

could be resolved by deep drilling in the vicinity of hydrothermal vents. None of the papers in this section appears to recognize the potential value of integrating theoretical calculation of high-temperature aqueous speciation and chemical mass transfer with the currently available experimental and field results.

In the section on mass balances and cycles, the overview paper, by Turekian, is particularly valuable because it discusses the results of the other papers in the section in the context of hydrothermal processes in the oceans. All the papers in the section contain new data and ideas. Von Damm *et al.* present new data on the chemistry of the 21°N vent waters. Welhan and Craig present data on the abundances and isotopic compositions of methane, hydrogen, and helium in the 21°N vent waters and conclude that the hydrothermal methane was extracted directly from basalt by the circulating seawater and hence has an abiogenic origin. However, a paper by Lilley *et al.* and one by Jannasch in another section both suggest that bacteria may play a role in determining the methane and carbon dioxide contents of the vent fluids. A paper by Simoneit is the only paper in the volume dealing with results from the recently discovered petroleum-bearing hydrothermal vents in the Guaymas Basin, Gulf of California.

The section on hydrothermal mineralization contains a paper on the currently active sulfide chimneys near 13°N (Heikinian *et al.*) and a paper on ancient sulfide deposits in the Mesozoic Tethys Ocean (Robertson and Boyle). Though the discovery of active sulfide mineralization in the ocean has been stimulating, the papers in this section clearly indicate that the present-day systems should be studied in much more detail before their significance with respect to ancient metallic ore deposits can be understood. This point is emphasized in the overview paper, by Skinner, which contrasts the tectonic settings and host-rock lithologies of the present-day rift-related sulfide deposits and those of the ancient massive sulfide deposits that appear to have formed in back-arc basins.

The value of this volume is that it deals with virtually every aspect of hydrothermal processes at sea-floor spreading centers, both modern and ancient, that has been investigated to date. Such broad coverage is possible because most of the research bearing directly on the hydrothermal processes is, as the editors point out, at an early stage of description and interpretation. In ten years' time it will probably not be possible to achieve such broad coverage in a single volume. I

highly recommend this volume both to people who want an introduction to the field and to active researchers in it. The inclusion of readable color maps and illustrations and excellent photographs, both color (taken from submersibles) and black-and-white, helps to make the volume attractive.

DIMITRI A. SVERJENSKY

*Department of Earth and Planetary Sciences, Johns Hopkins University, Baltimore, Maryland 21218*

## Honoring Munk

**"It's the Water That Makes You Drunk."** A Celebration in Geophysics and Oceanography—1982. In Honor of Walter Munk on His 65th Birthday. (La Jolla, Calif., Oct. 1982.) Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography, La Jolla, Calif., 1984. vi, 118 pp., illus. Paper. Scripps Institution of Oceanography Reference Series 84-5.

The title of this book comes from a story told by W. Markowitz at a dinner during the time of Walter Munk's preoccupation with problems of the earth's rotation. It is said that a logical scientist decided to determine the cause of drunkenness. On successive days, he consumed large quantities of scotch and water, bourbon and water, and vodka and water. Becoming very drunk in each case, he concluded that the water was responsible. Water may not have made Walter Munk drunk, but it has certainly provided him with a lifelong intellectual high, as this volume attests.

Munk's delightful autobiographical sketch at the beginning of the book gives glimpses of the great range and depth of his contributions to oceanography and geophysics. He writes modestly: "During my career I have worked on rather too many topics to have done a thorough job on any one of them; most of my papers have been superseded by subsequent work. But 'definitive papers' are usually written when a subject is no longer interesting. If one wishes to have a maximum impact on the rate of learning, then one needs to stick out one's neck at an earlier time." He has certainly done this. From his early work on wave generation in the '40's and wind-driven ocean gyres and earth wobble and spin in the '50's, to more recent contributions on radar clutter, swell propagation, internal waves, tides, and low-frequency oscillations and his present involvement with ocean acoustics, he has shown exquisite taste and consistent depth of perception. He himself does not

say so, of course, but the other contributors do not hesitate to do so.

Klaus Hasselmann shows how Sverdrup and Munk's pioneering work on wave prediction has flowered in the subsequent 40 years; Christopher Garrett explores the dynamical processes that seem to be involved in determining the form of the celebrated Garrett-Munk spectrum of internal waves; Carl Wunsch entertains us by discussing the contrasts between the theoretical oceans, the laboratory oceans, and the real ones; Gordon MacDonald gives a more serious review of the greenhouse effect and acid rain, and Adrian Gill offers a less serious note on the tides of the euripus. An ode introduces Stanley Flatte's informal but informative account of internal wave tomography, and Roger Revelle explains why it is important to be lucky.

There are other contributions as well; this is a joyful publication honoring one of the deans of modern oceanography and geophysics. It is a delight to read and will be a treasure to keep.

O. M. PHILLIPS

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## Books Received

**Altered Endocrine Status during Aging.** Vincent J. Cristofalo *et al.*, Eds. Liss, New York, 1984. xvi, 260 pp., illus. \$44. Modern Aging Research, vol. 6. From a symposium, Philadelphia, April 1983.

**Analgesics.** Neurochemical, Behavioral, and Clinical Perspectives. Michael J. Kuhar and Gavril W. Pasternak, Eds. Raven, New York, 1984. x, 341 pp., illus. \$82.50. Central Nervous System Pharmacology.

**Broken Earth.** The Rural Chinese. Steven W. Mosher. Free Press (Macmillan), New York, and Collier Macmillan, London, 1984. xiv, 317 pp. + plates. Paper, \$8.95. Reprint, 1983 edition.

**The Caffeine Book.** Frances Sheridan Goulart. Dood, Mead, New York, 1984. xii, 210 pp. Paper, \$8.95.

**Deconvolution.** With Applications in Spectroscopy. Peter A. Jansson, Ed. Academic Press, Orlando, Fla., 1984. xvi, 342 pp., illus. \$69.

**Ecological Communities.** Conceptual Issues and the Evidence. Donald R. Strong, Jr., *et al.*, Eds. Princeton University Press, Princeton, N.J., 1984. xiv, 614 pp., illus. \$60; paper, \$22.50. From a symposium, Wakulla Springs, Fla., March 1981.

**Lysosomes in Biology and Pathology.** 7. J. T. Dingle, R. T. Dean, and W. Sly, Eds. Elsevier, New York, 1984. xx, 479 pp., illus. \$125.

**Magnetic Resonance.** Introduction, Advanced Topics and Applications to Fossil Energy. Leonidas Petrakis and Jacques P. Fraissard, Eds. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). xii, 807 pp., illus. \$98. NATO ASI Series C, vol. 124. From an institute, Maleme, Crete, Greece, July 1983.

**The Psychopharmacology of Smoking.** G. L. Mangano and J. F. Golding. Cambridge University Press, New York, 1984. x, 257 pp., illus. \$49.50.

**Quantum-Mechanical Tunneling in Biological Systems.** Don DeVault. 2nd ed. Cambridge University Press, New York, 1984. xii, 207 pp., illus. \$44.50.

**The Total Synthesis of Natural Products.** Vol. 6. John ApSimon, Ed. Wiley-Interscience, New York, 1984. xii, 291 pp., illus. \$44.

**Transcription and Translation.** A Practical Approach. B. D. Hames and S. J. Higgins, Eds. IRL Press, Washington, D.C., 1984. xviii, 330 pp., illus. Paper, \$24. Practical Approach Series.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. 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, handicap, or sexual preference.

## LINE CLASSIFIED ADVERTISING DEADLINES:

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**30 November**  
 No 28 December issue  
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 11 January issue (mailed 4 January): **19 December**

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Effective 1 January 1985, the line display rate will be \$11.40 per millimeter, with a \$285 minimum charge per week.

## POSITIONS WANTED

**Biochemist/Marine Bioadhesion.** Ph.D. 1976. Experienced isolation, characterization, and polymerization of marine invertebrate adhesive proteins. Excellent publications and references. Committed grant and contract support of a million dollars. Seeking an improved research environment. Box 270, SCIENCE. X

**Biochemist/Spectroscopist.** Ph.D. 1978. Experience in membrane biochemistry; fluorescence spectroscopy and microscopy; protein purification/modification; enzyme kinetics; immunochemistry. Publications. Seeks position in industry/academia. Box 276, SCIENCE. X

**Biomathematician** seeks position as biostatistician or mathematical modeler. Ph.D. biomathematics. M.S. mathematics. Teaching, consulting, and programming experience. Publications. Address: 1211 Ashburton Road, Raleigh, N.C. 27606. X

**Molecular Biologist.** Ph.D., extensive research experience in academia and industry. Publications and patents covering wide area of recombinant DNA research, DNA synthesis, sequencing, cloning, expression, and DNA hybridization. Seeks senior industrial research position. Box 278, SCIENCE. X

**Pharmacologist** M.S., 183 multidisciplinary education. Experience with microsomal metabolism, radioligand binding, cell culture, and techniques for animal experimentation in immunology. Chemistry background. Industrious, effective communicator. Available immediately. Box 280, SCIENCE. X

## POSITIONS WANTED

**Microbiology/Molecular Biology.** M.S. Extensive tissue culture, molecular virology, recombinant DNA technology, restriction mapping, plasmid construction, chemical and transposon mutagenesis, protein/toxin characterization, serological/immunological assay procedures, industrial-scale fermentation. Five years of academics, 6 years of industrial experience. Box 277, SCIENCE. 11/30; 12/7

**Recent Graduate** with biochemistry and management degrees seeks employment and investment opportunity in a biochemically based firm. Reply to: Laurence Seenath, Number 7-5500 Rosedale Avenue, Cote St. Luc, Quebec, Canada H4V 2J1. Telephone: 514-486-7100. 11/30; 12/7

**Research Assistant, M.S.,** experienced with recombinant DNA, enzymology, electrophoresis, radioisotopes, nick translation, DNA hybridization, autoradiography, sterile techniques, DNA isolation. Seeks challenging position in molecular biology. Box 279, SCIENCE. X

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSOR

**MICROBIOLOGY—Infectious Disease,** tenure-track position available 1 July 1985, Ph.D., M.D. or D.D.S. with research and teaching experience in infectious diseases, preferably related to the oral cavity. Candidate will be responsible for teaching infectious diseases to medical, dental, and graduate students and is expected to pursue independent research in infectious diseases at the molecular level. Interested candidate should send curriculum vitae, names of three references, and a brief statement of research interest by 1 February 1985 to: **Dr. Gary R. Pearson, Professor and Chairman of Microbiology, Georgetown University Schools of Medicine and Dentistry, 3900 Reservoir Road, NW, Washington, D.C. 20007.**

*An Equal Opportunity/Affirmative Action Employer*

### ASSISTANT PROFESSOR OF BIOCHEMISTRY

A tenure-track position will become available in September 1985. Preference will be given to candidates with two or more years of postdoctoral experience and established record of productivity. Candidates conducting research in any area of biochemistry and molecular biology will be considered. Duties will involve teaching graduate and/or introductory level biochemistry and molecular biology courses. The appointment is for 9 months at an excellent salary level. Please submit curriculum vitae, research synopsis (two to three pages), and letters of recommendation from three references by 1 January 1985. Send material to: **Dr. Leaf Huang, Chairman, Search Committee, Department of Biochemistry, University of Tennessee, Knoxville, Tenn. 37996-0840.**

### ASSISTANT PROFESSOR OF BIOCHEMISTRY

A molecular biologist is sought to fill a tenure-track position which will become available in September 1985. Preference will be given to candidates with two or more years of postdoctoral experience and established record of productivity. Candidates conducting research in an area which involves the use of recombinant DNA techniques are encouraged to apply. Duties will involve teaching graduate and/or introductory level biochemistry and molecular biology courses. The appointment is for 9 months at an excellent salary level. Please submit curriculum vitae, research synopsis (two to three pages), and letters of recommendation from three references by 1 January 1985. Send material to: **Dr. Leaf Huang, Chairman, Search Committee, Department of Biochemistry, University of Tennessee, Knoxville, Tenn. 37996-0840.**

**ASSISTANT PROFESSOR OF PATHOLOGY.** Tenure-track position open for Board-certified pathologist to help supervise active autopsy service of the University of Wisconsin Hospitals—Madison. Autopsy director will have a large support staff of residents and attending pathologists. Fully 50 percent of time will be free for individual research. Many opportunities for collaboration with hospital, medical school, and graduate facility. Preference given to a candidate committed to a career of research and teaching in an academic setting. Send curriculum vitae and names of three references to: **Frank C. Larson, M.D., Department of Pathology and Laboratory Medicine, B4/251, Clinical Science Center, 600 Highland Avenue, Madison, Wisc. 53792. Equal Opportunity Employer, M/F.**

## POSITIONS OPEN

### ASSISTANT PROFESSOR—BIOCHEMISTRY

The Department of Chemistry at the University of Notre Dame is seeking applications for a tenure-track faculty position beginning in fall 1985. Applications are encouraged from individuals interested in the chemical basis of biological processes. Preference will be given to applicants with previous postdoctoral experience. The successful candidate is expected to establish and support an active research program in any one of the following areas: DNA replication, gene expression, or nucleic acid structure and function. The candidate will be expected to participate in the teaching of undergraduate and graduate courses.

The department is situated in a new, modern research building. Colleagues with complementary research interests are available. Send a résumé, three references, and a description of your proposed research interests by 15 February 1985 to: **Dr. Thomas P. Fehlner, Chairman, Department of Chemistry, University of Notre Dame, Notre Dame, Ind. 46556.**

*Notre Dame is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR OF BIOLOGY

Tenure-track assistant professor of biology with specialization in **CELLULAR NEUROBIOLOGY.** The successful candidate will be expected to provide instruction in both undergraduate and graduate courses in cell biology and neurobiology, supervise M.A. thesis research, and maintain an ongoing research program. Ph.D. degree required; postdoctoral experience preferred. Academic year salary: \$22,000 to \$24,300. Effective date: 26 August 1985. Applicants should submit curriculum vitae and statement of career goals, and should arrange for three letters of reference to be sent to: **Professor John S. Williston, Department of Biological Sciences, San Francisco State University, 1600 Holloway Avenue, San Francisco, Calif. 94132.** Closing date: 15 January 1985.

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

The University of Michigan Medical School has a position available for an **ASSISTANT PROFESSOR, CEREBROVASCULAR PHYSIOLOGIST,** to become Director of Neurosurgical Research in the Department of Surgery, Section of Neurosurgery, and to assume a tenure-track faculty position in the Department of Physiology. Duties include: establishing an outstanding research program in the Section of Neurosurgery; teaching physiology to medical, other health professional students, and graduate students. Necessary qualifications include a Ph.D. or M.D. degree, at least 2 years of postdoctoral research training, and a record of published work dealing with endothelial cell transport mechanisms. Reply to: **Dr. Jack L. Kostyo, Chairman, Department of Physiology, University of Michigan Medical School, Ann Arbor, Mich. 48109.**

### ASSISTANT/ASSOCIATE PROFESSOR, GROSS AND DEVELOPMENTAL BIOLOGY

Applications are invited for a tenure-track faculty position available beginning 1 July 1985. Initial teaching responsibilities will be in medical gross and developmental anatomy, with subsequent opportunities to offer graduate courses. Candidates will be expected to conduct fundable independent research in contemporary development or cell biology. Experience in TEM, SEM, and immunocytochemistry are highly desirable. For fullest consideration applicants should send curriculum vitae, a brief statement of teaching, research interests, experience, and request that three reference letters be sent to: **Chairman, Search Committee, Department of Anatomy, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, Indiana 46223.** Application deadline is 15 March 1985.

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**UNIVERSITY OF CALIFORNIA, IRVINE,** seeks individual at the level of **ASSISTANT PROFESSOR OF MEDICINE** in the Division of Basic and Clinical Immunology. Applicant should hold M.D. and Ph.D. degrees and have at least 4 years of postdoctoral research experience in immunology. Candidates with research interest in basic immunology preferred. Send curriculum vitae, list of publications, and at least three letters of reference by 20 December to: **Sudhir Gupta, M.D., Professor and Chief, Basic and Clinical Immunology, Med Sci I, C264A, University of California, Irvine, Calif. 92717. An Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

### HARVARD MEDICAL SCHOOL ASSISTANT PROFESSOR OF GENETICS/MOLECULAR BIOLOGY

The Department of Genetics at Harvard Medical School is seeking to fill a position at the assistant professor level for September 1985. Research laboratories will be located in the Department of Molecular Biology at Massachusetts General Hospital in Boston. Major research funding, including postdoctoral support, will be available through the Department of Molecular Biology. The Department of Genetics is building a strong graduate Ph.D. program and is engaged in teaching genetics to both graduate and medical students. Although no specific research areas will be excluded a priori, we are especially interested in candidates who are conducting research in plant molecular biology or developmental genetics. Applicants should have a strong background in molecular genetics research including significant postdoctoral training.

