

pioneer efforts there has been little geological research in most of this region because of its physical inaccessibility and because much of it has been closed to foreigners until rather recently. This is clearly evident on the "carte tectonique de l'Eurasie" that accompanied Argand's famous synthesis of Eurasia in 1924, where about half of the Tibetan region is left blank.

With the growth and development of plate tectonics, increased interest in the Himalayan-Tibetan region has resulted in a large amount of new geological work. This prompted the editors of this volume to organize a discussion meeting under the auspices of the Royal Society to bring together scientists working in the region. The papers contained in this volume are contributions from the meeting and largely reflect the status of current research efforts.

Most of the 12 papers contain reviews of the geology and geophysics of the Himalayan-Tibetan region, although a paper by Alan Smith considers the Late Palaeozoic biogeography of all East Asia. These reviews will be valuable to scientists who did not attend the meeting or who are not working in the region and will bring them up to date on advances in some areas of Himalayan-Tibetan research (the volume was published less than a year after the meeting), but the contributions cover only a few parts of this vast region. The areas from Pakistan to the Kumaun and eastern Nepal are reasonably well covered, but there are no contributions about the eastern part of the Himalaya or about the geology of Tibet. It is unfortunate that there is no general contribution, or even a brief review, from the Chinese-British Tibet Geotraverse, although the results from that study are to be published in a separate volume. Contributions by Molnar and Hirn describe geophysical information from Tibet as well as the Himalaya, and England and Houseman discuss the mechanics of deformation of the Tibetan Plateau. Even though the quantity of new data is not great in most contributions, the papers cannot be considered simply review articles, because all present new ideas and new interpretations from evolving research efforts.

An interesting paper by Hirn on an interpretation of the crust-mantle structure of the Himalaya-Tibet region is based on the Chinese-French seismic surveys in 1981-82, with comparisons with similar data from better-known collisional orogens in western Europe. Hirn shows that Moho reflections beneath one area of the Tibetan plateau are well defined because of the high velocity in the upper mantle, and these data show clear and numerous offsets in the Moho. The interpretation favored by Hirn is that the lower crust and upper mantle have been

shortened by thrust wedges bounded by low to moderately dipping faults that are decoupled within the middle crust and have no expression in the upper crust. The main sutures within Tibet are interpreted as being near vertical faults that offset the Moho. Hirn is quick to point out that seismic data from the Himalaya-Tibet region are very limited in quantity and quality relative to the size and complexity of the region and that sweeping conclusions are premature. There is an excellent review of the geophysical constraints on the deep structure of the Tibetan Plateau, the Himalaya, and the Karakoram, the longest paper in the volume (55 pages), by Molnar. From a variety of seismological data, Molnar concludes that the crust is nowhere less than 50 kilometers thick and that it is everywhere less than 80 kilometers thick, with marked lateral variations in thickness or velocity structure. He also concludes that there is a large area in north central Tibet underlain by lower-velocity material and more highly attenuated mantle, implying higher temperatures and thinner crust in that area, although in elevation the area is similar to the rest of the plateau. Isostatic compensation in this area occurs partly because it is underlain by less dense and hotter mantle than is present beneath the rest of Tibet. Molnar speculates that this area in north central Tibet may be the locus of convective upwelling of hot material in the upper mantle and that the corresponding area of downwelling might lie adjacent to the upwelling region, probably beneath southern Tibet and perhaps also beneath northernmost Tibet. Molnar disagrees with Hirn's interpretation that south-dipping lower-crust-upper-mantle thrust wedges exist beneath the Himalaya, arguing that the data are equivocal and that a north-dipping Moho, supported by flexural and gravity studies of the Himalaya, cannot be ruled out.

Hodges *et al.* present new pressure-temperature paths for metamorphic rocks from central Nepal and make the first attempt to relate segments of the pressure-temperature trajectories to specific Himalayan events. These data are used to construct an interpretative model for the tectonothermal evolution of the Greater Himalaya, in which the authors present an interesting series of cross sections that depict the structural evolution of the Greater Himalaya from Middle Eocene to Recent time. In another paper based on studies in the western Himalayan syntaxis, Coward *et al.* conclude that thrusting is thin-skinned and that thrust sheets are detached within the crust. Lower Indian crust has been underthrust about 500 kilometers beneath the region, and deformation within the underthrust crust is characterized

by ductile shears and recumbent folds, now uplifted and exposed in the Indus and Nanga Parbat syntaxes. Many of the data presented in this paper have been presented before, but they have been updated and reinterpreted.

Overall this book makes a useful reference work for scientists interested in the Himalaya and in processes of intracontinental deformation. The papers are well referenced and provide useful reviews for the parts of the Himalayan-Tibetan region they cover.

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## Books Received

**Automorphisms of Surfaces after Nielsen and Thurston.** Andrew J. Casson and Steven A. Bleiler. Cambridge University Press, New York, 1988. vi, 105 pp., illus. \$34.50; paper, \$12.95. London Mathematical Society Student Texts, vol. 9.

**Cognizers.** Neural Networks and Machines That Think. R. Colin Johnson and Chappell Brown. Wiley, New York, 1988. xii, 260 pp., illus. \$22.95. Wiley Science Editions.

**Coherent Interactions of Charged Particles in Single Crystals.** Scattering and Radiative Processes in Single Crystals. Nikolai P. Kalashnikov. Harwood, New York, 1988. x, 328 pp., illus. \$256. Translated from the Russian edition (Moscow, 1981) by Stephen J. Amor-etty.

**Combination Effects in Chemical Carcinogenesis.** Dietrich Schmähl. VCH, New York, 1988. xii, 279 pp., illus. \$89.50.

**The Common Loon.** Spirit of Northern Lakes. Judith W. McIntyre. University of Minnesota Press, Minneapolis, 1988. xii, 228 pp., illus., plates, + disc recording in pocket. \$25.

**Comparative Physiology of the Vertebrate Digestive System.** C. E. Stevens. Cambridge University Press, New York, 1988. xii, 300 pp., illus. \$49.50.

**Divisors.** Richard R. Hall and Gerald Tenenbaum. Cambridge University Press, New York, 1988. xvi, 167 pp. \$39.50. Cambridge Tracts in Mathematics, vol. 90.

**Human Organic Memory Disorders.** Andrew R. Mayes. Cambridge University Press, New York, 1988. viii, 300 pp., illus. \$49.50; paper, \$18.95. Problems in the Behavioural Sciences, vol. 7.

**Human Territorial Functioning.** An Empirical, Evolutionary Perspective on Individual and Small Group Territorial Cognitions, Behaviors, and Consequences. Ralph B. Taylor. Cambridge University Press, New York, 1988. xxviii, 350 pp., illus. \$49.50; paper, \$16.95. Environment and Behavior Series.

**Immunodeficiency Disorders and Retroviruses.** Kalman Perk, Ed. Academic Press, San Diego, CA, 1988. x, 262 pp., illus. \$65. Advances in Veterinary Science and Comparative Medicine, vol. 32.

**Lacustrine Petroleum Source Rocks.** A. J. Fleet, K. Kelts, and M. R. Talbot, Eds. Published for the Geological Society by Blackwell Scientific, Palo Alto, CA, 1988. xii, 391 pp., illus. \$90. Geological Society Special Publication, no. 40. From a meeting, London, U.K., Sept. 1985.

**Methodology and Epistemology for Social Science.** Selected Papers. Donald T. Campbell. E. Samuel Overman, Ed. University of Chicago Press, Chicago, 1988. xx, 609 pp., illus. \$62.50.

