Opportunity Institution.

**POSTDOCTORAL POSITION**—Available within the next 6 months for environmental engineering research and systems analysis support. Background in mathematical modelling of natural water systems, particularly lake eutrophication, estuarine systems, and fate and effects of hazardous substances. Scientific programming experience also required. Salary in \$20,000's and commensurate with experience. *Minority and female applicants welcome.* Please send curriculum vitae and references to: **Dr. Robert V. Thomann, Director, Environmental Engineering and Science Program, Manhattan College, Riverdale, New York 10471.** An Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Two-year Ph.D., biochemistry or cell physiology. Endocrine effects on cell surface proteins in cultured, cuticle-producing insect cells. Proposed salary: \$16,500. Contact: **H. J. Klosterman, Department of Biochemistry, North Dakota State University, Fargo, North Dakota 58105.**

North Dakota State University is an Equal Opportunity Institution.

**POSTDOCTORAL POSITION IN ANATOMY**—Medical school full-time research associate to develop collaborative biomedical research program in neuroendocrinology, specifically in the adrenal or reproductive system. Salary negotiable depending on qualifications and experience; available 1 June 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.

**POSTDOCTORAL POSITION IN TUMOR IMMUNOLOGY**—Immediately available for Ph.D. in immunology, biochemistry, or related area for studies in immunobiology of cancer metastasis. Studies of immune responsive cell effects with different malignant cell lines, including comparative cell surface biochemistry and cell-cell interactions. Experience in tissue culture, histology, cytochemistry, and work with small animals helpful. Send curriculum vitae, bibliography, and names of three references to: **Professor 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.

**POSTDOCTORAL POSITION** is available immediately for a fresh Ph.D. in biochemistry to work on a NIH-funded research project on lung growth and development. The work is concerned with cyclic nucleotides and related enzymes. Salary dependent on qualifications. Submit curriculum vitae, giving names of three referees, to: **Dr. M. S. Nijjar, Department of Pathology, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.**

**POSTDOCTORAL PROJECT ASSOCIATE.** Position available immediately at the High Voltage Electron Microscope Facility, University of Wisconsin-Madison. Biologist, with background in chemistry-biochemistry and interested in developing selective staining and immunocytochemical methods for high-voltage electron microscopy. The appointment is for 12 months renewable up to 3 years; salary: \$13,000 to \$15,000 depending on experience. Applicants should submit curriculum vitae and three letters of recommendation to: **Hans Ris, High Voltage Electron Microscopy Facility, University of Wisconsin, Animal Science Building, Madison, Wis. 53706.** An Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL RESEARCH ASSOCIATE** position is available in spring 1980 to collaborate in an NIH-sponsored research project on the "Genetic Control of Enzyme Expression in Eukaryotic Development." The system under investigation is the L-glycerol-3-phosphate dehydrogenase gene-enzyme system in *Drosophila melanogaster* (for a review, see Bewley and Miller, in *Isozymes: Current Topics in Biological and Medical Research*, Rattazzi, Scandalios, Whitt, Eds. (Liss, New York, 1979), vol. 3, pp. 23–52). Applicants should be trained in either nucleic acid chemistry with experience in RNA isolation, messenger RNA purification, and recombinant DNA technology or protein chemistry with experience in structural studies and protein turnover studies. Formal training in *Drosophila* genetics is not required. Starting salary from \$11,000 to \$14,000, depending on qualifications and experience. The position is for 1 year, renewable for 3 years upon satisfactory performance. Prospective applicants please send professional résumé, three letters of recommendation, and a summary of doctoral research to: **Dr. Glenn C. Bewley, Department of Genetics, North Carolina State University, Raleigh, North Carolina 27650.**

An Affirmative Action/Equal Opportunity Employer

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately for a protein chemist to study invertebrate elastomers. Experience in protein isolation, electrophoresis, and amino acid analysis desired. Salary: \$13,000. Please send curriculum vitae and three letters of recommendation to: **Dr. Mary E. Marsh, Department of Biology, Rice University, Houston, Texas 77001.** An Equal Opportunity/Affirmative Action Employer.



## ASSISTANT DIRECTOR FOR MEDICAL AFFAIRS

The U.S. Food and Drug Administration (FDA), Bureau of Medical Devices (Silver Spring, Maryland) is seeking candidates for the Civil Service position of assistant director for medical affairs.

The position of assistant director for medical affairs requires a qualified medical officer with nationally recognized expertise in his/her field. The level of professional development required is Board-certification or progressive experience equivalent in breadth and intensity. The incumbent serves as the principal advisor to the bureau director and provides leadership on all medical matters which impact on policy, direction, and long-range program goals. The major responsibilities of the position include providing medical opinions on special and overall program problems; serving as the bureau medical representative and advisory on medical research contracts, committees, and projects of agencywide scope; evaluating research results from other federal and nonfederal government agencies which impact on the bureau; and for carrying out programs of liaison with the medical community and consumers designed to promote a better understanding of and support for the agency medical device programs through educational training and professional development activities.

