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## Announcing the New AAAS Science Cover Calendar for 1980

On July 3, 1880, the first issue of *Science* magazine rolled off the presses.

AAAS is proud to commemorate this 100th anniversary with the publication of our annual 12" x 36" wall calendar of *Science* covers.

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Calendars will be shipped in November. Please allow 4-6 weeks for delivery. AAAS Calendar, 1515 Massachusetts Avenue, NW, Washington, DC 20005.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising closing for a particular Friday issue is Wednesday, 3 1/2 weeks before. Advertising is accepted only in writing; no abbreviations. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, or handicap.

**POSITIONS WANTED:** 40¢ per word, plus \$4 for use of box number, per insertion, \$10 minimum, per insertion. Prepayment required. This rate is available only to individuals seeking jobs.

**DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKET PLACE, and so forth):** \$6.40 per millimeter, \$160 minimum, per insertion (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing information required for all other advertising.

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

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Effective 1 January 1980, the display rate for SCIENCE will be \$180 per 25 millimeters, minimum, per insertion.

## POSITIONS WANTED

**Anatomist:** recent Ph.D. (1979) in anatomy would like faculty position in a college or university, preferably in the southern United States. Prefers to teach human anatomy and/or histology to biology majors or pre-professional students (nursing, medicine, and dentistry). Available 1 August 1980. Box 320, SCIENCE. X

**Bioengineer.** Ph.D. 1974, M.S.M.E. Diversified research experience; numerous publications. Seeks challenging interdisciplinary position. Box 321, SCIENCE. 11/23, 30, 12/7

**Chemist/Toxicologist.** Ph.D. Extensive experience in toxicological studies, drug-metabolism, pharmacokinetics, organic synthesis including radiolabeled compounds, analysis of biological samples with modern instruments, and so forth. Seeks staff position in industry/government. Box 322, SCIENCE. X

**Editorial Services:** well-qualified analytical chemist/biochemist with M.S. degree and several years of technical editing experience will help you write clear, concise, readable, and grammatically correct manuscripts for publication, instruction manuals, and advertising. By mail or travel all right. E. Lieber, Caller Box GG, Mill Valley, California 94941, or telephone 415-388-3250. X

**Mathematical Biologist/Heath Physicist.** Ph.D., 26 years of experience in health physics at Oak Ridge National Laboratory. Seeks consulting job in kinetics problems—pharmacokinetics-metabolic models, and so forth. Telephone: 615-574-6261 during the day, or 615-482-4532 at night. Or write: S. R. Bernard, 109 Packer Road, Oak Ridge, Tennessee 37830. 11/23, 30, 12/7, 14

## POSITIONS WANTED

**Experimental Psychologist.** Ph.D. 1973; 11 years in teaching; desires career change. Seeking postdoctoral or other arrangement providing research training and experience. Any area of psychological research considered. Some computer experience. Telephone (collect): 404-422-1159, or write: Box 323, SCIENCE. X

**Marine Biologist, Biochemist, Pharmacologist, Toxicologist;** Ph.D., 25 years of teaching, research, and administrative experience. Publication, books. Seeking position in teaching, research, and administration. Temporary positions considered. Box 324, SCIENCE. X

**Nutritionist/Physiologist.** Ph.D. Major interests are in diet-endocrine interactions in carbohydrate, lipid, and energy metabolism during postnatal development of animal models of obesity and diabetes. Publications. Grants. Seeks industrial research position in the New Jersey region. Box 325, SCIENCE. 11/23, 30, 12/7

**Protein Chemist/Biochemist.** Ph.D. 1968. Specialized in clotting, kinine, protein structure-function/modification; experience in isolation, purification, chemical analysis by biochemical techniques, RIA; developed diagnostic reagents. Will relocate. Box 326, SCIENCE. X

**Research Psychologist** (experimental, 1970), seeking research position in a university-affiliated psychiatric hospital. Publications and ongoing NIMH funding related to aging. Box 327, SCIENCE. X

## POSITIONS OPEN

### ANIMAL CELL BIOLOGIST

**ASSISTANT PROFESSOR.** Ph.D. Preference to applicants with postdoctoral experience who combine biophysical, biochemical, or immunological techniques with electron microscopy. Undergraduate and graduate teaching expected. Send résumé, reprints, and three reference letters to: Cell Biology Search Committee, Zoology Department, Arizona State University, Tempe, Arizona 85281. Deadline: 15 January 1980.

*Affirmative Action/Equal Opportunity Employer*

**ASSISTANT FACULTY FELLOW.** To perform research on ongoing projects in the biochemistry of blood coagulation and fibrinolytic proteins. At least 3 years of experience at the post-Ph.D. level in studying the physical chemistry of proteins is required. Salary: \$20,000 per annum. Send curriculum vitae, publications, and names of three references to: Dean, College of Science, University of Notre Dame, Notre Dame, Indiana 46556. Notre Dame is an Equal Opportunity Employer.

### ASSISTANT PROFESSOR POSITION GEORGIA TECH

The School of Physics of Georgia Institute of Technology expects to make an appointment for the fall quarter 1980 at the assistant professor level in the area of experimental laser spectroscopy. This is a tenure-track position and a Ph.D. in physics is required. The school is seeking applicants who are committed to undergraduate and graduate teaching, and can initiate and direct an active research program. Applicants should be able to complement ongoing experimental programs in laser Raman and Brillouin spectroscopy or solid state surface studies or a theoretical program in high resolution atomic-molecular spectroscopy. Please send curriculum vitae and the names of at least three professional references to: Professor D. C. O'Shea, School of Physics, Georgia Institute of Technology, Atlanta, Georgia 30332. Women and members of minority groups are encouraged to apply.

### ASSISTANT PROFESSOR

The Animal Science Department, Iowa State University, seeks an individual with a Ph.D. degree in reproductive physiology for a position in teaching and research. Teaching responsibilities include courses in physiology of reproduction in farm animals. Research includes physiological and biochemical aspects of problems dealing with reproductive efficiency in farm animals. Applications received by: Dr. S. A. Ewing, Head, Animal Science Department, 101 Kildee Hall, Iowa State University, Ames, Iowa 50011.

*Affirmative Action/Equal Opportunity Employer*

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** The Department of Chemistry, University of Florida, invites application for a tenure-track appointment of a bio-organic chemist for September 1980. Candidates should have a recent Ph.D. degree and preferably postdoctoral experience. The successful candidate will demonstrate both a potential to establish a creative research program and a keen interest in teaching organic and bio-organic chemistry. Submit curriculum vitae, transcripts of academic records, reprints, an explicit but concise account of research problems which will be developed initially, and three letters of recommendation to: Dr. John A. Zoltewicz, Department of Chemistry, University of Florida, Gainesville, Florida 32611, by 15 January 1980. An Equal Opportunity/Affirmative Action Employer.

**ASSISTANT/ASSOCIATE PROFESSOR.** Department of Osteopathic Sciences. Candidate must possess Ph.D. with background in biomechanics. Will teach and perform research in new aspects of biologic mechanics as related to disease. Send curriculum vitae to: Charles Steiner, D.O., Chairperson, Department of Osteopathic Sciences, College of Medicine and Dentistry of New Jersey, New Jersey School of Osteopathic Medicine, P.O. Box 55, Piscataway, N.J. 08854. Equal Opportunity/Affirmative Action Employer, M/F.

**ASSISTANT PROFESSOR,** broadly trained Ph.D. with strong teaching interests and background, for human anatomy, human physiology, and so forth, in small college; beginning 21 January 1980 or 1 September 1980. Salary based on credentials and experience. Send curriculum vitae, complete transcripts, and three letters of reference to: Dr. Betty F. Thacker, Chairperson, Department of Biology, Wheeling College, Wheeling, W. Va. 26003. Telephone: 304-243-2229. An Equal Opportunity/Affirmative Action Employer.

The Division of Environmental Toxicology in the Department of Environmental Health Sciences, The Johns Hopkins University, School of Hygiene and Public Health, invites applications for a new faculty position at the ASSISTANT PROFESSOR level. This program deals with the study of the basic mechanisms of the effects of environmental chemicals on biological systems. The position is open to environmental scientists, biochemists, or biologists interested in the biochemistry of the lung and inhalation toxicology. Recent Ph.D.'s with exceptional qualifications and promise for research and teaching at the graduate and postdoctoral levels are required. Applications should be sent to: Dr. Alan M. Goldberg, The Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, Maryland 21205.

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

### ASSISTANT PROFESSOR IN ASTRONOMY

The Department of Astronomy of The Ohio State University expects to have an assistant professor position open beginning autumn 1980.

Candidates should have observational experience with moderate to large aperture telescopes preferably in conjunction with programs directed toward spectroscopic studies of galaxies and quasars. Particular preference will be given to those having experience with computerized data gathering and reduction systems.

Candidates should include curriculum vitae and bibliography in their applications and arrange to have three letters of recommendation sent to: E. R. Capriotti, Chairman of the Astronomy Department, The Ohio State University, 5042 Smith Laboratory, Columbus, Ohio 43210 by 15 February 1980. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

**University of Hawaii at Hilo—Hilo College.** ASSISTANT PROFESSOR OF BIOLOGY. Tenurable. Starting date: September 1980. Minimum qualifications: Ph.D. in biology or zoology; academic training in marine biology, marine ecology, general ecology, and ichthyology; college teaching experience. Duties: teach undergraduate courses in marine biology, marine ecology, general ecology, and ichthyology. Salary: dependent on qualifications and experience. Applicants should send a letter of application, curriculum vitae, and have three letters of reference sent to: Professor Don E. Hemmes, Chairperson, Biology Discipline, Hilo College, University of Hawaii at Hilo, P.O. Box 1357, Hilo, Hawaii 96720. Telephone: 808-961-9363. Closing date for receipt of applications and letters of reference: 31 December 1979. An Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### ASSISTANT PROFESSOR: BIOCHEMISTRY

A faculty position at the rank of assistant professor will become available 1 July 1980. The primary requirement is promise in teaching and research. Applications will be accepted irrespective of the specific area of biochemical research.

Applicants should submit curriculum vitae with a list of publications, a brief description of their proposed research program, and the names of three references to: **Dr. Robert L. Hill, Chairman, Department of Biochemistry, Duke University Medical Center, Durham, North Carolina 27710.**

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

### ASSISTANT PROFESSOR, BOTANY

The Department of Biology, Vassar College, invites applications for a tenure-track position beginning in 1980-1981. Expertise in organismal and evolutionary botany. Teaching areas will include intermediate and advanced undergraduate courses in botanical sciences as well as participation in the departmental introductory course. Applicant will be expected to conduct research in the botanical sciences. Departmental resources include greenhouses, herbarium, and 250-acre ecological preserve with on-site field laboratory. Send letter of application, résumé, and three letters to reference to: **Dr. Patricia Johnson, Chairman, Box 377, Department of Biology, Vassar College, Poughkeepsie, New York 12601.**

*Vassar College is an Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR OF DERMATOLOGY.** Board-certified. Teaching experience and an interest in clinical or laboratory research. Replies to: **R. L. Dobson, M.D., Department of Dermatology, Medical University of South Carolina, Charleston, S.C. 29403.** The Medical University of South Carolina is an Equal Opportunity Employer. Qualified minority and women candidates are encouraged to apply.

### ASSISTANT PROFESSOR—IMMUNOLOGY

The T. H. Morgan School of Biological Sciences of the University of Kentucky invites applications from qualified persons in the area of immunology. Special consideration will be given to individuals in molecular immunology-immunogenetics. Qualifications: Ph.D., postdoctoral experience, and a strong commitment to development of an active research program. The applicants should be prepared to take an active role in teaching at the undergraduate and graduate level. Send curriculum vitae, a brief description of teaching and research interests, and the names of at least three references to: **Search Committee, Director's Office, School of Biological Sciences, University of Kentucky, Lexington, Kentucky 40506.** Deadline for receipt of applications is 21 December 1979.

*An Equal Opportunity/Affirmative Action Employer*

**ASSISTANT PROFESSOR OF PHARMACOLOGY.** Applications are being solicited for a 12-month, tenure-track position at the assistant professor level in pharmacology, available July 1980. The successful applicant will have an earned doctorate in pharmacology and have the potential to develop an independent research program. A major portion of time will be spent teaching pharmacology to second-year medical students. Experience in educational activities is therefore desirable. *Indiana University is an Equal Opportunity/Affirmative Action Employer.* Submit curriculum vitae, a résumé of research interest, and three letters of reference to: **Dr. Alvin S. Levine, Holmstedt Hall 135, Terre Haute Center for Medical Education, Terre Haute, Ind. 47809.**

**ASSISTANT RESEARCH BIOCHEMIST** for research on mouse mammary tumor virus. Expertise with restriction endonuclease mapping, nucleic acid hybridization, RNA sequencing and RNA tumor viruses required. Knowledge of protein chemistry required. Salary from \$19,800 to \$23,000, depending on experience. Ph.D. required. Send curriculum vitae and three letters of recommendation to: **Dr. George Lundberg, Department of Pathology, School of Medicine, University of California, Davis, Calif. 95616** by 15 December 1979. *The University of California is an Equal Opportunity Employer.*

**ASSISTANT RESEARCH SCIENTIST—A Ph.D. in biochemistry with related experience is required to work on hormonal regulation of secretion.** Contact: **M. Kerans, NEW YORK UNIVERSITY MEDICAL CENTER, 560 First Avenue, New York, N.Y. 10016; telephone: 212-679-3200, extension 2647.** *An Equal Opportunity/Affirmative Action Employer, M.F.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR**—Applications are invited from persons with or near a Ph.D. in **PHYSIOLOGICAL PSYCHOLOGY** or a related area for a tenure-track position in the Department of Psychology at Montana State University, which will begin in September 1980. Candidates for the position will be expected to initiate a vigorous research program in human physiological psychology. Opportunities are available to conduct research in a moderately well-equipped biofeedback laboratory. The successful candidate will be expected to teach courses (two per quarter) in physiological psychology, general psychology, and in one or more of the following areas: tests and measurements, abnormal or developmental. Montana State University is located in the Rocky Mountains north of Yellowstone Park and is noted for its excellent outdoor recreational opportunities. Interested candidates should send curriculum vitae, copies of papers, and have three letters of recommendation sent to:

**Dr. Robert Morasky  
Search Committee  
Department of Psychology  
Montana State University  
Bozeman, Montana 59717**

Deadline for application is 15 January 1980. *Montana State University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women, minorities, and handicapped persons.*

The Chemistry Department of the University of Maryland Baltimore County is recruiting for an **ASSOCIATE OR FULL PROFESSOR** in the area of toxicological chemistry. Applicants should send curriculum vitae and three letters of reference to: **Search Committee, Chemistry Department, University of Maryland Baltimore County, 5401 Wilkens Avenue, Catonsville, Md. 21228.** *An Affirmative Action/Equal Opportunity Employer.*

### ATMOSPHERIC PHYSICIST POSITION RESEARCH ASSOCIATE UNIVERSITY OF COLORADO AT BOULDER

Invites application for a research position in the Laboratory for Atmospheric and Space Physics. Responsibilities will be to provide leadership in a research program in which remote sensing data will be used to investigate the physical, chemical, and dynamical properties of the upper atmosphere. The preferred candidate will have a Ph.D. and experience in computer modeling of the dynamics of planetary atmospheres. Salary to be commensurate with experience. Applicants should send curriculum vitae and a description of research interests to: **Professor Gary E. Thomas, Laboratory for Atmospheric and Space Physics, Campus Box 392, University of Colorado, Boulder, Colo. 80309.**

Application deadline: September 1980. *University of Colorado, Boulder, is an Affirmative Action/Equal Opportunity Employer.*

### THE LABORATORY FOR ATMOSPHERIC AND SPACE PHYSICS (LASP) at the UNIVERSITY OF COLORADO

Invites applications for **POSTDOCTORAL RESEARCH POSITIONS** in the areas of atmospheric physics, astronomy, and astrophysics. Positions are continually open in the following areas: upper atmosphere of earth and planets including the disciplines of photochemistry, aeronomy, dynamics, spectroscopy, and radiative transfer; astronomy, including theory and observational work from both space platforms and ground-based telescopes; and the astrophysics of stellar atmospheres and the interstellar medium.