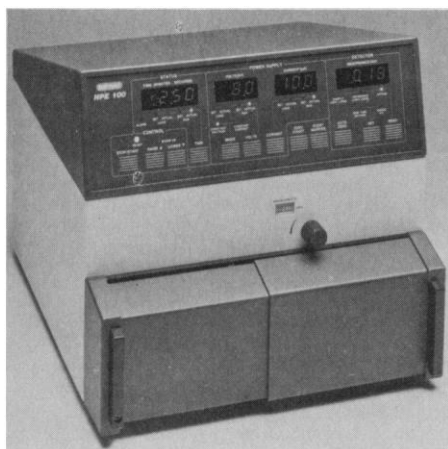
**Microbial Ecology.** Organisms, Habitats, Activities. Heinz Stolp. Cambridge University Press, New York, 1988. xiv, 308 pp., illus. \$54.50; paper, \$22.50. Cambridge Studies in Ecology.

**Our Daily Bread.** The Peasant Question and Family Farming in the Colombian Andes. Nola Reinhardt. University of California Press, Berkeley, 1988. xvi, 308 pp., \$35.

## Products & Materials

### Capillary Electrophoresis Instrument

The HPE 100 identifies and quantifies biopolymers, including peptides, proteins, and DNA fragments, by capillary electrophoresis. Samples are injected with a micro-liter syringe into very thin silica capillary



tubes. In the tubes, high-voltage gradients in free solution separate the biopolymer. Within minutes, an electropherogram can be printed on a strip chart recorder, can be sent to an integrator, or can be processed by a computer. Coated tubes prevent fluid flow caused by charged wall surfaces and also yield sharper results with lower voltages and simpler buffers. Because the tubes have an internal diameter of only 25  $\mu\text{m}$ , heating can be easily controlled. Bio-Rad Laboratories, Chemical Division. Circle 500.

### Nuclear Graphics Software

FCC is a software program for making quantitative comparisons among nuclear structure models and for clarifying the geometry of the solid-phase face-centered cubic (FCC) model. Quantitative comparisons may be made among current nuclear structure theoretical models. The graphics emphasize the solid-phase FCC model and demonstrate how the liquid-drop, shell, and

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

cluster aspects of nuclei can be simultaneously found within this model. To complement the program, plastic models are also available. FCC operates on IBM PC AT and compatible computers with Enhanced Graphics Adapter boards and color monitors. \$130. Transtech (United Kingdom). Circle 506.

### Whole-Cell Clamp

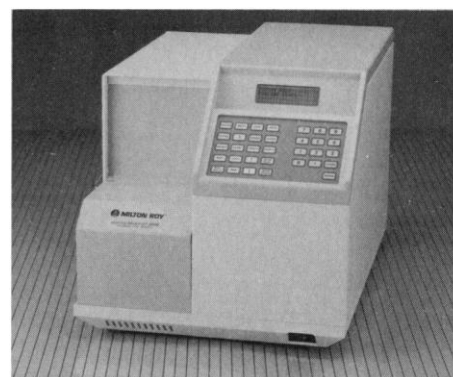
The HAY-1 is a whole-cell clamp that can measure  $\pm 1000$  mA of current. To minimize artifacts, the cell clamp inverts command pulses and applies them to the bathing solution rather than sending them through the recording electrode. The HAY-1 also has single-step series resistance compensation as high as 20 megohms, a low-pass filter with a choice of four cutoff frequencies, and offset and holding potentials with a combined voltage of  $\pm 500$  mV. For recording, voltage-to-current ratios can range between 10 and 1000 mV/nA. \$2250. General Bio-Engineering. Circle 505.

### Kits for Immunostaining

The AS/AP Immunostaining Kit is a kit for performing immunohistochemical staining procedures. The system is based on an amplified substrate system and an alkaline phosphatase-conjugated second antibody. All reagents, including the chromogenic substrate, come ready to use in dropper bottles; no reconstitution, dilution, or mixing is necessary. Each kit contains sufficient reagents to stain 75 slides. Two kits are available: the Universal Rabbit Kit detects all rabbit polyclonal primary antibodies, and the Universal Mouse Kit detects all mouse monoclonal primary antibodies. The kits are compatible with both frozen and paraffin-embedded tissue sections. Bio/Can Scientific. Circle 441.

### DNA Synthesizer

The Gene Assembler Plus is a fully automated oligonucleotide synthesizer. The instrument automatically calculates the coupling efficiency and yield of each cycle with the help of an on-line monitoring system. If coupling efficiency falls below a preset minimum, synthesis is put on hold. All reagents are packed in color-coded plug-in vials, and solvents are premixed. Supports are pre-packed in disposable cassettes that insert into a reusable column reactor. Pharmacia LKB Biotechnology, Molecular Biology Products (Sweden). Circle 501.



### Photodiode Array Detector for HPLC

The spectroMonitor 5000 photodiode array detector has a sensitivity of 0.0005 AUFS (absorbance unit full scale) and noise of  $\pm 1\%$ . The instrument, either unaided or with a personal computer, monitors high-performance liquid chromatography (HPLC) samples at four wavelengths simultaneously. It can also control external instruments, such as fraction collectors. The spectroMonitor 5000 reports any wavelength ratio the user requires and will plot absorbance derivatives. Also, it can store as many as 300 scans. Milton Roy, LDC Division. Circle 507.

### Literature

*The Lab Mart 1988* is a 96-page catalog of balances, baths, incubators, plasticware, pH equipment, and other laboratory apparatus. J. & H. Berge. Circle 514.

*Custom Hybridoma Development* is a set of development protocols for custom immunization, fusion, screening, and cloning. Berkeley Antibody. Circle 517.

*The Standards for Plasma Emission Spectroscopy* brochure describes a line of single-element and multielement standards for inductively coupled plasma, direct-current plasma, and atomic-absorption spectroscopy. SPEX Industries. Circle 519.

*Chromatopac to PC Utility Software* is a brochure about computer interface software for ultraviolet-visible spectroscopy. Shimadzu Scientific Instruments. Circle 520.

The brochure *COMPASS* describes computer-assisted spectrometry systems for gas analysis. Spectramass (United Kingdom). Circle 522.

*Biochemicals, Organic Compounds for Research, and Diagnostic Reagents* is a 1952-page catalog of more than 24,000 reagents, albumins, bioactive peptides, enzymes, immunochemicals, lectins, lipids, and radiochemicals. Sigma Chemical. Circle 450.

# 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. **SCIENCE** reserves the right, in its discretion, to decline to publish advertisements submitted to it.

## LINE CLASSIFIED ADVERTISING DEADLINES:

Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date). For deadlines for display advertising, please contact Scherago Associates.

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

## LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):

\$40.00 per line; \$400 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

## To ESTIMATE ad cost:

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines x \$40.00 = approximate cost of ad. (This is an approximate cost ONLY: Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

## CANCELLATION POLICY:

NOTE: Ad cancellations made after Thursday, TWO weeks prior to issue date incur a 10% production charge. Final deadline for cancellations is 12 p.m. Tuesday, ONE week prior to issue date. Cancellations must be in writing.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

**SCIENCE Classified Advertising**  
1333 H Street, NW, Room 940  
Washington, DC 20005  
Telephone: 202-326-6555

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

**Scherago Associates, Inc.**  
1515 Broadway  
New York, NY 10036  
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)  
**SCIENCE**  
1333 H Street, NW  
Washington, DC 20005

## POSITIONS WANTED

**Biochemist/Chemist Ph.D. (1976)** with experience in proteins and DNA analysis and immunochemistry seeks career change to permanent position in physical anthropology/archaeology. Many publications, teaching experience, languages, liberal arts. Box 26, **SCIENCE**.