Applicants should submit, prior to 1 February 1985, curriculum vitae, reprints, statement of research interests, and letters from at least three references to: **Dr. Howard H. Goodman, Chief, Department of Molecular Biology, Massachusetts General Hospital, Boston, Massachusetts 02114.**

*Harvard University/Massachusetts General Hospital are Equal Opportunity/Affirmative Action Employers. Qualified women and minority group members are encouraged to apply.*

**ASSISTANT OR ASSOCIATE PROFESSORS—IMMUNOLOGY AND VIROLOGY.** Two tenure-track, 12-month positions are available 1 July 1985 in the Department of Microbiology and Immunology at Wright State University. Applicants should have a Ph.D. in microbiology or related field, a minimum of 2 years of postdoctoral training and evidence of research productivity. Preference for one position will be given to individuals whose research program involves immunology at the molecular/cellular level. Preference for the other position will be given to individuals with experience in molecular virology. Appointment as a faculty member will be in both the School of Medicine and the College of Science & Engineering. The individual's duties will include the teaching of undergraduate, graduate and medical students and the development of independent productive research programs. Salary will be commensurate with professional experience and WSU standards. Applicants should send current curriculum vitae, a brief outline of proposed research, and the names and addresses of three references to: **Nancy J. Bigley, Ph.D., Chairman/Program Director, Microbiology and Immunology, 409 Oelmann Hall, Wright State University, Dayton, Ohio 45435.** Closing date for receipt of applications is 1 March 1985. *Wright State University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF MICROBIOLOGY.** Search reopened for a tenure-track position in the Department of Microbiology, effective September 1985. Applications are invited from individuals with postdoctoral experience in immunology, virology, or infectious disease microbiology. Successful candidate required to teach undergraduate microbiology and a graduate course in professional specialty plus develop a strong, competitive research program. Submit curriculum vitae, a résumé of past and present research, and four letters of reference by 10 February 1985 to: **Search Committee, Department of Microbiology, University of Georgia, Athens, Ga. 30602.**

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

### DEPARTMENT OF MEDICINE THE UNIVERSITY OF CHICAGO

**BIOMEDICAL RESEARCH TECHNOLOGIST.** Immediate opening. To assist in molecular biology laboratory using recombinant DNA methodology. Techniques employed include DNA and RNA extractions, electrophoresis, preparation of radioactive probes and of cDNA and genomic libraries and DNA sequencing. Also, tissue culture work: maintaining cell lines, transfecting them, and using the fluorescence-activated cell-sorter. Applicants must possess a B.S. or M.S. degree in science with at least 1 year of laboratory experience in recombinant DNA work. Send résumé and salary requirements to: **Dr. Vikas Sukhatme, The University of Chicago, Department of Medicine, 920 East 58 Street, Room 321, Chicago, Ill. 60637.** *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR IN MOLECULAR BIOLOGY.** The Department of Animal Sciences, University of Arizona, is seeking a highly qualified molecular biologist with expertise in recombinant DNA techniques for a tenure-track position. The successful applicant is expected to develop a strong research program in an area of importance to animal production, such as embryology, the molecular basis of endocrine regulation of growth or reproduction, rumen microbiology, or the molecular and cellular biology of heat stress and tolerance. A willingness to participate in interdisciplinary research projects and in graduate and undergraduate teaching is expected. The candidate must have a Ph.D. and postdoctoral experience. Position is available 1 April 1985, and applications will be accepted until 15 January 1985 or until position is filled. Interested persons should submit complete curriculum vitae, including list of publications, and arrange to have copies of official transcripts and at least three letters of reference sent to: **Dr. Ronald E. Allen, Chairman of Search Committee, University of Arizona, Department of Animal Sciences, Tucson, Ariz. 85721.** *The University of Arizona is an Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology at the University of Tennessee Center for the Health Sciences invites applications from individuals with strong research credentials in regulatory aspects of neurobiology for two tenure-track appointments available immediately as an assistant or associate professor of pharmacology, depending on qualifications. Applicants must have a Ph.D. and/or M.D. degree, have completed not less than 2 years of postdoctoral training, and have a demonstrated ability to conduct independent research. Preference will be given to applicants who apply modern constructs of biochemistry, immunology, or genetics, to the solution of research problems in neurobiology. The appointee is expected to develop a strong research program and to participate in departmental teaching activities. Submit résumé, and statement of research interests, and arrange for three letters of reference to be sent to: **Dr. Murray Heimberg, Chairman, Department of Pharmacology, The University of Tennessee, Center for the Health Sciences, Memphis, Tennessee 38163.** *Equal Opportunity/Affirmative Action Employer.*

### BASIC RESEARCH RELATED TO ATHEROSCLEROSIS

A postdoctoral position is available at The Hormel Institute, University of Minnesota, through a training grant awarded by the U.S. PHS, National Heart, Lung and Blood Institute. The program is intended to provide research training in areas of lipid biochemistry, membrane biophysics, and cell biology related to cardiovascular disease. Participating faculty members are: **Doctors W. J. Baumann, H. L. Brockman, M. P. Cleary, R. T. Holman, D. R. Pfeiffer, O. S. Privett, H. Schlenk, and H. H. O. Schmid.** Applicants select a faculty sponsor specialized in their area of research interest. Collaboration with other faculty members is encouraged.

Appointments are annually renewable and currently provide a minimum stipend of \$17,384. Applicants must be U.S. citizens, noncitizen nationals, or permanent U.S. residents with a Ph.D., M.D., or equivalent degree. Applications should include curriculum vitae, list of publications, and the names of three references. Submission deadline: 15 January 1985. For further information or to apply, write to: **Dr. R. T. Holman, Professor and Director, The Hormel Institute, University of Minnesota, Austin, Minn. 55912.** Telephone: 507-433-8804. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.*

**BIOCHEMIST**—The Institute of Arctic Biology (IAB), University of Alaska, invites applications for a 9-month, tenure-track position at the rank of assistant/associate professor. Applicants should have a background in biochemistry at the molecular level and an interest in environmental adaptation. The position will require development of a strong program of individual and collaborative research on problems associated with the northern environment, teaching, and advising graduate students. A Ph.D. is required. Submit a résumé, statement of research experience and interests, teaching experience, and names of three referees to: **Keith Miller, IAB, University of Alaska, Fairbanks, Alaska 99701.** Application deadline: 31 December 1984. *The University of Alaska is an Affirmative Action/Equal Opportunity Employer and Educational Institution.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** Tenure-track position. Ph.D. is required with specialization in **TOXICOLOGY**; preferred research interests are in aquatic systems either at the molecular, cellular, or organismal level. Postdoctoral or industrial experience is desirable. Duties include participating in undergraduate molecular biology courses, teaching graduate toxicology courses, establishing a research program, and supervising M.S. thesis research. Facilities include a well-equipped lake station and an animal care facility (under construction). Send curriculum vitae with listing of graduate courses taken, a statement of research and teaching interests, and three letters of recommendation by 15 January 1985 to: **Dr. D. Wartok, Chair, Department of Biological Sciences, Indiana University-Purdue University at Fort Wayne, Fort Wayne, Ind. 46805.** *An Affirmative Action/Equal Opportunity Employer.*

The Department of Zoology at Miami University wishes to make a tenure-track, **ASSISTANT PROFESSOR** appointment on the Oxford Campus to a person who is working in the area of **animal development**, preferably at the cell or molecular level. The primary teaching duty is a course in comparative vertebrate anatomy. The department has 30 faculty, and offers B.S., M.S., and Ph.D. programs. It will soon occupy a new building. Substantial equipment money is available. A Ph.D. is required; postdoctoral training and teaching experience are assets. Applications must be completed by 28 January 1985. An application consists of a résumé, transcripts of all academic work, and three letters of reference. Send application materials to: **R. G. Sherman, Zoology, Miami University, Oxford, Ohio 45056.** *Affirmative Action/Equal Opportunity Employer.*

**CARDIAC MECHANICS/BIOENGINEERING**—Postdoctoral laboratory position studying global left ventricular pump properties. Ph.D. in either physiology or bioengineering. Laboratory experience in cardiac measurement is required. Background in system identification techniques desirable. Annual salary: \$22,000 to \$25,000. Send résumé by 15 January 1985 to: **Dr. Kenneth Campbell, Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology, Washington State University, Pullman, Wash. 99164-6520.** *Equal Opportunity/Affirmative Action Employer.*

### CELL AND MOLECULAR BIOLOGY

The Division of Biology at Kansas State University has a tenure-track position available at the assistant professor level, effective 1 September 1985. Applications are invited from investigators with postdoctoral experience in **ANY AREAS OF CELL, MOLECULAR, AND DEVELOPMENTAL BIOLOGY.** The division has a strong program in biological research, excellent facilities, an NIH training grant, and a distinguished faculty with several millions of dollars in extramural research grants. The successful candidate will be expected to establish a vigorous and creative research program and to participate in graduate and undergraduate instruction. Applicants should apply by 11 January 1985 and submit curriculum vitae, three letters of reference, and a brief description of future research plans to:

**Dr. Terry C. Johnson, Director  
Division of Biology  
Ackert Hall  
Kansas State University  
Manhattan, Kans. 66506**

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

**CHAIRMAN, DEPARTMENT OF PHYSIOLOGY.** Kirksville College of Osteopathic Medicine invites applications and nominations for the position of chairman, available after 1 July 1985. Applications will be accepted through 31 January 1985.

**Qualifications include:** Ph.D. or equivalent degree in physiology or related basic science discipline; a sincere commitment to excellence in medical education; established research program; success in attracting extramural funding; previous administrative experience desired; leadership ability.

Prospective applicants should submit a letter, current curriculum vitae, and the names of three professional references. Applications, nominations, or requests for additional information should be submitted to:

**Allen W. Jacobs, D.O., Ph.D.  
Associate Dean for Academic Affairs  
Kirksville College of Osteopathic Medicine  
Kirksville, Mo. 63501**

*Kirksville College of Osteopathic Medicine is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSISTANT PROFESSOR PLANT BIOLOGY

A 12-month, tenure-track position at the assistant professor level is available 1 July 1985 in the Section of Plant Biology, Division of Biological Sciences, Cornell University. Applicants should have their research interests in the biophysics, biochemistry, or cellular physiology of photosynthesis. The appointee will be expected to maintain a strong research program and to teach in his/her area of specialization and in related areas in a way that integrates with the training program in plant physiology. Candidates should have a Ph.D. in an appropriate area.

Applicants should submit a letter of application, a résumé of biographical data and professional experience, the names and addresses of at least three referees who have been asked to write letters of recommendation, and a brief plan of future research. Deadline for applications is 15 January 1985. Send materials to: **Dr. R. M. Spanswick, Section of Plant Biology, Plant Science Building, Cornell University, Ithaca, N.Y. 14853; telephone: 607-256-8422.**

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

### ANNOUNCEMENT FOR TWO HALF-TIME ASSISTANT RESEARCHER POSITIONS IN THE HAWAIIAN EVOLUTIONARY BIOLOGY PROGRAM

The Hawaiian Evolutionary Biology Program of the Pacific Biomedical Research Center is seeking two assistant researchers to conduct research on Hawaii's endemic biota, each supported up to 50 percent on state funds, currently classified as temporary. A Ph.D. degree in an appropriate discipline with postdoctoral research experience in the field of evolutionary biology is required. Demonstrated excellence in research is a prime consideration; a multidisciplinary approach to investigating dynamics of speciation and other evolutionary processes would be most congruent with the research aims of the program. Both positions are renewable annually dependent on the continued availability of state funds and the ability of the researcher to secure extramural funds to include some salary support. Address inquiries or submit curriculum vitae and names of three references to: **Dr. K. Y. Kaneshiro, Interim Program Director, Hawaiian Evolutionary Biology Program, University of Hawaii, 3050 Maile Way, Honolulu, Hawaii 96822.** Closing date: 14 December 1984.

*An Equal Opportunity Employer*

**BIOLOGY TEACHING OVERSEAS.** The Department of Biology at the American University of Beirut (AUB) invites applications for tenure-track faculty positions, available 1 October 1985 in the following fields: plant anatomy, plant taxonomy, plant physiology, plant or animal biochemistry, plant or animal cell biology, developmental biology, or vertebrate zoology. Applicants should hold the Ph.D. degree and appointments are normally made for a 3-year period in the rank of assistant professor. The department has a faculty of nine lines, an undergraduate B.S. program, and an M.S. graduate program with thesis. Interested persons may send their curriculum vitae and inquiries to: **Chairman, Department of Biology, American University of Beirut, Beirut, Lebanon.** *AUB is an Equal Opportunity/Affirmative Action Employer.*

### THE UNIVERSITY OF SYDNEY TWO CHAIRS OF BIOLOGY

Applications are invited for a chair of biology made vacant by the resignation of Professor M. G. Pitman. The chair will be filled in plant biology (reference number 43/04).

Applications are invited for a chair of biology made vacant by the retirement of Professor L. C. Birch. The chair will be filled in animal biology, with emphasis on the experimental biology of animals in the field (reference number 43/05).

Further details of the positions may be obtained from: **The Head, School of Biological Sciences, Zoology Building A08, University of Sydney, NSW 2006, Australia.**

Salary will be at the rate of A\$52,026 per annum.

The University reserves the right not to proceed with any appointment for financial or other reasons.

Applications, quoting reference number, including curriculum vitae, list of publications, and the names of three referees, should be sent to: **The Registrar, University of Sydney, NSW 2006, Australia,** by 31 January 1985.

## POSITIONS OPEN

### CHAIRMAN DEPARTMENT OF INTERNAL MEDICINE HENRY FORD HOSPITAL DETROIT, MICHIGAN (Affiliated with the University of Michigan)

Qualified candidates are invited to apply for the position as chairman of the Department of Internal Medicine at Henry Ford Hospital.

Applicants should submit curriculum vitae, bibliography, and the names of three references to:

**Fred W. Whitehouse, M.D., Chairman  
Search Committee for  
Department of Internal Medicine Chairman  
c/o Janet L. Arntfield, Administration  
Henry Ford Hospital, CFP-239  
2799 West Grand Boulevard  
Detroit, Michigan 48202**

*Henry Ford Hospital is an Affirmative Action/Equal Opportunity Employer. Women and minorities are urged to apply. Applications should be received by 15 December 1984.*

### CHAIRMAN OF COMPUTER SCIENCE DEPARTMENT THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The University of North Carolina at Chapel Hill invites nominations and applications for the chairmanship of its Department of Computer Science. The position is a tenured professorship, and the department chairmanship is initially for a 5-year term.

Application materials, including curriculum vitae and publications list, and the names, addresses, and telephone numbers of at least four references should be sent to the chairman of the search committee: **Professor Eugen Merzbacher, Department of Physics and Astronomy, University of North Carolina, Chapel Hill, N.C. 27514; telephone: 919-962-3021.** The deadline date is 1 January 1985.