Research in the above areas is currently supported by LASP experiments carried on rockets, balloons, satellites, and planetary probes. LASP experiments are on board the Voyager mission to the outer solar system and the PIONEER VENUS orbiting mission.

LASP scientists are preparing an ultraviolet spectrometer for the GALILEO Jupiter Orbiter, and an array of remote sensing atmospheric experiments for the earth-orbiting SOLAR MESOSPHERE EXPLORER Mission. In addition to their use in solar and planetary observations, advanced detection systems are being developed for use in stellar and interstellar observing programs from both ground-based and space observatories. Applications are reviewed as vacancies occur. Applications and curriculum vitae should be addressed to: **Professors Gary E. Thomas or Theodore P. Snow, Jr., Laboratory for Atmospheric and Space Physics, University of Colorado, Campus Box 392, Boulder, Colo. 80309.**

*University of Colorado, Boulder, is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

The Massachusetts Institute of Technology (MIT) Writing Program hopes to fill a position in **TECHNICAL WRITING** at the rank of **ASSISTANT PROFESSOR** beginning in September 1980. Candidates should have writing and teaching experience, interest in curriculum development, and either a technical background or experience as a technical writer or editor. The term of appointment and salary are commensurate with credentials. Application deadline is 5 December 1979. Please send curriculum vitae and recommendations or dossier to:

**Professor Emma Rothschild  
Director of the Writing Program (TW)  
MIT, Room 14E-310D  
Cambridge, Mass. 02139**

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

### ASSISTANT PROFESSORSHIPS IN ZOOLOGY, BOTANY, MICROBIOLOGY

The Department of Biology, Texas A & M University, invites applications for tenure-track faculty positions.

Postdoctoral experience is preferred, and a high level of research creativity will be expected. Teaching duties include possible teaching in the introductory botany/biology programs; there are also needs for teaching of undergraduate invertebrate zoology, vascular plant systematics, and general microbiology. Appointment will be made at the assistant professor level.

Applicants should send curriculum vitae, statement of teaching and research interests, reprints, and three letters of reference to:

**Search Committee  
Department of Biology  
Texas A & M University  
College Station, Texas 77843**

Application deadline: 15 December 1979.

*Texas A & M is an Equal Opportunity/Affirmative Action Employer.*

**University of Hawaii at Manoa. ASSOCIATE SPECIALIST IN HORTICULTURE**, to provide leadership for state-wide educational program in tropical fruit production. Doctorate in horticultural physiology, with major in fruit tree nutrition, post-harvest physiology and supporting disciplines; 4 years of experience in the appropriate specialty at next lower rank. Send curriculum vitae and transcripts, and have three letters of recommendation sent to: **George Nakasato, Assistant Director, Hawaii Institute of Tropical Agriculture and Human Resources, 3050 Maile Way, Room 203, Honolulu, Hawaii 96822.** Deadline: 21 December 1979. *Equal Opportunity/Affirmative Action Employer.*

**BACTERIOLOGIST, Ph.D.**—Immediate opening for assistant professor in microbiology and immunology at the University of South Carolina School of Medicine. The applicant should have expertise in molecular and/or pathogenic bacteriology and would be expected to teach medical and graduate students and conduct research. Send curriculum vitae and references to: **Abdul Ghaffar, Ph.D., Chairman, Search Committee, Department of Microbiology and Immunology, University of South Carolina School of Medicine, Columbia, S.C. 29208.** *Affirmative Action/Equal Opportunity Employer.*

**BIOCHEMISTRY:** assistant professor, tenure-track position effective 1 September 1980. The applicant must have postdoctoral experience and a strong commitment to research and teaching. Preferred areas of specialty include enzymology, membrane biochemistry, metabolic control, or molecular biology. Send résumé and three letters of reference by 1 March 1980 to: **Dr. Herman De Haas, Department of Biochemistry, 202 Hitchner Hall, University of Maine, Orono, Maine 04469.** *Equal Opportunity/Affirmative Action Employer.*

**BIOMETRICIAN** to collaborate with the staff biologists in design and analysis of a wide variety of ecological and environmental studies. Candidates should have an interest in experimental design, time series analysis, and data analysis techniques. Applicants should have at least an M.S. with experience in statistics or biometry. Send résumé with salary history and requirements as well as references to:

**Dr. Michael Hirschfield  
Academy of Natural Sciences of Philadelphia  
Benedict Estuarine Research Laboratory  
Benedict, Maryland 20612**

## POSITIONS OPEN

**ASSISTANT PROFESSORSHIP** and/or **INSTRUCTORSHIP** to teach advanced undergraduate and/or introductory course, fall 1980. Submit curriculum vitae and three references to: **Search Committee, Department of Biology, University of Virginia, Charlottesville, Virginia 22901. Telephone: 804-924-7118.**

### BIOCHEMIST

The Alaska Project Office of the Office of Marine Pollution Assessment, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, in Juneau, Alaska, is seeking a biochemist with scientific expertise in the study of biota in the marine environment to serve on a 2-year IPA assignment. The assignee will participate in developing technical planning documents, evaluating studies aimed at measuring the effects of oil on specific marine biota, and preparing progress reports. Only employees of state or local governments or institutions of higher education, who can obtain a 2-year leave of absence, are eligible to apply. Assignee will remain an employee of his/her respective organization. Base salary range is \$20,611 to \$32,110 per annum. Final salary determination will be based on candidate's current salary and qualifications. Reimbursement for salary, travel, benefits, cost of living adjustment, moving expenses, and so forth, is negotiable between employee's organization and NOAA. To apply, submit an SF-171 Personal Qualifications Statement (which can be obtained from any federal office by telephoning: 303-499-1000, extension 6585) to: **NOAA/NTIA, Personnel Services Division, R561, Boulder, Colo. 80303. Attention: C. Straight.** Applications must be postmarked no later than 21 December 1979 to receive consideration.

*An Equal Opportunity/Affirmative Action Employer*

### BIOLOGIST

Department of Biology is seeking to fill an anticipated opening for fall 1980 at the assistant professor level. Qualifications include Ph.D. in zoology with a minimum of 1 year of college teaching. Duties include teaching courses in general zoology, comparative anatomy, basic biology, and graduate courses in areas of specialization. Salary: \$15,455.20 for 9 months. Interested applicants should submit curriculum vitae, transcripts, and at least three letters of recommendation by 30 January 1980 to:

**Dr. Jack Waber, Chairman  
Department of Biology  
West Chester State College  
West Chester, Pa. 19380**

*An Equal Opportunity/Affirmative Action Employer*

### LEAVE REPLACEMENT IN BIOLOGY MIDDLEBURY COLLEGE

One-year position. Assistant professor or instructor. Teaching responsibilities include: a one-semester lecture/laboratory course in plant physiology; a winter (short) term lecture, laboratory, or seminar course; a one-semester, lecture/laboratory course in developmental biology; and, as enrollments permit, an advanced literature seminar. The successful candidate will also be expected to direct undergraduate research projects. Preference given to candidates with no more than 2 years of full-time teaching experience; Ph.D. or ABD required. Position available 1 September 1980; applications must be received by 7 January 1980. Send curriculum vitae, statement of teaching and research interests, all undergraduate and graduate transcripts, and three recent letters of recommendation (directly from referees) to: **Christopher Watters, Ph.D., Chairman, Department of Biology, Middlebury College, Middlebury, Vermont 05753; telephone: 802-388-2802.** *An Equal Opportunity Employer.*

**BIOPSYCHOLOGY—Assistant/Associate Professor.** September 1980. Tenure-track position. Looking for candidates who have demonstrated excellence in research (laboratory and/or field) with emphasis upon the analysis of behavioral processes, preferably from an evolutionary perspective; excellence in undergraduate/graduate teaching and success in obtaining extramural research funds. Send application, curriculum vitae, and three letters of recommendation to: **Professor A. Robert Tollin, Biopsychology Search Director, Department of Psychology, Box U-20, University of Connecticut, Storrs, Connecticut 06268.** Applications should be received by 31 December 1979.

*An Equal Opportunity Employer*

## POSITIONS OPEN

**CELLULAR AND MOLECULAR PHARMACOLOGY—THREE POSITIONS AVAILABLE:** (i) Assistant professor, (ii) Instructor, and (iii) Postdoctoral fellow. A doctoral degree, demonstrated excellence in research, and experience appropriate to the rank are required. Candidates will be favored whose research, training, and experience complement that of the present faculty. Currently, cellular functions and molecular events related to drugs, hormones, cyclic nucleic acids, calcium, chromatin, and cytoskeletal elements are being studied. These investigations also concern mitosis, cellular motility, and the regulation of gene expression. In addition, local neuronal circuit functions and the actions of novel neuromodulators are being analyzed. Send curriculum vitae and the names of three references to: **Dr. Bruce McL. Breckenridge, Department of Pharmacology, COLLEGE OF MEDICINE AND DENTISTRY OF NEW JERSEY, Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854.** *Equal Opportunity/Affirmative Action Employer, M/F.*

### KLEIDERER/PEZOLD CHAIR IN CHEMISTRY UNIVERSITY OF NOTRE DAME

The Department of Chemistry is seeking an outstanding scholar to occupy the recently endowed

#### KLEIDERER/PEZOLD PROFESSORSHIP

The individual's research interests should be related to organic chemistry. Résumés and/or nominations should be addressed to:

**Professor Francis J. Castellino  
Dean, College of Science  
University of Notre Dame  
Notre Dame, Indiana 46556**

*Notre Dame is an Equal Opportunity Employer.*

### COMPARATIVE PHYSIOLOGIST

The Department of Zoology at the University of Vermont invites applications from comparative physiologists for a faculty position to begin September 1980. Candidates should have a Ph.D. in an appropriate discipline (zoology, biology, physiology, endocrinology); be able to teach courses in vertebrate and invertebrate comparative and environmental physiology at the graduate and undergraduate levels; and an interest in pursuing a vigorous research program in comparative physiology. Two years of postdoctoral experience is desirable. Rank and salary are open. Applicants should send curriculum vitae and a statement of research plans, relevant courses taken, and courses qualified to teach and should arrange for three letters of recommendation to be sent to: **Dr. George M. Happ, Department of Zoology, University of Vermont, Burlington, Vermont 05405.** Deadline for receipt of applications is 15 January 1980.

### ECOLOGIST

The Department of Zoology at the University of Vermont invites applications from ecologists for a faculty position to begin September 1980. Candidates should have a Ph.D. in an appropriate discipline (evolutionary biology, zoology, taxonomy, biology); be able to teach courses with an ecological, morphological, and evolutionary emphasis at the undergraduate and graduate levels; and an interest in pursuing a vigorous research program in ecology. Postdoctoral experience is desirable. Rank and salary are open. Applicants should send curriculum vitae and a statement of research plans, relevant courses taken, courses qualified to teach, and should arrange for three letters of recommendation to be sent to: **Dr. George M. Happ, Department of Zoology, University of Vermont, Burlington, Vermont 05405.** Deadline for receipt of applications is 15 January 1980.

### GENETICIST

The Department of Zoology at the University of Vermont invites applications from geneticists for a faculty position to begin September 1980. Candidates should have a Ph.D. in an appropriate discipline (genetics, development, cell biology, biology, zoology); be able to teach courses in genetics and developmental genetics at the undergraduate and graduate levels; and an interest in pursuing a vigorous research program in developmental genetics. Two years of postdoctoral experience is desirable. Rank and salary are open. Applicants should send curriculum vitae and a statement of research plans, and should arrange for three letters of recommendation to be sent to: **Dr. George M. Happ, Department of Zoology, University of Vermont, Burlington, Vermont 05405.** Deadline for receipt of applications is 15 January 1980.

## POSITIONS OPEN

**CELL BIOLOGIST** (associate professor). Applications are solicited for a 9-month, tenure-track faculty position in cell biology. All qualified cell biologists (animal and plant) without regard to specialty are encouraged to apply. The appointment will be at the associate professor level and will be available autumn 1980. Applicants must have demonstrated excellence in research and teaching. Responsibilities of the successful candidate will include developing and directing a quality research program in some aspect of cell biology, advising graduate students, development and teaching of a graduate level course in his or her specialty in cell biology, and teaching general cell biology to undergraduate students. Complete curriculum vitae and a list of three references should be sent to: **Professor Joseph Y. Cassim, Chairman, Cell Biology Search Committee, Department of Microbiology, The Ohio State University, 484 West 12 Avenue, Columbus, Ohio 43210.** Applications will be accepted until 15 January 1980.

*An Equal Opportunity/Affirmative Action Employer. Qualified women, minority, and handicapped persons, as well as others, are encouraged to apply.*

### CHAIRPERSON DEPARTMENT OF PHYSIOLOGY

Applications are invited from qualified Ph.D.'s and/or M.D.'s for this position at the University of Puerto Rico, School of Medicine.