**Biotechnology Ph.D. (1979).** Experience in biotechnology, fermentation, natural products separations, mycotoxicology. Analytical procedures: HPLC, TLC, GC-MS, NMR, etc. Experiences: management, sales, research, good communication skills, computer experience. Box 30, **SCIENCE**.

**Environmental/Comparative Physiologist, Ph.D.** Established investigator with publications in thermoregulation, perinatal development, and drug-stress interaction. Current funding in ethanol research. Seeks academic position offering teaching and research opportunities. Box 27, **SCIENCE**.

## POSITIONS OPEN

**ACADEMIC PATHOLOGIST/MEDICAL MICROBIOLOGIST** (M.D. or Ph.D. or equivalent and postdoctoral experience required). The Department of Microbiology at Montana State University is seeking to fill a tenure-track vacancy at the level of assistant professor. The appointment will start between 1 September and 30 December 1989. The position is supported jointly by the Department of Microbiology and the WAMI Regional Medical Education Program (which provides the first-year medical school curriculum at Montana State University for 20 medical students who are enrolled in the University of Washington School of Medicine). The primary teaching responsibility will be to teach and/or coordinate courses in pathology and infectious diseases for medical students. The individual will also contribute to courses related to undergraduate and graduate education in the Department of Microbiology. The successful candidate will be expected to establish a vigorous, independently funded research program in experimental pathology or in an area which complements or extends departmental strengths in molecular biology, medical microbiology, immunology, and oncology. Salary is competitive at the rank of assistant professor. To apply: send letter of application, curriculum vitae, and names and telephone numbers of four references, postmarked no later than 15 May 1989 to: **Search Committee Chair, Department of Microbiology, Montana State University, Bozeman, MT 59717. Telephone: 406-994-2373. Montana State University is an Equal Opportunity/Affirmative Action Employer.**

## ANALYTICAL CHEMIST

The University of Pennsylvania, School of Veterinary Medicine and the Pennsylvania Equine Research and Toxicology Laboratory have a position for an analytical chemist. This highly challenging position requires a Ph.D. in analytical chemistry, biochemistry, or pharmaceutical chemistry with 3 to 5 years of industrial or postdoctoral experience in the characterization, analysis, and identification of drugs and drug metabolites in biological fluids and tissues. Salary: \$25,000 to \$30,000 per year, depending on experience. Please send curriculum vitae to: **Dr. Lawrence R. Soma, University of Pennsylvania, School of Veterinary Medicine, New Bolton Center, Kennett Square, PA 19348. An Affirmative Action/Equal Opportunity Employer.**

**AQUATIC ECOLOGIST.** The Department of Biology of Berry College, a small, selective, liberal arts college in rural northwestern Georgia, invites applications from aquatic ecologists for a tenure-track position at the assistant professor level (Ph.D. required). The successful candidate will teach introductory biology for majors and nonmajors, aquatic ecology and invertebrate zoology. Commitment to research and publication are expected. Submit three letters of recommendation, transcripts of all college work and curriculum vitae by 15 April 1989 to: **Dr. Robert A. Martin, Head, Department of Biology, Berry College, Mount Berry Station, Rome, GA 30149. Equal Opportunity Employer.**

## ASSISTANT PROFESSOR IMMUNOLOGY/CELL BIOLOGY

Applications are invited for an assistant professor for appointment in 1989. This is a tenure-track 100% research faculty position (12-month appointment) supported by a full-time technician and seed money. Salary range will be \$35,000 to \$39,000 per year based on experience and qualifications.

Required qualifications: Ph.D. or Ph.D./D.V.M., research interests in a modern area of immunology or cell biology, postdoctoral experience, and a record indicating the ability to perform independent research and potential to establish a competitive, extramurally funded research program. A willingness to collaborate with other faculty on projects dealing with disease agents of livestock and to participate in an active graduate program is essential. Interested applicants should send a letter of application describing research goals, curriculum vitae, and arrange for three letters of recommendation to be sent to: **Chairman, Search Committee, Veterinary Research Laboratory, Montana State University, Bozeman, MT 59717. Screening of applicants will begin 15 March 1989 and will continue until a suitable candidate is found. An Equal Employment Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**AQUATIC VERTEBRATE BIOLOGY POSITION**—Assistant Professor. Mississippi State invites applications for a tenure-track position in the Department of Biological Sciences to begin August 1989. Position will remain open until filled. Applicants must be interested in developing a strong fish biology research program, directing graduate students, and be committed to providing quality instruction at the undergraduate and graduate levels. For details or to submit résumé, contact: **Dr. Wyman Dorrough, Head, Department of Biological Sciences, P.O. Drawer GY, Mississippi State, MS 39762. Affirmative Action/Equal Employment Opportunity Employer.**

## ASSISTANT PHYSICIST

Ph.D. in physics. Education and graduate research should include electrical engineering principles and computer techniques, vacuum systems, various control systems, numerical simulation and analysis, classical electromagnetism, experimental technique and operation of laboratory equipment. Will investigate wakefield acceleration schemes for the next generation of electron-positron TeV linear colliders. Perform experiments on structure and plasma wakefield acceleration using the Advanced Accelerator Test Facility. Identify and analyze new approaches for high gradient acceleration. Salary: \$2800 per month—40 hours per week, 8:30 a.m. to 5:00 p.m. Send résumé to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605, Attention: Marie Ninneman, Reference #8927. An employer-paid ad.**

## ASSISTANT PROFESSOR BAYLOR COLLEGE OF MEDICINE HUFFINGTON CENTER ON AGING

The Roy M. and Phyllis Gough Huffington Center on Aging is interdisciplinary and multidisciplinary. A primary goal of the Center is to add to our existing research program to create an exceptionally strong program in the cellular and molecular aspects of the aging process. A tenure-track position at the assistant professor level is available to the candidate whose plans complement the Center's research goals. Primary responsibility is to the Center, but the candidate will enjoy full privileges of an academic appointment in the appropriate basic science department. Generous start-up funds are available. Applicants should send curriculum vitae, publications list, brief statement of research plans and teaching interests, and names of three persons we may contact for letter of recommendation by 1 April 1989 to: **James R. Smith, Ph.D., Co-Director, Huffington Center on Aging, Baylor College of Medicine, One Baylor Plaza, M320, Houston, TX 77030. Baylor College of Medicine is an Equal Opportunity/Affirmative Action Employer.**

## ASSISTANT PROFESSOR

Tenure-track position is available in the Department of Medical Microbiology and Immunology, Ohio State University (OSU) College of Medicine, for either a retrovirologist or a viral immunologist interested in neurological disease. Opportunities to collaborate closely with other groups involved in viral immunology, molecular virology, and neuroimmunology. The OSU Medical Center is one of the designated AIDS Clinical Trial Groups. Applicant should hold M.D. or Ph.D. degree and at least 2 years of experience, and have a strong record of scholarly achievement. Will be expected to establish an active research program and participate in medical student and graduate teaching programs. Send curriculum vitae, a summary of research interests, and three letters of recommendation to: **Ronald Glaser, Ph.D., Department of Medical Microbiology and Immunology, The Ohio State University College of Medicine, 333 West 10th Avenue, Columbus, OH 43210.**

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

## ASSISTANT/ASSOCIATE PROFESSOR MEDICAL COLLEGE OF OHIO

The Department of Surgery, Medical College of Ohio is searching for a G.I. (preferably hepatic) physiologist. Tenure-track position with opportunity for independent research program. Address inquiries (please include curriculum vitae) to: **Neil R. Thomford, M.D., Chairman, Department of Surgery, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699-0008. The Medical College of Ohio is an Equal Opportunity Employer.**