*The University of North Carolina at Chapel Hill is an Affirmative Action/Equal Opportunity Employer.*

### CHAIRPERSON DEPARTMENT OF ANATOMY

Applications and nominations are invited for the position of professor and chairperson, Department of Anatomy, University of Mississippi Medical Center. The successful candidate should be an established investigator and offer leadership in the continued development of outstanding programs for research and education in the anatomical sciences. Applicants should send a résumé and the names of three references by 1 February 1985 to: **Dr. L. William Clem, Department of Microbiology, University of Mississippi Medical Center, Jackson, Miss. 39216-4505.** *Equal Opportunity Employer, M/F/H/V.*

**CHEMISTRY FACULTY POSITION.** Transylvania University. Available September 1985. Tenure-track position in physical chemistry at the assistant or associate professor level. Ph.D. required; undergraduate teaching experience highly desirable. Transylvania is an independent liberal arts college with especially outstanding programs in science. Excellence in teaching emphasized. Send résumé and three letters of recommendation to: **Dr. Charles H. Haggard, Chairman, Division of Natural Sciences and Mathematics, Transylvania University, Lexington, Kentucky 40508.** *Transylvania University is an Equal Opportunity Employer.*

**CLINICAL LABORATORIES.** The University of Chicago Medical Center is seeking a clinical laboratory immunologist. The candidate must hold an M.D. degree, possess expertise in diagnostic cellular immunology, and should have a general working knowledge of immunogenetics and/or humoral immunology/serology, preferably both. The successful candidate, depending on qualifications and interests, would direct cell immunology as well as immunogenetics and/or humoral immunology laboratories. Depending on the scope of responsibilities, one or two faculty immunologists would assist the director. The candidate must possess proven research capabilities to qualify for a tenure-track faculty appointment in the Department of Pathology at the Pritzker School of Medicine. Development of both collaborative and independent research programs would be an integral part of the assignment. Please submit résumé, copies of three recent publications, and three names for personal reference by 1 January 1985 to: **S. T. Shaw, Jr., M.D., Box 404, The University of Chicago Medical Center, 5841 South Maryland Avenue, Chicago, Ill. 60637.** *The University of Chicago is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### CHAIR, MICROBIOLOGY EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Nominations and applications invited for chair, Department of Microbiology, East Carolina University School of Medicine. Accomplished scientist to lead the department with responsibilities in teaching and research. Excellent facilities, equipment, and budget. Currently there are ten faculty members. Candidates should hold M.D., M.D.-Ph.D., or Ph.D. degree; should have record of excellence in research, teaching, and administration. Applications accepted until position is filled. Screening to begin January 1985. Address inquiries to: **Dr. H. Thomas Norris, Chairman, Search Committee in Microbiology, Room 1F 79, Brody Building, East Carolina University School of Medicine, Greenville, North Carolina 27834-9990.** *An Equal Opportunity/Affirmative Action Employer.*

### SENIOR FACULTY POSITION IN CHEMICAL ENGINEERING

The G. W. C. Whiting School of Engineering of the Johns Hopkins University invites applications for the position of professor with tenure in the Department of Chemical Engineering. A candidate should have a commitment to teaching, have exceptional research accomplishments, and should be recognized as a leader in the chemical engineering community. Research specialty is open but should be in an area central to chemical engineering. Established in 1979, the department now has eight faculty members and a strong emphasis on graduate education and research. Applicants should send a résumé to the chairman of the search committee: **Professor Jared Cohon, Associate Dean, Whiting School of Engineering, The Johns Hopkins University, Baltimore, Maryland 21218.** *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

### CHEMISTRY DEPARTMENT

Indiana University of Pennsylvania (IUP), Department of Chemistry, invites applications for a tenure-track position if **biochemistry** at the **assistant professor** level. The successful candidate must be committed to quality teaching not only in biochemistry but at the introductory level as well. Research participation in M.S. degree program in chemistry with emphasis in biochemistry is expected. Research interests should complement present staff. Ph.D. expected and teaching experience desirable.

Salary is competitive, plus an ample fringe benefits program. Applications must include a résumé, a one- to three-page statement of research interests, transcripts (graduate and undergraduate), and the names, addresses, and telephone numbers of four references. Applications must be received by 16 January 1985. Send to: **Dr. Richard A. Hartline, Chairperson, Search Committee, Chemistry Department, IUP, Indiana, Pa. 15705.**

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

**DEVELOPMENTAL GENETICIST**—Tenure-track position open in fall 1985 for assistant professor. Candidates must have Ph.D. with research abilities (as demonstrated by publications) in some area of eukaryotic developmental genetics, though research emphasis could involve problems in evolutionary or environmental biology, gene regulation, or other specialty. Postdoctoral experience is preferred. Teaching duties include undergraduate courses in genetics and graduate course in specialty. Candidates are expected to demonstrate excellent teaching abilities and to develop external research support. Send curriculum vitae, four letters of recommendation, and copies of representative publications by 30 January 1985 to: **Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, Oklahoma 73019.** *An Equal Opportunity/Affirmative Action Employer.*

The Section of Reproductive Endocrinology at Northwestern University is seeking a qualified Ph.D. to **DIRECT THE LABORATORY PORTION** of an in vitro fertilization program. Research goals must be consistent with the program. Embryologist, andrologist, or experience with tissue culture techniques is preferred. Salary and academic rank are negotiable. Monies are available for a technician. Interested parties should contact: **Dr. Robert Rebar, Department OB/GYN, Northwestern University, 333 East Superior Street, Prentice, Suite 1190, Chicago, Ill. 60611.** *Northwestern University is an Equal Opportunity Employer.*

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Molecular Biosciences is seeking qualified applicants for two (2) positions as Assistant or Associate Program Director for the Prokaryotic Genetics Program and the Eukaryotic Genetics Program. The positions are excepted from the competitive civil service and will be filled on a one- or two-year rotational or temporary basis. The per annum salary range for Assistant Program Director is from \$30,000 to \$45,000 and for the Associate Program Director, \$35,000 to \$55,000. Normally, the candidate selected receives a leave of absence from his/her employer and salary is set in accordance with NSF Circular No. 167, Rotator Program. Otherwise, salaries for temporary employees are set at NSF's GG/GH schedule (equivalent to the GS schedule). Candidates should have a Ph.D. or equivalent experience in genetics or a closely related field. In addition for the Assistant Program Director 3 to 4 years of successful scientific research and teaching experience is required and for the Associate Program Director 4 to 6 years is required. A broad general knowledge of the field, and experience in the administration of grants as principal investigator are desirable. Appointments will begin no later than September 1985. Responsibilities include proposal handling, review, and evaluation, preparation of awarded and declined proposals, discussions with principal investigators, and provision of technical advice to the Foundation on their particular scientific area. **Applicants should send resumes indicating current salary to: National Science Foundation, Personnel Administration Branch, 1800 G. St. N.W., Washington, DC 20550. Attn: Catherine Handle, EX 85-6/7. For information concerning the Prokaryotic Genetics Biosciences Program contact Dr. Philip Harman (202/357-9687) and for information concerning the Eukaryotic Biosciences Program contact Dr. Delill Nasser (202/357-0112). Hearing impaired individuals should call 202/357-7492. NSF is an Equal Opportunity Employer.**

## FACULTY APPOINTMENTS

IN

### MOLECULAR BIOLOGY

The E. A. Doisy Department of Biochemistry at St. Louis University School of Medicine intends to develop a center of excellence in Molecular Biology. Three appointments were made so far, and at least four more tenure track appointments in this area will be made over the next three years. At least one appointment can be made at the Associate or Full Professor level. This represents a major expansion of the interdisciplinary, multidisciplinary Cell and Molecular Biology program at St. Louis University School of Medicine. Applicants should be capable of developing a strong, independent research program employing molecular biological, genetic, and/or biophysical approaches to address fundamental biological questions, and/or studies of the molecular bases of human disease. Excellent start-up funds and salary are available. Send curriculum vitae, description of research plans, and names of three references by February 1, 1985 to:

**Dr. William S. Sly**  
Chairman  
Department of Biochemistry  
St. Louis University School of Medicine  
St. Louis, Missouri 63104

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Ocean Sciences is seeking candidates for the position of Assistant/Associate Program Director for the Biological Oceanography Program. The position is excepted from the competitive civil service and will be filled by July 1985 on a two year rotational or temporary appointment under the provisions of NSF's Rotator Program. The per annum salary ranges from \$30,000 to \$45,000 for the Assistant Program Director and from \$35,000 to \$55,000 for the Associate Program Director. Normally, the candidate receives a leave of absence from his/her employer and salary is set in accordance with NSF Circular 167, Rotator Program. Otherwise, salaries for temporary employees are set at NSF's GG/GH schedule (equivalent to GS schedule). The program supports fundamental research into the biology of the oceans. The incumbent will provide technical expertise in proposal evaluation, administration of research grants, program planning and budgeting. Applicants should have a Ph.D. in oceanography or marine biology, or equivalent experience. In addition, for the Assistant Program Director, 3 to 4 years of successful scientific research beyond the Ph.D. is desirable and for the Associate Program Director 4 to 6 years of successful scientific research experience is required. Experience in an academic research institution is highly desirable, as is at-sea and/or laboratory experience in biological research. **Applicants should refer to Announcement Number EX 85-4 when submitting resumes (including current salary) to the National Science Foundation, Personnel Administration Branch, Rm. 212, 1800 G St. N.W., Washington, DC 20550. Attn: Catherine Handle. For further information call 202/357-7840. Hearing impaired individuals should call 202/357-7492. NSF is an Equal Opportunity Employer.**

## ST. JOHN'S UNIVERSITY

New York

Toxicologist-tenure track, Assistant or Associate Professor level. Applicants must have a Ph.D. in toxicology or related disciplines with research interest in mechanism of toxic injury. Responsibilities will include teaching undergraduate and graduate courses, and active participation in research. **Send curriculum vitae to: Dr. Amrit L. Kapoor, Chairman, Department of Pharmaceutical Sciences, College of Pharmacy & Allied Health Professions, St. John's University, Grand Central & Utopia Pkwy., Jamaica, NY 11439.**

An Equal Opportunity Employer—M/F

## Postdoctoral Fellowships at THE WISTAR INSTITUTE

Postdoctoral positions for 2 to 3 years are continuously available in the fields of oncogenesis, cellular differentiation, chemical carcinogenesis, membrane biochemistry, cell genetics, and immunology.

Previous strong training or experience in molecular biology or virology, molecular genetics, protein biochemistry are required.

Applicants should send their curriculum vitae and the names of three references to:

**Dr. Giovanni Rovera**  
Coordinator of Research Training

**THE WISTAR INSTITUTE  
OF ANATOMY AND BIOLOGY**  
36th & Spruce Streets  
Philadelphia, PA 19104

Equal Opportunity Employer

## CHANCELLOR

University of Wisconsin—River Falls

Applications and nominations are invited for the position of chancellor of the University of Wisconsin (UW)—River Falls. The University, founded in 1874, is one of the 13 universities in the University of Wisconsin System. It has an enrollment of 5000 students and a faculty of 350. The university is located in northwestern Wisconsin approximately 30 miles from the Minneapolis—St. Paul metropolitan area. The city of River Falls has a population of 9000 and combines the advantages of a small community environment with the cultural, recreational, and educational opportunities of a metropolitan area.

The chancellor is the chief administrative officer of the university and is accountable to the Board of Regents through the president of the UW System. The institution offers undergraduate programs through the College of Agriculture, the College of Arts and Sciences, and the College of Education. A variety of programs at the master's level is offered in the Graduate School, and the university has some responsibilities in both cooperative and general extension.

The successful candidate should have demonstrated effective administrative and educational leadership in higher education, be strongly committed to teaching, scholarship, and outreach, and to shared governance of the university community.

The appointment is to be effective July 1985. Applications must consist of a letter detailing administrative experience and other special qualifications for the position, current curriculum vitae, and names, addresses, and telephone numbers of five professional references. Applications with supporting documentation must be received no later than 7 January 1985.

Letters of application and nomination should be addressed to:

**Dr. Margaret Odegard**  
Chair, Chancellor Search and Screen Committee  
Room 137, Davee Library  
University of Wisconsin—River Falls  
River Falls, Wis. 54022

*The University of Wisconsin System is an Equal Opportunity/Affirmative Action Employer*



## POSITIONS OPEN

### CORNELL UNIVERSITY Sections of Ecology and Systematics and Physiology COMPARATIVE INVERTEBRATE PHYSIOLOGIST

A faculty position in invertebrate zoology and comparative physiology will be available beginning 1 September 1985. Rank is open, but preference will be given to applicants at the assistant or associate professor level. We are seeking an individual with a broad organismal understanding of invertebrates, especially marine invertebrates, and an interest in comparative physiology. Teaching responsibilities include an undergraduate course in comparative physiology (both invertebrates and vertebrates) and in invertebrate zoology, and participation in an undergraduate course in Principles of Oceanography (courses offered in alternate years). Candidates must develop a strong research program in their own area of expertise. Applicants must supply curriculum vitae and the names, addresses, and telephone numbers of three references. Send applications by 15 February 1985 to: **Dr. William N. McFarland, Section of Ecology and Systematics, CORNELL UNIVERSITY, E145 Corson Hall, Ithaca, N.Y. 14853-0239.** *Cornell University is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are encouraged to apply.*

### CURATOR AND CHAIRMAN

The Department of Natural Sciences, Florida State Museum, seeks applicants for a full curator and chairman position beginning 1 July 1985. Applicants should have a Ph.D., curatorial experience with systematic collections, and a major research interest in the systematics and evolution of plants or animals. Preference will be given to the area of fossil invertebrates, but all natural history disciplines will be considered. Teaching opportunities exist in appropriate academic departments. Applicants should send a letter of interest, curriculum vitae, and the names of five references by 31 December 1984 to: **Dr. Elizabeth S. Wing, Search Committee, Florida State Museum, University of Florida, Gainesville, Fla. 32611.** *Equal Opportunity/Affirmative Action Employer.*

The University of Idaho, a land-grant institution, seeks well-qualified individual for position of **DEAN, COLLEGE OF FORESTRY, WILDLIFE, AND RANGE SCIENCES.** The college has a long history of leadership in renewable natural resource-related areas, and the successful individual will be expected to continue this tradition of excellence. Candidates must possess an earned doctorate with at least one advanced degree in a renewable natural resource profession.

The university is seeking a person with a distinguished record of leadership, academic achievement, and experience with demonstrated abilities to initiate research and establish an environment for creative activities that responds to the needs of high quality academic training, as well as those of government and industry. Experience in budgeting, personnel management, and research administration is required. The successful candidate must also have demonstrated ability to work and communicate with students, faculty, and constituency groups.

The salary is competitive and the position currently available; a more complete position description will be sent on request. Please send inquiries, nominations, or letters of application with the names of at least three references to:

**Dean William Saul  
Search Committee Chairman  
College of Engineering  
University of Idaho  
Moscow, Idaho 83843**

Search and selection procedures will be closed when a sufficient number of qualified applicants has been identified, but not earlier than 1 February 1985. *Affirmative Action/Equal Opportunity Employer.*

**DIRECTOR,** Museum Institute for Teaching Science (MITS). Lead a consortium of Boston-area museums in upgrading science education. If you are committed to nonformal learning in science, understand child development and elementary school education, have strong management and group process skills, can write funding proposals, communicate well and are creative, send your résumé to: **MITS Search Committee, c/o Education, Massachusetts Audubon Society, South Great Road, Lincoln, Mass. 01773.** Closing date for applications in 15 December 1984. *MITS is an Equal Opportunity Employer.* Continuation of 1-year position contingent on funding.

## POSITIONS OPEN

### DEAN, COLLEGE OF PHARMACY WASHINGTON STATE UNIVERSITY

Washington State University invites applications and nominations for the position of dean, College of Pharmacy. The position is available 1 July 1985. The University is located at Pullman, and enrolls approximately 16,000 full-time students with approximately 200 students in the College. The College's 19 faculty provide vigorous undergraduate and graduate programs leading to the bachelor of pharmacy and the M.S. and Ph.D. in pharmacology/toxicology. The College recently moved to a new facility. A candidate for the position should have an earned doctorate in a pharmaceutical or science discipline. Desirable qualifications include an undergraduate degree in pharmacy, experience with teaching and curriculum development at the undergraduate and graduate level, demonstrated research achievements, and an ability to relate to pharmacy practitioners. *Washington State University is an Affirmative Action/Equal Opportunity Employer.* Review of candidates will begin 2 January 1985. Applications should include a current résumé and the names and addresses of five references. Applications and nominations should be sent to:

**Robert A. Nilan, Chair  
Dean of Pharmacy Screening Committee  
208 Morrill Hall  
Washington State University  
Pullman, Wash. 99164-3520**

### DEAN OF ACADEMIC AFFAIRS

The Southern California College of Optometry, Fullerton, California, an independent, nonprofit, fully accredited college providing training for optometric technicians and doctors of optometry, was founded in 1904. The College has a student body of 400 and a faculty of approximately 45 FTE. The dean of academic affairs is responsible to the president and has under his/her direction the Departments of Basic and Visual Science, Optometry, and Clinics. Students generally have a bachelor's degree upon entering the 4-year professional degree program. In addition to its training program in basic sciences and clinical skills, the college operates an extensive clinical program which includes a number of outreach clinical facilities.

Experience in administration of educational programs, health delivery systems, an understanding of clinical practice and patient care, concern with excellence in teaching and research, a keen interest in students, and a far-seeing approach to the future of health care are desirable qualifications. Salary will be dependent upon qualifications.

Additional information about the college, the administration and faculty, and the position will be sent upon request.