This is a permanent position which provides professional recognition and continuing contacts with colleagues, good salary, comprehensive fringe benefits, and excellent job security. Applicants, if selected, must submit to a security clearance investigation and conflict of interest screening. Eligibility is based upon Civil Service regulations. Salary ranges from \$46,276 to \$50,112 per year (GS-15). *The Food and Drug Administration is an Equal Opportunity Employer.* Submit curriculum vitae, bibliography, and if available, a completed Standard Form 171 (Personal Qualifications Statement), to: Bureau of Medical Devices, FDA, Room 1442, 8757 Georgia Avenue, Silver Spring, Maryland 20910, Attention: Robert Manning. Telephone: 301-427-8166.

### U.S. ENVIRONMENTAL PROTECTION AGENCY ENVIRONMENTAL HEALTH SCIENTIST ENVIRONMENTAL SCIENTIST SUPERVISORY BIOLOGIST (BRANCH CHIEF)

The Hazard Evaluation Division of the Office of Pesticide Programs, Environmental Protection Agency (EPA), invites applicants for the position of chief Health Effects Branch (HEB). The position is open to individuals with strong scientific credentials in the health, biological, or physical sciences who are also experienced managers. HEB, through a \$5 million program of cooperative agreements with nine major medical schools and three state public health departments, and with 25 in-house staff, develops data on the exposure and the health effects of pesticides. The branch has access to consultant specialists in veterinary and human medicine, oncology, toxicology, physiology, epidemiology, pathology, environmental and analytical chemistry, biostatistics, and other relevant disciplines. Specific programs include field studies to determine effects on farmworkers and other exposed populations, systematic collection and analysis of pesticide poisoning data, evaluation of pesticide hazard and exposure data, and investigation and special studies related to incidences of unintentional exposure.

Serious applicants will have considerable knowledge and experience in the development and evaluation of scientific data on the health impacts of pesticides or similar chemicals as well as experience in managing extramural program activities, particularly in a matrix-management environment. Knowledge of the federal pesticides regulatory programs, experience in the administration of health-related regulatory programs, and successful experience in communicating with government officials, industry, and the concerned public are also important qualifications.

This position may be filled by Civil Service or Public Health Service appointment. Applicants must have at least a bachelor's degree in a health-related field, plus 3 years of appropriate professional experience in a health-related field. Salary ranges from \$40,832 to \$50,112 depending on qualifications.

**APPLICATION SUBMISSIONS**—Please submit a completed SF-171, available at Federal Job Information Centers and federal agency personnel offices, to reach EPA no later than 29 February 1980, to: **Ginny Hoover, Environmental Protection Agency, Hazard Evaluation Division, Mail Code (TS-769-C), 401 M Street, SW, Washington, D.C. 20460.** Also submit SF-171 to Office of Personnel Management, if this has not been done previously, or if previous submission needs to be updated. (Please do not send résumés.) If you are now or have ever been employed in the Federal Service, you must also submit a performance appraisal and an appraisal of supervisory potential dated within 1 year of the closing date of the announcement. All applications (SF-171's) postmarked after the above date will be returned.

## FACULTY OF NATURAL SCIENCES AND MATHEMATICS

### STOCKTON STATE COLLEGE

Announces faculty openings, starting September 1980 in a dynamic interdisciplinary 50-person department in coastal southern New Jersey.

**Biology:** (animal behavior, one-year temporary position)

**Environmental Studies:** (pollution control)

**Environmental Studies:** (ecology, one-year temporary position)

**Geology:** (petrology)

**Mathematics:** (applied mathematics computers)

**Physics:** (applied physics)

A commitment to excellence in teaching is required. Normal loads are five to six courses per year, including offerings in the general education curriculum and supervision of independent student projects. Base salaries: instructor (Master's degree): \$13,500 and assistant professor (Ph.D.): \$16,500. Closing date: 1 March 1980. *Women and minorities are encouraged to apply.* Send résumé and names of three references to:



**Edward Paul, Dean  
Faculty of Natural Sciences  
and Mathematics  
Box 7440  
Stockton State College  
Pomona, N.J. 08240**

**INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS (ICRISAT), near Hyderabad, India, needs the following personnel:**

**PRINCIPAL PIGEONPEA BREEDER** to be stationed in Hyderabad. As a member of a multidisciplinary team directed to improve pigeonpeas internationally, the appointee will conduct an applied plant breeding program with considerable opportunity for problem-oriented research. He/she will lead a team of scientists and technicians in breeding research closely integrated with scientists in pathology, entomology, physiology, microbiology, biochemistry and nutrition, genetic resources, and agronomy. A major objective is to strengthen international cooperation and the development of national programs. Requirements of the position are Ph.D. in plant breeding or closely related field; at least 10 years of experience in plant breeding, including quantitative aspects, preferably with food legume crops and/or with partially cross-pollinated species; leadership and administrative ability. Experience in the tropics desirable. English is the official language of the institute.