## POSITIONS OPEN

### ASSISTANT PROFESSOR—BIOCHEMISTRY.

The School of Medicine Medical Biochemistry Unit at Southern Illinois University—Carbondale has available a tenure-track position in the area of molecular biology. Minimum qualifications are a Ph.D. degree and postdoctoral training. While all qualified candidates are encouraged to apply, preference will be given to those working with eukaryotic organisms. The candidate will be expected to develop a strong graduate research program and to participate in teaching undergraduates, medical students, and graduate students. This is a 12-month position with a cross appointment in the Department of Chemistry and Biochemistry in the College of Science. Qualified candidates should send curriculum vitae, statement of research plans, and three letters of reference to: **Dr. Joseph C. Schmit, Chair, Medical Biochemistry, Southern Illinois University, Carbondale, IL 62901.** *Southern Illinois University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR, ZOOLOGY:** tenure-track position beginning 24 August 1989 to teach in areas of zoology broadly defined, and conduct a productive research program. A Ph.D. is required and documented lecturing experience is preferred. The appointee will be in residence at the University of Wyoming/Casper College Center, Casper, Wyoming, and will be expected to teach two courses, an undergraduate seminar, and perform student advising each semester. Send curriculum vitae and three letters of recommendation to: **Dr. Robert W. Atherton, Department of Zoology and Physiology, The University of Wyoming, Laramie, WY 82071-3166** by 10 April 1989. *The University of Wyoming is an Equal Employment Opportunity/Affirmative Action Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR YALE UNIVERSITY

The Department of Pharmacology in conjunction with the Comprehensive Cancer Center of the Yale University School of Medicine invites applications for tenure-track appointments at the assistant or associate professor level to begin in 1989 or 1990. Candidates are sought with basic research interests in cancer chemotherapy or biotherapy. Appropriate target areas include growth factors, oncogenes, receptors, bioorganic reaction mechanisms, and the structural biology of ligand/receptor interactions. Appointees will have access to a variety of Departmental and Cancer Center resources. Candidates should have a Ph.D. or M.D. degree, postdoctoral experience, and a strong commitment to research. Applications submitted by 1 May 1989 should include curriculum vitae (including up to five reprints), description of research interests, and the names of at least three references to be sent to: **Faculty Search Committee, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT OR ASSOCIATE PROFESSOR—BIOCHEMICAL TOXICOLOGY.** Louisiana State University (LSU) is seeking a highly motivated person to develop a strong research program in biochemical toxicology. Position requires Ph.D. in chemistry, biochemistry, pharmacology, toxicology, or closely related field. This is a fiscal year (12-month) tenure-track appointment. Salary and date of employment are negotiable. Send résumé and three letters of recommendation to: **Dr. Charles R. Short, School of Veterinary Medicine, LSU, Baton Rouge, LA 70803,** by 15 April 1989. *LSU is an Equal Opportunity Employer.*

**ASSISTANT OR ASSOCIATE PROFESSOR IN THE RESEARCH ASSOCIATE TRACK** to assume major responsibility in a cellular electrophysiology laboratory studying the effects of arrhythmogenic influences and antiarrhythmic drugs on ionic currents, gap junctional conductance, and repolarization. Experience in voltage-clamping of myocytes and cell pairs useful. Excellent scientific environment. Renewable term appointment with full fringe benefits. *Equal Opportunity Employer.* Immediate availability. Please send curriculum vitae, representative reprints, and names of three references to: **Morton F. Arnsdorf, M.D., Chief, Section of Cardiology, University of Chicago Hospitals, Box 423, 5841 South Maryland, Chicago, IL 60637.**

## UNIVERSITY OF GUELPH DEPARTMENT OF NUTRITIONAL SCIENCES COLLEGE OF BIOLOGICAL SCIENCE

The Department of Nutritional Sciences invites applications for a tenure-track position as an assistant professor. The position involves teaching undergraduate and graduate students and the development of an independent research program in nutritional sciences. A Ph.D. in nutritional sciences or related disciplines such as biochemistry, cell biology or physiology is required. Preference will be given to applicants with experience in teaching and post-doctoral research.

Applications should include curriculum vitae, a list of publications, future research objectives and the names of three referees and be sent to:

Dr. H.S. Bayley  
Department of Nutritional Sciences  
University of Guelph  
Guelph, Ontario, Canada N1G 2W1  
Closing date for applications is  
May 1, 1989

Subject to final budgetary approval. The University of Guelph is committed to Employment Equity.



## ONCOGEN

ONCOGEN, a Division of Bristol-Myers, and a leader in Biotechnology, performs research dedicated to pursuing novel approaches to the development of therapeutic products in the area of Immunology, Infectious Diseases, and Cancer. We are recruiting two Ph.D. scientists:

### Molecular Biologist:

#### Job Responsibilities:

- Identification of new genes involved in cell growth and differentiation.
- Expression of recombinant proteins in eukaryotic and prokaryotic hosts with emphasis on mammalian cell expression.
- Investigate mechanisms of ligand-receptor interaction and signal transduction.
- Study of protein-DNA interaction with respect to regulation of gene expression.

#### Qualifications:

Ph.D. with postdoctoral experience. cDNA cloning/recombinant DNA manipulations/DNA transfections/immunological detection of recombinant products/protein purification/characterization of DNA binding proteins. Ad #002.

### Cell Biologist:

Individual to work closely with molecular biologists to provide expertise needed to make biologically active fusion proteins and chimeric antibodies.

#### Qualifications:

Ph.D. with postdoctoral experience and extensive cell biology experience. Ad #011.

We offer a professional and challenging work environment, competitive salaries, and an excellent benefit package. Qualified applicants please send resume to: Human Resources, ONCOGEN, 3005 First Avenue, Seattle, Washington 98121.

*Equal Opportunity Employer. (M/F/H/V).*

## Research Scientist Microbiologist



Pfizer Central Research has an excellent career opportunity for a creative scientist at its modern Animal Research facility in Terre Haute, Indiana. As a regional economic center in western Indiana, Terre Haute supports both rural and urban lifestyles. In addition, within a reasonable drive are several large universities and major urban areas.

We are seeking an accomplished scientist who is innovative, enthusiastic, has good communication skills, and enjoys working as part of a strong multidisciplinary project team. You will have an opportunity to exercise ingenuity and originality in developing and conducting basic and applied research toward the evaluation of agents for the control of infectious disease. You must possess a PhD in Microbiology and postdoctoral experience would be an asset; however, educational training, intellectual capabilities, and leadership traits are most important.

Pfizer provides an outstanding opportunity for professional recognition and career growth. We offer excellent compensation, comprehensive benefits, and relocation assistance. Qualified applicants should submit a current resume with the names of three references to: Ms. Christina Batjer, Senior Personnel Supervisor, Pfizer Inc., P.O. Box 88, Terre Haute, Indiana 47808. An equal opportunity employer.

## POSITIONS OPEN

**ASSISTANT/ASSOCIATE PROFESSOR, IMMUNOLOGIST.** The Microbiology Department of the Chicago College of Osteopathic Medicine invites applications for a tenure-track position. A Ph.D., 2 years of postdoctoral experience or equivalent, and strong commitment to teaching are required. Preference given to those having research interests in cellular immunology or immunologic aspects of microbial pathogenesis. Start-up funds available. Send curriculum vitae, a statement of research interests, and names of three references to: **Dr. J. R. Burdick, Department of Microbiology, Chicago College of Osteopathic Medicine, 555 31st Street, Downers Grove, IL 60515.**

### OREGON HEALTH SCIENCES UNIVERSITY CENTER FOR RESEARCH ON OCCUPATIONAL AND ENVIRONMENTAL TOXICOLOGY ASSOCIATE DIRECTOR FOR OCCUPATIONAL RESEARCH AND HEALTH PROMOTION

Center seeks medical scientist with international/national reputation of excellence in neurological or neuro-behavioral research pertinent to occupational disease, and a track record of effective teaching and/or research administration. Successful candidate will conduct funded laboratory and/or workplace research to identify toxic chemicals and reduce occupational exposure to these agents; develop highly visible occupational and community outreach program to promote occupational health and to prevent disease; catalyze formation of an effective diagnosis and treatment program for occupational disorders, and participate in development and administration of new basic research center with heavy focus on neuro-toxicology. Tenure or tenure-track position with salary and appointment commensurate with qualifications/experience/potential. Full application submitted by 24 March 1989 to: **Dr. P. S. Spencer, Director and Senior Scientist, Center for Research on Occupational and Environmental Toxicology, Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, L474, Portland, OR 97201.** Oregon Health Sciences University is an Equal Opportunity/Affirmative Action Employer.