Nominations and curriculum vitae should be sent by 1 February 1985 to:

**James R. Greeg, Chairman  
Dean Search Committee  
Southern California College of Optometry  
2575 Yorba Linda Boulevard  
Fullerton, California 92631  
*An Equal Opportunity Employer***

### ELECTRON MICROSCOPY TECHNICIAN

An electron microscopy (EM) technician qualified to assume the day-to-day operations and supervision of our new central laboratory facility is needed. At present, we have two new transmission and one scanning electron microscopes and all associated specimen preparation instruments. The successful candidate should be familiar with both types of microscope, various preparation techniques, and possess the ability to teach. Knowledge of histochemical techniques highly desirable. Salary commensurate with experience. Send résumé to: **A. Chedid, M.D., Director, EM Center, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, Illinois 60064.**

### ENVIRONMENTAL PATHOLOGY/ TOXICOLOGY

Postdoctoral positions available in trace metal teratology, respiratory and inhalation toxicology and aquatic toxicology (cytogenetics or teratogenesis) beginning January or March 1985 for those with a Ph.D., M.D., D.V.M., D.D.S. degree. Send curriculum vitae, two reference letters, reprints, and research interest statement to: **N. K. Mottet, M.D., Professor of Pathology and Environmental Health, SM-30, University of Washington, Seattle, Wash. 98195.**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

San Diego State University is seeking an **ELECTRON MICROSCOPIST** to fill a tenure-track position (assistant professor or higher). Candidates must be able to establish a strong and innovative research program and demonstrate expertise in a wide range of EM techniques. Facilities include a Philips 410 TEM and a Hitachi S-500 SEM. Instructional responsibilities include participation in the cell biology and electron microscopy programs. Submit, by 15 January 1985, curriculum vitae, names of three references, reprints of recent publications, and a statement of research goals to: **EM Search, Department of Biology, San Diego State University, San Diego, Calif. 92182.** *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN GENETICS/MOLECULAR BIOLOGY

The Division of Biological Sciences of The University of Michigan invites applications for two tenure-track faculty positions in genetics/molecular biology. Applicants at both the junior and senior levels will be considered. Primary duties will be the establishment of a strong program of basic research and participation in the teaching of undergraduate and graduate students. No specific area of research is mandated, and excellence of the candidates will be the primary consideration in making appointments. However, it is hoped to make two coordinated appointments and/or to add individuals in areas where the division already has some strength. Applications from individuals using genetic and molecular biological techniques to attack significant problems at the cellular or developmental levels (in animal, plant, or microbial systems) will be especially welcome. Applicants should submit curriculum vitae, reprints and preprints of selected publications, a statement of future research plans, and four letters of recommendation (applicants at the senior level may submit instead the names of prospective referees) to: **Professor John Pringle, Chairman, Genetics Search Committee, Division of Biological Sciences, The University of Michigan, Ann Arbor, Michigan 48109.** Applications should be submitted as soon as possible but no later than 4 January 1985. *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITIONS MOLECULAR PHYSIOLOGY

**Department of Physiology and Biophysics  
The University of Iowa College of Medicine**

We invite applications from individuals with a strong record of innovative research using current strategies of molecular biology and molecular genetics to investigate fundamental mechanisms of regulation and function of the eukaryotic cell. We are particularly interested in individuals using recombinant DNA, nucleic acid hybridization, or gene transfer techniques to study biologically important processes related to hormone action, membrane transport, or CNS function. Please send curriculum vitae, description of research plans, and the names of three references to: **Dr. Richard A. Maurer, Department of Physiology and Biophysics, The University of Iowa, Iowa City, Iowa 52242.**

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

### FACULTY POSITION IN PHARMACEUTICS

The Washington State University, College of Pharmacy, has available an annual appointment, tenure-track, assistant/associate/full professor level position, beginning 1 July 1985. A professional degree in pharmacy is preferred and a Ph.D. in pharmaceuticals or a related discipline is required. Postdoctoral experience is desirable at the assistant professor level. Associate or full professor level candidates must provide evidence of productive research. The candidate should have a strong background in physical pharmacy, biopharmaceutics, or pharmacokinetics. The position will involve teaching pharmaceuticals to professional pharmacy students and teaching and direction of graduate students in the pharmacology/toxicology graduate program. Development of a vigorous independent research program is expected. Salary and rank will depend on qualifications and experience of the candidate. Send a letter of application, curriculum vitae, a summary of research interests, and three letters of recommendation to: **Dr. Garold S. Yost, College of Pharmacy, Washington State University, Pullman, Wash. 99164-6510; telephone: 509-335-4754.** Applications are due by 15 January 1985.

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

**BIOLOGICAL SCIENCES  
UNIVERSITY OF WISCONSIN-MILWAUKEE**

The newly formed 36 member Department of Biological Sciences anticipates opening four full time tenure-track positions to start in Fall, 1985, and invites applications. General qualifications include a Ph.D., postdoctoral experience, a strong publication record, and the ability to maintain an independent, rigorous, extramurally-funded research program. Responsibilities include teaching the specific course listed, an advanced course and/or seminar in the candidate's area of specialization, participation in a team-taught undergraduate Biology course, and the supervision of M.S. and Ph.D. students.

**Evolutionary Plant Biologist** at the Assistant Professor level with research interest in the relationship of plant species at the genome level. Strong background in plant molecular biology and plant systematics is a requirement. Specific teaching responsibility: plant systematics. Direct applications to: Dr. Charles Weise, Chair, Evolutionary Plant Biologist Search Committee.

**Plant Molecular/Developmental Biologist** at the Assistant Professor level with research interest in the molecular aspects of development or gene regulation in vascular plants. Strong background in plant molecular biology and plant anatomy is a requirement. Specific teaching responsibility: plant anatomy. Direct applications to: Dr. Robert Costello, Chair, Plant Molecular/Developmental Biologist Search Committee.

**Prokaryotic Molecular Biologist** at the Assistant Professor level with research interest in the molecular aspects of membrane structure and development investigated with current molecular (e.g., recombinant DNA) techniques. Specific teaching responsibility: virology, participation in a team-taught microbiology course. Direct applications to: Dr. Cynthia Sommer, Chair, Prokaryotic Molecular Biologist Search Committee.

**Phycologist** at the Associate or Assistant Professor level with research interest in the physiological ecology of phytoplankton. Specific teaching responsibility: phycology. Opportunities exist for developing individual or cooperative research through the Center for Great Lake Studies. Direct applications to: Dr. Arthur S. Brooks, Chair, Phycologist Search Committee.

Applicants must send a curriculum vitae, a concise statement of research and teaching objectives, recent reprints, and the names and addresses of three references who may be contacted for letters. Direct applications to the attention of the appropriate search committee chair listed above by January 15, 1985.

**University of Wisconsin-Milwaukee  
Department of Biological Sciences  
P.O. Box 413  
Milwaukee, WI 53201**

The University of Wisconsin-Milwaukee is an Affirmative Action/Equal Opportunity Employer.



**General Motors  
Research Laboratories**

**has positions open for  
Ph.D. RESEARCHERS**

**ENVIRONMENTAL SCIENTIST** - to conduct research on the effects of acid rain and gaseous pollutants on terrestrial ecosystems.

**ATMOSPHERIC CHEMIST** - to conduct research on atmospheric chemistry as it relates to the fate of pollutants in the environment.

**AEROSOL SCIENTIST** - to conduct aerosol research related to the fate of pollutants in the environment.

Candidates should have a Ph.D. in the appropriate discipline. A record of accomplishment and evidence of the ability to do independent research are required.

Applicants must have U.S. citizenship or visa status which legally permits them to accept permanent employment under U.S. immigration laws.

These new positions are in our Environmental Science Department that has a staff of 40 scientists and support personnel. Located at the General Motors Technical Center, the Research Laboratories offers a competitive salary commensurate with experience and ability as well as a complete benefits package.

Qualified candidates are invited to send their resume with cover letter and salary history to:

Dr. K. C. Taylor, Head  
Environmental Science Department  
**General Motors Research Laboratories**  
Warren, Michigan 48090-9055

*An equal opportunity employer*

**Pharmaceutical  
Research Scientists**

The Research Division of Schering-Plough Corporation in Bloomfield, New Jersey has several positions available for outstanding research investigators in the New Drug Discovery area. These positions provide the opportunity for the investigator to carry out original research studies using novel approaches in the specified areas. An excellent scientific background, organizational and communication skills are required.

**ANIMAL VIROLOGY**

Molecular Virologist, PhD in Virology with 0-3 years post-doctoral academic or industrial research experience in animal virus gene cloning. RNA virus (polio, influenza) experience is preferred. Responsibility will include insertion of cDNA viral gene clones into eukaryocytes or prokaryocytes and evaluation of the expression level of the viral gene and function of the viral gene product.

**ANIMAL VIROLOGY**

In-vivo Immunology of Viral Infections, PhD in Virology (with Immunological emphasis) and 0-3 years post-doctoral academic or industrial research experience. Background should include evaluation of immune status in laboratory animals utilized as research models of human virus infection (such as cytomegalovirus), or work in evaluation of immunosuppressive therapy using laboratory animal models.

**BIOCHEMICAL METHODS**

Two positions are available in the Section of Biochemical Screening Methods. The successful candidates will have a PhD in Biochemistry or Microbiology with 0-3 years of experience in microbial physiology at the biochemical level. The candidates will be responsible for discovery and implementation of novel assays to identify new agents useful in the treatment of infectious diseases (including antivirals, antibacterials, antifungals) and pharmacologically active agents.

**ISOLATION CHEMISTRY**

The successful candidate will have a PhD in Organic/Analytical Chemistry with 0-3 years experience in the isolation and structure determination of natural products. A strong background in all phases of chromatography, especially HPLC, and experience in the spectroscopic analysis of natural products are required. Responsibilities will include chemical classification, isolation and structure determination of compounds with biological interest.

**All positions offer attractive starting salaries and comprehensive company benefits.**

Qualified candidates should forward resume specifying position desired, to:  
Louis DeMartino, Box AA-100, Schering-Plough Pharmaceutical Research Division,  
60 Orange Street, Bloomfield, New Jersey 07003.



**Schering-Plough**

We Are An Equal Opportunity Employer  
Women, Minorities, Handicapped & Veterans  
Are Strongly Encouraged To Apply

## POSITIONS OPEN

### FACULTY POSITIONS IN CELLULAR AND MOLECULAR BIOLOGY

As part of a continuing program of growth and development, the Boston College Biology Department plans to fill two additional tenure-track positions for September 1985. More information can be found in the 16 November issue of *Science* (page 880), or by writing to:

**Chairman, Biology Search Committee**  
**Biology Department**  
**Higgins Hall**  
**Boston College**  
**Chestnut Hill, Mass 02167**

*An Equal Opportunity/Affirmative Action Employer*

### Science Faculty Positions CLARK UNIVERSITY, Worcester, Mass. 01610

**Biochemistry/Molecular Biology.** Tenure-track assistant professorship available starting September 1985. Candidate will contribute to undergraduate and Ph.D. programs, establish active research program, and obtain external research support. Research in biochemistry or molecular biology preferred. Send résumé, a brief statement of research plans, and three letters of recommendation by 15 December 1984 to: **Dr. Donald J. Nelson, Department of Chemistry.**

**Computer Science.** Tenure-track assistant or associate professorship available starting September 1985. Candidate will teach advanced undergraduate courses in computer science and establish active research program in an area such as artificial intelligence, computer architecture, database systems, computer graphics, and parallel processes. Computer science Ph.D. preferred; equivalent of M.A. or M.S. in computer science and Ph.D. in related area will also be considered. Send inquiries to: **Professor John Kennison, Department of Mathematics/Computer Science** by 14 December 1984. Deadline may be extended.

**Physics.** Tenure-track assistant professorship in experimental physics available starting September 1985. Applications are encouraged from experimentalists in condensed matter, atomic, molecular and chemical physics, biophysics, and modern optics. Send curriculum vitae, a brief statement of research plans and teaching philosophy, and names of three references to: **Dr. Harvey Gould, Chair, Department of Physics.** Search continued to 1 April 1985.

*Clark University is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

The Department of Pharmacology, University of New Mexico, School of Medicine, is seeking applications for a tenure-track **FACULTY POSITION** at assistant professor level. Candidates must have Ph.D. or M.D. with minimum of 2 years of postdoctoral research experience. Will be expected to establish independent research program and participate in instruction of medical and graduate students. Preference given to those candidates whose research experience has involved application of techniques in molecular biology and/or immunology. Send curriculum vitae and letters of three references by 15 January 1985 to: **Dr. Leon Hurwitz, Chairman, Department of Pharmacology, School of Medicine, University of New Mexico, Albuquerque, N.M. 87131.** *Affirmative Action/Equal Opportunity Employer.*

### PLANT MOLECULAR BIOLOGIST

The Department of Biology of the Virginia Polytechnic Institute and State University announces a tenure-track faculty position at the assistant professor level, available 1 September 1985. Preference will be given to candidates with a strong background in plant molecular biology with research interests in the structure, function, regulation, and manipulation of chloroplast genes. However, candidates with research interests in the general area of plant molecular biology and demonstrated competence in recombinant DNA techniques are also encouraged to apply. Postdoctoral training is highly desirable. The successful applicant will be expected to establish an active research program and participate in the graduate and undergraduate instructional programs of the department. Applicants should submit curriculum vitae, a two- to three-page statement of research interests, and names of at least three references to: **Dr. A. Esen, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.** Application deadline is 15 January or until the position is filled. *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### UNIVERSITY OF MIAMI ROSENSTIEL SCHOOL OF MARINE AND ATMOSPHERIC SCIENCE

The Division of Marine and Atmospheric Chemistry is embarking on a major expansion program that includes the construction of new laboratory facilities which will be completed in mid-1985. In accordance with this program, **four tenure-track positions** at the rank of assistant, associate, or full professor are available for qualified persons with backgrounds in the areas of stable isotope geochemistry, water-sediment chemistry, atmospheric chemistry and the modeling of atmospheric and/or ocean chemical processes. Division members are engaged in a broad spectrum of research programs including field studies carried out at continental and island sites and aboard aircraft and ships. While all qualified persons are encouraged to apply, we would particularly welcome applications from persons interested in pursuing field-related research, especially aboard ships.

Curriculum vitae, a summary of teaching and research experience, a brief statement about future research interests, and the names of three references should be sent to: **Dr. Joseph M. Prospero, Chairman, Division of Marine and Atmospheric Chemistry, University of Miami, RSMAS, 4600 Rickenbacker Causeway, Miami, Fla. 33149-1098,** by 15 January 1985.

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

**TWO FACULTY POSITIONS.** To support expanding doctoral program in **ENVIRONMENTAL AND EVOLUTIONARY BIOLOGY.** Tenure-track assistant or associate professors; start 20 August 1985. Duties include active research, pursuit of extramural research funding, supervision of M.S. and Ph.D. students. **DEVELOPMENTAL BIOLOGIST** to teach undergraduate developmental biology and general biology in alternating sequence; potential to develop graduate course in area of specialty; research emphasis may be in development or any area supportive of the doctoral program. **MARINE/ESTUARINE ECOLOGIST** must have community or ecosystems emphasis with experience in experimental field ecology; strong background in statistical analysis, mathematical modeling, and/or computer applications required; appointee will interact with state-wide marine consortium (LUMCON) in studies of coastal resources and their management; coastal laboratories and vessels available; will participate in undergraduate and graduate teaching. Send letter of application, statement of research goals, curriculum vitae, reprints, and three letters of reference to: **Search Committee, Biology Department, UNIVERSITY OF SOUTHWESTERN LOUISIANA, Lafayette, La. 70504.** Applications will be accepted until 14 December 1984, or until position is filled. *An Equal Opportunity/Affirmative Action Employer.*

### DEPARTMENT OF ZOOLOGY UNIVERSITY OF WASHINGTON

Applications are invited for two faculty positions, effective September 1985:

1) **Comparative physiology or comparative endocrinology** (application deadline: 1 January 1985; extension of deadline in advertisement of 21 September 1984).

2) **Evolutionary biology** with theoretical orientation (deadline: 1 February 1985).

Rank is open, but appointments will probably be made at the level of assistant or associate professor. Candidates must present evidence of strong research activity and potential for obtaining research funding. Send curriculum vitae, copies of three publications, and brief outline of previous and proposed research directions, and have three letters of recommendation sent to: **A. O. D. Willows, Chairman, Department of Zoology NJ-15, University of Washington, Seattle, Wash. 98195.** *Equal Opportunity/Affirmative Action Employer.*

### IMMUNOLOGIST

The Department of Pathology at the Hubert H. Humphrey Cancer Research Center of Boston University School of Medicine invites applications at the assistant or associate professor level for a researcher working on basic problems in immunology or immunopathology. Candidates should send a curriculum vitae, a statement of research interests, and three letters of recommendation by 1 February 1985 to: **Director, Hubert H. Humphrey Cancer Research Center, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118.** *Boston University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

Tenure-track **FACULTY POSITION** at the rank of associate or full professor based on qualifications and experience. Applicants must have a Ph.D. and preferably postdoctoral training, and should have a demonstrated record of independent research in an aspect of cell physiology and ability to obtain outside funding for their research. The selected person will be expected to teach physiology in the newly formed Department of Anatomy and Physiology. Candidates must submit a letter of application, their résumé, research plans, and transcripts, and arrange to have three letters of recommendation sent.