**PRINCIPAL ENTOMOLOGIST (CEREALS)** to be stationed in Hyderabad. ICRISAT requires an experienced economic entomologist with a Ph.D. to lead a team of up to four Ph.D. research entomologists and ancillary staff working on pest problems of sorghum and millet. Current program emphasis is on pest biology and ecology and on host plant resistance, with a view to developing biological and agronomic pest control measures for these low-cash-value crops. The scientist appointed will have considerable input into the work and programs of ICRISAT scientists based in Africa. Research experience in tropical or developing countries in desirable.

**ENTOMOLOGIST (CEREALS).** Two posts at ICRISAT research centers in West Africa. ICRISAT requires entomologists with a Ph.D. and some years of proven research attainment for its cooperative program. Appointees will be expected to conduct pest surveys and loss assessments and formulate programs of work leading to control of pests on sorghum and millet crops. They will work in close association with the national agricultural research programs and have an important input, particularly in host plant resistance studies, to the ICRISAT Center program. Research experience in tropical or developing countries and a working knowledge of French would be an advantage.

Salary commensurate with experience; excellent fringe benefits.

Send résumé by 8 April 1980 to: **Director, ICRISAT, ICRISAT Patancheru P.O., Andhra Pradesh 502 324, India.**

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH ASSOCIATE**—Research assistant professor or research associate professor for position in the Laboratory of Neurovirology in the Department of Neurology. Available immediately. Ph.D. or D.V.M. in virology or microbiology with strong background in electron microscopy, cell tissue culture techniques and/or molecular biology of viruses. Opportunity to work on basic neurobiological problems with other neuroscientists. Competitive salary; excellent facilities. Interested applicants should submit curriculum vitae with bibliography and three letters of references or telephone collect: T. S. Elizan, M.D., Department of Neurology, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029; telephone: 212-650-7070. *An Equal Opportunity Employer.*

**POSTDOCTORAL RESEARCH ASSOCIATE** available immediately for research in regulation of membrane lipid asymmetry in tumorigenic cells or for regulation of very low density lipoprotein secretion, physical properties, and degradation by lipoprotein lipase. Work involves cell culture, biophysical measurements (fluorescence probes, DSC), and lipid modifications. Send résumé and three letters of recommendation to: Dr. F. Schroeder, Department of Pharmacology, University of Missouri, School of Medicine, Columbia, Missouri 65212.

**PROTEIN CHEMIST** needed as research associate for project on influenza virus neuraminidase vaccine. Salary negotiable. Please send curriculum vitae to: Dr. E. D. Kilbourne, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029. *An Equal Opportunity Employer.*

Northwestern University seeks a **PSYCHOLOGIST** with a strong background in formal mathematics. Applications are welcome from highly qualified individuals in one or more of the following areas: decision processes broadly conceived, measurement and scaling, and cognition including social cognition. All applicants will be expected to have a strong mathematical background, teaching experience, and relevant publications. The successful applicant will be appointed as an assistant or associate professor of psychology as of 1 September 1980. Curriculum vitae, names of at least three references, relevant reprints, and a summary of research interests and plans should be sent to: Professor Peter W. Frey, Department of Psychology, Northwestern University, Evanston, Ill. 60201. Closing date for applications: 1 April 1980. *Northwestern University, 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.*

**RESEARCH ASSISTANT**, for work on human lung cancer, using cell culture and nude, athymic mice. B.A. (M.S. preferred) in biological science and experience in cell culture required. Responsible person to work in association with other actively involved members of interdisciplinary research team. Available immediately. Rural New England Medical Center. *Equal Opportunity Employer. Box 27, SCIENCE.*

**RESEARCH ASSOCIATE**—A postdoctoral position starting 1 August 1980 or thereafter is open for a biochemist, molecular biologist, or microbiologist for work on chromosomal proteins of yeasts. Please send curriculum vitae and have references sent to: Irvin Isenberg, Department of Biochemistry and Biophysics, Oregon State University, Corvallis, Oregon 97331. *An Affirmative Action/Equal Opportunity Employer in compliance with Section 504 of the Rehabilitation Act of 1973.*

**ARECIBO OBSERVATORY: SCIENTIFIC STAFF POSITIONS** at the level of research associate are available at the National Astronomy and Ionosphere Center's Arecibo Observatory for work in atmospheric science. Candidates are particularly sought with experience relevant to the following areas of research: radar study of dynamical processes in the stratosphere and mesosphere, active experimentation in the ionospheric plasma utilizing radio waves (ionospheric heating), study by means of incoherent scatter radar of the dynamics of the thermosphere and ionosphere.