**BIOLOGIST.** The Biology Department of the University of the South invites applications from broadly trained zoologists with Ph.D. or equivalent for a 1-year, 3/4-time sabbatical replacement position beginning in late August 1989. Teaching responsibilities include general zoology, developmental biology, and a field-oriented invertebrate zoology course. Applications will be reviewed beginning 15 March 1989. Graduate and undergraduate transcripts, curriculum vitae, and three letters of reference should be sent to: **Dr. Larry H. Jones, Chairperson, Biology Department, The University of the South, Seawane, TN 37375.** This University is an Equal Opportunity Employer; women and minorities are encouraged to apply.

### BIOLOGY BALL STATE UNIVERSITY MUNCIE, INDIANA

Tenure-track position in the Department of Biology, available fall 1989, for an individual with primary interest in instruction of a multisectioned course entitled Biological Concepts for Teachers. Candidates will be expected to employ innovative teaching methods in conveying basic biological/scientific principles to elementary teaching majors. Responsibilities: To develop, teach and coordinate a multisectioned course in biology to elementary teaching majors and to teach a course in specialty area; to conduct research in a specialty area and promote student research; and be an active member of the academic community. Minimum qualifications: Earned doctorate in a biological science or science education. Preferred qualifications: Experience teaching biology to non-majors and research in his/her subdiscipline; experience teaching elementary school science. Submit résumé, documentation of scholarly activity (e.g., reprints of publications or creative activities), a list of three referees, and transcripts to: **Dr. Alice Bennett, Chairperson, Department of Biology Search Committee, Ball State University, Muncie, IN 47306.** Telephone: 317-285-8820. Applicants will be evaluated commencing 17 March 1989, and will continue until the position is filled.

Ball State University Practices Equal Opportunity in Education and Employment.

## POSITIONS OPEN

**BIOLOGIST:** University of South Carolina (USC) at Sumter (a 2-year campus) has an opening for a visiting professor of biology for 2 years beginning August 1989. Candidates should have a strong commitment to teaching and possess a background in vertebrate anatomy, physiology, cell biology, and chemistry. Teaching experience is required and a Ph.D. in biology is preferred. Teaching duties will vary, but include human anatomy, human physiology, and allied health chemistry for nursing/allied health majors. Send résumé, three letters of recommendation, and transcripts by 17 April 1989 to: **Dr. Bob Nerbun, Chairman, Division of Science, Math, and Engineering, USC-Sumter, Miller Road, Sumter, SC 29150-2498.** An Affirmative Action/Equal Opportunity Employer.

**BIOLOGIST—ASSISTANT/ASSOCIATE PROFESSOR** (anticipated vacancy) Ph.D. Tenure-track starting 26 August 1989. Teach general biology, vertebrate and invertebrate zoology. High energy level, genuine interest in undergraduate teaching, advising, and computer literacy required. Send letter of application, résumé, transcripts, and three letters of reference to: **Dr. Hobart Dixon, Adams State College, Alamosa, CO 81102.** Telephone: 719-589-7256. Screening begins 31 March 1989, and continues until the position is filled. Affirmative Action/Equal Opportunity Employer.

**CELL/MOLECULAR BIOLOGIST**—The Department of Biology, Iona College, New Rochelle, New York, invites applications for a tenure-track position, available in September 1989. Minimum requirements include a Ph.D., a broad background in biology, and ability to teach undergraduate and master's level courses in cell/molecular biology, genetics, related courses, and science literacy courses to nonmajors. Rank and salary negotiable. Forward résumé, including courses applicant is equipped to teach, and three references by 17 March 1989 to: **Dr. George Pappas, Chairman, Department of Biology, Iona College, New Rochelle, NY 10801.** Iona is an Affirmative Action/Equal Opportunity Employer.

### BAYLOR COLLEGE OF MEDICINE CELLULAR AND MOLECULAR PATHOBIOLOGY

Applications are invited from outstanding candidates for junior and intermediate-level **FACULTY POSITIONS** within the newly created section of Molecular Pathobiology in the Department of Pathology, Baylor College of Medicine. Our goal is to recruit exceptional investigators to a collaborative environment centered around molecular approaches to disease mechanisms. Successful candidates should have Ph.D., M.D., or equivalent degrees plus at least 2 years of postdoctoral research training and will be expected to establish and maintain independent, extramurally-funded research programs. Interested individuals should submit curriculum vitae, a brief description of prospective research plans, and three letters of recommendation to:

**Chairman, Molecular Pathobiology  
Search Committee  
Department of Pathology  
Baylor College of Medicine  
Houston, TX 77030**

**CHIEF, DIVISION OF ONCOLOGY/HEMATOLOGY**—Full-time academic appointment available at Southern Illinois University School of Medicine. Associate Professor or Professor of Medicine, depending on experience. Internal Medicine and Oncology/Hematology certification or equivalency is required. Teaching and patient care responsibilities with a strong interest in clinical research. Send résumés to: **Oliver E. Owen, M.D., Professor and Chairman, Department of Internal Medicine, SIU School of Medicine, P.O. Box 19230, Springfield, IL 62794-9230.** SIU School of Medicine is an Equal Opportunity/Affirmative Action Employer. This position will be open until April 1989 or until filled.

**CYTOGENETICIST RESEARCHER**—Conduct research into genetics for detection, prevention of genetic disorders, birth defects with emphasis on chromosome abnormalities. No treatment of patients. Write reports re: research data. Ph.D. genetics, 1 year of experience. \$60,000 per year. Job site/interview: Pasadena, California. Send this ad and your résumé to: **Job #DH17083, P.O. Box 9560, Sacramento, CA 95823-0560,** not later than 18 March 1989.

## POSITIONS OPEN

### CHAIRMAN MOLECULAR GENETICS AND CELL BIOLOGY THE UNIVERSITY OF CHICAGO

The Division of the Biological Sciences, which includes The Pritzker School of Medicine, at the University of Chicago is seeking a Chairman of the Department of Molecular Genetics and Cell Biology (MGCB). This is a multidisciplinary department with approximately 30 faculty in the fields of cell biology, developmental biology, genetics, microbiology, plant biology, and virology. The Chairman reports to the Dean of the Division and is responsible for providing academic and administrative leadership in research and teaching of undergraduate, graduate, postgraduate, and medical students. The successful applicant will have an outstanding record of scientific accomplishment and demonstrated teaching and administrative abilities that will qualify him/her for the rank of professor. University of Chicago is an Equal Opportunity/Affirmative Action Employer. Please send curriculum vitae and the names of three individuals familiar with your work to: **Dr. Donald Steiner, Chair, Search Committee for MGCB, The University of Chicago, 5841 South Maryland Avenue, Box 391, Chicago, IL 60637.** Applications should be submitted by 15 April 1989.