Two 2-year lectureship appointments to teach lectures and laboratories in an introductory human physiology course, an upper division mammalian physiology course, and possible involvement in a pathophysiology course. Ph.D. required in physiology or related subject. Teaching experience at the college level preferred. Appointments are from 26 August 1985 to 30 May 1987. Send letter of application, résumé, and transcripts, and arrange to have three letters of recommendation sent.

Salary commensurate with academic rank and subject to collective bargaining negotiations. All application materials should be sent to: **Dr. Larry Leamy, Ph.D., Chairman, Department of Biology, California State University, Long Beach, Calif. 90840.** Final filing date is 31 January 1985.

*An Affirmative Action/Title IX/  
Equal Opportunity Employer*

The Department of Pathology, Medical College of Georgia, Augusta, Georgia, invites applications for a **FACULTY POSITION** at the rank of **assistant or associate professor.** The candidate should have a Ph.D. degree with demonstrated leadership in research and teaching. The position will have the responsibility of directing a hospital laboratory performing service in immunochemistry and immunomorphology. Experience in flow cytometry is desirable. Applicants should submit curriculum vitae and references to: **Dr. R. N. Rao, Chief, Section of Anatomic Pathology, Medical College of Georgia, Augusta, Georgia 30912.** *Equal Opportunity Employer/Affirmative Action Program. J 257.*

### National Institutes of Health National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) Immunochemist

An **IMMUNOCHEMIST POSTDOCTORAL RESEARCH** position is available to study the membrane and cytoplasmic antigens of glioma-derived tissue culture lines. The presence of the antigenic proteins, their induction by differentiation agents, and their characterization are to be studied. A background in tissue culture and cell biology, as well as gel electrophoresis, is desirable.

Collaboration with other immunologists, molecular biologists, and tumor biochemists is essential. Immunochemistry laboratory facilities are available, as well as microcinematography, fluorescent microscopy, quantitative morphometrics, image analysis and processing, and SEM-EDX (microanalysis) to study the antigenic characteristics of brain tumors.

This position will be in the Surgical Neurology Branch, NINCDS, National Institutes of Health, Public Health Service. Salary range for this staff fellowship position is \$17,000 to \$35,467 per year, commensurate with experience. Send curriculum vitae and three references to: **Janet E. Follin, Personnel Department, NINCDS, National Institutes of Health, 9000 Rockville Pike, Building 31, Room 8A23, Bethesda, Md. 20205.** *NIH is an Equal Opportunity Employer.* (For more information, telephone: Ms. Follin on 301-496-6334.)

### IMMUNOLOGIST

The Department of Biology seeks applicants for a tenure-track immunologist position at the assistant professor level to begin 1 September 1985. Preference will be given to applicants with research interests in the area of molecular and biochemical immunology focusing on immunoregulation, and knowledgeable in cellular aspects of lymphocyte cloning. Applicants should have 2 to 3 years of postdoctoral training. The successful candidate will be expected to establish an active research program and participate in the undergraduate and graduate teaching programs of the department. Applicants should submit curriculum vitae, a two- to three-page statement of research interests, and names of at least three references to: **Dr. Klaus D. Elgert, Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.** Application deadline: 15 January 1985 or until position is filled. *Affirmative Action/Equal Opportunity Employer.*



# NIOSH ANNOUNCES RESEARCH AWARDS FOR Ph.D. & M.D. SCIENTISTS



The National Institute for Occupational Safety and Health announces outstanding opportunities for research in

- bioengineering
- biochemistry
- immunology
- mutagenesis
- pathology
- physiology
- pharmacology

The National Research Council in cooperation with the National Institute for Occupational Safety and Health will offer competitive research awards in 1985 for independent scientific research. Recipients will be free to work on problems of their own choice as guest investigators at NIOSH. This program is open to experienced senior scientists as well as to recent PhD and MD graduates. Stipends begin at \$26,350 for recent graduates and are appropriately higher for seniors. Relocation reimbursement and funds for professional travel on tenure are available, and a health insurance program is offered.

For further information and application materials please write to:

Associateship Programs (JH608/NI-1)

**National Research Council**

2101 Constitution Avenue, N.W.  
Washington, D.C. 20418

1985 Deadlines for application are  
January 15, April 15 and August 15.

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GENECOR's STRENGTH in biotechnology lies in its ability to put enzymes to work as problem solvers.

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We offer advanced laboratory environments, excellent salaries and generous benefits. Our expanding facility is just minutes South of San Francisco...just 30 minutes North of Stanford University. For immediate consideration, please send your resume to Donna Clark, Director, Human Resources, Genencor, 180 Kimball Way, So. San Francisco, CA 94080. An equal opportunity employer.

# GENENCOR



## KING SAUD UNIVERSITY (formerly University of Riyadh) Riyadh, Saudi Arabia

The College of Pharmacy, King Saud University, has vacant faculty positions (Professor, Associate Professor, Assistant Professor) for Ph.D. holders and/or holders of academic titles earned at accredited universities who would be employed on contract basis as of commencement of the academic year 1985-1986 which begins on July 27, 1985

The language of instruction at the college is ENGLISH.

The college has the following departments:

Pharmaceutical Chemistry, Pharmacology, Pharmaceutics, Pharmacognosy and Clinical Pharmacy.

Noteworthy benefits:

- Free return air tickets annually for faculty member and family.
- Furnished accommodation or housing and furnishing allowances.
- Monthly transport allowance.
- Relocation allowance.
- End-of-service gratuity.
- Free medical and dental care covering family.
- Contribution by University to tuition fees of non-Arabic-speaking children.

Interested academicians are kindly requested to send non-returnable photocopies of their academic diplomas and specialized experience certificates together with their resumes (including lists of their publications and references) and written applications indicating the position applied for and the subjects the applicant is qualified to teach to the

Dean of College  
P. O. Box 2457  
Riyadh 11451 Saudi Arabia

and

Ms. Aida Ganim  
King Saud University Office  
2425 West Loop South, Suite 450  
Houston, TX 77027 USA

Please send address and telephone number (if available) so that you may be contacted for interview if selected.

## POSITIONS OPEN

### DIVISION HEAD FOR HEMATOLOGY/ONCOLOGY

The Department of Pediatrics, University of Washington/Children's Orthopedic Hospital, Seattle, Washington, is recruiting for a director of its Hematology Division. The division has an active clinical, research, and teaching program with the University of Washington. The Children's Orthopedic Hospital, and the Fred Hutchinson Research Center. Candidates must have strong academic credentials.

Interested candidates should send curriculum vitae to: **C. Ronald Scott, M.D., Hematology Search Committee, Department of Pediatrics, RD-20, University of Washington, Seattle, Wash. 98195.**

*The University of Washington/Children's Orthopedic Hospital is an Affirmative Action/Equal Opportunity Employer.*

### GROUP LEADER/FERMENTATION MOLECULAR BIOLOGY

The Northern Regional Research Center, U.S. Department of Agriculture (USDA), is seeking an accomplished scientist for the position of research leader in agricultural microbiology in the Fermentation Laboratory. The successful candidate will have 5 to 10 years of post-Ph.D. research experience and a substantial publication record. Scientific creativity and superior professional credentials are prerequisites. The individual will be responsible for supervising scientists doing research involving molecular biology of yeasts and fungi. Present research involves the bioconversion of agricultural residues and biosynthesis of *Fusarium* mycotoxins. The development of long-term research goals and coordination of research activities are expected to expand research programs to new aspects of biotechnology. Knowledge of and experience in fungal physiology, biochemistry, and molecular biology are essential.

The position is GS-13/14 (\$36,327 to \$55,807). Send résumé to: **USDA-ARS, Midwest Area, Personnel Section, Northern Regional Research Center, 1815 North University Street, Peoria, Ill. 61604. Telephone: 309-685-4011, extension 632. The USDA is an Affirmative Action/Equal Opportunity Employer. U.S. citizenship required.**

### ICHTHYOLOGY

#### CURATORIAL FELLOW

The Department of Ichthyology of The American Museum of Natural History has an opening for an individual with a Ph.D. in the natural sciences and a research background in development and its relevance for systematics of fishes. As a curatorial fellow, you will use this background to conduct scientific research in this area and to participate in the programs of the department involving collection, curation, exhibition and education. The position, which will begin on or about 1 July 1985, is a 1-year term appointment, and is renewable. The salary is negotiable. Full benefits coverage, including major medical/dental, vacation and sick leave allowances are also provided by the Museum.

Interested candidates must submit the following information by 15 February 1985: (i) curriculum vitae, (ii) a complete bibliography and sample publications, (iii) names, positions, and addresses of at least three professional references. These should be forwarded to: **Dr. Gareth Nelson, Chairman, Department of Ichthyology, The American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024. The Museum is an Equal Opportunity/Affirmative Action Employer, M/F/H.**

**UNIVERSITY OF SOUTHERN CALIFORNIA.** The Department of Psychology is seeking for fall 1985: (i) A **PHYSIOLOGICAL PSYCHOLOGIST** (level open) with a record of significant research and (ii) A **FULL PROFESSOR** with an active research program in aging. Send curriculum vitae or letter of inquiry to: **Chair, Search Committee, Department of Psychology, University of Southern California, Los Angeles, Calif. 90089-1061**

**PLANT BIOLOGIST:** Tenure-track appointment, starting 1 August 1985. Overall responsibility for half of the introductory biology course in fall (shared with zoology) and all of the same course in spring. Requirements: Ph.D.; enthusiasm for teaching; and a research program, preferably in plant genetics or molecular biology. Send curriculum vitae, transcripts, and arrange for three letters of recommendation by 15 January 1985 to: **Dr. R. L. Vadas, Department of Botany and Plant Pathology, University of Maine, Orono, Maine 04469.**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**FACULTY POSITION IN DERMATOLOGY**—The Department of Dermatology, University of Michigan Medical School, is searching for an assistant professor through full professor. The primary responsibility will be basic research with some teaching and patient care. Candidates must be Board-eligible in dermatology and have suitable training in dermatologic research. The salary is negotiable. A departmental subsidy for supplies and travel is available. Research grants are available from the Veterans Administration Medical Center. Well-equipped laboratory space. There is also a possibility of a joint appointment with a basic science department. The position is available immediately. Address applications, including curriculum vitae, to: **John J. Voorhees, M.D., Professor and Chairman, Department of Dermatology, University of Michigan Medical School, C-2064 Outpatient Building, Ann Arbor, Michigan 48109. The University of Michigan is a nondiscriminatory, Affirmative Action Employer.**

**INSTRUCTOR—CANCER PHARMACOLOGY.** The Department of Pharmacology, University of Tennessee Center for the Health Sciences (UTCHS), has an immediate opening (nontenure-track) for a Ph.D. pharmacologist to study the pharmacological determinants of novel anthracycline antitumor drug action. Clinical pharmacology training, and at least 2 years of postdoctoral experience in anthracycline research essential. Other requirements: experience in animal research and small animal surgery, high-performance liquid chromatography and microsampling techniques, and a publication record in metabolism and disposition of antitumor antibiotics. Salary: \$19,000 to \$22,000, depending on qualifications. Inquiries, curriculum vitae and names of three references should be received prior to 31 December 1984, addressed to: **Dr. Mervyn Israel, Department of Pharmacology, UTCHS, 874 Union Avenue, Crowe Building, Room 100, Memphis, Tenn. 38163. UTCHS is an Equal Opportunity/Affirmative Action Employer.**

### IVF TECHNICIAN

An in vitro fertilization technician is needed for a newly developed IVF Laboratory at Akron City Hospital, Akron, Ohio. Applicants must possess a B.S. degree in reproductive physiology or cell biology; M.S. preferred, with training in tissue culture techniques and/or 2 years of experience working in an established IVF Laboratory. The salary range for the position is \$20,000 to \$25,000 per annum. Excellent benefits, including educational reimbursement and on-site child care facility. Please submit complete curriculum vitae and the names and addresses of three references to:

**Steven P. Schmidt, Ph.D.  
Akron City Hospital  
525 East Market Street  
Akron, Ohio 44309**

*An Equal Opportunity Employer*

**LOW-TEMPERATURE GEOCHEMIST.** Tenure-track, full-time position as an assistant professor in low-temperature geochemistry for August 1985 with research interests in field and theoretical aspects of: (i) ore-forming processes, (ii) sedimentary geochemistry, or (iii) geochemistry of ground water. Depending on budgetary approval. Submit résumé, transcripts, and three letters of recommendation to: **Cornelis Klein, Chairman, Department of Geology, University of New Mexico, Albuquerque, New Mexico 87131. Deadline is 20 March 1985. Affirmative Action/Equal Opportunity Employer.**

### MOLECULAR GENETICIST

The Department of Biology at the University of Miami seeks to fill a tenure-track appointment at the assistant or associate professor level to begin in August 1985. Candidates must be trained in the techniques of molecular genetics and have an interest in applying them to problems at the organismic level, in such areas as evolutionary and/or plant biology.

Applicants should provide a brief statement of research interests and plans, curriculum vitae, and not more than two reprints of published work or work in press. Three letters of reference, to be received by 1 February 1985, should be sent separately to:

**Molecular Biology Search Committee  
c/o James S. Clegg, Chair  
Department of Biology  
University of Miami  
P.O. Box 249118  
Coral Gables 33124**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**THE AUSTRALIAN NATIONAL UNIVERSITY** invites applications from suitably qualified applicants for appointment to the position of **TEMPORARY LECTURER IN PETROLOGY** in the **DEPARTMENT OF GEOLOGY, FACULTY OF SCIENCE.** The department is seeking applications from persons interested in any aspect of petrology; preference given to candidates engaged in research into metamorphic or mafic igneous rocks, with an interest in fieldwork. The appointee will be required to teach at all undergraduate levels, supervise honours and postgraduate students, follow a program of research in his or her chosen field, and accept normal lecturing, demonstrating, and fieldwork responsibilities. Appointment to commence in February 1985 with the term of appointment expected to extend until December 1987. Closing date: 15 December 1984. Salary in accordance with qualifications and experience within the range: lecturer, \$24,840 to \$32,634 per annum; current exchange rate: A\$1 = U.S.\$0.83. Grants towards travel and removal; assistance with housing; superannuation. Maternity leave is available. For further particulars, write to: **The Acting Registrar, The Australian National University, GPO Box 4, Canberra, ACT 2601 Australia. The University is an Equal Opportunity Employer.**

**IMMUNOLOGIST/VIROLOGIST**—The Department of Biology at **WEST CHESTER UNIVERSITY** invites applications for a full-time, tenure-track, teaching and research position. The successful candidate will have the ability to teach upper division graduate and undergraduate courses in immunology and virology and will be expected to conduct research involving both undergraduate and graduate students. Requirements include a Ph.D. with a minimum of 1 year of college teaching experience. Postdoctoral experience is desirable. Expected availability: September 1985. The applicant is responsible for providing curriculum vitae, a complete set of graduate and undergraduate transcripts, plus three letters of recommendation, postmarked by 3 January 1985, to: **Dr. Carmella L. Cinquina, Department of Biology, WEST CHESTER UNIVERSITY, West Chester, Pa. 19383. An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

### MARINE RESEARCH SCIENTIST

Applications are invited for principal investigator position, effective January 1985. Doctoral degree and postdoctoral experience required. Candidates should present evidence of grantsmanship and potential for partial support of research in biological, geological, or physical disciplines. Send curriculum vitae, copies of three publications, and succinct review of previous and proposed research directions to: **Dr. Marsh J. Youngbluth, Harbor Branch Foundation, RR 1, Box 196, Fort Pierce, Florida 33450, by 15 December 1984.**

*Equal Opportunity Employer*

**Full-time MEDICAL TECHNOLOGIST I** position in clinical electron microscopy. One year of full-time experience in electron microscopy is highly desirable; clinical electron microscopy experience is desirable. Applicant should know how to process tissue, thin-section epoxy blocks using a diamond knife and maintain an electron microscope. Requires bachelor's degree from an accredited college or university in medical technology or area of specialty; or equivalent; and certification or certification eligible. Send résumés to: **Staff Employment, Personnel Department, University of Arizona, 1717 East Speedway Boulevard, Tucson, Ariz. 85721. An Equal Opportunity/Affirmative Action Employer.**

**MOLECULAR BIOLOGIST**—Tenure-track starting August 1985; rank and salary commensurate with experience. Applications are solicited from highly qualified molecular biologists, particularly those with interests in gene expression, evolution, or development. The successful applicant will be expected to develop a vigorous research program and teach at the undergraduate and graduate levels. This individual will have the opportunity to participate in university-wide programs in molecular, cellular, and developmental biology. Requirements include a Ph.D. or equivalent, demonstrated research ability, and strong prospects for research funding. Applicants should submit detailed curriculum vitae, three letters of recommendation, and a description of research interests to: **S. H. Bishop, Molecular Biology Search Committee Chairman, Department of Zoology, Iowa State University, Ames Iowa 50011.**

Applications deadline: 31 January 1985, or until filled. *Iowa State University is an Equal Opportunity/Affirmative Action Employer.*

## SENIOR AEROSOL RESEARCH SCIENTIST

Battelle, Pacific Northwest Laboratories at Richland, Washington invites applications from aerosol scientists or engineers capable of conducting innovative research involving aerosol physics and animal inhalation exposure technology.