Attractive 12-month salary with possibility of salary supplement from own research grants. Please send curriculum vitae, including summary of qualifications (including grant support), a brief description of research plans or research in progress, reprints of your most important articles, and three reference letters to:

**L. A. Le Zotte, Jr., M.D., Ph.D.  
G.P.O. Box 4462  
San Juan, Puerto Rico 00936**

**DEVELOPMENTAL PSYCHOLOGIST.** The Psychology Department, University of California, Santa Barbara, anticipates a position at the assistant professor level in social development or personality development. A strong interest in teaching and research in developmental psychology is required. Candidates with research interests in the biological substrates of social behavior (including ethology or behavior genetics) are preferred but other candidates are encouraged to apply. The department offers a Ph.D. in developmental psychology but has no clinical program. The applicant should have experience appropriate for teaching both at the graduate level and in our undergraduate major in developmental psychology. The undergraduate program includes both lectures and practica in developmental psychology.

Send curriculum vitae, copies of publications, and direct four letters of recommendation to: **Professor Daphne Bugental, Search Committee, Department of Psychology, University of California, Santa Barbara, California 93106.** Deadline for completed application is 15 January 1980.

*An Equal Opportunity/Affirmative Action Employer*

**DIRECTOR OF SUMMER PROGRAMS.** Development and administration of summer instruction in natural resources and environmental studies. Duties: curriculum development, management of logistics, publicity, student recruitment, and teaching in areas for which qualified. Requires master's degree in resource or environmental field, demonstrated administrative ability, innovative approaches. Send curriculum vitae, transcripts, and three references to: **Dean Benjamin A. Jayne, School of Forestry and Environmental Studies, Duke University, Durham, N.C. 27706.** *Duke is an Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITIONS.** Resource ecology, systems analysis, policy/economics. Four faculty and four research positions to be filled by 1 September 1980. Applicants sought in one or more of these centers of excellence: **ecology:** water resources, watershed hydrology, land resource/environmental analysis, applied systems ecology, insect/animal population dynamics; **systems analysis:** application of quantitative methods (simulation, statistics, operations research) to natural resource/environmental problems; and **policy/economics:** water, land use, energy systems, taxation, regulation, rural development. Send curriculum vitae, publications, three references, and recent Ph.D.'s submit transcripts, to: **Dean Benjamin A. Jayne, School of Forestry and Environmental Studies, Duke University, Durham, N.C. 27706** by 1 February 1980. *Duke is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**CHAIRMAN OF PHYSIOLOGY.** Applications are invited for chairman of the Department of Physiology at the Oral Roberts University School of Medicine. Candidates should have an M.D. or Ph.D. degree and minimally have held the rank of associate professor or its equivalent. The committee is seeking candidates who have demonstrated excellence in teaching and research and who would be compatible with the unique life-style at Oral Roberts University. Administrative experience is desirable. Please send curriculum vitae and accompanying letter to: **Donald R. Tredway, M.D., Ph.D., Oral Roberts University School of Medicine, 7777 South Lewis, Tulsa, Okla. 74171. Equal Opportunity/Affirmative Action Employer.**

**CONTRACT MANAGER.** Determination of toxic substance fate in aquatic ecosystems. B.S.-M.S. chemist, limnologist, aquatic biologist. Minimum of 10 years of experience in an analytical laboratory making nutrient, toxicant, and biomass determinations. At least 3 years of laboratory management with government contract experience preferred.

Qualified candidates should send résumé with salary requirements to: **N. H. Perkins, THE BIONETICS CORPORATION, 18 Research Drive, Hampton, Va. 23666. An Equal Opportunity Employer, M/F/H/V.**

### DIRECTOR OF CYTOGENETICS LABORATORY

UNIVERSITY OF WASHINGTON

Experienced Cytogeneticist (Ph.D. or M.D.)

Position requires management of established prenatal and postnatal diagnostic laboratory and independent research experience in experimental cytogenetics. Early starting date desirable. Send curriculum vitae and the names and addresses of at least three references to: **Dr. George M. Martin, Division of Genetic Pathology, Department of Pathology, SM-30, University of Washington, Seattle, Washington 98195. The University of Washington is an Affirmative Action/Equal Opportunity Employer.**

### THE UNIVERSITY OF BRITISH COLUMBIA CLINICAL ENGINEERING PROGRAM

Applications are invited for the position of **DIRECTOR** of the Clinical Engineering Program. The director's responsibility will be the operation and development of a master's-level program approved to start in September 1980. The director must hold an advanced engineering degree (Ph.D. preferred), have several years of clinical experience, and be eligible for registration as a professional engineer in British Columbia. The appointment will be at the associate professor level. Applications should be sent by 15 January 1980 to:

**Professor Axel Meisen, Chairman  
Clinical Engineering Search Committee  
Faculty of Applied Science  
University of British Columbia  
Vancouver, British Columbia, Canada V6T 1W5**  
Late applications may be considered.

The National Oceanic and Atmospheric Administration (NOAA) announces a Senior Executive Service position vacancy for **DIRECTOR**, Office of Marine Pollution Program, in the Office of Policy and Planning. Incumbent is responsible for managing Section 4 of the National Ocean Pollution Research and Development and Monitoring Planning Act of 1978, including development of a biennial 5-year federal plan for ocean pollution research, development, and monitoring and interagency coordination to ensure implementation of plan recommendations. Candidates must demonstrate: knowledge of general problems posed by ocean pollution and the scientific and technological approaches to better understanding the causes, nature, and effects of ocean pollution; familiarity with the scope of federal agency responsibilities for ocean related activities and with marine science and technology activities in the non-federal sector; familiarity with the process by which knowledge and information on ocean pollution problems is applied by policy and decision-makers to avoid, reduce, or ameliorate environmental impacts that arise from human activities, in or near the marine environment; and knowledge of agency and interagency approaches and methods used for planning federal ocean pollution, research, development, and monitoring programs. Inquire for detailed information by writing: **NOAA Personnel, AD411, 6001 Executive Boulevard, Rockville, Maryland 20852, attention: Rebecca A. Williams or telephone: 301-443-8425 no later than 15 December 1979.**

*Department of Commerce is an Equal Opportunity Employer.*

## POSITIONS OPEN

**DIRECTOR, CENTER FOR BIOENGINEERING,** University of Washington, interdisciplinary program of the College of Engineering and School of Medicine. Engineering and/or medical background with experience in biomedical engineering required, plus administrative and academic leadership capability. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.* Send nominations or résumé to: **Thomas F. Hornbein, M.D., Chairman, Bioengineering Search Committee, RN-10, University of Washington, Seattle, Wash. 98195.**

### DIRECTOR School of Biology Georgia Institute of Technology

Applications are invited for the position of director (head) of the School of Biology at Georgia Tech. Qualifications sought include an established record of research and teaching in biology as well as leadership and administrative ability. Candidates should qualify for the rank of professor and should strengthen existing areas of biophysics, environmental biology, genetics, microbiology, or physiology. A major responsibility is to enlarge and develop the graduate program. Send curriculum vitae and names of four references to: **Dr. D. B. Dusenbery, Search Committee, School of Biology, Georgia Institute of Technology, Atlanta, Georgia 30332. An Equal Opportunity/Affirmative Action Employer.**

### ECOLOGIST

**ASSISTANT PROFESSOR.** Ph.D., vertebrate behavioral ecologist or community/ecosystems ecologist. Tenure-track, beginning 15 August 1980. Send curriculum vitae, reprints, and three letters of reference before 1 February 1980 to: **Dr. John Alcock, Ecology Search Committee, Department of Zoology, Arizona State University, Tempe, Arizona 85281.**

*Affirmative Action/Equal Opportunity Employer*

**ECOLOGIST.** The Kellogg Biological Station of Michigan State University invites applications for a tenure-track position at the assistant professor level in aquatic or terrestrial ecology. Applicants should show potential for developing and maintaining strong basic experimental research and graduate training programs. Submit résumé, statement of research interests, publications, and other supporting documentation by 15 December to:

**Search Committee  
Kellogg Biological Station  
Hickory Corners, Mich. 49060**

*An Equal Opportunity/Affirmative Action Employer*

**ENVIRONMENTAL CHEMIST POSITION AVAILABLE,** research associate, permanent appointment in the Chemistry Department. Ph.D. in the field of environmental/analytical chemistry preferably with expertise in the area of trace organics. Duties include research, teaching, and collaboration with faculty and other organizations involved with environmental problems. Send résumé, names and addresses of three references, and a critique of research interests by 30 December 1979 to: **Dr. David L. Johnson, Department of Chemistry, State University of New York College of Environmental Science and Forestry, Syracuse, New York 13210. (Search extended.)**

*An Equal Opportunity/Affirmative Action Employer*

**FACULTY POSITIONS (THREE) IN MICROBIOLOGY.** The Genetics and Cell Biology Group in the Department of Microbiology, University of Alabama in Birmingham, has three vacancies for assistant professorships (tenure-track) for individuals with research expertise in one or more of the following areas: microbial physiology and biochemistry, genetic and biochemical aspects of pathogenicity of nonviral agents of dental or medical significance, and microbial and molecular genetics. Preference will be given to those who have strong credentials for and commitment to developing an independent research program working with prokaryotic or lower eukaryotic organisms and who have interest and aptitude for teaching graduate, medical, and dental students. Positions available during 1980. Salary commensurate with experience but not less than \$22,000 for a 12-month appointment. Send letter outlining current and future research interests, curriculum vitae, bibliography, and names and addresses of three references to: **Roy Curtiss III, Department of Microbiology, Box 11 SDB, The Medical Center, The University of Alabama in Birmingham, Birmingham, Ala. 35294. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**ECOLOGY.** Clemson University has a tenure-track position with research interests in community or ecosystem ecology for the fall semester 1980. The Ph.D. is required. Salary will be commensurate with qualifications. A vigorous research program supporting M.S. and Ph.D. programs is expected. Teaching will include participation in a course in animal ecology and offerings in the area of specialization. Complete applications should include a letter of application, curriculum vitae, transcripts, three letters of recommendation, and reprints. Mail by 15 January 1980 to: **Dr. Carl W. Helms, Head, Department of Zoology, Clemson University, Clemson, South Carolina 29631. Telephone: 803-656-2328. An Affirmative Action/Equal Opportunity Employer.**

**ELECTRON MICROSCOPIST-CELL BIOLOGIST.** Position open immediately for a research associate, Georgetown University, Schools of Medicine and Dentistry. We seek a Ph.D. or equivalent with proven research capabilities to collaborate on problems related to immediate hypersensitivity and host defense mechanisms. Applicants must be capable of innovative and independent research, have a strong background in electron microscopy and cell biology, and have interests in immunology and biochemistry. Academic appointment, salary, and technical support will be commensurate with the qualifications of the applicant. Please send letters of application, curriculum vitae, representative reprints, and three professional letters of recommendation to:

**John Gerin, Ph.D.  
Georgetown University  
Division of Molecular Virology and Immunology  
5640 Fishers Lane  
Rockville, Md. 20852**

*An Equal Opportunity/Affirmative Action Employer*

### ENVIRONMENTAL POLICY ANALYST

The Institute for Environmental Studies, University of Illinois at Urbana-Champaign. Tenure-track openings for environmental policy analysts at appropriate rank. Quantitative skills, plus interest in analyzing policy decisions in one or more environmental problems (for example, mutagens/carcinogens, energy development, environmental management, and so forth). Ability to develop research programs and potential for creating and analyzing policy options. Possible joint appointment in degree-granting department. Prefer June 1980. Salary open. **Ben B. Ewing, Institute for Environmental Studies, 408 South Goodwin Avenue, University of Illinois, Urbana, Illinois 61801. Telephone: 217-333-2503.** To assure full consideration, apply by 31 January 1980. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION, ORGANIC CHEMISTRY

Applications are invited for a tenured senior appointment which the Department of Chemistry at Stanford University expects to be able to make in the near future. Applicants must have outstanding research credentials in organic chemistry and a strong commitment to teaching undergraduates as well as graduates. In applying, send curriculum vitae and bibliography to: **Professor K. O. Hodgson, Department of Chemistry, Stanford University, Stanford, California 94305. Stanford is committed to Equal Opportunity through Affirmative Action in employment and we are especially eager to identify women and minority persons with appropriate qualifications.** Applications should be received by 15 December 1979.

### FACULTY POSITION

The Department of Physiology, School of Medicine, University of Pennsylvania, Philadelphia, Pa., invites applications for the position of assistant professor. Candidates should have Ph.D. or M.D. degree. Salary will be commensurate with experience and qualifications. Candidates should have experience with single- and multi-unit neurophysiological recording techniques and gastrointestinal smooth muscle functional measurements. Teaching responsibilities include medical and graduate student courses in physiology and neurophysiology. Research experience sufficient to seek grant support as an independent investigator desirable. Send curriculum vitae and names of three references to:

**Dr. Robert Forster, Professor and Chairman  
Department of Physiology  
School of Medicine  
University of Pennsylvania  
Philadelphia, Pa. 19104**

*An Equal Opportunity/Affirmative Action Employer*



## POSITIONS OPEN

**FACULTY POSITION** in physical chemistry or chemical physics. Applications or nominations are invited for an opening in the Department of Chemistry at Massachusetts Institute of Technology (MIT). Applicants should have demonstrated ability to do exceptional independent research in chemistry. Appointment will probably be at the assistant professor level, but applications and nominations for other levels will be considered. Candidates should submit curriculum vitae, a publications list, a description of research interests, and have three letters of recommendation sent not later than 15 February 1980, to: **Professor J. L. Kinsey, Room 18-399, MIT, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

### FACULTY POSITION IN BIOLOGICAL SCIENCES at the Hopkins Marine Station of Stanford University

Applications are invited for an appointment in the Department of Biological Sciences of Stanford University, to be resident at the Hopkins Marine Station in Pacific Grove, California. The position is without restriction as to rank, although some preference will be given to younger candidates. The position involves both teaching and research. The areas in which the Station wishes to expand its faculty include cellular, neuro-, and developmental biology. All applications must include curriculum vitae, a statement of research interests, and a list of three people from whom letters of reference will be sought. Applications should reach: **C. S. Pittendrigh, Hopkins Marine Station, Pacific Grove, Calif. 93950** by 15 January 1980. *Stanford University is an Equal Opportunity Employer.*

**FACULTY POSITIONS: Physics.** With the award of a major grant from the McDonnell Aerospace Foundation, we anticipate filling several faculty positions in the Department of Physics. We are therefore seeking applications from experimentalists and theoreticians in the general field of astrophysics, and hope to make initial appointments for fall 1980. Appointments will be at senior or junior rank, depending on experience. For assistant professorships, preference will be given to candidates who have had at least 2 years of postdoctoral experience. A brochure describing activities of the McDonnell Center is available upon request. Inquiries and applications, including names of at least three referees, should be addressed to: **Professor M. W. Friedlander, Department of Physics, McDonnell Center for the Space Sciences, Washington University, St. Louis, Mo. 63130.** *Washington University is an Equal Opportunity/Affirmative Action Employer.*

### University of California, Berkeley College of Natural Resources

**FACULTY AND AGRICULTURAL EXPERIMENT STATION POSITION** in the Division of Biological Control and Department of Entomological Sciences.