Curriculum vitae, publications lists, and the names and addresses of three references should be sent to: Dr. H. D. Craft, Jr., Director, Arecibo Observatory, P.O. Box 995, Arecibo, Puerto Rico 00612. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**RESEARCH ASSISTANT PROFESSOR** position (Ph.D.) available immediately for 3 years with research group at Vanderbilt to study transmembrane coupling of mitogenic peptides (EGF). Experience with isolation and immunocytochemical localization of microfilaments or cyclic nucleotides and membrane phosphorylation desired. Salary range: \$12,500 to \$20,000, depending upon experience. Send curriculum vitae and two references to: Lloyd E. King, Jr., M.D., Ph.D., Dermatology Research, Vanderbilt University School of Medicine, Nashville, Tenn. 37232.

**RESEARCH ASSOCIATE.** Postdoctoral position available 1 July 1980 for 3 years. Physiologist/pharmacologist for studies in catecholamines and hypertension. Background in HPLC, radioimmunoassay, and peptides essential; starting salary: \$14,000. Send curriculum vitae to:

Edward D. Miller Jr., M.D.  
Department of Anesthesiology  
Box 238

University of Virginia School of Medicine  
Charlottesville, Va. 22908

*An Equal Opportunity/Affirmative Action Employer*

**RESEARCH ASSOCIATE/POSTDOCTORAL POSITION** at Harvard Medical School and Children's Hospital Medical Center. The position involves isolating, purifying, and characterizing a biochemical which inhibits tumor neovascularization and growth. Experience in biochemistry and chemistry desirable. Please send inquiries and curriculum vitae to: Dr. Robert Langer, Department of Surgical Research, CHILDREN'S HOSPITAL MEDICAL CENTER, 300 Longwood Avenue, Boston, Mass. 02115. *An Affirmative Action/Equal Opportunity Employer.*

**RESEARCH ASSOCIATE**—Position available April 1980 in developmental neuroendocrinology and neuropharmacology. Ph.D. and a background in reproductive endocrinology and neuroendocrinology, at least 3 years of postdoctoral experience in a neuroendocrinology laboratory training and/or experience in radioimmunoassays, assays of specific neurotransmitters, and sterotaxic surgery. Send curriculum vitae and two letters of recommendation to: J. Stephen Kizer, M.D., Biological Sciences Research Center, School of Medicine, University of North Carolina, Chapel Hill, North Carolina 27514. *An Equal Opportunity/Affirmative Action Employer.*

**SEDIMENTARY GEOLOGIST.** We seek applicants for a tenure-track assistant professor (\$17,000 to \$19,900 per academic year) commencing fall 1980 in the broad area of sediments, stratigraphy, and/or sedimentary petrology. A Ph.D. will be required, as is a high level of competence in research and teaching. Send résumé, statement of research and teaching interests, and the names of three referees by 1 March 1980 to: Jere H. Lipps, Chair, Department of Geology, University of California, Davis, California 95616. *An Equal Opportunity/Affirmative Action Employer.*

The Human Affairs Research Centers (HARC) of the Battelle Memorial Institute seeks a **SOCIAL SCIENTIST** to develop and subsequently assume management of HARC's Washington, D.C., operation. One position is open immediately for an individual who will be responsible, working with the director of HARC, for the identification, staffing, and subsequent development of new R & D program areas. In addition to exercising line responsibility for the research staff and programs which are developed in the Washington, D.C., operation, there is a matrix management responsibility for research staff members attached to study centers in Seattle but physically located in Washington, D.C. Applicants should have national visibility based on scholarly and professional achievement in social/behavioral science. Applicants should possess a Ph.D. degree in a social science discipline or a journeyman degree in a closely allied professional field. Extensive experience in the design and execution of large-scale research projects and a demonstrated ability to lead scientific personnel in a research environment are essential. Experience in contract research, federal government research programs, and social science research administration is desirable. Salary is negotiable depending on qualifications and experience. *Battelle is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and a brief letter outlining research interests to: Director, Battelle Human Affairs Research Centers, P.O. Box C-5395, Seattle, Wash. 98105.

## POSITIONS OPEN

**RESEARCH ASSOCIATE**—Immunologist, knowledgeable in methodologies of cellular and humoral immunity to work on existing projects dealing with experimental bone marrow transplantation, and both active and adoptive immunotherapy of cancer. Opportunity to develop own research program. Postdoctoral experience necessary. Salary: \$20,000 to \$24,000. Send curriculum vitae, selected reprints, and three references to: Mortimer M. Bortin, M.D., Winter Research Laboratory, Mount Sinai Medical Center, 950 North 12 Street, Milwaukee, Wis. 53233.