Position requires a working knowledge of aerosol and/or vapor generation and characterization, delivery systems, and respiratory deposition of materials. Applicants should have PhD or equivalent in training in aerosol physics or related aerosol sciences engineering. Will provide technical guidance for the design, testing, and operation of animal inhalation exposure facilities. Should have experience in oral presentations and in writing research proposals and reports. Experience with interdisciplinary research teams and familiarity with research project management desirable.

Please submit resume, transcript, and references to: **Loren P. Herderson, Manager-Employment, Battelle-Northwest, P.O. Box 999, Richland, WA 99352.**

U.S. citizenship required.

An Equal Opportunity Employer M/F.



## Willard T. C. Johnson Jr. Research Professorship

### The Mount Sinai Medical Center, New York Department of Geriatrics and Adult Development

Candidates are sought for an endowed research chair in the newly-formed Department of Geriatrics and Adult Development at Mount Sinai. The chair will initiate and head a sizeable research program in neurobiology of aging with the intent of increasing understanding of Alzheimer's disease. *Mount Sinai is a part of the Federally-funded Alzheimer's Disease Study Center in New York.* Considerable resources including large, recently renovated laboratory space and support for fellows will be available. Targeted starting date is July 1985. Candidates must be prepared to lead an outstanding aging research program in this department, which is uniquely committed to interest in aging. Please send curriculum vitae to:

**Robert N. Butler, M.D., Department of Geriatrics and Adult Development, One Gustave L. Levy Place, New York, New York 10029.**  
An Equal Opportunity Employer.



### The Mount Sinai Medical Center

## Scientific Research

## Summer Faculty Research Program



The USAF Summer Faculty Research Program (SFRP) and Graduate Student Research Program sponsored by the Air Force Office of Scientific Research and conducted by Universal Energy Systems, Inc. (UES) provides research opportunities for qualified faculty members and Graduate students of U.S. Institutions of higher education.

- Electrical Engineering
- Mechanical Engineering
- Aeronautical and Astronautical Engineering

- Biomedical Engineering
- Chemical, Industrial, and Civil Engineering
- Physics
- Computer Modeling and Computer Science
- Chemistry
- Mathematics
- Behavioral Science
- Operations Research
- Metallurgy
- Logistics, Production, and Systems Management
- Meteorology and Geophysics
- Life Sciences, Biology and Biophysics

To be eligible for participation, individuals must be U.S. citizens currently serving as full-time faculty or Graduate students at U.S. Institutions. All qualified applicants will receive consideration without regard to age, color, race, religion, sex, or national origin.

Interested individuals are requested to contact:

**SFRP Administrator  
Universal Energy Systems, Inc.  
4401 Dayton-Xenia Road  
Dayton, Ohio 45432  
Phone (513) 426-6900**



**Universal Energy Systems**

Equal Opportunity Employer

## POSITIONS OPEN

**ORGANIC CHEMICAL OCEANOGRAPHER**—The College of Marine Studies invites applications for a tenure-track position in chemical oceanography. Applicants should have a background in organic chemical oceanography, experience in analysis of specific organic compounds, and field experience. Interest or experience in estuarine and coastal research is preferred. The successful applicant will have the opportunity to develop independent and cooperative research within existing interdisciplinary estuarine and coastal research programs. Facilities available include a modern research campus in Lewes, Delaware, and the 120-foot research vessel R.V. *Cape Henlopen*. Teaching at the graduate level will be required, and the successful candidate will be expected to develop a funded research program and advise M.S. and Ph.D. students. It is anticipated that the appointment will be at the assistant professor level, but applications from more senior persons are welcome. Applicants should send curriculum vitae, pertinent reprints, and the names of three references to the chairman of the Search Committee: **Dr. Jonathan H. Sharp, Oceanography Program, College of Marine Studies, UNIVERSITY OF DELAWARE, Lewes, Del. 19958 (telephone: 302-645-4259).** The closing date for applications is 15 December 1984. *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.*

### ORGANIC CHEMIST/CHEMICAL ENGINEER (Fall 1985)

State University of New York (SUNY) College of Technology seeks individual for tenure-track position for chemical technology/biotechnology program. Involvement with undergraduate research is expected. **Qualifications:** Ph.D.; industrial experience desirable; other types of experience considered. **Salary:** commensurate with training and experience. **Deadline:** application must be postmarked by 15 January 1985. Send curriculum vitae and three letters of recommendation to:

Director of Personnel/AA  
SUNY College of Technology, Box 402  
811 Court Street  
Utica, N.Y. 13502

*An Equal Opportunity/Affirmative Action Employer*

Applications are invited for a tenure-track position beginning 15 August 1985. Ph.D. required; postdoctoral experience desirable. Candidates must have a specialty in **PHYSICAL CHEMISTRY OR PHYSICAL BIOCHEMISTRY**. Appointment will be at the level of assistant professor. Position involves teaching courses offered by Chemistry Department including, but not limited to, general chemistry and advanced undergraduate courses in area of expertise. Appointee is expected to conduct an active research program with the participation of qualified undergraduates. Other duties include student advising and participation on College committees. Applicants should send résumé, transcripts from all post-secondary institutions attended, a statement of professional objectives and research interests, and the names of at least three references to:

**Dr. Henry A. DePhillips, Jr., Chairman**  
Department of Chemistry  
Trinity College  
Hartford, Conn. 06106

By 1 February 1985. *Trinity College is an Equal Opportunity/Affirmative Action Employer.*

**Ph.D. IN PHYSIOLOGY/BIOCHEMISTRY** with molecular biology, protein chemistry, and/or reproductive biology background, to work on regulation of gonadotropin synthesis and glycosylation and isolation of gonadal peptides. Large division with full range of basic and clinical research opportunities. Two to 3-year program. Available 1 January 1985. Contact: **Ronald S. Swerdloff, M.D., Professor, Department of Medicine, Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, Calif. 90509; telephone: 213-533-3681.**

### POSTDOCTORAL—CELLULAR SECRETION

Available immediately to study secretory mechanisms in the adrenal chromaffin system. Experience in any of the following areas desirable: Cell calcium regulation, P. Inositol metabolism, cell culture, fluorescence spectroscopy, membrane biophysics. US citizenship or permanent resident visa required. Send curriculum vitae, bibliography, and the names of three references to: **Dr. Allan Schneider, Sloan-Kettering Institute, Cornell University Graduate School Medical Sciences, 1275 York Avenue, New York, N.Y. 10021.**

## POSITIONS OPEN

**PHYSICAL OCEANOGRAPHER OR PHYSICIST WITH MARINE EXPERTISE:** Ph.D.; tenure-track; assistant professor; start September 1985. Teach introductory and advanced courses in area of expertise to support a marine science major. Contribute periodically to general education program. Successful candidate expected to establish active research program. Extensive new computer facilities present. Send résumé, transcripts, and three reference letters by 15 February 1985 to: **Dr. John Reynolds, Eckerd College, St. Petersburg, Florida 33733; telephone: 813-867-1166. Equal Opportunity Employer.**

### PHYSICAL OCEANOGRAPHER

The Woods Hole Oceanographic Institution plans to make a tenure-track appointment as assistant scientist in the Department of Physical Oceanography. Applicants should have a degree in physical oceanography or a closely related field and, preferably, some postdoctoral experience. A candidate's area of expertise in oceanography is not specified, but a working knowledge of fluid dynamics is an important qualification. Please send résumé to: **The Personnel Manager, Box 54P, Woods Hole Oceanographic Institution, Woods Hole, Mass. 02543. An Equal Opportunity Employer, M/F/H.**

### PLANT MOLECULAR BIOLOGIST

The Department of Botany, University of Minnesota, invites applications for one or possibly two tenure-track positions at the assistant professor level beginning fall 1985. Preference will be given to candidates who can document abilities in molecular approaches to research on gene regulation or developmental biology of either vascular plants or non-vascular plants (including fungi). Applicants must have a minimum of 1 year of postdoctoral training and a strong background in biochemistry and molecular biology. Responsibilities include development of a creative and vigorous research program in plant molecular biology and participation in undergraduate and graduate-level teaching in plant cell, developmental, or molecular biology or plant physiology. Please submit curriculum vitae, transcripts, reprints of research articles, a statement of professional goals/research interests, and names of three references by 15 January 1985 to: **Dr. Tom J. Guilfoyle, Search Committee Chair, Department of Botany, 220A Biological Sciences Center, University of Minnesota, St. Paul, Minn. 55108. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

### PLANT PHYSIOLOGIST

Assistant professor, tenure-track; 9-month appointment, responsible for teaching undergraduate and graduate courses; continuing an already well-established research program; competitive in obtaining grant funding; advising graduate students; and becoming involved in scholarly service. Requires a Ph.D. degree; teaching and research experience, and a sound publication record. Nine-month salary: \$22,080 or commensurate with qualifications. Starts autumn 1985. Apply before 15 January 1985 by sending curriculum vitae and publications, and having at least three letters of recommendation sent to: **Dr. Emanuel D. Rudolph, Chairman, Department of Botany, Ohio State University, 1735 Neil Avenue, Columbus, Ohio 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer. All qualified persons, including women, members of minority groups, and the handicapped, are encouraged to apply.**

### POSTDOCTORAL ASSOCIATE— STREPTOCOCCAL GENETICS

Position available at the University of Minnesota, 15 January 1985, for 1 year with possible renewal for 1 or 2 additional years. To study plasmid biology in lactic streptococci and use genetic engineering techniques to develop phage-resistant dairy starter cultures. Requires Ph.D. in microbiology, genetics, biochemistry, or related field. Background in gene cloning, recombinant DNA techniques, and microbiology preferred. Competitive stipend plus fringe benefits. Send curriculum vitae and three references to: **Dr. Larry L. McKay, Department of Food Science and Nutrition, University of Minnesota, 1334 Eckles Avenue, St. Paul, Minn. 55108. Applications accepted to 2 January 1985 or until position filled. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

## POSITIONS OPEN

**POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE** position is available in the area of cancer immunology and biological modification. A strong background in cellular immunology is required. Send curriculum vitae and list of three references to: **Dr. Eva Lotzova, Head, Laboratory of Immunogenetics, Department of General Surgery, M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, 6723 Bertner, Houston, Texas 77030. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE.** The Department of Microbiology of The University of Texas Medical Branch is seeking a candidate to assist in studying the cellular response to human herpesviruses. A strong background in cell physiology or biology and either virology or biochemistry is required. Experience with quantitation of specific ions, particularly  $Ca^{2+}$ , is desirable. Competitive salary commensurate with experience. Submit curriculum vitae, publications, and three references to: **Dr. Thomas Albrecht, Department of Microbiology, The University of Texas Medical Branch, Galveston, Texas 77550. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

**POSTDOCTORAL POSITIONS, APPLIED CHEMISTRY.** Applications are invited for two or more postdoctoral positions in the areas of applied chemical kinetics, atmospheric chemistry, and microbial kinetics of iron(III) reduction. Experience in one or more of the following areas is desired: Ligand-substitution kinetics, solution phase kinetics, ester hydrolysis, photo-assisted catalysis, field-oriented cloud-, fog-, or rainwater chemistry, homogeneous and heterogeneous catalysis by transition metal complexes, nucleophilic substitution reactions, rapid reaction kinetics, or applied microbiology. Send résumé and three letters of reference to: **Professor Michael R. Hoffmann, Engineering and Applied Science, W. M. Keck Laboratories, California Institute of Technology, Pasadena, Calif. 91125.**

**POSTDOCTORAL POSITION** available immediately to study the effects of antibodies on drug disposition and response in animals. The candidate should have experience in immunochemical techniques and in production, isolation and quantitation of antibodies and immunoassay development. Send curriculum vitae and names of three references to: **Michael Mayersohn, Ph.D., College of Pharmacy, University of Arizona, Tucson, Ariz. 85721. Affirmative Action/Equal Opportunity Employer**

**POSTDOCTORAL POSITION** available immediately to study endocrine interactions between endoparasitic insects and host tobacco hornworm larvae, with emphasis on host juvenile hormone titer regulation during parasitism. Experience with HPLC desirable. Send curriculum vitae and names of three references to: **Dr. Nancy Beckage, Issaquah Health Research Institute, 1595 NW Gilman Boulevard, Issaquah, Wash. 98027; telephone: 206-392-3931. Located in the Seattle area. An Equal Opportunity Employer**

**POSTDOCTORAL POSITION** available to study molecular genetics of normal and abnormal human globin gene expression. Experience in nucleic acid technology desirable. Send curriculum vitae and names of three references to: **Dr. Ronald F. Rieder, Director, Hematology Division, Box 20, State University of New York-Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203. DMC number 600. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available immediately to study mechanisms controlling gene expression during herpesvirus infections. Studies will include construction of virus mutants using recombinant DNA methods and analysis of the effects of mutations on RNA and protein synthesis. Send résumé and references to: **Donald M. Coen, Department of Pharmacology, Harvard Medical School, Boston Mass. 02115. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** to study the biochemistry of contractility. Research will involve a study of the structure-function relationships of the different subunits of myosin using biochemical and biophysical approaches. Send curriculum vitae and three letters of reference to:

**Dr. Morris Burke**  
Department of Biology  
Case Western Reserve University  
Cleveland, Ohio 44106

## POSITIONS OPEN

### POSTDOCTORAL FELLOW

Two postdoctoral positions available in the Division of Nutrition and Metabolism, The Miriam Hospital, Brown University, to study metabolism of serum amyloid A or plasma lipoproteins in man and experimental animals. Applicants should have a strong background in biochemical research. Salary commensurate with experience. *The Miriam Hospital is an Equal Opportunity Employer.* Please send résumé or inquiries to: **Linda L. Bausserman, Ph.D.**, or **Peter N. Herbert, M.D.**, Division of Nutrition and Metabolism, The Miriam Hospital, 164 Summit Avenue, Providence, R.I. 02906.

### POSTDOCTORAL POSITION

Work with university research group on the study of single channels in artificial bilayers. Experience with channel electrophysiology is preferred and experience with bilayers is helpful. The project concerns the synthesis and characterization of ion channels which are linked to receptors and can be made to respond to specified agonists. The position is located at a major university in western New York and is available immediately. Salary: \$19,000 to \$23,000. Send curriculum vitae and references to: **Box 275, SCIENCE.**

**POSTDOCTORAL POSITION** available immediately to study photolytic and thermochemical reactions of hydrocarbons and biomass materials. Applicants should have Ph.D. in photochemistry, organic chemistry, or physical organic chemistry. Send curriculum vitae and names of three references to: **Professor M. J. Antal, Renewable Resources Research Laboratory, Department of Mechanical Engineering, 2540 Dole Street, University of Hawaii, Honolulu, Hawaii 96822.**

### POSTDOCTORAL POSITION IN REPRODUCTIVE ENDOCRINOLOGY

Available immediately to study photoperiodic modulation of pineal-hypothalamic-pituitary axis in horses. Experience with horses is not necessary, but background in neuroendocrinology and/or circadian organization is essential. Experimental approach involves testing interactions among photoperiod, pineal compounds, opioid peptides, catecholamines gonadotropin-releasing hormone, and LH and FSH. Send curriculum vitae to:

**Dan C. Sharp, Ph.D.**  
459 Shealy Drive  
Department of Animal Science  
University of Florida  
Gainesville, Fla. 32611

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL POSITION** available immediately for 2 to 3 years to study the biochemistry and regulation of sugar transport in *Escherichia coli*. Background in biochemistry, microbiology, or a related field desired. Send curriculum vitae and three letters of recommendation to: **Dr. Gary Jacobson, Department of Biology, Boston University, 2 Cunningham Street, Boston, Mass. 02215.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION**, immediate opening for work directed at the identification of the genomic structure of apolipoprotein converting enzymes in liver and peripheral cells. Opportunity to work in a multidisciplinary and stimulating environment. Send résumé and two reference letters to: **Lipoprotein Study Group, University of Chicago, 5841 South Maryland, Box 231, Chicago, Ill. 60637; telephone: 312-962-1775.** *Equal Opportunity Employer*

**POSTDOCTORAL RESEARCH** in motor control available starting immediately. A quantitative oriented neurophysiologist/biomedical engineer is wanted to collaborate in studies of the human motor system. Candidates should be interested in mathematical modeling of experimental data. Contact: **Gerald L. Gottlieb, Department of Physiology, Rush Medical Center, 1753 West Congress Parkway, Chicago, Illinois 60612.**

*Rush is an Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL RESEARCH ASSOCIATE** position open for innovative research in molecular basis of viral pathogenicity and cell biology in the laboratory of: **Dr. Robert R. Wagner, Department of Microbiology, Box 441, University of Virginia Medical School, Charlottesville, Va. 22908.** Applicants should send curriculum vitae, description of research interests, and letters from three references. Competitive salary and opportunity for advancement.