A position as **assistant professor of entomology and assistant entomologist** in the Experiment Station will be available 18 January 1980. A Ph.D. in a biological science with specialization in invertebrate ecology is required. Qualifications must include training in insect population ecology applicable to biological control, insect ecology, and population ecology; skills in statistical and quantitative evaluation and computer methodology would be an asset. Research responsibilities (80 percent) in the Division of Biological Control will include field and experimental ecology, working with live insects, with emphasis on biological control, assessment of efficiency of entomophagous arthropods in relation to both physical and biotic environmental factors. The assignment includes conceptualization, organization, and conduct of classical biological control; assessment of pest potential for economic damage and of naturally occurring biological control; and experimentation on predator-prey/host-parasite relationships. Teaching (20 percent) is in the Department of Entomological Sciences in insect ecology, especially population ecology, and biological control. Applicants should send full curriculum vitae, relevant publications and manuscripts, official academic transcripts, the names of three persons as reference, and a statement on research interests by 18 January 1980 to:

**L. E. Caltagirone, Chairman  
Division of Biological Control  
University of California  
1050 San Pablo Avenue  
Albany, California 94706**

*The University of California is an Affirmative Action Employer.*

## POSITIONS OPEN

**ENVIRONMENTAL SCIENTISTS.** Nonsalaried 9-week summer positions in **ecology and geology.** Advise undergraduate students working on independent projects, lead interpretive activities; conduct research. Ph.D. and previous experience in North-eastern mountains preferred. Send curriculum vitae and names of three references to: **Director, The Adirondack Laboratory, P.O. Box 492, Saranac Lake, New York 12983.**

### STANFORD UNIVERSITY GEOCHEMIST—PETROLOGIST

The Department of Geology in the School of Earth Sciences invites applications for a faculty position beginning September 1980. Areas of interest include (but are not limited to) geochemical processes in the crust and mantle of the earth including isotope geochemistry, thermodynamics, kinetics, element distribution and phase equilibria studies. Teaching responsibilities might include graduate and undergraduate courses in geochemistry and igneous petrology. Level of appointment is open, but we are particularly interested in a creative person, with a well-established record in research. Applications should include (i) a résumé of education, professional experience, and published research, (ii) a brief statement of plans for future research, and (iii) the names of four references. Send to: **Professor J. G. Liou, Department of Geology, Stanford University, Stanford, Calif. 94305**, by 1 December 1979. *Stanford University is an Equal Opportunity/Affirmative Action Employer.*

**GEOLOGY**—Assistant professor, tenure-track position starting in September 1980, in a new geology B.S. program at George Mason University, a state university located 10 miles south of the U.S. Geological Survey in Reston and 15 miles west of the Smithsonian Institute in Washington, D.C. Applicants will be considered if they have a Ph.D. by June 1980, and a background sufficient to teach basic undergraduate geology courses plus advanced courses in a specialized field such as soft rock geology, fossil fuels and mineral resources, and/or geomorphology. Research is encouraged and preference will be given to candidates whose research interests complement those of current faculty members. Send résumé, statement of research interests, and names of three references by 15 January 1980 to: **Douglas Mose, Department of Chemistry, George Mason University, Fairfax, Virginia 22030.** *Minorities are encouraged to apply. George Mason University is an Equal Opportunity/Affirmative Action Employer.*

### IMMUNOLOGY FACULTY POSITION

The Department of Microbiology invites applications for a faculty appointment at The University of Texas Medical Branch, Galveston, Texas; rank and salary commensurate with qualifications. The successful candidate would be expected to have postdoctoral experience in and to develop a research program in cellular immunology, immunogenetics, or immunochemistry. The department provides an excellent environment for independent and collaborative research and for teaching graduate and medical students.

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

**Howard M. Johnson, Ph.D., Chairperson  
Immunology Search Committee  
Department of Microbiology  
P.O. Box 146  
The University of Texas Medical Branch  
Galveston, Texas 77550**

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

### THE UNIVERSITY OF CHICAGO NEUROBIOLOGIST

The Department of Anatomy invites applications for a **FACULTY POSITION** in the area of **NEUROBIOLOGY.** We prefer an individual with research interests in the CNS components of motor or sensory systems, or someone approaching the nervous system in a strong biological context. Primary teaching responsibility will be in neurobiology; however, the successful candidate will interact with departmental programs in functional and organismic biology. Please send curriculum vitae and a statement of research goals by 30 December to: **Dr. Philip S. Ulinski, Anatomy Department, The University of Chicago, 1025 East 57 Street, Chicago, Illinois 60637.**

*The University of Chicago is an Equal Opportunity Employer; women and members of minority groups are specifically encouraged to apply.*

## POSITIONS OPEN

**INSTRUCTOR**—Nine-month, nontenured position, open January 1980. Ph.D. in genetics desired. Responsibilities involve teaching undergraduate genetics. Salary: \$13,500 for 9 months. Applicants send résumé, transcripts, and names of three references to: **Dr. C. R. Benedict, Head, Department of Plant Sciences, Texas A & M University, College Station, Texas 77843.**

*Texas A & M University is an Affirmative Action/Equal Opportunity Employer.*

### INVERTEBRATE ZOOLOGIST

A beginning **ASSISTANT PROFESSOR** or **INSTRUCTOR** position is available 1 July 1980. Candidates must have Ph.D., potential for excellence in teaching, and ability to develop an independently funded, high-quality research program. Teaching responsibilities include an introductory invertebrate zoology course with laboratory and field trips, an upper level course in the applicant's specialty, and participation in the Aquatic Biology Program. Research should be field oriented and focused at the organismal, population or community level, preferably with marine organisms. We prefer someone who will interact productively with faculty in such areas as physiology, ecology, ethology, and evolutionary biology.

Applicants should submit a résumé, including research and teaching experience, future research plans, and a list of publications, and have three letters of reference sent by 15 January 1980 to: **Dr. J. K. Waage, Division of Biology and Medicine, Brown University, Providence, R.I. 02912.** *An Equal Opportunity/Affirmative Action Employer.*

### JUNIOR FACULTY POSITION—VIROLOGY

The Department of Virology, University of Erlangen-Nürnberg, West Germany, invites applications for a tenure-track position equivalent to assistant professorship, to conduct a research program in the molecular biology of pathogenic herpesviruses. Applicants with expertise in DNA cloning technology or in vitro-translation systems will be preferred. Send curriculum vitae, list of publications, and letters of recommendation to: **Dr. B. Fleckenstein, Chairman, Institut für Klinische Virologie, Loschgestrasse 7, D-8520 Erlangen, West Germany.**

### LIMNOLOGIST

Postdoctoral research associate available immediately to study nutrient dynamics and cycling in Lake Michigan. Applicant should have a background in biological limnology/oceanography and willingness to access and interpret collected data. Send curriculum vitae and names of three references by 15 December 1979 to: **Dr. Arthur S. Brooks or Dr. Charles C. Remsen, Center for Great Lakes Studies, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201.** *The University of Wisconsin-Milwaukee is an Equal Opportunity/Affirmative Action Employer.*

### MARINE CHEMIST/ CHEMICAL OCEANOGRAPHER

The Department of Oceanography at the University of Washington invites applications for positions at the assistant professor level, available September 1980. Applicants must have demonstrated a capability to initiate a vigorous research program in marine chemistry and/or chemical oceanography and a commitment to superior graduate and undergraduate teaching. Deadline for receipt of applications is 1 February 1980. Send complete résumé and four letters of reference to: **Chairperson, Faculty Recruitment Committee, Department of Oceanography, University of Washington, Seattle, Washington 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

## MEDICAL FACULTY

**The American University of the Caribbean School of Medicine**, located on the island of Montserrat in the West Indies, has faculty openings in the areas of physiology and pathology. Ph.D. or M.D. required. Retired professionals are welcome to apply.

Send résumé to:

**U.S. Office  
American University of the Caribbean  
Mount St. Joseph, Ohio 45051  
Telephone: 513-244-4821**

## POSITIONS OPEN

### LECTURERS DEPARTMENT OF BIOLOGICAL SCIENCES COLUMBIA UNIVERSITY

Part-time, or possibly full-time, lecturers to teach a two-semester introductory lecture course emphasizing cell and molecular biology and genetics; a one-semester general biology laboratory; and a lecture course in general physiology. All courses meet primarily in the evening. Ph.D. and teaching experience required. Application deadline: 1 January 1980. Send résumé, with names of three references familiar with scientific and teaching qualifications, to: **Professor Lawrence Chasin, 902A Fairchild, Department of Biological Sciences, Columbia University, New York, New York 10027. Equal Opportunity/Affirmative Action Employer.**

### MARINE RESEARCH ASSOCIATE II OR III

Responsible for studies of phytoplankton and zooplankton production, species composition and abundance and other aspects of plankton ecology in enclosed ecosystems affected by low level chronic pollutants or other perturbations; supervise technical personnel, sampling program, data acquisition and analysis, scholarly writing, and independent research. Ph.D. and experience in plankton required. Submit résumé and the names of three references to: **Dr. Candace Oviatt, MERL, Graduate School of Oceanography,**

### UNIVERSITY OF RHODE ISLAND

Kingston, Rhode Island 02881

An Affirmative Action/Equal Opportunity Employer, M/F

### POSTDOCTORAL AVIAN ECOLOGIST

Position is available analyzing and interpreting habitat census data for shorebirds in arctic littoral areas. Strong background in vertebrate ecology and abilities to synthesize and initiate analytical approaches desired. Salary: \$12,000. Please send résumé, thesis abstract, and names of two references to: **Dr. Peter Connors, Bodega Marine Laboratory, University of California, Bodega Bay, Calif. 94923. An Affirmative Action Employer.**

## POSITIONS OPEN

### MICROBIAL PHYSIOLOGY AND ECOLOGY

Two postdoctoral positions, one in fungal metabolism of hydrocarbons, one in metabolism of organometals. Available 1 January 1980; \$12,500 per annum. Submit curriculum vitae and arrange for three letters of recommendation to be sent to: **Joseph J. Cooney, Head, Chesapeake Biological Laboratory, University of Maryland, Solomons, Maryland 20688.**

**MICROBIOLOGIST.** Position for Ph.D. at State University College, Oneonta, N.Y., beginning January 1980. Duties include teaching a microbiology course for majors, one for nonmajors, and developing and teaching one or more courses appropriate to person's interests and competency. Areas of competence applicable to department's needs include: parasitology, protozoology, food microbiology, soil microbiology, microbiology of freshwater habitats, and fermentation. Appointments will be for the spring semester with possibility of renewal at the rank of lecturer, instructor, or assistant professor with a salary of \$11,000 to \$14,000, depending on training and experience and per university policy. Position dependent upon budgetary approval. Reply with undergraduate and graduate transcripts, résumé, and three letters of recommendation by 1 December 1979 to: **Dr. John G. New, Chairman, Biology Department, State University College, Oneonta, N.Y. 13820. Telephone: 607-431-3344 or 3703. State University of New York is an Equal Opportunity/Affirmative Action Employer.**

### MICROBIOLOGIST

Applications are invited for a tenure-track teaching/research position at the assistant professor level from individuals with active research programs in microbiology.

Responsibilities for this position include teaching courses in specialty area and supervision of master's degree candidates. Send curriculum vitae, representative reprints, statement of research interests, and three letters of recommendation to: **Search Committee, Department of Biology, University of Missouri-St. Louis, 8001 Natural Bridge, St. Louis, Mo. 63121. Applications close 2 January 1980. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**MARINE RESOURCES MANAGEMENT AGENT/SPECIALIST.** Responsible for planning and implementing projects and programs addressing marine resource management issues including land-use planning, coastal development, shoreline and wetlands protection, and water quality management. Requires equivalent of Ph.D. in civil, environmental, or sanitary engineering with demonstrated research skills, plus 2 to 4 years of effective experience; or a master's degree in same, with 4 to 7 years of effective experience. Send résumé to: **Dr. Carolyn Thoroughgood, College of Marine Studies, University of Delaware, Newark, Del. 19711. The University of Delaware is an Equal Opportunity Employer which encourages application from qualified minority groups and women.**

### MICROBIOLOGY LABORATORY INSTRUCTOR

Doctorate required, to supervise beginning and service course microbiology laboratories starting August 1980. Nontenure-track position; salary dependent upon training, experience, and availability of funds; appointment will be 50 percent assistant professor, 50 percent research microbiologist. Appointee will be encouraged, but not required, to join an existing research program within the department, and if qualified, can be involved in graduate research supervision. Send résumé and names of three references to: **R. D. DeMoss, Department of Microbiology, 131 Burrill Hall, University of Illinois, Urbana, Ill. 61801, by 10 January 1980. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.**

### POSTDOCTORAL FELLOW

A postdoctoral position is available in a multidisciplinary group working on connective tissues. Areas of current research include collagen metabolism in vivo and in vitro, cytoskeletal elements and their relationship with extracellular macromolecules in vitro, and electromechanical and hormonal aspects of cell regulation in vitro. Position available for 3 years immediately post-Ph.D. First-year salary: \$12,200. Send résumé to: **Dr. A. H. Melcher, Room 4384 Medical Sciences Building, University of Toronto, Toronto, Ontario, Canada M5S 1A8.**

## Challenging Ph.D. positions:

# Pharmaceutical Research

## Ann Arbor, Michigan

Group Leader in Immunopharmacology: A new position has been created in the Pharmaceutical Research Division of the Warner-Lambert Company for a Ph.D. in Immunopharmacology to develop a group for the study of chronic immunoinflammatory diseases. You should be...

- ...familiar with the modern concepts and laboratory techniques in cellular immunology.
- ...aware of the action of drugs in immunological reactions.
- ...interested in drug research and development.
- ...able to supervise a group of degreed scientists.
- ...knowledgeable in the areas of classical anti-inflammatory therapy.
- ...well regarded scientifically, with 2-5 years experience beyond the Ph.D., preferably in the pharmaceutical industry.

Ph.D. Scientist, Immunochemistry: A position has been established in the Drug Metabolism Section, Pharmacology Department, for an expert in immunochemistry to...

- ...develop RIA procedures suitable for the detection of drugs and their metabolites in a variety of biological fluids and tissues; this includes the preparation of antigens and antisera.

...participate in the development of protocols for both human and animal studies in which these techniques will be used.

...prepare verbal and written reports describing results and the significance of studies being supervised.

...contribute to the overall drug discovery program of the company.

An advanced degree in immunochemistry with experience in analytical chemistry would be advantageous for the person in this position.