**RESEARCH ASSOCIATE** position available in the study of neuropharmacological and behavioral aspects of alcoholism. Doctorates from any of the neurosciences with a strong interest in experimental models of alcoholism are invited to send curriculum vitae and names of references to: Dr. R. Thomas Gentry, The Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.

**RESEARCH FELLOW.** Ph.D. in biochemistry with interest in enzymology of lipids to work on glycerolipids and prostaglandins in smooth muscle. Send résumé to: Professor A. Latif, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30912. *An Affirmative Action/Equal Opportunity Employer.*

Bryn Mawr College seeks a **SENIOR FACULTY MEMBER** specializing in cell and molecular biology, developmental biology, or neurobiology to teach and supervise research in its Ph.D., M.A., and A.B. programs in biology. The appointee should have a record of publication and outside funding that shows sustained research productivity. Interested persons are urged to write or telephone: Dr. Robert L. Conner, Department of Biology, Bryn Mawr College, Bryn Mawr, Pa. 19010; telephone: 215-645-5091. *Bryn Mawr College is an Affirmative Action/Equal Opportunity Employer.*

## SYMPOSIUM

### PLANT BIOLOGY SYMPOSIUM

"Biological Responses of Higher Plants to Environmental Stresses" to be held 26 to 28 March 1980, at the University of Minnesota, St. Paul.

Topics include: drought, heat, chilling, freezing, and mineral stresses; viral, bacterial, fungal and insect agents.

Send information requests to:

Plant Biology Symposium  
Department of Agronomy and Plant Genetics  
University of Minnesota  
St. Paul, Minnesota 55108

## SUMMER RESEARCH

**FIELD BIOLOGY.** Stipends of \$1700 are available for postdoctoral summer research at the Mountain Lake Biological Station of the University of Virginia. Proposals for studies on a wide variety of terrestrial and fresh water environments at Mountain Lake will be considered. Deadline: 1 April 1980. Write to: James L. Riopel, Director, Mountain Lake Biological Station, Gilmer Hall, University of Virginia, Charlottesville, Va. 22901. *Equal Opportunity/Affirmative Action Employer.*

## ASSISTANTSHIPS

### GRADUATE TEACHING ASSISTANTSHIPS IN BIOLOGY

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

## Postdoctoral Investigator

### GEOCHEMIST

A postdoctoral position is open early in 1980 for a Geochemist interested in the use of helium and other noble gas isotopes in continental and marine hydrothermal and volcanic systems. Direct experience not a prerequisite.

Send resume, reprints and transcripts of graduate and undergraduate work to Personnel Manager.

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

Woods Hole, MA 02543



An Equal Opportunity Employer M/F

## HEALTH PHYSICIST

Argonne National Laboratory has an exceptional opportunity for a professional with an MS, PhD, or equivalent in Health Physics or related discipline . . . and a strong interest in assuming both operational and applied research responsibilities in the health physics field. Ideal candidate will also be experienced in one or more of the following areas: system safety analysis, radiation instrument design and evaluation, radiochemistry, personal monitoring, measurement of pulsed radiation fields, environmental assessment, shielding design, nuclear engineering, emergency planning, and neutron energy spectrometry.

As a member of our Health Physics section, your primary responsibility will be to provide our personnel with the information and services needed to protect against or minimize exposure to radiation. Diversified duties will include directing and implementing day-to-day operational radiation protection program; performing safety analysis reviews of new or modified equipment; consulting in the design phase of new facilities; coordinating training programs; and participating in applied health physics research projects.

We will provide a fully commensurate compensation package and ample opportunity for professional recognition and career growth. For prompt consideration, please submit resume and salary history in confidence to: **Mr. Walter McFall, Box 4674, Argonne National Laboratory, 9700 S. Cass Avenue, Argonne, IL 60439**



**ARGONNE NATIONAL LABORATORY**

U of C-AUA-USDOE

An Affirmative Action/Equal Opportunity Employer. Women, Minorities, the Handicapped and Veterans Urged to Apply.

## PHARMACIST

### Scientific Information / Regulatory Affairs

The Pharmaceutical Research Department of Hoechst AG, one of the world's largest pharmaceutical manufacturers, seeks a Pharmacist for scientific information and regulatory affairs.

Duties include the compilation of pre-clinical dossiers on new research products for clinical trials and marketing applications, worldwide. Contact with scientific personnel at all levels in our worldwide organization will be involved.