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** available immediately to study microtubules in mammalian cells. Mutations in the genes for tubulin are being used to explore the assembly, function, and regulation of this cytoskeletal component. A background in recombinant DNA technology, protein chemistry, or genetics is highly desirable. Successful candidates will work in the Texas Medical Center, which provides a varied and vigorous research environment for biomedical science. Interested individuals should send their curriculum vitae and the names of three references to: **Dr. Fernando Cabral, Ph.D., Division of Endocrinology, University of Texas Medical School, P.O. Box 20708, Houston, Tex. 77225.** *An Equal Opportunity Employer. Women and minorities are encouraged to apply.*

**POSTDOCTORAL RESEARCH ASSOCIATE MICROBIOLOGIST.** Position will be available 1 November 1984 for a research program on discovery, isolation, and production of pesticidal and plant growth regulating compounds from microorganisms. Ph.D. in microbiology with good knowledge of techniques for isolation and culture of organisms as well as methods for scale-up fermentations. Knowledge of actinomycetes taxonomy also beneficial. Opportunity to work closely with industry scientists. Send résumé, with three letters of reference, prior to 14 December 1984 to: **Dr. A. R. Putnam, 105 Pesticide Research Center, Michigan State University, East Lansing, Mich. 48824.**

**POSTDOCTORAL/RESEARCH ASSOCIATE** position is available immediately in neurophysiology/neuropharmacology to study neurotransmitter systems in the cerebellum. Applicants must have the M.D. and/or Ph.D. degree. Candidates should have training in electrophysiology techniques and experience with microiontophoresis. Send curriculum vitae and names of three references to:

**Dr. Jean Strahlendorf**  
Department of Physiology  
Texas Tech University Health Sciences Center  
Lubbock, Texas 79430

**POSTDOCTORAL RESEARCH ASSOCIATE** for studies of the catalytic mechanism and cellular function of carbonic anhydrase using spectroscopic and kinetic methods. Experience with NMR or recombinant DNA helpful. Salary commensurate with experience. Send résumé and names of three references to: **Dr. D. N. Silverman, J-267, J. H. Miller Health Center, University of Florida, Gainesville, Fla. 32610.**

**POSTDOCTORAL RESEARCH ASSOCIATE** available in **MOLECULAR BIOLOGY.** Individuals with Ph.D. are invited to apply to the Department of Biology at the University of North Carolina at Chapel Hill for a position with one of our faculty in molecular biology and biotechnology. The department has recently expanded its resources in molecular biology and is engaged in the following research: chromosome mechanics and molecular and developmental genetics in bacteria, yeast and fungal systems, bacterial plant pathogens, *Drosophila*, *Xenopus*, and maize. For further information, write to: **Research Associate Search, Department of Biology, Coker Hall 010A, University of North Carolina, Chapel Hill, North Carolina 27514.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH FELLOW.** A position will be available 1 February 1985 for an individual interested in the evolution and function of the **MAJOR HISTOCOMPATIBILITY COMPLEX** to participate in a research project to characterize genes encoding tissue-specific antigens of the chicken MHC. A strong background in molecular biology and recombinant DNA techniques desirable. Funding available for 3 years. Contact: **Dr. Marcia Miller, Division of Cytogenetics and Cytology, City of Hope Medical Center, Duarte, California 91010.** Telephone: 818-359-8111, extension 2832.

**PROTEIN CHEMIST:** Biology Department seeks assistant professor; tenure-track; protein chemistry and enzymology; fall 1985. Postdoctoral experience required; research interest in metabolism of environmental compounds desirable. Appointee will contribute to curriculum of advanced biotechnology and applied marine ecology programs and establish active independent research. Send résumé, three reference letters, and description of current/planned research to: **Dr. Richard White, Biology Department, University of Massachusetts, Boston, Mass. 02125,** by 15 January 1985. *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### PREDOCTORAL TRAINING IN PHARMACOLOGY

Predoctoral training positions in pharmacological sciences are available for the 1985-1986 academic year. The areas of training include neuropharmacology (electrophysiological and neurochemical), cardiac pharmacology, drug metabolism, endocrine pharmacology, cancer pharmacology, clinical pharmacology, and toxicology. Emphasis is placed on the cellular and molecular approaches. Stipend and tuition supports are available from various sources including the NIH training grants, university fellowships, private foundations, and research assistantships. Contact: **Dr. Toshio Narahashi, Professor and Chairman, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago Ill. 60611.** Telephone: 312-649-8284. *Affirmative Action/Equal Opportunity Employer.*

### PRODUCT MANAGER

We are interested in hiring a product manager to help us develop new instruments for the biological sciences; must be familiar with the needs of the biological scientist and must have prior experience in product development and in researching the market for new instruments. The product manager will be responsible for the detailed specification of a new product or products which will then be given to our engineering department to develop. This person will also be responsible for testing the new product in various stages of its development. If you are innovative and want to join a company that is progressive-minded and desirous of meeting the needs of the research scientist, then we are very interested in talking with you. Please send your résumé in absolute confidence or telephone collect: **Alex Meshbane, President, SAVANT INSTRUMENTS, INC., 221 Park Avenue, Hicksville, N.Y. 11801; telephone: 516-935-8774.** *An Equal Opportunity/Affirmative Action Employer.*

### PROFESSOR OR ASSOCIATE PROFESSOR OF TOXICOLOGY/PHARMACOLOGY

The Department of Pharmacology, University of Tennessee Center for the Health Sciences, is inviting applications for a tenure-track position available immediately. The applicant should possess the Ph.D. or M.D. degree and should be an established scientist with demonstrated experience in the application of biochemical, molecular, and/or immunological knowledge in the study of basic toxicology problems. The applicant would be expected to maintain an active, independent research program and participate in undergraduate and graduate teaching. Please submit complete curriculum vitae and three letters of reference before 31 December 1984 to: **Dr. K. U. Malik, Chairman Ad Hoc Search Committee, Department of Pharmacology, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

**PROGRAMMER ANALYST:** Need to coordinate medical computing program and oversee all aspects of statistical historical analyses on patient data. Salary: \$2310 per month. Requires M.S. degree in medical computing; knowledge of FORTRAN, PASCAL, or TAL on IBM, CDC, and TANDEM computers; and comprehensive background in statistics. Contact: **Utah Job Service, 1234 South Main, Salt Lake City, Utah 84101; Job order number: 76804.**

### QUANTITATIVE PLANT ECOLOGY NEW MEXICO STATE UNIVERSITY

The Department of Biology, New Mexico State University, invites applications for a tenure-track assistant professor position to start August 1985. Outstanding candidates may be considered at a higher rank. Applicants should have broad biological background, with an interest in desert plant ecology. We seek an individual with demonstrated research emphasis in quantitative ecology, specifically at the community level, and including biometrics and an interest in community and ecosystem modeling. The successful candidate will be expected to teach at the undergraduate and graduate levels, and to pursue a strong research program (potential exists for participation on a funded interdisciplinary desert ecology research team). Please send curriculum vitae, appropriate reprints, and the names of at least three references to: **Walt Conley, Department of Biology, New Mexico State University, Las Cruces, New Mexico 88003.** Telephone: 505-646-2541. Applications will be accepted until 15 January 1985.

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



## POSITIONS OPEN

### PROTEIN KINASE/ BIOCHEMIST

Positions available immediately for Ph.D.-level postdoctoral associates to study protein kinase and mechanism of actions of growth factors. Send résumé to: **Dr. James Tam, Box 294, Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.** *Equal Opportunity/Affirmative Action Employer.*

### SOUTHERN ILLINOIS UNIVERSITY (SIU) SCHOOL OF MEDICINE SPRINGFIELD, ILLINOIS

An expanding program of the Department of Psychiatry has created seven faculty positions for Board-eligible or Board-certified **PSYCHIATRISTS** who demonstrate an interest in clinical and research aspects of mental illness. Positions include Director of Outpatient Services, Division Chief of Child Psychiatry, Director of the Inpatient Schizophrenia Research Unit, two inpatient services psychiatrists, Chief of the Consultation-Liaison Service, and a psychiatrist to direct gerontology and dementia research. A faculty position is also open in biochemistry research which may be filled by an M.D. or Ph.D.

Appointment level for these positions will be commensurate with qualifications. Both tenure and non-tenure-track positions are included. Some positions are currently open and available; other positions will be available in the near future or await funding approval for the next fiscal year.

Interested applicants should submit curriculum vitae and statement of clinical and research interests to: **Robert E. Becker, M.D., Professor and Chairman, Department of Psychiatry, SIU School of Medicine, P.O. Box 3926, Springfield, Ill. 62708.** *SIU is an Affirmative Action/Equal Opportunity Employer.*

Positions for research university graduates with a bachelor's degree in the biological sciences to do **RESEARCH** in the areas of **CELLULAR AND MOLECULAR BIOLOGY** with the W. Alton Jones Cell Science Center, for a period of 3 years. Salary ranges from \$8,000 to \$10,000, depending on experience. Send curriculum vitae to: **The Personnel Office, W. Alton Jones Cell Science Center, 10 Old Barn Road, Lake Placid, New York 12946.** Refer to: Job SA-201. *An Affirmative Action/Equal Opportunity Employer.*

### RESEARCH ASSISTANT PROFESSOR

Applicant should have a Ph.D. and 4 to 5 years of postdoctoral experience in immunochemistry, immunocytochemistry isolation, and biochemical characterization of membrane glycoproteins and biology of complement, and so forth. Submit curriculum vitae and references to: **S. P. Makker, M.D., Head Division of Nephrology, Department of Pediatrics, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

**STAFF FELLOW** position available immediately to Ph.D. graduates to investigate oncogene-linked cell surface antigens using immunochemical and biochemical techniques. Applicants should have a strong background in gene transfer and recombinant DNA technology. Send résumé and three references to: **Jack A. Roth, M.D., Surgery Branch, National Cancer Institute, Building 10, Room 2B07, Bethesda, Md. 20205.**

### TROPICAL PLANT BIOLOGY

Applications are invited for two tenure-track positions in tropical plant biology at the University of Miami at the assistant or associate professor level, effective August 1985, for research-oriented scientists in the following areas:

**Co-evolutionary Biologist** with a research program in the field of plant-insect interactions, with emphasis on biochemical or evolutionary aspects.

**Plant Ecological Physiologist** with a quantitative, field-oriented research program.

Curriculum vitae, statement of research plans, not more than two reprints or preprints, and three letters of reference must be received by 1 February 1985.

**David P. Janos, Co-Chair  
Tropical Plant Biology Search Committee  
Department of Biology  
University of Miami  
P.O. Box 249118  
Coral Gables, Fla. 33124**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### RESEARCH ASSOCIATE Department of Radiation Therapy The University of Texas Medical Branch Galveston, Texas

A research associate position (postdoctorate) is available in an active research group with interests in the mechanisms of the development of resistance to chemotherapeutic agents by mammalian cells and the influence of the resistant state to radiation responses. Experience in somatic cell genetics, cell culture, membrane biology, and radiation biology are desirable, but not necessary. Salary is negotiable. Interested individuals may send current curriculum vitae and the names of at least three individuals as references to:

**James A. Belli, M.D.  
Professor and Chairman  
The University of Texas Medical Branch  
Department of Radiation Therapy, Route G11  
Galveston, Texas 77550**

*The University of Texas Medical Branch is an Equal Opportunity Employer.*

**RESEARCH ASSOCIATE.** Position available January 1985 to study cellular control mechanisms of parietal cell HCl secretion. Experience in primary cell culture and/or protein purification techniques desirable (must have a Ph.D. degree in physiology, pharmacology, biochemistry, or microbiology or have equivalent research experience.) Salary up to \$22,000, depending on experience. Submit curriculum vitae, a statement of research experience, and names, addresses, and telephone numbers of three references to: **Catherine S. Chew, Ph.D., Department of Physiology, Morehouse School of Medicine, 720 Westview Drive, SW, Atlanta, Ga. 30310.** *Morehouse School of Medicine is an Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ASSOCIATE** position available for a biochemist or biologist to isolate, purify, characterize, and localize the enzymes of sperm acrosomal membranes. Strong background in protein purification and enzymology plus knowledge of immunoassays and electron microscopy desired. The position is funded up to March 1987 by NIH. Salary negotiable. Send curriculum vitae and three references to: **Dr. P. N. Srivastava, Department of Biochemistry, University of Georgia, Athens, Ga. 30602.**

### STAFF DIRECTOR—MATHEMATICS

The National Academy of Sciences/National Research Council seeks a staff director for its Board on Mathematical Sciences. Extensive working familiarity with research in pure and applied mathematics and statistics, and experience with study project management are required.

A Ph.D. in a directly relevant field and 7 to 10 years of relevant professional experience are strongly preferred. Evidence of management and communications skills are required. The incumbent will have responsibility for designing, securing funding for, and managing an important program of studies.

Please submit résumé to:

**Dr. Lawrence E. McCray  
Associated Executive Director  
Commission on Physical Sciences,  
Mathematics, and Resources  
National Academy of Sciences/  
National Research Council  
2101 Constitution Avenue, NW  
Washington, D.C. 20418**

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

### VIROLOGY PREDOCTORAL AND POSTDOCTORAL POSITIONS

The Department of Microbiology and Immunology, University of California, Los Angeles (UCLA), School of Medicine, invites applications for training positions in virology. Research programs and faculty include the cellular and molecular basis of latency and pathogenesis of herpes simplex viruses (Dr. Jack G. Stevens), molecular biology of influenza viruses (Dr. Debi P. Nayak), transformation by papilloma viruses (Dr. Felix Wettstein), persistence of lymphocytic choriomeningitis viruses (Dr. Rafi Ahmed), molecular biology of picornaviruses (Dr. Asim Dasgupta), and molecular basis for transcriptional activation of herpesvirus genes (Dr. Lawrence T. Feldman). Stipends are available. For predoctoral training program, contact: **Dr. Dexter Howard**, and for postdoctoral positions, contact **Dr. Debi Nayak, Department of Microbiology and Immunology, UCLA School of Medicine, Los Angeles, Calif. 90024.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**VISITING RESEARCH ASSISTANT PROFESSOR/POSTDOCTORAL**, nontenure-track position available January 1985 for molecular biologist interested in working on gene expression. Individual must have a Ph.D. and expertise in DNA cloning and sequencing. Salary: \$18,000 to \$20,000, commensurate with experience and qualifications. Minimal teaching is required; full benefits; renewable yearly up to 5 years.

Send résumé and three letters of recommendation to: **Dr. Michael Klass, Biology Department, University of Houston, Houston, Texas 77004.** *Equal Opportunity Employer.*

**RESEARCH BIOCHEMIST/TOXICOLOGIST:** The U.S. Environmental Protection Agency (EPA) is seeking candidates for consideration against a potential opening in the area of pulmonary biochemical toxicology. This position will be located in the Toxicology Branch, Inhalation Toxicology Division, Health Effects Research Laboratory. It is a Federal Civil Service permanent position. Salary range: \$36,327 to \$47,226, depending upon qualifications.

The successful candidate will be expected to develop an advanced program which investigates biochemical alterations in mammalian respiratory tract connective tissue caused by inhaled pollutants. Areas of interest include sensitive detection of altered lung collagen and elastin, development of serum and urine measurements as indicators for chronic lung disease, and biochemical mechanisms of chronic disease development.