Our modern, well-equipped laboratories are located adjacent to the campus of the University of Michigan. If you are interested in these challenging opportunities to become involved in the discovery and development of new drugs, contact:

Mr. D. Misner, Personnel Supervisor  
WARNER-LAMBERT RESEARCH LABS  
2800 Plymouth Road • Ann Arbor, Michigan 48106

An Equal Opportunity Employer M/F



# Warner-Lambert

## POSITIONS OPEN

### NEUROBIOLOGISTS

The Worcester Foundation for Experimental Biology has initiated a faculty recruitment effort in which one major focus will be **cellular and molecular** approaches to neurobiology. In order to complement existing strength in our Cell Biology and Neurobiology Groups, we are particularly interested in outstanding investigators at any rank who can pursue vigorous, independent research programs in any of the following specialties: synapse formation and function, neuroreceptors, cellular and molecular aspects of neural development, neuroimmunology, and genetic approaches to the nervous system.

New faculty members can expect excellent facilities, a minimum of nonscientific obligations, a strong administrative commitment to productive research, and an informal environment highly conducive to scientific interactions. The foundation is situated on a wooded, 100-acre campus only a few minutes from the University of Massachusetts Medical Center, and within close proximity to all major Boston-area academic and research institutions.

Application materials, including names of references and a brief synopsis of research plans, should be addressed to: **Cellular Neurobiology Search Committee, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Massachusetts 01545.**

*An Equal Opportunity/Affirmative Action Employer*

### NEURO-ONCOLOGY: POSTDOCTORAL RESEARCH ASSOCIATES (TWO)

Positions available for interdisciplinary training in cancer research with a team of engineers, physiologists, and physicians. Research involves CNS evaluation of microwave-induced focal hyperthermia, alone and in conjunction with ionizing radiation and chemotherapy both in vivo and in vitro. One position is for an individual with training and experience in neurophysiology and mammalian stereotaxic surgery. The other position is for an individual with training and experience in biochemistry/neurochemistry. Preference will be given to candidates with an undergraduate background in a physical science or engineering. Support is available for up to 3 years (\$11,000 to \$15,000). Applicants with a recent doctorate in a biomedical science should send résumé and letters of reference to: **Dr. George M. Samaras, Neuro-Oncology Research Laboratories, Department of Radiation Therapy, University of Maryland School of Medicine, 10 South Pine Street, Baltimore, Maryland 21201.** *An Equal Opportunity/Affirmative Action Employer.*

### NEUROPHYSIOLOGISTS DEPARTMENT OF PHYSIOLOGY UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE

The newly formed Division of Neurophysiology seeks applications and nominations for faculty positions in this general field. Candidates must have completed postdoctoral training, be prepared to initiate an independent research program, and participate in a one-semester interdisciplinary neuroscience course. Appointments at the assistant professor level preferred, but appointments for qualified individuals at more senior levels will also be considered.

Please send curriculum vitae, brief description of projected research program, and three letters of reference to: **Dr. J. Byrne, Chairman, Neurophysiology Search Committee, Department of Physiology, University of Pittsburgh, School of Medicine, Pittsburgh, Pa. 15261.**

*An Equal Opportunity/Affirmative Action Employer*

**PHARMACOLOGIST-PHYSIOLOGIST**, Ph.D. with evidence of postdoctoral teaching/research in areas of organ systems, pharmacology, and/or physiology. Undergraduate teaching in human physiology and/or pharmacology. Tenure-track position; 12-month appointment with 1-month vacation; rank/salary commensurate with qualifications. Pharmacy baccalaureate desirable. *Equal Opportunity Employer.* Send curriculum vitae, publications list, and names of three references to: **Dr. K. K. Knapp, Physiology-Pharmacology Unit, School of Pharmacy, University of the Pacific, Stockton, California 95211.** Applications accepted until 15 February 1980.

## POSITIONS OPEN

### NONVASCULAR BOTANIST

The Department of Biology at The University of Texas at Arlington is seeking to fill a tenure-track position with specialization in nonvascular plants beginning 1 September 1980. Duties include teaching general botany, nonvascular plants, and general biology at the undergraduate level, phycology at the graduate level; and establishing or continuing a strong research program. Applicants should have an earned doctorate and submit complete curriculum vitae, transcripts, reprints, and three letters of reference to: **Louis H. Bragg, Department of Biology, The University of Texas at Arlington, Arlington, Texas 76019.** Closing date: 30 January 1980. *The University of Texas at Arlington is an Equal Opportunity/Affirmative Action Employer.*

The **DEPARTMENT OF PATHOLOGY** at the University of Pittsburgh School of Medicine wishes to recruit a member for its Division of Experimental Pathology. The position will entail research and teaching to medical students and to graduate students. There are ample clinical opportunities for research programs needing them. The major areas of interest in the division are immunology and tumor biology. The level of academic appointment will be commensurate with the candidate's qualifications. Reply with curriculum vitae to: **Thomas J. Gill, M.D., Department of Pathology, University of Pittsburgh School of Medicine, Room 716 Scaife Hall, Pittsburgh, Pa. 15261.** *An Equal Opportunity/Affirmative Action Employer.*

Radiation Chemistry Data Center, jointly sponsored by the Department of Energy and the National Bureau of Standards Office of Standard Reference Data, desires to add to its staff a **PHYSICAL CHEMIST** with background in kinetics and/or spectroscopy for data compilation and information storage and retrieval activities. The position provides an opportunity to develop a career in computerized information and data handling. Appointment will be made to the special professional faculty of the University of Notre Dame. Send résumé to: **Dr. Albert B. Ross, Supervisor, Radiation Chemistry Data Center, Radiation Laboratory, University of Notre Dame, Notre Dame, Ind. 46556.** *An Equal Opportunity/Affirmative Action Employer.*

### PHYSICAL OCEANOGRAPHY PROGRAM COORDINATOR

Applications and/or nominations are now being received for the position of Physical Oceanography Program Coordinator, College of Marine Studies, University of Delaware. This individual will play the key role in directing and developing the physical oceanography program. The individual must be committed to the highest quality of academic excellence and research as well as being capable of developing interdisciplinary programs. This is a tenured or tenure-track position with salary and rank compatible with experience. Contact: **Dr. Jin Wu, Chairman, Search Committee, College of Marine Studies, University of Delaware, Newark, Del. 19711.** *The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.*

### BERKELEY PHYSICS

The Physics Department of the University of California, Berkeley, expects during the next 2 years to be making one or two appointments at the assistant professor level. Preferred areas of experimental and theoretical research are astrophysics, atomic and plasma physics, condensed matter physics, nuclear physics, and particle physics.

Applicants should write, as soon as possible, and definitely before 1 January 1980, to: **Chairman of the Physics Department, University of California, Berkeley, Calif. 94720,** giving curriculum vitae, publication list, and references. *The University of California is an Affirmative Action Employer.*

### MEMORIAL UNIVERSITY OF NEWFOUNDLAND DEPARTMENT OF BIOLOGY

**POSTDOCTORAL POSITION** available immediately to study host-pathogen interaction in plants. Training in biochemistry and plant pathology preferable; \$11,800 or more per annum, depending on experience. Applications, including curriculum vitae and names of three referees, should be addressed to: **Dr. Arya K. Bal, Department of Biology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1B 3X9; or telephone 709-753-1200, extension 2694.**

## POSITIONS OPEN

### DIVISION OF PHARMACOTHERAPEUTICS AND HEALTH SCIENCES ARNOLD AND MARIE SCHWARTZ COLLEGE OF PHARMACY AND HEALTH SCIENCES (formerly Brooklyn College of Pharmacy)

Two newly created tenure-track positions in pharmacotherapeutics are available as calendar-year appointments. Academic rank and salary are open and commensurate with qualifications. Applicants must have a Ph.D. in pharmacology or related biomedical science with minor in pharmacology. Though preference will be given to individuals with a B.S. in pharmacy from an accredited U.S. college of pharmacy, an applicant with an undergraduate degree in other scientific disciplines will be considered. Applicants must have a strong commitment to teaching and a proven record of research. Responsibilities will include undergraduate (B.S.) and graduate (M.S.) teaching in pharmacotherapeutics. The applicants should be qualified to develop new graduate courses for the M.S. in pharmacotherapeutics and pursue a research program in areas of own interest. Teaching expertise in one or more of the disciplines within the division of pharmacotherapeutics and health sciences is desirable: pharmacology, clinical pharmacology, clinical pharmacokinetics, physiology, toxicology, and clinical pathology. Send letter of application, curriculum vitae, representative reprints, and names of three references to:

**Dr. Shirley D. Kraus, Director  
Division of Pharmacotherapeutics and  
Health Sciences  
Arnold and Marie Schwartz College  
of Pharmacy and Health Sciences  
Long Island University  
75 DeKalb Avenue  
Brooklyn, New York 11201**

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL: BIOCHEMIST**, Ph.D. Work emphasis is on enzyme physical chemistry. Send curriculum vitae to: **S. K. Chatt, Department of Food Science, Cook College, Rutgers University, New Brunswick, N.J. 08903.** *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOW.** Position available in Immunology Research Unit beginning 1 July 1980. Research in immunologic aspects of occupational lung disease studying involvement of immunopharmacologic, environmental, and host factors. Send curriculum vitae, publications, and names of three references to: **Director of Training Program, Clinical Immunology Unit, Environmental Sciences Building, Tulane University Medical Center, 1700 Perdido Street, New Orleans La. 70112.** *An Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** for BIOCHEMIST with an interest in genetic and evolutionary problems. Work will involve enzyme purification, characterization, and other biochemical studies using *Drosophila*. Skills in enzyme purification and immunological techniques are desirable. Position is available immediately. Send résumé, summary of previous research experience, and names of three references to: **Dr. David Sullivan, Department of Biology, Syracuse University, Syracuse, New York 13210.** Deadline for applications is 15 December 1979.

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

**POSTDOCTORAL POSITION** available about May 1980 for investigating thermal tolerances of desert succulents. Background in plant physiological ecology or biochemistry expected. Salary approximately \$14,000 per year, for up to 2 years. Send curriculum vitae, statement of research experience and interests, plus names of three references to: **Dr. Park S. Nobel, Division of Environmental Biology, Laboratory of Nuclear Medicine and Radiation Biology, University of California, Los Angeles, Calif. 90024.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** in biochemistry/biophysics. To study structure and function of acetylcholine receptors. Experiments will involve membrane and protein chemistry, photolabeling techniques, nanosecond fluorescence, and immunology. Send résumé and arrange for three letters of reference to be sent to: **Dr. M. Martinez-Carrion, Department of Biochemistry, Box 614, Medical College of Virginia, Richmond, Virginia 23298.** *An Equal Opportunity/Affirmative Action Employer.*



## EXECUTIVE DIRECTOR BRITISH COLUMBIA RESEARCH COUNCIL

Responsible to a Board of Directors for the day-to-day operation of the British Columbia Research Council's facilities in Vancouver and the management of a government-supported Core Research Program related to the social and economic development of British Columbia, industrial research, and service contracts. The staff consists of 70 professional and 77 support staff. Reorganization and increased funding is expected in cooperation with the Science Council of British Columbia.

### Qualifications:

A first degree in some branch of physical or applied science and preferably a Ph.D. degree in one of these areas. However, experience in the initiation, planning, and management of applied research is of major importance.

### Salary and benefits:

- Salary of \$45,000 and up, depending on experience and other qualifications,
- All normal benefits including superannuation, medical, group insurance, and so forth, and
- Excellent location on the campus of the University of British Columbia and good research facilities, located in the Discovery Park area of the University of British Columbia.

Please send applications to:

**Dr. John MacDonald**  
Chairman Executive Committee, BCR  
c/o Research Secretariat of British Columbia  
7671 Alderbridge Way  
Richmond, British Columbia  
Canada V6X 1Z9

A short list of candidates may be asked to come to Vancouver for a personal interview.

**POSTDOCTORAL POSITIONS**—Four positions in the Division of Neurobiology at the Barrow Neurological Institute will be available, starting 1 July to 1 September 1980.

### NEUROANATOMY—

Neuroscientist to conduct research with Dr. Russell Carey on the evolution of the primate thalamus and cortex (particularly visual). Areas of interest include neuroanatomical and histochemical investigations of the (i) extrageniculate projections to visual cortex, (ii) connectivity of the claustrum and the thalamic intralaminar nuclei, and (iii) putative neurotransmitters involved in these systems. Knowledge of mammalian neuroanatomy and experience in neural traces/immunohistochemistry techniques are desired but not mandatory.

### NEUROPHYSIOLOGY—

Neuroscientist to conduct electrophysiological studies with Dr. Daniel Pollen on spatial information processing in the striate and higher visual cortices of the cat or monkey. Neurophysiological or psychophysical experience in spatial vision is essential.

### NEUROANATOMY AND/OR NEUROPHYSIOLOGY—

Neuroscientist to work jointly with Dr. Pollen and Dr. Carey on combined anatomic-physiologic studies of the extrageniculate afferents to the striate cortex. Previous experience in either neuroanatomy or neurophysiology of the visual system is essential.

### NEUROENDOCRINOLOGY—

Neuroscientist to conduct research with Dr. Hsien-jen (Jim) Chen studying effects of biogenic amines, gonadal hormones, and aging on release and synthesis of the hypothalamic and pituitary hormones as well as on brain peptides such as endorphins and enkephalins. Experience in receptor assays and tissue culture desired but not essential.

Starting salaries: \$14,000 per year. Send curriculum vitae, brief statement of research interest, and names of three references before 1 January 1980, to either: Dr. Carey, Dr. Chen, or Dr. Pollen, Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, 350 West Thomas Road, Phoenix, Arizona 85013. An Equal Opportunity Employer.

## UNIVERSITY OF MAINE AT ORONO STRUCTURAL GEOLOGY-TECTONICS

The Department of Geological Sciences invites application for a teaching-research position in structural geology-tectonics. Currently the department has an established focus in Quaternary geology and is developing a second focus in the reconstruction of ancient orogens. We are seeking a person both experienced and active in fieldwork and one who has an established reputation for applying field studies to the solution of fundamental problems of Appalachian-Caledonide geology. The candidate's research should be independent but complementary to that of the department. Success in developing or continuing competitive, nonuniversity sources of research funding is essential. Primary consideration will be given to hiring at the associate or full professor level, although candidates with less experience but with exceptional potential will also be considered. Courses to be taught would be consistent with the successful candidate's background and interests and would include upper-level undergraduate and graduate courses in structural geology and tectonics. Potential exists for a program relationship with the geotechnical and environmental faculty of the Civil Engineering Department.