The company seeks a Pharmacist or Life Sciences Graduate with some knowledge of German and experience in regulatory work. First interviews for this Frankfurt, West Germany-based position will be held in our offices in Somerville, New Jersey. Send curriculum vitae with current earnings to Mr. Richard Groben, Hoechst-Roussel Pharmaceuticals, Inc., Route 202-206 North, Somerville, New Jersey 08876.



**Hoechst AG**

An Affirmative Action Corporation M/F/H



## Carbohydrate Chemist

The General Foods Technical Center located in Tarrytown, New York, has an opening for a Carbohydrate Chemist with a PhD in Organic Chemistry or related field and 2-3 years industrial or academic experience, preferably related to low molecular weight carbohydrates. Strong instrumental and computer background helpful.

Successful candidate will work well both independently and as a member of a research team with opportunity to contribute to basic knowledge building as well as to interface with product application.

General Foods is a leader in the food industry. Our compensation and benefits packages are outstanding. Please send resume and salary requirements in confidence to:

**PERSONNEL ASSOCIATE (CAR)**

**GENERAL FOODS CORPORATION**

**TECHNICAL CENTER**  
555 South Broadway  
Tarrytown, N.Y. 10591

An Equal Opportunity Employer M/F/Hc.

## ASSISTANTSHIPS

**ARECIBO OBSERVATORY: A VISITING GRADUATE RESEARCH ASSISTANTSHIP** is available for a student at the National Astronomy and Ionosphere Center's Arecibo Observatory who is interested in carrying out research utilizing radar techniques for the study of dynamical processes in the stratosphere and mesosphere. The student will work with Dr. R. F. Woodman of the observatory's staff while, if it is appropriate, maintaining close contact with the relevant faculty member at his or her home institution. The appointment will be for up to 1 year. One round-trip air fare and moving expenses will be provided for the student and immediate family.

A letter of application describing experience and interests, a transcript of grades, and letters of support from at least the chairman of the student's graduate committee or equivalent should be sent by 31 March 1980 to: Dr. H. D. Craft, Jr., Director, Arecibo Observatory, P.O. Box 995, Arecibo, Puerto Rico 00612. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

## TRAINING PROGRAMS

### POSTDOCTORAL TRAINEESHIPS AVAILABLE

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

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

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

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

**PRE- AND POSTDOCTORAL TRAINEESHIPS AND FELLOWSHIPS** in an interdepartmental program in **EXPERIMENTAL PARASITOLOGY** are available, as of 1 September 1980, at the University of Massachusetts/Amherst. Training is provided in biological, immunological, physiological, and biochemical aspects of zooparasites. Write to: Dr. B. M. Honigberg, Parasitology Program, Department of Zoology, University of Massachusetts, Amherst, Mass. 01003. *An Affirmative Action/Equal Opportunity Employer.*

## GRADUATE STUDY

### GRADUATE STUDY Predoctoral Opportunities in the Basic Medical Sciences

Loyola University Stritch School of Medicine offers graduate training leading to the Ph.D. degree in each of the following disciplines: anatomy, biochemistry, microbiology, pharmacology, and physiology. The medical campus, located in the western Chicago suburb of Maywood, is easily accessible by major interstate routes. Modern, well-equipped facilities together with a low student to faculty ratio provide optimum conditions for qualified students to pursue a graduate education in the medical sciences. The diversity of research interests offers a wide range of opportunities for intra- and interdepartmental studies. Tuition remission and stipend are available for successful applicants. Address requests for application forms to:

Director of Graduate Program  
(for appropriate department)  
Loyola University  
Stritch School of Medicine  
2160 South First Avenue  
Maywood, Illinois 60153

*An Equal Opportunity/Affirmative Action Employer*

## FELLOWSHIPS

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

Two-year postdoctoral fellowships starting in 1980 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 include biochemical, physiological, pathological, and epidemiological studies on 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.

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

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

Myron Yanoff, M.D.  
Director, Scheie Eye Institute  
Chairman, Department of Ophthalmology  
University of Pennsylvania-  
Presbyterian Medical Center  
51 North 39 Street  
Philadelphia, Pa. 19104

**RESEARCH POSITION IN DRUG METABOLISM** for a recent postdoctorate with background in chemistry, biochemistry, or biochemical pharmacology. Studies seek to characterize the reductive metabolism of the 5-nitroimidazoles in order to understand their antiparasitic, bacteriocidal, and mutagenic activities. Salary based on experience. Send résumé and names of two references to: Dr. Peter Goldman, Department of Pharmacology, Harvard Medical School, Beth Israel Hospital, Boston, Mass. 02215. *An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship available 1 May 1980 in the Research Laboratory for Calcium Metabolism, Departments of Orthopedic Surgery and Medicine, University of Zurich, to participate in research on parathyroid hormone, calcitonin, and D-vitamins. Send résumés and three references to: Jan A. Fischer, M.D., Orthopädische Universitätsklinik Balgrist, Forchstrasse 340, 8008 Zurich, Switzerland.