### CHAIRMAN PHARMACOLOGICAL AND PHYSIOLOGICAL SCIENCES THE UNIVERSITY OF CHICAGO

The Division of the Biological Sciences, which includes The Pritzker School of Medicine, at the University of Chicago is seeking a Chairman of the Department of Pharmacological and Physiological Sciences. This is a multidisciplinary department with 16 faculty in the fields of cell physiology, clinical pharmacology, neurobiology, and pharmacology. The Chairman reports to the Dean of the Division and is responsible for providing academic and administrative leadership in research and teaching of undergraduate, graduate, postgraduate and medical students. The successful applicant will have an outstanding record of scientific accomplishment and demonstrated teaching and administrative abilities that will qualify him/her for the rank of professor. The University of Chicago is an Equal Opportunity/Affirmative Action Employer. Please send curriculum vitae and the names of three individuals familiar with your work to: **Dr. Frank W. Fitch, Chair, Search Committee for Pharmacological and Physiological Sciences, The University of Chicago, 5841 South Maryland Avenue, Box 414, Chicago, IL 60637.** Applications should be submitted by 15 April 1989.

The Food and Drug Administration invites applications for an interesting and challenging position that is available in its Center for Biologics Evaluation and Research located in Bethesda, Maryland. The position is in the Senior Executive Service with a salary range of \$68,700 to \$76,400 per annum (physicians may be eligible for a comparability allowance up to \$20,000 per year). As **DIRECTOR, DIVISION OF BACTERIAL PRODUCTS**, the incumbent directs a multidisciplinary scientific and professional staff engaged in research and operational programs relating to the regulatory control of bacterial and allergenic products. Candidates should have an M.D. degree or a Ph.D. in the biological or physical sciences and research experience involving bacterial and allergenic products. The position needs an individual who has demonstrated strong leadership and managerial abilities in directing complex scientific programs; ability to deal effectively with high level government officials, the scientific/academic communities, national/international medical and health-related organizations and regulated industry representatives; and the ability to implement equal employment opportunity programs.

If you are interested and want to be considered . . . send curriculum vitae to: **Jim Keady, Division of Human Resources Management, Food and Drug Administration, Parklawn Building, Room 4B-09, 5600 Fishers Lane, Rockville, MD 20857.** If you need more information, call Jim, collect, on : 301-443-1755.

This position can also be filled by current Commissioned Officers of the U.S. Public Health Service, or by former officers willing to rejoin the corps.

An Equal Opportunity Employer.



## RESEARCH ASSOCIATE/ PROTEIN BIOCHEMISTRY

**Amgen**, a rapidly emerging leader in applied biotechnology, has an immediate opportunity for a BS or MS level scientist to contribute to on-going research efforts in molecular biology and protein purification.

Qualified candidates for this position must have a BS or MS in Biochemistry, Molecular Biology or a related discipline and some experience in the purification and characterization of proteins. Experience in the scale-up of purification processes is highly desirable as is some familiarity with basic gene cloning and gene expression.

**Amgen** offers an excellent compensation and benefits package as well as the unique opportunity to participate in innovative and challenging research projects. If you have the necessary qualifications and are interested in being part of a dynamic, growing organization, please send a resume, in confidence, to:

**AMGEN, INC.**  
Recruitment, Dept. #381  
1900 Oak Terrace Lane  
Thousand Oaks, CA 91320

Equal  
Opportunity  
Employer

# AMGEN

## DIRECTOR

### MOLECULAR GENETICS DIVISION

**Children's Hospital National Medical Center of Washington, D.C.** is seeking an individual to direct a newly created Molecular Genetics Division in the Department of Clinical Genetics. Candidates must have an M.D., Ph.D. or M.D./Ph.D. degrees and have previously demonstrated skill in the field of molecular genetics. The ability to supervise a rapidly growing research team and to conduct appropriate independent research is required.

Excellent salary and benefits package with tenured appointment at the Associate Professor or Professor level in the Department of Child Health and Development of George Washington University. Position available July 1, 1989. Send curriculum vitae and brief statement of research interests to:

**Kenneth N. Rosenbaum, M.D.**  
Director, Clinical Genetics  
and Genetics Laboratory

**CHILDREN'S HOSPITAL NATIONAL  
MEDICAL CENTER**  
111 Michigan Ave., N.W.  
Washington, D.C. 20010

Equal Opportunity Employer

## PUBLIC HEALTH SERVICE National Institutes of Health Division of Research Resources

**Position Title:** Health Scientist Administrator  
(Chief, Animal Resources Program Branch),  
GM-601-15. Salary Range: \$57,158 to \$74,303

**Location:** Bethesda, Maryland

**Duties:** The Chief, Animal Resources Program Branch, serves as scientific manager of a broad resource area dealing with laboratory animal sciences, primate research centers, and other biological resources utilized in biomedical research. These programs use resource grants, resource-related research grants, training grants, research contracts and other resource support mechanisms. The Chief administers policies and operational procedures of the program, plans short- and long-term goals, coordinates multidisciplinary research efforts within this agency and with other federal research activities and special interest groups; and evaluates scientific accomplishments of supported scientists and institutions.

**Qualifications Required:** Completion of all requirements for a Doctor of Veterinary Medicine degree, plus experience in research program administration in which professional judgments were exercised that required the application of scientific knowledge of health or health-related research. U.S. citizenship is required.

**How to Apply:** Submit an Application for Federal Employment (SF-171) (available at all Federal Job Information Centers and Federal Personnel Offices), curriculum vitae and bibliography to the following address:

**Ms. Grace Walton**  
Division of Research Resources  
Personnel Office  
Westwood Building, Room 854  
5333 Westbard Avenue  
Bethesda, Maryland 20892  
(301) 496-1524

Applications must be received by March 31, 1989.



NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## POSITIONS OPEN

The Food and Drug Administration is recruiting for the **DIRECTOR, DIVISION OF VIROLOGY** in the Center for Biologics Evaluation and Research located in Bethesda, Maryland. The position is in the Senior Executive Service with a salary range of \$68,700 to \$76,400. The Director is responsible for directing a staff of 55 in assuring the safety and effectiveness of biological products used in the prevention, treatment, and mitigation of viral and rickettsial diseases. Applicants must have: executive level experience in managing broad scientific research or regulatory programs; demonstrated strong leadership and managerial abilities in directing complex scientific programs; ability to deal effectively with high level governmental officials, the scientific and academic communities, medical and health-related organizations, representatives of the regulated industry and others; and the ability to implement equal employment opportunity programs. Applicants should have an M.D. degree with board certification or a Ph.D. in a related scientific discipline with postdoctoral training and a national/international reputation in viral and rickettsial biological products or related disciplines.

If you are interested and want to be considered, send curriculum vitae to: **Jim Keady, Division of Human Resources Management, Food and Drug Administration, Parklawn Building, Room 4B-09, 5600 Fishers Lane, Rockville, MD 20857.**

If you need more information, call **Jim**, collect, on: **301-443-1755.**

This position can also be filled by current Commissioned Officers of the U.S. Public Health Service, or by former officers willing to rejoin the corps.

Applications will be accepted until 31 March 1989.

*An Equal Opportunity Employer.*

### **DIRECTOR OFFICE OF MODELING, MONITORING SYSTEMS AND QUALITY ASSURANCE WASHINGTON, DC ES-401/801/1301 \$68,700 to \$78,600**

U.S. Environmental Protection Agency is seeking highly qualified candidates for the position of Director, Office of Modeling, Monitoring Systems and Quality Assurance (OMMSQA). The OMMSQA, a component of the Office of Research and Development, is responsible for developing research and development policies regarding a major segment of the Agency's program in the areas of: techniques, equipment, systems and operations for national environmental monitoring; characterization and source apportionment of pollutants in the environment; air transport, transformation and fate modeling; methods development for human and ecosystem exposure monitoring and assessment; quality assurance programs; technical information systems; and technical support to EPA regulatory and enforcement programs.