The starting date of the position is 1 September 1980. The Ph.D. is required. Rank, salary, and conditions of employment will be commensurate with qualifications and are negotiable. Application deadline: 31 December 1979. Interested candidates should send curriculum vitae and the names of three referees to:

**Chairman**  
Department of Geological Sciences  
University of Maine at Orono  
Orono, Maine 04469

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

## PROGRAM MANAGER

Manage an extensive research and development program concerned with the science and technology for geological isolation of nuclear wastes. Develop and implement program policies and long range research plans for a wide variety of fundamental and applied projects and diverse scientific disciplines. Requires extensive scientific background and technical knowledge relevant to the program's R&D work. Experience in the management of a research group with multidisciplinary project teams interfacing with public and private sectors. Prefer a Ph.D. in a geotechnical field and experience in fundamental and applied earth sciences research. Send 2 resumes including salary history to:

Employment Office  
Lawrence Berkeley Laboratory  
One Cyclotron Road  
Berkeley, California 94720



EOE

## Quality Assurance Unit Head (Toxicology)

This is a start-up situation in which you will spearhead the formalization of a Quality Assurance Unit in an Industrial Toxicology section for a major U.S. corporation, headquartered in the northeast, which few companies can surpass in capacity for petroleum and chemical production.

We are searching for a thoroughly experienced Quality Assurance Unit Head to originate and implement wide-ranging programs and contribute to departmental professionalism as we increase staff.

### Major responsibilities will include:

- Establishing a complete and inclusive Q.A. function.
- Consistently update procedures and assure compliance with all pertinent Q.A. guidelines and government regulations.
- Conduct audits of toxicologic studies.
- Assist in the evaluation and adequacy of testing protocols.
- Provide Q.A. training to section toxicologists.

To accomplish these tasks, you must have a Ph.D. (or equivalent) in biological research, or a B.S. with extensive experience and responsibility in an industrial or Quality Assurance laboratory.

In addition to a highly competitive salary and benefits package, you'll be working in a modern, well appointed facility.

For consideration, please forward your resume in strictest confidence to:

**Box 319, SCIENCE**  
An Equal Opportunity Employer. M/F

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately for 1 to 2 years to develop methodology for detection of viral antigens. Experience desired in immunology, biochemical procedures of purification and characterization of proteins, and in protein chemistry. Write to: **Dr. G. R. Dreesman, Department of Virology, Baylor College of Medicine, Houston, Texas 77030.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION**—Physiology of circadian rhythms. Experience in biochemistry preferred. Send curriculum vitae and request three letters of reference to be sent to: **Dr. R. Konopka, Division of Biology, California Institute of Technology, Pasadena, Calif. 91125.**

An Equal Opportunity/Affirmative Action Employer

**POSTDOCTORAL POSITIONS** to study: (i) aging of the transcription and translation processes in vivo or (ii) bacteriophage development in anucleate cells. Candidates should have experience in either enzymology, preferably RNA polymerase, in vitro transcription/translation systems, characterization of DNA replication intermediates, or bacterial/phage genetics. Applications with full curriculum vitae, research experience, and names of referees should be sent to: **Dr. J. N. Reeve, Department of Microbiology, Ohio State University, Columbus, Ohio 43210.**

An Equal Opportunity/Affirmative Action Employer. Qualified women, minority, and handicapped persons, as well as others, are encouraged to apply.

**POSTDOCTORAL POSITION IN PHYSIOLOGY** available May 1980 for 2 years to study the functional relationship between cerebrospinal fluid and brain. Emphasis is on the mechanisms and pathways of exchange between cerebrospinal fluid, plasma, and brain; and compounds of interest are prostaglandins, proteins, and acid metabolites of the biogenic amines. Salary range: \$13,500 to \$15,000, plus fringe benefits. Send curriculum vitae and three letters of reference by 1 March 1980 to: **Dr. Helen F. Csern, Box G, Brown University, Providence, R.I. 02912.** Brown University is an Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH POSITION** available for studies on "Control of normal and abnormal human hemoglobin synthesis." Experience with nucleic acid technology desirable. Send curriculum vitae with names of three references to: **Dr. R. F. Rieder, Department of Medicine, State University of New York—Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** to study mechanism of growth regulation by estrogens. Experience in hormone binding, protein fractionation, cell culture, histology, and small animal surgery desirable. Salary: \$10,000 to \$14,000. Send complete curriculum vitae and three references to: **Dr. George M. Stancel, Department of Pharmacology, University of Texas Medical School, P.O. Box 20708, Houston, Texas 77025.** An Equal Opportunity Employer.

## POSTDOCTORAL TRAINEE

A postdoctoral position is open for a recent Ph.D. in protein chemistry, RNA metabolism, or immunology with interests in nucleocytoplasmic exchange properties, nuclear envelope, or nuclear matrix proteins. The position offers the opportunity to learn techniques for the production of monoclonal antibodies and participate in research concerned with properties of the germinal vesicle. The initial appointment is for 1 year but may be extended up to 3 years. Send curriculum vitae, bibliography, and names of three professional references to: **Dr. Gerd Maul, The Wistar Institute, 36th and Spruce Streets, Philadelphia, Pa. 19104.**

## RESEARCH ASSOCIATE

A research position is open at the Wistar Institute for a virologist or neuroanatomist with strong background in electron microscopy. The candidate is expected to collaborate closely with the multiple sclerosis group of the institute. Experience in histochemical techniques at the ultrastructural level is desirable. Salary commensurate with experience. Send curriculum vitae and names of three professional references to: **Dr. Gerd Maul, The Wistar Institute, 36th and Spruce Streets, Philadelphia, Pa. 19104.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY.** Position is available immediately to work on the isolation and analysis of sequences coding for a specific protein in *Drosophila*. Previous experience with DNA sequencing, restriction mapping, or recombinant DNA technology is desirable. Starting date is flexible. Send résumé and names of three references by 1 January to: **David Sullivan, Department of Biology, Syracuse University, Syracuse, N.Y. 13210.**

Syracuse University is an Equal Opportunity/Affirmative Action Employer.

**Laboratoires de Recherches Médicales  
Faculty of Medicine—Geneva University  
Geneva, Switzerland**

**POSTDOCTORAL POSITION available  
(spring 1980) for a  
MAMMALIAN NEUROPHYSIOLOGIST**

Ph.D. required—to participate in multidisciplinary laboratory interested in the neural control of pancreatic function.

Appointment for 2 or 3 years. Approximate gross salary: Swiss F40,000, per annum.

Candidates should submit their curriculum vitae and the names of three references to: **Professor Bernard Jeanrenaud, M.D., Laboratoires de Recherches Médicales, 64, avenue de la Roseraie, 1205 Geneva, Switzerland.**

**POSTDOCTORAL RESEARCH ASSOCIATE**—Position available for study of the immunological and biochemical characterization of a nonpathogenic variant of *Candida albicans*. A Ph.D. with background in biochemistry and molecular biology is desirable. Send résumé and names of three references to: **Dr. H. R. Buckley, Department of Microbiology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140.** Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** position in auditory neuropharmacology. A postdoctoral position in pharmacology, physiology, or related field is available beginning either 1 January 1980 or 1 February 1980 for an individual interested in iontophoretic studies of putative transmitters of the auditory system. Experience required in sensory neurophysiology. Computer analysis of neurophysiologic data is highly desirable. Please send curriculum vitae and three letters of recommendations by 15 December 1979 to: **Dr. Donald Caspary, Department of Pharmacology, Southern Illinois University School of Medicine, P.O. Box 3926, Springfield, Ill. 62708.** An Equal Opportunity/Affirmative Action Employer.

**PROFESSOR/ASSOCIATE PROFESSOR IN PHYSIOLOGICAL/COMPARATIVE PSYCHOLOGY.** The Department of Psychology at the University of Florida seeks a faculty member with an active research program, teaching capabilities in the physiological/comparative area, and strong interests in interacting with other members of our active and extensive neurobiological science community. The position is available immediately; salary is highly competitive. Applicants should send curriculum vitae, a summary of research plans, and three letters of reference to: **Dr. Carol Van Hartesveldt, Psychology Department, University of Florida, Gainesville, Florida 32611.** An Equal Opportunity/Affirmative Action Employer.

**University of California, Los Angeles (UCLA), Department of Earth and Space Sciences** invites applications for the **RUBEY ASSISTANT PROFESSORSHIP.** One or more nonladder faculty positions are available effective 1 July 1980 in any of three specializations: (i) **Planetary Atmospheres** (for example, origin, diversity, chemical evolution); (ii) **Planetary Surfaces** (for example, planetary astronomy, radiation effects, planetary geology, impact physics); and (iii) **Solid Earth Geophysics** (for example, tectonophysics, seismology, geomagnetism). Appointment is for a minimum of 2 years, with possibility of renewal. Concomitant with instructional duties, the successful candidate(s) is(are) expected to conduct original and significant research involving such topics as the evolution of planetary crust, atmosphere, and/or biosphere. Send résumé and three letters of recommendation by 1 January 1980 to: **M. G. Kivelson (Planetary Atmospheres), W. M. Kaula (Planetary Surfaces), or D. D. Jackson (Solid Earth Geophysics), Department of Earth and Space Sciences, University of California, Los Angeles, Los Angeles, California 90024.** UCLA is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**DEPARTMENT OF ANESTHESIOLOGY  
WASHINGTON UNIVERSITY  
SCHOOL OF MEDICINE  
(BARNES HOSPITAL, ST. LOUIS)**

Searching for **PROFESSOR AND HEAD** of Department of Anesthesiology at Washington University School of Medicine and **ANESTHESIOLOGIST-IN-CHIEF** at Barnes Hospital. Research accomplishments particularly important. Submit curriculum vitae with complete bibliography to:

**M. K. King, Dean  
Washington University School of Medicine  
Box 8106  
660 South Euclid Avenue  
St. Louis, Missouri 63110**

## PSYCHIATRISTS WANTED

Full-time or part-time Veterans Administration position as codirector or director of Clinical Psychiatric Research Ward. Affiliated with Case Western Reserve University (CWRU). Full academic appointment at CWRU. Excellent opportunity on 15-bed research ward in psychopharmacology, experimental therapeutics, or other areas of interest to investigator. Possible private practice opportunity as well.

For further information contact either: **Howard S. Sudak, M.D., Chief, Psychiatry Service, or Jerome Kowal, M.D., Chief of Staff, Cleveland Veterans Administration Medical Center,**

**10701 East Boulevard  
Cleveland, Ohio 44106  
Telephone: 216-791-3800, extension 7391 or 7205  
An Equal Opportunity Employer**

**PUBLIC INTEREST SCIENTIST**—Midwest's largest environmental group seeks scientist in our Chicago office for local and national toxics work. Requires an advanced degree (science or public health) or experience in governmental control of toxics. You must demonstrate writing and speaking skills and be capable of independently identifying and attacking toxics problems. Salary range: \$13,000 to \$16,000. Reply to: **Bill Forcade, Citizens for a Better Environment, Suite 1600, 59 East Buren Street, Chicago, Ill. 60605.**

## RADIATION BIOLOGY

The Radiation Biology and Biophysics Section at the Medical College of Wisconsin is seeking individuals to fill positions in its expanding research and teaching program at several levels: technician, graduate student, and research associate. The latter may qualify for regular faculty status.

Areas of investigation include interaction of hyperthermia and radiation on human normal and tumor cells, induction of mutations by x-rays, effects of toxic agents on membrane fluidity, response of melanoma cells in different states of differentiation to x-rays and drugs, response of normal and tumor tissue to various combinations of fractionated doses of x-rays, and the use of hypoxic cell sensitizers in tumor therapy.

For further information, please contact:

**Larry E. Hopwood, Ph.D.  
Therapeutic Radiology, MCMC Box 165  
The Medical College of Wisconsin  
8700 West Wisconsin Avenue  
Milwaukee, Wis. 53226**

## RESEARCH ASSOCIATE

A research associate (postdoctoral) position is available immediately in the laboratory of Dr. R. R. Weihing to study cytoplasmic proteins that interact with actin. Experience with contractile proteins preferred but not absolutely necessary. If interested send curriculum vitae and list of three references to: **Dr. R. R. Weihing, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

An Equal Opportunity/Affirmative Action Employer

**RESEARCH ASSOCIATE.** Position to be filled any time within the next 4 months. Salary: \$13,500 plus. M.A. required; Ph.D. preferred. Studies include the isolation of the genes coding for the myosin heavy chain in both normal and dystrophic chicks and control of their function during development. Experience with nucleic acid hybridization and restriction enzymes is highly desirable. Opportunity for independent research and publications. Send résumé and two letters of reference to: **Dr. Jeff Robbins, Department of Biochemistry, M-121 Medical Science Building, University of Missouri, Columbia, Mo. 65212.** An Equal Opportunity/Affirmative Action Employer.

OTEC

## Marine Biologist

Manage the biological monitoring and environmental assessment program at OTEC sites in the tropical oceans. Interpret data collected by subcontractors and LBL staff. Conduct marine research and surveys associated with the development of the OTEC program and other marine projects. Requires substantial experience in marine biology. Prefer PhD in Biology or Oceanography with appropriate publication record. Ocean-going experience desirable.

Send 2 resumes including salary history to: Employment Office  
Lawrence Berkeley Laboratory  
One Cyclotron Road  
Berkeley, California 94720



An Equal Opportunity  
Employer M/F/H

## DIRECTOR

**Biopharmaceutics, Drug Metabolism, Pharmacokinetics**  
Ann Arbor, Michigan

The Pharmaceutical Research Division of Warner-Lambert is seeking an outstanding scientist to head a newly constituted group. The new Director will be responsible for a group of 25-30 scientists dealing with absorption, distribution, metabolism and excretion of new drugs.

The successful applicant will have:

- Extensive personal experience with biopharmaceutic and drug metabolism studies in the pharmaceutical industry.
- Complete familiarity with and knowledge of radiochemical techniques both at the synthetic and analytical level.
- Experience and knowledge of sophisticated analytical techniques such as GC/MS and radioimmunoassay.
- A thorough and detailed knowledge of drug metabolism studies in relation to requirements of the FDA and other drug regulatory authorities.
- Management and leadership skills with abilities to motivate staff to a high level of scientific performance and to communicate well.

and be responsible for:

- all absorption, distribution, metabolism and excretion studies carried out in experimental animals with potential new drugs.
- bioavailability, bioequivalence, pharmacokinetic and metabolism studies in human subjects.
- providing an input into the Drug Discovery process from a knowledge of metabolism of known chemical compounds.

The Director of Biopharmaceutics and Drug Metabolism will liaise closely with other scientists in Pharmacology, Chemistry and Toxicology as well as the Clinical Research Group.

The research facilities, located next to the University of Michigan campus in Ann Arbor, Michigan, are among the finest and best equipped in the world and are devoted exclusively to the discovery and development of new drugs.

Join the exciting Research and Development Team at Warner-Lambert in this very key position and enjoy outstanding compensation, benefits and work environments.