**POSTDOCTORAL RESEARCH FELLOWSHIP** applications are being accepted for a limited number of investigations in neuroscience with potential application to CNS regeneration at any accredited institution (worldwide). Applications must be received by 1 April. Stipends: \$12,000 to \$15,000. For information and application forms, contact: Research Director, National Spinal Cord Injury Foundation Research Division, Suite L-111, 4440 Northwest 19 Street, Lauderdale, Florida 33313. Telephone: 305-735-9050.

### FELLOWSHIPS IN ENVIRONMENTAL SCIENCE AND ENGINEERING

Applications are invited for fellowships for study toward the degree of doctor of environmental science and engineering (D.Env.). Applicants should have completed a master's degree in one of the natural sciences, engineering, or public health and possess an interest in the solution of environmental problems related to resource management and energy production. The program includes completion of breadth courses in the natural sciences, social sciences and engineering, and multidisciplinary applied research on current environmental problems. For further information, send inquiries to: Office of Environmental Science and Engineering, University of California, Los Angeles, California 90024.

## FELLOWSHIPS

### PREDOCTORAL FELLOWSHIPS— MICROBIOLOGY AND PARASITOLOGY

Predoctoral fellowships are presently available for graduate studies in infectious diseases and basic microbiological mechanisms. Applicants should have a strong background in biology, genetics, and chemistry. Major faculty research interests: bacterial genetics; membrane biochemistry; biochemical basis of pathogenicity; synthesis and modes of action of interferon; studies on trypanosomal and malarial parasites. For further information write to either: Dr. Joel Oppenheim, Graduate Advisor of Microbiology, or Dr. Jerome Vanderberg, Graduate Advisor of Parasitology, New York University Medical Center, 550 First Avenue, New York, N.Y. 10016.

**POSTDOCTORAL FELLOWSHIP** to work on characterization of the nuclear and cytoplasmic matrices and their interactions with microtubules in fungi. Ability to work independently and experience in cell fractionation or electron microscopy essential. Available immediately. Salary: approximately \$12,500. Dr. I. B. Heath, Biology Department, York University, Toronto, Ontario, Canada M3J 1P3. Telephone: 416-667-3748.

**POSTDOCTORAL FELLOWSHIP.** Immediate openings for participation in studies of diabetes mellitus. Opportunity to join a program featuring isolation of islet and endothelial cells for study of their membrane biochemistry and enzymology in normal and diabetic animals. Please send curriculum vitae and references to: Dr. Mark Bitensky, Yale University School of Medicine, Department of Pathology, 333 Cedar Street, New Haven, Conn. 06510. Competitive salary. *Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIPS.** Immediate openings. Comparison of light and hormone regulated cyclic nucleotide systems. Ongoing program with new approaches to purification of cyclic nucleotide processing enzymes and their reconstitution into active complexes which display light or hormone dependence. Please send curriculum vitae and references to: Dr. M. Bitensky, Yale University School of Medicine, Pathology department, 333 Cedar Street, New Haven, Conn. 06510. *Equal Opportunity Employer.*

### POSTDOCTORAL POSITION

Available for research on preimplantation mammalian embryos. Studies are on micromanipulation of the embryo as well as on biochemistry of development. Apply with curriculum vitae to: R. L. Brinster, Laboratory of Reproductive Physiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia Pennsylvania 19104.

**POSTDOCTORAL RESEARCH FELLOWSHIP IN EXPERIMENTAL HEMATOLOGY.** Position available for M.D. or Ph.D. under National Research Service Award to study problems of: (i) hemostasis, (ii) tumor immunology, or (iii) control of hemoglobin synthesis. Send curriculum vitae to: Dr. R.F. Rieder, State University of New York-Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, New York 11203. *An Affirmative Action/Equal Opportunity Employer.*

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## NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Opening Date: February 4, 1980

Closing Date: February 19, 1980

(All applications must be postmarked by closing date)

# DIRECTOR, MICROBIOLOGY AND INFECTIOUS DISEASES PROGRAM

The National Institute of Allergy and Infectious Diseases expects to appoint a permanent Director of its Microbiology and Infectious Diseases Program. This Director is responsible for the development and operation of extramural programs (grants and contracts) in infectious diseases and related disciplinary areas of basic science.