The candidate should: (i) possess a Ph.D. in biochemistry or an allied discipline, (ii) have four or more years of postdoctoral research experience in collagen/elastin biochemistry or pulmonary biochemical toxicology and exhibit a strong interest in professional growth in the area where his/her experience is less, and (iii) be capable of effective oral and written communication with relevant first author publications in peer-reviewed journals. *U.S. citizenship required.*

Forward curriculum vitae and names of three persons we can contact for references to: **Dr. Judith A. Graham, c/o Personnel Management Division (MD-29), U.S. EPA, Research Triangle Park, North Carolina 27711,** no later than 31 December 1984.

### THE UNIVERSITY OF MELBOURNE RESEARCH FELLOW GRADE 1 (EXTENDIBLE TENURE) in the DEPARTMENT OF ZOOLOGY

Neurobiologist or neurophysiologist with intracellular recording experience required for externally funded 2-year project on coordination in the crayfish ventral nerve cord. Salary in the range of A\$21,411 to A\$24,528 per annum. Position to start as soon as possible. Some assistance with travel may be available. Enquiries in the first instance to: **Dr. D. Macmillan, Zoology Department, University of Melbourne, Parkville, Victoria 3052, Australia; telephone: (03)-341-5127.**

**SENIOR ENVIRONMENTAL SCIENTIST**—Vermont-based consulting firm, involved in international development work, seeks senior environmental scientist for home-office technical support of projects in renewable energy, agriculture, forestry, and other resource management. Primary skills in EIA, resources inventories, and field research; laboratory experience useful but not essential. Some short-term overseas travel required. Willingness and ability to develop domestic work desirable. Applicants should send curriculum vitae, including reference and salary history, to: **Dr. George Burrill, President, Associates in Rural Development (ARD), Inc., P.O. Box 1397, Burlington, Vt. 05402.** *ARD is an Equal Opportunity Employer.*

**VERTEBRATE BEHAVIORAL ECOLOGIST.** Tenure-track assistant professor to establish a vigorous research program in contemporary behavioral ecology, emphasizing experimental studies of vertebrates. Postdoctoral experience is highly desirable. Applicants will be expected to develop a graduate course in behavioral ecology and teach an undergraduate course in some aspect of vertebrate biology. Candidates will be chosen to reinforce our strong commitment to research and graduate training in ecology. Send curriculum vitae, statement of research interests and plans, and names of at least three references by 11 January 1985 to: **Behavioral Ecology Search Committee, T. H. Morgan School of Biological Sciences, University of Kentucky, Lexington, Ky. 40506-0225.** *An Affirmative Action Employer.*

## BIOCHEMIST/ PHYSICAL CHEMIST

Space Science Laboratory  
NASA Marshall Space Flight Center  
Huntsville, Alabama 35812

The Space Science Laboratory invites applicants for research positions in its ongoing theoretical and experimental research program in macromolecular crystal growth for protein structure and in separation science, including electrophoresis, isoelectric focusing, and phase partitioning. The laboratory has state-of-the-art facilities and is actively developing microgravity experiments to be flown on the Space Shuttle.

Candidates must have a research background in one or more of the above fields with a strong interest in separation science or protein crystal growth. The incumbent will have the opportunity to select research goals and to develop experiments for future space missions.

Salary will range from \$30,549 to \$36,327 depending on experience. Forward resumes to the following address not later than February 28, 1985.

Dr. Robert J. Naumann  
or  
Dr. Robert S. Snyder  
ES71  
NASA Marshall Space Flight Center  
Huntsville, AL 35812  
Phone: (205) 453-0940 or 453-3537



U. S. Citizenship Required

Equal Opportunity Employer

## PATHOLOGIST

An excellent career opportunity is now available with our aggressive research team for a DVM and/or PhD in Pathology to conduct toxicologic pathology on research animals in support of preclinical drug safety assessment (IND, NDA). Applicants with toxicological pathology experience with a pharmaceutical company are preferred and Board certification or eligibility is also a plus.

In addition to an excellent salary and fringe benefits, there is good potential for continued professional growth. Interested and qualified candidates are invited to forward their CV in confidence to:

### Wyeth Laboratories, Inc.



P.O. BOX 861  
PAOLI, PA 19301

Equal Opportunity Employer, M/F/H

## ELECTRON MICROSCOPIST

An Electron Microscopist Postdoctoral Research position is available to study the cell surface (SEM) and subcellular organelle changes (SEM) induced in glioma-derived tissue culture cell lines. The qualitative and quantitative *in vitro* effects of chemotherapy and differentiating agents are to be studied to assess mechanisms of action on nuclear and cytoplasmic constituents. Immunocytochemistry (monoclonal antibody labels) and cytochemistry of tissue culture cells is desirable.

Collaboration with immunologists, immunochemists and tumor biochemists is essential. Microcinematography, fluorescent microscopy, quantitative morphometrics, image analysis and processing and SEM-EDX (microanalysis) are tools available for further development to study the oncogenetic changes of brain tumors.

This position will be in the Surgical Neurology Branch, NINCDS, National Institutes of Health, Public Health Service. Salary range for this Staff Fellowship position is \$17,000-\$35,467 per year commensurate with experience. Send curriculum vitae and three references to: Janet E. Follin, Personnel Department, NINCDS, National Institutes of Health, Building 31, Room 8A23, 9000 Rockville Pike, Bethesda, Maryland 20205. For more information, call Ms. Follin on (301) 496-6334.

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## CARBOHYDRATE BIOCHEMIST

The Biopolymer Chemistry unit of The Upjohn Company's Biotechnology Research Program seeks a Research Associate with a BS/MS in Biochemistry or related area with experience in carbohydrate analysis of glycoproteins. The successful candidate will study selective deglycosylation of novel proteinaceous compounds. This individual will be part of a new and growing integral team of researchers working on discovery and characterization of peptides and proteins.

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For confidential consideration, please call from outside of Michigan, toll free, 1-800-253-8600, extension 3-6767; or call from Michigan, collect, (616) 323-6767 to request an application. Please refer to Ad Number 17236B when calling.

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## POSITIONS OPEN

### RENAL PHYSIOLOGIST

Ph.D. or M.D., preferably with skill in micropuncture, to join group studying renal kallikrein system. Assistant or associate professor rank; position funded for at least 5 years. Start between January and July 1985. Send curriculum vitae to: **Dr. N. G. Levinsky, Boston University Medical Center (BUMC), 75 East Newton Street, Boston, Mass. 02118.** BUMC is an Affirmative Action Employer.

**RESEARCH FELLOWSHIP** in lipid biochemistry and metabolism, atherosclerosis and nutrition in laboratory with established postdoctoral training program; 1- to 3-year positions; Ph.D. or M.D. applicants, citizens or permanent residents in this NIH-sponsored program. Send curriculum vitae and references to: **Dr. William E. Connor, L465, Department of Medicine, Oregon Health Sciences University, Portland, Oregon 97201.**

### STAFF OFFICER

The National Research Council seeks applicants for the position of staff officer for the Board on Army Science and Technology. Duties will include assisting in the management of two or more studies, such as an assessment of energetic (that is, explosive) materials, and a structural materials planning panel. Applicants must have a demonstrated understanding of issues involving structural materials and energetic materials science and technology. Applicants must have a M.S. or equivalent work in physics or in materials engineering and a security clearance. Send résumé to: **Dennis F. Miller, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** An Equal Opportunity Employer.

**WOODY PLANT PHYSIOLOGIST.** Assistant professor, tenure-track position with research (60 percent) and teaching (40 percent) duties. Major emphasis on development of a strong research program on some aspect of woody plant physiology. Ph.D. in plant/tree physiology or related discipline is required. Send curriculum vitae and the names of five references by 31 January 1985 to: **Dr. R. P. Guries, Department of Forestry, UNIVERSITY OF WISCONSIN, 1630 Linden Drive, Madison, Wis. 53706.** An Equal Opportunity/Affirmative Action Employer

## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIPS CENTER FOR ADVANCED STUDY IN THE BEHAVIORAL SCIENCES

The Center solicits nominations of distinguished or exceptionally promising scholars in the behavioral and social sciences, as well as biology, statistics, the humanities, and related fields. Nominations are accepted at any time from any member of the academic community, including academic deans and department heads. Fellowship arrangements are normally completed 9 to 18 months before period of residence. Current sources of federal support include the National Science Foundation and the National Endowment for the Humanities. *The Center accepts Fellows of any race, color and national or ethnic origin.*

For further information, write to: **Robert A. Scott, Associate Director, Center for Advanced Study in the Behavioral Sciences, 202 Junipero Serra Boulevard, Stanford, California 94305.**

### POSTDOCTORAL FELLOWSHIP

A postdoctoral fellowship position for a biochemist is now available at the Becton Dickinson and Company Research Center. This opportunity involves research programs directed toward new and novel diagnostic applications using DNA technology. Experience in enzyme modification, coupling chemistry, and bio-analytical techniques needed. Some knowledge of DNA techniques would be an advantage.

This is a 1-year fellowship that may be renewed for a second year. The first year salary is \$23,000 plus a \$2,000 relocation allowance. Send curriculum vitae, a description of your research interests, and the names of three references to: **Dr. Daniel B. Wagner, Becton Dickinson and Company Research Center, P.O. Box 12016, Research Triangle Park, North Carolina 27709.**

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## FELLOWSHIPS

### THE MURIEL & PHILIP BERMAN FELLOWSHIP FUND

P.O. Box 1255, Jerusalem 91904, Israel

#### POSTDOCTORAL FELLOWSHIPS

for 1985-1986

at the Hebrew University of Jerusalem

Berman Fellows are selected on the basis of demonstrated excellence in their studies, promise of distinction in their chosen fields of specialization, and qualities of mind, intellect, and character. Candidates may apply not later than 3 years after completion of their doctoral dissertation. The fellowships are tenable for 1 year but may be extended for an additional year. The grant covers travel and reasonable living expenses. Prospective candidates, including Israelis abroad, may obtain application forms by writing to the above address. Completed application forms must reach Jerusalem not later than 31 January 1985. **Note:** The University has a number of other funds for the award of postdoctoral fellowships. Applicants who are not awarded a Berman Fellowship will automatically be considered for one of these other awards.

**POSTDOCTORAL FELLOWSHIP** available in the area of regulation of DNA methylation during carcinogenesis, starting 1 January 1985, for U.S. citizen or permanent resident. Studies focus on alterations in DNA composition, function, and enzymology of the methylase system. Experience in recombinant DNA technology and/or protein chemistry is required. Send curriculum vitae and three references to: **Jean-Numa Lapeyre, Ph.D. Department of Pathology, Box 85-E, The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.** An Equal Opportunity/Affirmative Action Employer.

The University of Alberta  
Edmonton, Alberta, Canada

### POSTDOCTORAL FELLOWSHIP CELL BIOLOGY OF DEVELOPMENT

One position is available immediately to study cell-cell and cell-matrix interactions in early vertebrate development. Initial appointment will be for 2 years with possible extension. Applicants should send curriculum vitae and three letters of reference to: **Dr. E. J. Sanders, Department of Physiology, University of Alberta, Edmonton, Alberta, Canada T6G 2H7.**

**GRADUATE TRAINING IN DOMESTIC ANIMAL BIOTECHNOLOGY.** Outstanding applicants are encouraged to apply for a program of integrated study to prepare Ph.D. students to use biotechnology to increase reproductive efficiency and decrease losses from disease. Students will receive advanced training in methods for diagnosis and prevention of infectious diseases, immunology, recombinant DNA procedures, genetic engineering, and molecular aspects of reproductive biology through course work and participation in research in which these procedures are applied to solve problems in animal agriculture. Annual fellowships of \$15,000 are provided by a U.S. Department of Agriculture Graduate Fellowship Program. Applicants for entry in spring, summer, or fall 1985 must send a statement of goals, interests, and relevant experience, and arrange to have complete college transcripts, GRE scores, and three letter of reference sent to: **Dr. G. D. Niswender, Associate Dean for Research, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colo. 80523.** Colorado State University is an Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

**IMMUNOLOGY FELLOWSHIP** available July 1985. Program mainly involves work with monoclonal antibodies for radioimmunoimaging and therapy of patients with melanoma and other malignancies. Completion of residency in internal medicine required. Successful completion of program leads to Board-eligibility to allergy and immunology. Excellent opportunity for bright, self-motivated physician with interest and skill in clinical research. Contact: **Lynn E. Spittler, M.D., Childrens Hospital, 3700 California Street, San Francisco, Calif. 94118.**

**EVOLUTIONARY BIOLOGY.** Postdoctoral fellowships are available for summer research at the Mountain Lake Biological Station of the University of Virginia. Proposals will be considered for a wide variety of ecological and evolutionary studies. Deadline for applications: 1 March 1985. Write to: **Director, Mountain Lake Biological Station, Gilmer Hall, University of Virginia, Charlottesville, Va. 22901.** Equal Opportunity/Affirmative Action Employer.

## FELLOWSHIPS

### MORRIS DOCTORAL FELLOWSHIPS SOUTHERN ILLINOIS UNIVERSITY

Outstanding students are invited to compete for exceptional fellowships. Stipends of \$8500, plus tuition, for up to 3 years of full-time study, are available to support high calibre students entering any of 23 doctoral programs at Southern Illinois University at Carbondale (SIUC). Application due date is 1 February 1985; notification of awards will be made by 15 April 1985. For detailed information and application materials, write:

**Morris Doctoral Fellowship Program  
Dean of the Graduate School  
Southern Illinois University  
Carbondale, Illinois 62901**

SIUC is an Equal Opportunity/Affirmative Action Institution.

### DREXEL FELLOWSHIPS IN BIOMEDICAL ENGINEERING AND SCIENCE

These are supported by the Calhoun Endowment. Students can specialize in the following areas: bioinstrumentation; biomedical imaging and signal processing; biomedical science, biomaterials; biomedical systems and control; cardiovascular dynamics; biomedical computer applications; diagnostic ultrasound; heart assist devices; and sensors. Each fellowship provides a minimum of \$8500 tax-free stipend for a 12-month appointment plus waiver of tuition and fees beginning fall 1985. Deadline for application: 15 February 1985. For application and information about this and other financial support, write: **Dr. Dov Jaron, Director, Biomedical Engineering and Science Institute, Drexel University, Philadelphia, Pennsylvania 19104.**

## ASSISTANTSHIPS

### PREDOCTORAL RESEARCH ASSISTANTSHIPS

The Department of Food Science and Nutrition, University of Massachusetts, Amherst, has available on a competitive basis, a number of U.S. Department of Agriculture predoctoral research assistantships at \$15,000 per year; these include a full tuition waiver and are restricted to U.S. citizens and nationals. Applications will be accepted for both spring and fall semester of 1985 with cutoff dates of 15 December and 15 April, respectively. Prospective applicants with an interest in nutrition, food biochemistry, food enzymology, industrial fermentation technology, food microbiology and toxicology, genetic toxicology, biotechnology, food chemistry, or food biochemistry should contact: **Dr. Robert E. Levin, Graduate Program Director, Department of Food Science and Nutrition, University of Massachusetts, Amherst, Mass. 01003.** The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.

## TRAINING PROGRAMS

### UNIVERSITY OF TENNESSEE CENTER FOR HEALTH SCIENCES NATIONAL RESEARCH SERVICE

#### TRAINEESHIPS INFECTIOUS DISEASES, MICROBIOLOGY, AND IMMUNOLOGY

The University of Tennessee Center for Health Sciences announces an interdepartmental **TRAINING PROGRAM** for predoctoral and postdoctoral candidates. Faculty in the Departments of Medicine, Pediatrics, and Microbiology and Immunology participate as preceptors for research and clinical training in microbial pathogenesis and immunity, epidemiology, virology, oncogenes, microbial and eukaryotic genetics, recombinant DNA, cloning and monoclonal antibody techniques, infections in immunocompromised hosts, human lymphocytes in the immune response, tumor immunology and immunotherapy of allergies. Prerequisites are: U.S. citizenship; predoctoral candidates—bachelor's degree in science; postdoctoral candidates—Ph.D. or M.D. degree. Post-M.D. candidates should also have 2 to 3 years of clinical training in internal medicine or pediatrics. The predoctoral stipend is \$8000 per year plus tuition and books. The postdoctoral stipend is dependent on previous experience. Interested individuals should contact: **Dr. Edwin H. Beachey, Research Service, Department of Medicine, University of Tennessee/VA Medical Center, 1030 Jefferson Avenue, Memphis, Tenn. 38104.** An Equal Opportunity/Affirmative Action Employer.

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Interested applicants should send full details of their qualifications and experience, quoting ref. 190. Please indicate expected salary range and earliest starting date.

Should you require any further details, please telephone Prof. Dr. Hoffmeister, Head of Coordination, Pharmacological Research, on (01149202) 36-83 38, who will be pleased to help you.

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