Send your resume and salary history/requirements in confidence to:

Mr. D. Misner Personnel Supervisor  
WARNER-LAMBERT RESEARCH LABS.  
2800 Plymouth Road • Ann Arbor, Michigan 48106  
An Equal Opportunity Employer M/F



## Warner-Lambert

### University of Wisconsin- Madison Center for Health Sciences Dept. of Physiology

A faculty position at the Assistant Professor level is currently available. Applications are invited from persons with post doctoral experience and a demonstrated interest in endocrinology or neuroendocrinology. Participation is expected in the teaching program of the department, which includes courses in organ systems and cell physiology to undergraduates, graduates and medical students.

Interested candidates should submit curriculum vitae, complete bibliography, and have letters of reference from 3 individuals sent to:

**Dr. Richard C. Wolf**  
Dept. of Physiology  
**UNIVERSITY OF**  
**WISCONSIN-MADISON**  
470 N. Charter  
Madison, Wisconsin 53706

To receive full consideration, applications should be received by January 15, 1980.

The University is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

## CHIEF PREVENTION, EDUCATION, AND MANPOWER BRANCH Division of Lung Diseases

The National Heart, Lung, and Blood Institute is seeking applicants for the position of Chief, Prevention, Education, and Manpower Branch of the Institute's Division of Lung Diseases. The Prevention, Education, and Manpower Branch is responsible for design and management of programs which facilitate or implement the transfer of knowledge gained through research and development in the program area into clinical practice through educational measures, demonstrations, control programs, and planning and directing a program for the development of manpower trained in research pursuits.

Applicants must have a broad knowledge in one of the following fields: education, epidemiology, public health or preventive medicine, and have experience in administering, supervising, and performing scientific work in programs supported by grants-in-aid and by contract research. Applicants must have as a minimum, an M.D., or formal training through the Ph.D. or its equivalent. Additionally, the applicant must show evidence of having ability in program planning.

Salary range GS-14 to GS-15, dependent upon qualifications. Interested persons should submit curriculum vitae, bibliography, and a completed form SF-171 (Personal Qualifications Statement) by February 11, 1980 to Mr. Herb Jones, NHLBI Personnel Office, NATIONAL INSTITUTES OF HEALTH, Public Health Service, 9000 Rockville Pike, Building 31, Room 5A-32, Bethesda, Maryland 20205. For additional information please call (301) 496-6477. Equal Opportunity Employer.

## NATIONAL INSTITUTES OF HEALTH

## POSITIONS OPEN

### RADIOIMMUNOASSAYS

Challenging position for a candidate with M.S. or Ph.D. degree. Ability to set up RIA's for steroid and protein hormones and to train and effectively monitor one to three individuals. Send résumé, references, and salary requirements to: **Personnel Manager, E G & G Mason Research Institute, 57 Union Street, Worcester, Mass. 01608. An Equal Opportunity Employer.**

### RESEARCH ASSOCIATE NEPHROLOGY UNIT UNIVERSITY OF VERMONT

Full-time position in the Department of Medicine. Ph.D. in physiology needed to direct micropuncture acid-base laboratory. Candidates must have extensive postdoctoral experience in micropuncture techniques and acid-base physiology. Starting date: 1 July 1980. Send curriculum vitae and inquiries to: **Dr. F. John Gennari, Director, Nephrology Unit, University of Vermont, Department of Medicine, Given Medical Building, Burlington, Vermont 05405.**

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**RESEARCH ASSOCIATE**—Postdoctoral position in neuropharmacology. To participate in neurophysiological experimentation on animal models of epilepsy involving single-unit, multiunit, and field potential recordings from the brainstem. Applicant should have a Ph.D. in pharmacology, physiology, psychology, or related field. Experience in electrophysiological recording techniques and experimental surgery is required. Position is available on or about 1 January 1980 with a salary of \$12,000 to \$15,000 per year, depending on qualifications, plus fringe benefits. Initial appointment is through 31 December 1980, with a possibility of renewal through 31 December 1982. Send curriculum vitae and names of three references to: **Dr. Carl Faingold, Department of Pharmacology, Southern Illinois University School of Medicine, Springfield, Ill. 62708, no later than 15 December 1979. Southern Illinois University School of Medicine is an Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE POSITION

Ph.D. or equivalent with experience in nucleic acid reassociation kinetics to collaborate on a study of mechanisms of cartilage differentiation at the chromatin level. Position is available immediately with a salary of \$13,000 per year.

Send curriculum vitae and names of two references to: **Dr. S. A. Newman, Department of Anatomy, New York Medical College, Basic Science Building, Valhalla, New York 10595.**

**RESEARCH POSITION**, postdoctoral or permanent at university hospital in Midwest. Biochemist with carbohydrate chemistry background and skill. Doctorate required. Work on cell-surface glycoconjugates in relation to human cancer. Excellent benefits and salary. **Box 311, SCIENCE.**

### RESEARCH/TECHNICAL ASSOCIATE

Ph.D. biochemist with experience/interest in neurochemistry to study enzymes of purine metabolism, amino acid levels, development of enzyme assays, purification of proteins, kinetic studies, nucleic acids, and so forth. Excellent salary/benefits. Send résumé to: **Dr. Sudhir Kumar, Director, Perinatal Laboratory and Research, Christ Hospital, 4440 West 95 Street, Oak Lawn, Ill. 60453. Telephone: 312-425-8000, extension 5690. Equal Opportunity Employer.**

### UNIVERSITY OF ARIZONA SENIOR FACULTY COMMUNITY MEDICINE

Physician wanted to direct major section in Department of Family and Community Medicine. Professorial rank, position requires national, international activities, health care administration and management, community development, and graduate/undergraduate education. Responsibilities include directing general preventive medicine, residency program.

Sun-belt university community with pleasant climate and life-style. Salary is negotiable. Excellent fringe benefits package. *Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.* All inquiries confidential. Send résumé to: **Search Committee A, Department of Family and Community Medicine, University of Arizona, Health Sciences Center, Tucson, Ariz. 85724.**

## POSITIONS OPEN

### Michigan State University Mass Spectrometry Facility

An opening exists for a **RESEARCH SPECIALIST** in natural products chemistry and mass spectrometry. Applicant should be a natural products chemist or biochemist with expertise in the isolation, separation, and structural characterization of organic compounds using microanalytical separation and mass spectrometric techniques. This person will be a member of the mass spectrometry facility group and will perform in concert with the other members of that group in collaborative research, core research, and service and training functions. In addition, he/she will be encouraged to develop an active research program in an area encompassing mass spectrometry and plant natural products chemistry, plant biochemistry, or plant physiology.

The appointment will be as a research specialist and the position will carry job security and could lead to a tenure-track academic appointment. Applicants should submit curriculum vitae, including a statement of research interests, and should identify three references. Submit materials to: **Dr. John F. Holland, Department of Biochemistry, Michigan State University, East Lansing, Michigan 48824. Michigan State University is an Equal Opportunity Employer.**

We are looking for a **RESEARCH TECHNICIAN** with experience in histology, tissue culture, and animal work. The position is available for 1 year. Salary: \$12,000 to \$14,000 per annum. Please send application to: **Professor M. M. Burger, Biocenter, University of Basel, Klingelbergstrasse 70, CH-4056, Basel, Switzerland.**

### SENIOR SCIENTIFIC PROGRAMMER

A Washington University research program in molecular modeling and graphics has a position available for a senior staff member to assist in the development of application software and support of a National Collaborative community. The community currently involves ten research groups who are using the MMS-X Computer Graphics System, developed by the Computer Systems Laboratory, for research on the structure and function of biologically important molecules.

Candidates should have a graduate research degree with experience in crystallographic computing and in the use of both high-performance graphics and minicomputer systems. The salary will depend on qualifications and experience. Applications should include a résumé and should be supported by letters of reference directed for the attention of:

**Dr. C. D. Barry  
Director, MMS-X National  
Collaborative Research Program  
Computer Systems Laboratory  
724 South Euclid Avenue  
St. Louis, Mo. 63110**

**VETERINARY IMMUNOGENETICIST.** Ph.D. with minimum of 2 years of postdoctoral experience or Ph.D./D.V.M., together with demonstrated scientific productivity and teaching ability, are required. Rank and salary are negotiable. Send curriculum vitae and names of three references to: **Chairman, Immunogeneticist Search Committee, Department of Microbiology and Public Health, Michigan State University, East Lansing, Mich. 48824. Michigan State University is an Equal Opportunity Employer.**

**VIROLOGIST.** Search reopened. Applications are solicited for a 9-month, tenure-track faculty position. The appointment will be at the assistant professor level and will be available immediately. Applicants must have Ph.D. and postdoctoral experience. The successful candidate will be expected to develop and direct a quality research program and advise graduate students. Preference will be given to candidates actively studying viral diseases and viral pathogenesis, but applications from individuals working in other areas will be considered. Responsibilities will include teaching at the introductory and advanced levels. Send curriculum vitae and three letters of reference to: **Neil R. Baker, Chairman, Search Committee, Department of Microbiology, The Ohio State University, 484 West 12 Avenue, Columbus, Ohio 43210. Applications will be accepted until 1 March 1980.**

*An Equal Opportunity/Affirmative Action Employer. All qualified persons, including women, members of minority groups, and the handicapped, are encouraged to apply.*

## POSITIONS OPEN

Positions are available in the Department of Biochemistry for **TEACHER-RESEARCHERS** in molecular genetics and in the metabolism and structure of cell surface glycoproteins or the components of the cytoskeletal system. The positions are tenure-track and are at the level of assistant professor. Interested candidates should contact: **Dr. M. Waite, Department of Biochemistry, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina 27103. Telephone: 919-727-4255. An Equal Opportunity/Affirmative Action Employer.**

## GRADUATE STUDY

### GRADUATE SCHOOL AT NORTH DAKOTA STATE UNIVERSITY

Check out our interdisciplinary program of applied physics. We combine the comfortable atmosphere of a small department with a program which involves campus-wide faculty cooperation. Current research areas include biophysics, environmental modeling, laser spectroscopy, medical physics, and surface physics. Research is conducted jointly with Departments of Biochemistry, Biology, Botany, Chemistry, Computer Science, and Engineering, local hospitals, and industry. M.S. and Ph.D. degrees offered. T.A. and R.A. positions available. Write today for information to: **Chairman, Graduate Advisory Committee, Department of Physics, North Dakota State University, Fargo, N.D. 58105. An Equal Opportunity/Affirmative Action Employer.**

**GRADUATE TRAINING IN BIOCHEMISTRY AND BIOPHYSICS** at the University of Hawaii. Join our active medical school department engaged in numerous research projects of interest and importance. Unique geographical and cultural setting. Pre-doctoral teaching and research assistantships available September 1980 to qualified applicants. Write to: **Chairman, Department of Biochemistry and Biophysics, University of Hawaii, Honolulu, Hawaii 96822. An Equal Opportunity Employer.**

### GRADUATE STUDY IN ENVIRONMENTAL HEALTH School of Public Health Harvard University

Traineeships available for M.S. degree candidates in industrial hygiene and occupational health, air pollution control, radiation protection, environmental health management, and medical radiological physics. Candidates for doctoral studies in these same fields are invited to apply for Leslie Silverman Fellowship which will be awarded for the 1980-1981 academic year. Traineeships and fellowship provide tuition plus monthly stipend of \$350. Deadline for applications is 1 February 1980. Contact: **Dade W. Moeller, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115. Affirmative Action Employer.**

## TRAINING PROGRAMS

**MYCOLOGY**—Pre-doctoral training program in medical mycology for research orientation into immunologic or biochemical problems associated with a pathogenic fungus. The program offers a broad background in microbiology, biochemistry, and training in medical mycology. Supported by a National Service Award in Medical Mycology. Personal stipend and full tuition provided. Interested graduate and undergraduate students should apply to: **Dr. H. R. Buckley, Department of Microbiology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

The Yale University Department of Epidemiology and Public Health invites applications for **DOCTORAL AND POSTDOCTORAL STUDIES** in cardiovascular disease measurement. The program is sponsored by the Divisions of Biometry and Epidemiology. Fellowship awards will include a stipend and tuition. Interested individuals may obtain additional information from: **Dr. Adrian Ostfeld (Epidemiology) or Daniel H. Freeman, Ph.D. (Biometry), Department of Epidemiology and Public Health, Yale University, 60 College Street, New Haven, Conn. 06510. Applications for the doctoral program must be received by 20 January 1980.**

## THE UNIVERSITY OF PAPUA NEW GUINEA (PORT MORESBY)

Applications are invited for the post of LECTURER GRADE 1/11 IN PHYSIOLOGY in the DEPARTMENT OF HUMAN BIOLOGY in the Faculty of Medicine. It is expected that the appointee will share in the teaching of Physiology, undertake research and be actively involved in the National Staff Development Programme. The Department is responsible for teaching basic medical sciences to undergraduate and postgraduate students. Courses offered include gross anatomy, histology, embryology, neuroanatomy/neurophysiology, medical physiology, biochemistry and pharmacology. A higher degree in physiology or a medical qualification with teaching experience in physiology is required. Teaching and/or research experience in a developing country would be an advantage. Salary scales:—Lecturer Grade I K11,875pa, Lecturer Grade II K13725pa, (£1 sterling = K1.55). Family passages; baggage allowance; clinical allowance; 3 year contract; 24% gratuity of which 5% is taxable; research support; rent-free accommodation; overseas leave; education allowances; medical scheme. Detailed applications (2 copies) with curriculum vitae and naming 3 referees to be sent direct to the Secretary, University PO, Papua New Guinea, by 17 December 1979. Applicants resident in the UK should also send one copy to the Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Further details may be obtained from either address.

## RESEARCH OPPORTUNITIES IN ENERGY-RELATED FIELDS FOR FACULTY AND STUDENTS AT DEPARTMENT OF ENERGY RESEARCH FACILITIES

The Department of Energy's research facilities invite applications from qualified faculty and graduate and undergraduate students interested in participating in ongoing DOE energy-related research and development. The facilities are located in Carbondale, Illinois; Bartlesville, Oklahoma; Pittsburgh, Pennsylvania; Puerto Rico; Aiken, South Carolina; Oak Ridge, Tennessee; and Morgantown, West Virginia. Appointments may be made for the summer and a limited number for the academic year.

The program is managed for the Department of Energy by Oak Ridge Associated Universities. Information and application materials may be obtained from:



Oak Ridge Associated Universities  
University Programs  
P.O. Box 117  
Oak Ridge, Tennessee 37830

This is an equal opportunity program open to qualified persons without regard to race, sex, creed, color, or national origin. The program is open to permanent resident aliens and U.S. citizens.