Applicants for this Senior Executive Service (SES) position must have a bachelor's or higher degree in life sciences, physical sciences or engineering, and substantive professional experience demonstrating scientific leadership and competence. Notable experience in atmospheric, ecological, analytical chemistry and/or exposure programs is desirable. You must also meet the technical and executive qualifications described in the Vacancy Announcement. For a copy of the Vacancy Announcement call or write: **Edna Morse, Environmental Protection Agency, Executive Resources and Special Programs Division, PM-224, 401 M Street, S.W., Washington, DC 20460.** The telephone number is: **202-382-3328.** Applications must be postmarked by 31 March 1989. *EPA is an Equal Employment Opportunity Employer.*

**ENVIRONMENTAL PATHOLOGY/TOXICOLOGY.** NRSA-supported **PRE- AND POSTDOCTORAL POSITIONS** available with research emphasis on cellular and molecular effects (mutagenesis, neurotoxicity, biotransformation, DNA dosimetry) of toxic chemicals (especially trace metals, aromatic hydrocarbons, ozone respiratory epithelial injury, aflatoxins). Inquiries: **Dr. N. K. Mottet, Program Director, Department of Pathology, SM-30, University of Washington, Seattle, WA 98195.** U.S. citizen/permanent resident. *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**DIRECTOR: BIOCHEMICAL DISEASE DETECTION LABORATORY.** Yale University Department of Human Genetics invites applications for an assistant professor, M.D. or Ph.D., to direct its Biochemical Disease Detection Laboratory and develop a major research program in conjunction with the laboratory. The position is available from July 1989. Board-eligible/Board-certified, American Board of Medical Genetics is desirable. Experience and expertise with mass spectrometry and the metabolites of amino acid and fatty acid metabolism are required. Send curriculum vitae, statement of research interests, and recent reprints to:

**Dr. M. J. Mahoney  
Department of Human Genetics  
333 Cedar Street  
New Haven, CT 06510-8005**

The deadline for applications 30 April 1989. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

U.S. Environmental Protection Agency. **DIRECTOR OF QUALITY ASSURANCE AND METHODS DEVELOPMENT DIVISION** at major research laboratory. Responsible for research and development activities centering on the improvement and evaluation of chemical analytical methods for multimedia pollution problems; the development and implementation of quality assurance programs to support multimedia environmental monitoring requirements; and analytical support for laboratory programs. Requirements include training and experience equivalent to an advanced degree in chemistry, biochemistry, chemical engineering or other appropriate environmental sciences, and significant management experience. Must have knowledge of and research experience to appreciate capabilities and limitations of advanced analytical instrumentation. Experience is required in project management and supervision of professional personnel at all levels engaged in research activities. This is a full-time position at the GS-15 level (\$54,907-\$71,377) under the Government's Merit Pay System. Candidate must be a U.S. citizen. *The U.S. EPA is an Equal Opportunity Employer.* For additional information, contact: **Robert Snelling, Acting Director, Environmental Monitoring Systems Laboratory, telephone: 702-798-2525.** To receive an application package write to: **U.S. EPA, Personnel Office at Las Vegas, P.O. Box 98516, Las Vegas, NV 89193-9516** by 31 March 1989.

**ENDOCRINOLOGIST**—Diabetologist/Nutritionist Board-certified physician needed for a full-time academic appointment with Southern Illinois University School of Medicine. This position is needed to expand the current metabolic, endocrine, nutritional and diabetes center. Rank and salary to be negotiated. Research and service activities are integrated with an innovative teaching program. Send résumés to: **Oliver E. Owen, M.D., Professor and Chairman, Department of Internal Medicine, Southern Illinois University School of Medicine, P.O. Box 19230, Springfield, IL 62794-9230.** This position will be open until April 1989 or until filled. *SIU is an Equal Opportunity/Affirmative Action Employer.*

### **ENVIRONMENTAL SCIENCE**

SUNY Plattsburgh seeks applicants for an anticipated 1-year **SABBATICAL REPLACEMENT** for fall 1989 in environmental science.

Duties: Teach Introduction to Environmental Science, Introduction to Water Resources, seminar in environmental science, and other courses by negotiation.

Qualifications: Ph.D. in environmental science or related field; excellence in teaching required.

*Individuals with an understanding of and sensitivity to minority and gender concerns are encouraged to apply.*

Closing date for receipt of applications is 31 March 1989 or until qualified candidate is found.

Send letter of application, current résumé, and three current letters of reference to:

**Chair, Search Committee  
c/o Office of Personnel/Affirmative Action  
SUNY Plattsburgh  
Box 1596-246  
Plattsburgh, NY 12901**

*Qualified ethnic minorities and females are encouraged to apply. SUNY is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### **ELECTRON MICROSCOPY LABORATORY COORDINATOR**

Coordinate and maintain a multiuser EM facility serving the biological and physical sciences. Applicant must be experienced in microscope maintenance, training users, specimen preparation, and x-ray microanalysis. The facility has a Philips 400 ST, Philips 505 SEM with Tracor Northern 5500 X-ray analyzers, JEOL 100CX and a Balzers freeze-fracture device. Ph.D. required, salary dependent on training. Send résumé and three letters of recommendation by 31 March 1989 to: **Dr. Jerome J. Paulin, Center for Advanced Ultrastructural Research, 152 Barrow Hall, University of Georgia, Athens, GA 30602.** *An Equal Opportunity/Affirmative Action Institution.*

### **ENVIRONMENTAL PHYSICIST/ WATER SCIENTIST UNIVERSITY OF CALIFORNIA, DAVIS**

The Department of Land, Air and Water Resources seeks applicants for an 11-month tenure-track teaching and research position in environmental physics/water science at the assistant professor level. The appointee will develop an active research program in evapotranspiration (ET), with sound theoretical approach based on field experimentation. Research areas may include, but are not limited to: ET from different ecosystems, border effects of ET, scaling up of ET to regions, regional ET estimation by remote sensing and spatial variability effects. Emphasis is to be on water transport processes, but may include associated fluxes such as those involving air pollutants and CO<sub>2</sub>. The appointee is expected to teach a graduate course on ET and two undergraduate courses. A Ph.D. in environmental physics, water sciences, micrometeorology, or a closely related field is required. The position commences 1 August 1989. Applicants should submit: a résumé, transcripts, research and teaching statements with background in each, copies of publications and manuscripts, and the names and addresses of at least three references to: **Professor K. T. Paw U, Environmental Physicist/Water Scientist Search Committee Chair, Department of Land, Air and Water Resources, University of California, Davis, CA 95616.** Applications should be postmarked by 15 April 1989.