This is a Civil Service position in the Senior Executive Service with salary from \$47,889 to \$50,112 per year depending on qualifications. (Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service). The SES individual selected, if not presently in the Senior Executive Service must serve a one-year probationary period. Mandatory professional/technical qualifications are: a Doctor of Medicine together with research experience in an area related to infectious diseases. In addition, candidates must meet the following mandatory managerial/executive qualifications: experience necessary to select, manage, and motivate a staff and carry out organizational goals, including the ability to implement EEO objectives, and administrative leadership experience in the

management and leadership of a science program. Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the following factors: scientific reputation/peer recognition, research experience and leadership, honors and awards, training and education, and the extent to which they exceed the level of mandatory managerial/executive qualifications specified above.

Applications (Personal Statement of Qualification—SF-171) are to be sent to the Chairperson, Search Committee, National Institute of Allergy and Infectious Diseases, NATIONAL INSTITUTES OF HEALTH, Building 31, Room 7A-33, 9000 Rockville Pike, Bethesda, MD 20205. A current curriculum vitae, bibliography and performance information must accompany all applications.

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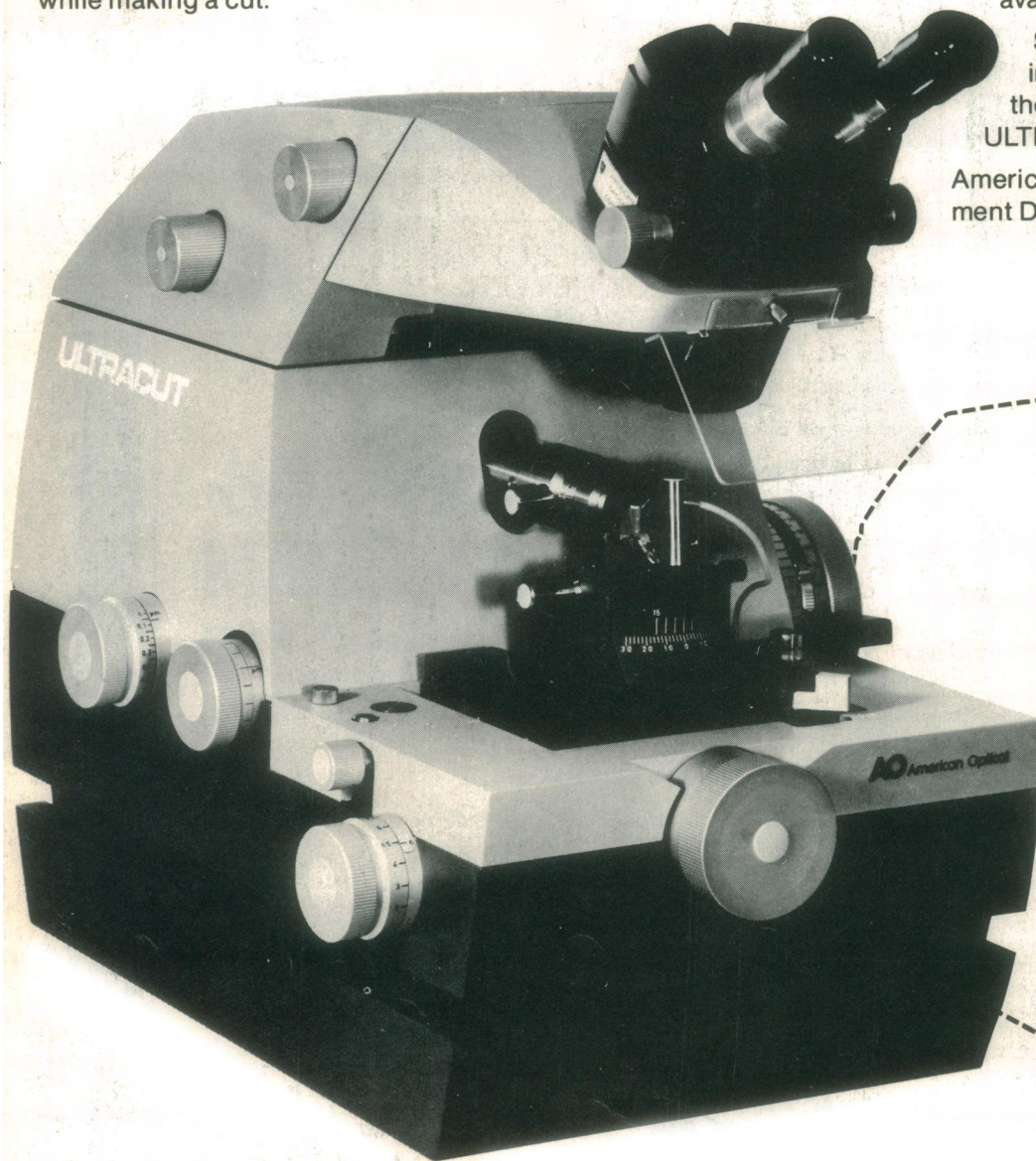
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