## BIOCHEMIST, ENZYMOLOGIST

Biochemist, enzymologist, with Ph.D. or equivalent laboratory experience, wanted to participate in research program on DNA polymerase and DNA replication. Position available immediately, \$12,500 starting salary. Send curriculum vitae, summary of research experience, and letters of recommendation to:



### NEW YORK UNIVERSITY

Faculty of Arts and Science  
Department of Biology  
952 Brown Building  
Washington Square  
New York, N.Y. 10003

Attn.: Dr. C. L. Brakel

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## SPECIAL ASSISTANT FOR RISK ASSESSMENT

National Institute of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service is seeking a senior outstanding microbiologist or infectious diseases expert to develop a program in risk assessment for recombinant DNA research. The primary responsibility will be to work with NIH staff, the Recombinant DNA Advisory Committee, and the scientific community to assess risk areas of DNA research and to determine the needs for a program of experiments to obtain data not otherwise available. The appointee will work as a special assistant to the Director of the Institute who has responsibility for the HEW Program of Risk Assessment.

Because the long-range need for a permanent full-time Director of Risk Assessment cannot be foreseen at this time, the initial appointment will be made through an Intergovernmental Personnel Act Agreement with the parent educational or research institution. This agreement will provide reimbursement to the institution for salary and fringe benefits for a two-year period. Alternately, an expert appointment for two years could be available. Moving expenses are payable by the government.

Inquiries or applications can be addressed to the Director, National Institute of Allergy and Infectious Diseases, NATIONAL INSTITUTES OF HEALTH, Bethesda, MD 20205. Applications should be by letter and accompanied by a curriculum vitae and bibliography by January 2, 1980. An Equal Opportunity Employer.

NATIONAL INSTITUTES OF HEALTH



## TRAINEESHIPS

**TRAINING IN METABOLISM, PREDOCTORAL AND POSTDOCTORAL TRAINEESHIPS** are available in July 1980 and 1981 in an NIH-supported program. Trainees participate in courses, seminars, and collaborative research under joint supervision of faculty of the Departments of Biochemistry, Medicine, Pediatrics, and Pharmacology of Case Western Reserve University, School of Medicine. The program is designed for the Ph.D. or would-be Ph.D. desiring a foundation in clinical investigation while developing his or her basic science capabilities and for M.D.'s to obtain expertise in basic science. Ph.D. candidates must fulfill the requirements of the basic science departments for awarding the degree. Trainees must be U.S. citizens or permanent residents. For detailed information write to: **Dr. Merton F. Uter, Program Director, Department of Biochemistry, Case Western Reserve University, School of Medicine, Cleveland, Ohio 44106.**

**POSTDOCTORAL TRAINEESHIP—BIOCHEMISTRY OF AGING.** Positions are available 1 January at Boston University School of Medicine, supported by the National Institute on Aging. Projects include the study of nuclear and chromosomal changes in the brain, connective tissue, and kidney. A recent Ph.D. in molecular biology or biochemistry is preferred. Send curriculum vitae and the names of at least two references to: **F. Marott Sinex, Ph.D., Head, Section of Biomedical Gerontology, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118. An Equal Opportunity Employer.**

### POSTDOCTORAL TRAINEESHIP IN MOLECULAR BIOLOGY

Available immediately to study replication of bacteriophage lambda. Contact:

**Dr. Frederick R. Blattner**  
Department of Genetics  
University of Wisconsin  
Madison, Wisconsin 53706.

## FELLOWSHIPS

**POSTDOCTORAL OR RESEARCH ASSOCIATE.** Janice Gram Fellowship established for study of motor neuron disease. Position available January 1980 for M.D. or Ph.D. Neuron-neuron and neuron-glial relationships in vitro; emphasis on neuroendocrinology and receptor autoradiography. Background in neuroanatomy and/or neuroendocrinology preferred. Salary to \$15,000. Submit curriculum vitae and three references to: **Dr. L. P. Weiner, Department of Neurology, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles, California 90033. Equal Opportunity/Affirmative Action Employer.**

### RESEARCH FELLOWSHIP

A postdoctoral cytogeneticist or molecular biologist, with experience in human karyotyping, is required to participate in a project on the analysis of chromosomes from human solid tumours.

The appointment is for 3 years. Salary with entry according to qualifications and experience within range £5990 to £7434 including L.A. For further information telephone: **Dr. E. Solomon at 242-0200, extension 426.** Applications with curriculum vitae and names of two referees should be sent to: **The Secretary, Imperial Cancer Research Fund, Lincoln's Inn Fields, London W.C.2, England, quoting reference 408/79.**

### POSTDOCTORAL FELLOWSHIP IN CELLULAR NEUROBIOLOGY

NIH training fellowship for work on membrane properties, synaptic relationships, and ultrastructure of large neurons in the central nervous system of the lamprey. Send curriculum vitae and letters of reference to:

**Warren O. Wickelgren, Ph.D.**  
Department of Physiology, C240  
University of Colorado Medical School  
4200 East Ninth Avenue  
Denver, Colorado 80262

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## FELLOWSHIPS

### C. H. BEST FOUNDATION POSTDOCTORAL FELLOWSHIP

Awarded in molecular endocrinology, molecular biology, differentiation, immunology, structure and function of membranes, and lipid metabolism. Tenable for 2 years from 1 July 1980 with a stipend of \$15,000, plus traveling and dependents' allowance. Applicants with fewer than 2 years of postdoctoral experience should send curriculum vitae and three letters of reference before 15 January 1980 to: **Chairman, Search Committee (Dr. J. Dorrington), Banting and Best Department of Medical Research, University of Toronto, Toronto, Canada M5G 1L6.**

### POSTDOCTORAL RESEARCH FELLOWSHIPS

**Simpson Memorial Research Institute  
University of Michigan Medical School**

NIH training positions available July 1980, for M.D.'s or Ph.D.'s in broad field of hematology/oncology. Major research programs in (i) immunology (macrophage/lymphocyte studies), (ii) leukocyte biochemistry, (iii) hematopoiesis, (iv) clinical and laboratory pharmacology, (v) tumor cell kinetics and biochemistry, (vi) gene expression in normal and malignant cells, (vii) corticosteroid receptor modulation in lymphoid cells, (viii) coagulation, (ix) platelet function and metabolism, (x) red cell biochemistry, (xi) hemoglobinopathies, and (xii) biochemical mechanisms of immunodeficiency states.

Applications should include curriculum vitae, two letters of recommendation, and indication of major research interests. Send application or letter of inquiry to: **Dr. Albert F. LoBuglio, Simpson Memorial Research Institute, University of Michigan, 102 Observatory Road, Ann Arbor, Mich. 48109.**

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The Department of Biochemistry at The University of Texas Health Science Center at San Antonio invites applications for **Graduate Teaching Assistantships** for fall 1980. The department has vigorous research programs that cover a wide range of biochemical areas leading to the Ph.D. degree and is well equipped for research. Stipends for a 12-month period begin at \$5400. For more information, write to: **Dr. Paul Horowitz, Department of Biochemistry, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOWSHIP IN BIOLOGICAL PSYCHOLOGY.** University of Oklahoma Health Sciences Center. Appointment for approximately 1 year, to begin immediately. Candidates should have strong research backgrounds either in human cognitive processes or human performance, with interests in electrophysiology, psychophysiology, or neuropsychology. Interest in psychobiological applications to such health-related areas as alcohol or drugs is essential. Collaborative and independent studies in the above areas are expected. Opportunities exist for advanced training in biological and psychobiological areas related to behavior. Candidates are expected to assume light teaching loads in the Biological Psychology Ph.D. Program. Eleven-month salary range is \$10,000 to \$13,250, dependent on qualifications. Submit a letter of application, curriculum vitae, names and addresses of three references, and two recent preprints or reprints to: **Professor Harold L. Williams, Department of Psychiatry and Behavioral Sciences, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190. The University of Oklahoma is an Equal Opportunity Employer.**

**POLYMER SCIENCE AND ENGINEERING.** University of Massachusetts at Amherst.

Research fellowships will be awarded in 1980-1981 for studies toward a Ph.D. degree in the Polymer Science and Engineering Department.

Each fellowship will pay up to \$5500 per year. The stipends are income tax-free and include a tuition waiver.

Research and course programs are available in polymer synthesis, characterization, morphology, rheology, physics, and engineering.

Applications by qualified students with a first degree in chemistry, physics, materials science, or engineering should be made to: **Professor Richard Farris, Polymer Science and Engineering, University of Massachusetts, Amherst, Massachusetts 01003.**

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## FELLOWSHIPS

**POSTDOCTORAL FELLOWSHIP IN EXPERIMENTAL HEMATOLOGY/ONCOLOGY**—A postdoctoral position is immediately available for an individual to investigate in vitro aspects of normal and malignant hematopoiesis. Experience desired in tissue culture, cell separatory procedures, and biochemical characterization of biologically active molecules. Send résumé and request that three letters of recommendation be sent to:

**Dr. Martin J. Murphy, Jr., Director**  
**The Bob Hippie Laboratory for Cancer Research**  
Wright State University School of Medicine  
3525 Southern Boulevard  
Dayton, Ohio 45429

*Wright State University is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL FELLOWSHIP IN IMMUNOBIOLOGY.** Postdoctoral fellowships in cancer immunobiology are available at Sloan-Kettering Institute for Cancer Research. Fellows will be trained in cellular immunology, development and interaction of lymphoid cells, molecular immunology, clinical immunology and cancer, human and mouse immunogenetics, tumor immunology, cell surface immunology, and immunogenetics. Training methods include individualized research with qualified mentor, training in clinical laboratory analysis, lectures, courses, seminars, discussions, rounds, clinics, and conferences. Individual research program will be offered either in New York City or at Walker Laboratory, Rye, N.Y. Only U.S. citizens or foreign nationals with permanent resident or immigrant visas will be considered. Send inquiry with brief résumé to: **Dr. Y. S. Choi, Immunobiology Training Program Director, Sloan-Kettering Institute for Cancer Research, 145 Boston Post Road, Rye, N.Y. 10580. An Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL FELLOWSHIPS

Postdoctoral fellowships are available in the Department of Molecular Biology and Biochemistry at the University of California, Irvine. These fellowships are for 1 or 2 years under the sponsorship of the following faculty members: **R. Davis:** biochemical genetics of *Neurospora*; **G. A. Granger:** cell and molecular mechanisms operative in cellular immunity; **B. A. Hamkalo:** eukaryotic chromosome structure and function; **S. Hayes:** gene regulation and replication; **B. Levy-Wilson:** structure of transcriptionally active chromatin in higher cells; **J. E. Manning:** gene sequence organization in eukaryote DNA, electron microscopy; **W. D. Nunn:** regulation of membrane lipid metabolism, genetic approaches; **W. M. Stanley, Jr.:** protein biosynthesis in eukaryotic cells; **K. K. Tewari:** nucleic acids of chloroplasts and other organelles; **E. K. Wagner:** nucleic acids and molecular biology of herpesvirus replication; **R. C. Warner:** mechanism of genetic recombination; and **C. A. Woolfolk:** general microbiology, enzymology.

For further information contact the individual faculty member or write to: **Yvonne Gilbert, The Department of Molecular Biology and Biochemistry, University of California, Irvine, California 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.**

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## announces SPECIAL FELLOWSHIP PROGRAMS FOR 1980

These fellowships are intended for investigators and students who have specific interests and backgrounds or who have reached specific stages of career development. Most awards are for support of research to be done at MBL during the summer and may be used to defray laboratory fees, housing, travel, and other personal expenses.

### **STEPS TOWARD INDEPENDENCE FELLOWSHIPS**

Intended primarily for persons already holding faculty appointments at the Instructor or Assistant Professor level, this program provides the facilities, associations, and training necessary for them to apply and develop research abilities beyond the immediate postdoctoral years.

### **MACY FELLOWSHIPS FOR BLACKS AND OTHER MINORITIES**

The Josiah Macy, Jr. Foundation provides funds to support blacks and other minority groups in research and educational activities at MBL. Preference is given to faculty members and students in four-year, predominantly black colleges.

### **GRASS FOUNDATION FELLOWSHIPS**

The Grass Foundation makes available to young investigators fellowships for summer research in neurophysiology at MBL. Applicants may be predoctoral or fewer-than-3-years postdoctoral and should have no previous research experience at MBL.

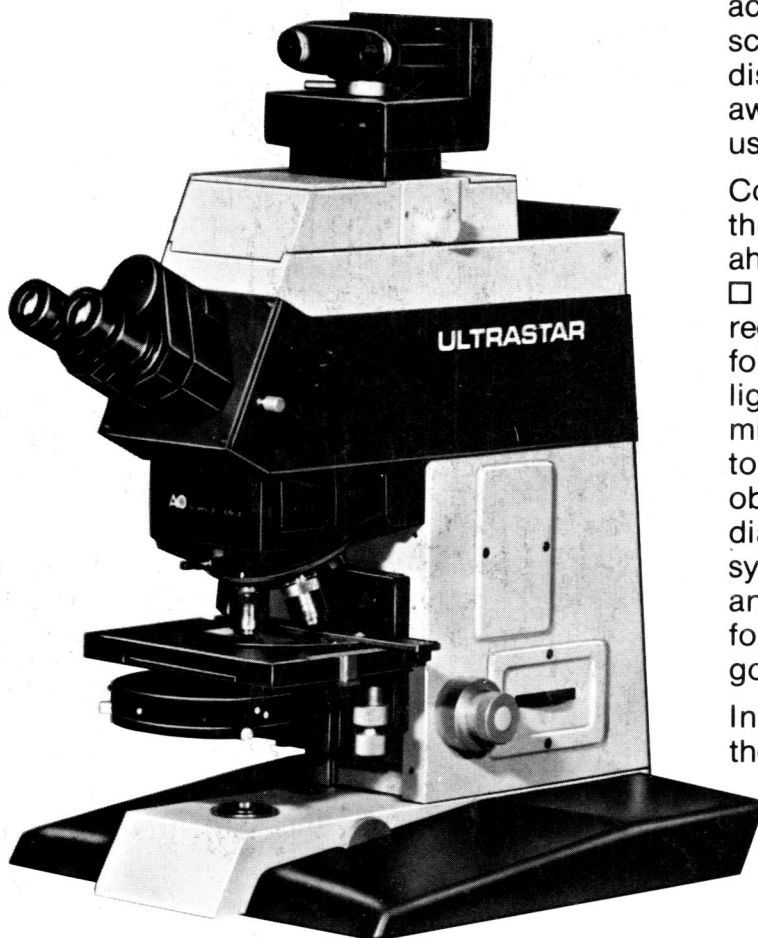
Additional Information and Application Materials may be obtained from the Admissions Office, Marine Biological Laboratory, Woods Hole, MA 02543 (for Steps Toward Independence and Macy Fellowships) and from the Grass Foundation, 77 Reservoir Road, Quincy, MA 02170 (for Grass Fellowships).



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