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

**EXECUTIVE DIRECTOR,** Coalition to Restore Coastal Louisiana. Year-old, nonprofit increasing staff to three. Position requires management experience, ability to raise funds, technical knowledge of wetland issues, strong scientific and/or legal background, ability to work with legislators, community organizations, volunteers, and board of directors. Office in Baton Rouge. Requires travel within Louisiana and elsewhere. Salary negotiable in 30's. Résumés to: **Robert Gorman, P.O. Box 3894, Houma, LA 70361.**

### **FACULTY POSITION MOLECULAR BIOLOGY**

The Institute of Molecular Biology at the University of Oregon seeks at least one senior faculty member in structural biology. This represents the first step of a significant expansion in this area funded in part by the Markey Charitable Trust. Possible research interests include, but are not restricted to, enzymology, structural biology, macromolecular assemblies, biochemistry or excitable membranes, transport mechanisms, receptor biochemistry and membrane assembly. We anticipate filling this position at the full professor level although junior persons with outstanding qualifications will be considered. The appointment will be made jointly with the chemistry or biology department as is appropriate to the background and interests of the appointee. Interested persons should forward curriculum vitae, statement of research interests and the names of three references to:

**F. W. Dahlquist, Chair  
Structural Biology Search  
Institute of Molecular Biology  
University of Oregon  
Eugene, OR 97403**

The closing date is 15 April 1989. *The University of Oregon is an Equal Opportunity/Affirmative Action Employer.*

## Research Positions Drug Metabolism



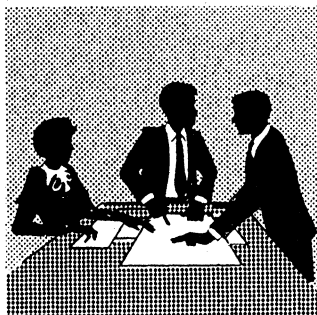
The continued expansion of our research facilities at Pfizer has created an ever growing need for qualified PhD and BS/MS research scientists in our Drug Metabolism Department.

**Research Scientists (PhD)** - Will be responsible for design and conduct investigations into the metabolism and disposition of experimental drugs in animals and humans. Will interact in a project area with a multidisciplinary team including chemists, biologists and clinicians where drug metabolism input is essential to the discovery and development of new drugs. Will work with some of the most advanced equipment and support systems available. Publication of original research encouraged.

Requires a PhD in Pharmacology, Biochemistry or Pharmaceutical Chemistry, preferably with postdoctoral training or employment. Practical experience with bioanalytical methods is essential. Working knowledge of pharmacokinetics and drug biotransformation is recommended. Must be creative and possess superior interpersonal and communication skills.

**Research Assistants (BS/MS)** - Responsibilities for this position include: the development and utilization of analytical chromatographic methods for monitoring drugs and metabolites in biological samples; isolation and identification of metabolites and utilizing instrumental methods; collection of biological samples, and use of *in vivo* and *in vitro* techniques; utilization of electronic data systems for acquiring and processing data. Applicants should possess a BS or MS degree in Chemistry, Biochemistry, or the biological sciences and have an interest in the analysis, disposition, and metabolism of drugs.

These positions offer a stimulating professional environment in an attractive southeastern Connecticut shore area, complemented by a competitive salary/benefit package. Please send a resume and description of research accomplishments to: Dr. David G. Burnett, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



Experience  
the rewards  
of involvement

## MANAGER, International Scientific Affairs

Hoechst-Roussel Agri-Vet Co., a joint venture of the multi-national concerns, Hoechst AG and Roussel UCLAF, and a division of Fortune 100 Hoechst Celanese Corporation, currently has a position available in Somerville, NJ for a Manager of International Scientific Affairs.

The position will interact with the parent companies to coordinate studies performed in the United States to support U.S. registrations of active ingredients sold by Hoechst AG and Roussel UCLAF in countries outside the U.S. as well as studies required for import tolerances of pesticides used on crops grown outside the U.S.

The successful candidate will develop toxicological, environmental and residue protocols, contract and monitor studies, as well as summarize

and submit data packages to the EPA. This individual will also interact and respond to EPA questions regarding the data packages.

Applicants must have a PhD in a related discipline and a minimum of 3-5 years' Scientific project management in the pesticide field. Knowledge of toxicology, environmental fate and analytical chemistry required.

We offer a competitive salary, excellent company benefits including dental, 401(k) Savings Plan and Performance Sharing Plan. For prompt confidential consideration, please direct your resume with salary history/requirements to: Jim Hamilton, Section 502, Hoechst-Roussel Agri-Vet Co., Inc., Route 202-206, Somerville, NJ 08876-1258. An affirmative action employer M/F/H/V.

## Hoechst Celanese

Hoechst 



## POSITIONS OPEN

The Department of Pathology is recruiting a full-time **FACULTY** (M.D. or Ph.D.) with primary responsibilities in microbiology/virology. Expertise and experience in infectious disease, immunology, and molecular biology is critical. Responsibilities include directing the clinical laboratories in microbiology and virology at the University of New Mexico Medical Center and teaching at the medical student, house staff, and graduate student level. Academic rank and salary dependent upon experience. Please forward inquiries to: **Dr. Robert Anderson, Chairman, Department of Pathology, University of New Mexico School of Medicine, Albuquerque, NM 87131.** Application deadline 7 April 1989. *Affirmative Action/Equal Opportunity Employer.*

**FACULTY POSITION**—Department of Avian Medicine, The University of Georgia. Assistant professor, basic research position requiring Ph.D. degree, responsibility for graduate student training. Biotechnology skills and postdoctoral training or equivalent desirable. Receipt of applications deadline is 15 April 1989. Inquiries should be directed to: **Dr. Oscar J. Fletcher, Head, Avian Medicine, 953 College Station Road, Athens, GA 30605.** *An Equal Opportunity/Affirmative Action Institution.*

### FACULTY POSITION AVAILABLE IN BIOCHEMISTRY AND MOLECULAR CELL BIOLOGY

The Division of Life Sciences, The University of Texas at San Antonio, invites applications for a tenure-track assistant professor in biochemistry and molecular cell biology with an interest and experience in research related to the nervous system. Candidates must show demonstrated research productivity and substantial ability and interest in teaching biochemistry at the undergraduate and graduate levels. In addition, candidates must have a teaching interest in one or more related areas such as microbiology, cytotoxicity, molecular toxicology and pathology. A Ph.D. is required and postdoctoral experience desired. Submit curriculum vitae, names of at least three professional references, and representative publications to: **Director, Division of Life Sciences, The University of Texas at San Antonio, San Antonio, TX 78285-0662.** Closing date to receive applications is 1 May 1989. *The University of Texas at San Antonio is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITIONS DEPARTMENT OF BIOLOGICAL SCIENCES WELLESLEY COLLEGE

The Department of Biological Sciences at Wellesley College, a liberal arts institution located 10 miles west of Boston with a student body of 2200 women, invites applications for one full-time and two part-time positions to be filled by September 1989.

One full-time and one three-quarter time position will be made at the level of **ASSISTANT PROFESSOR** to teach some combination of courses in cell biology (introductory and/or intermediate level); microbiology, immunology and/or genetics (all at the intermediate and/or advanced level). Candidates for these positions should hold the Ph.D. and should indicate their abilities in all these areas. These positions are 1-year, nontenure-track appointments, with the possibility of a second year. For all these positions, we are seeking applicants who demonstrate a commitment to the teaching of undergraduates. Because of space limitations, research on-site will be difficult, and will not be expected for these positions.

An opening also exists for a **BOTANIST/HORTICULTURIST** to teach a lecture and laboratory course for non-majors on a continuing quarter-time basis. The initial appointment will be for 1 year, with a possibility of subsequent appointments.

Credentials will be reviewed when complete. Applicants should send their curriculum vitae, graduate transcript, a statement of teaching expertise, one letter of recommendation and the names of two additional references to: **Dr. Dennis M. Smith, Chairman, Department of Biological Sciences, Wellesley College, Wellesley, MA 02181,** no later than 1 April 1989.

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

## POSITIONS OPEN

### FACULTY POSITION AVAILABLE IN BIOCHEMISTRY AND NEUROCHEMISTRY AND/OR MOLECULAR PHARMACOLOGY

The Division of Life Sciences, The University of Texas at San Antonio, invites applications for a tenure-track assistant professor in biochemistry and neurochemistry and/or molecular pharmacology. Candidates must show demonstrated research productivity and substantial ability and interest in teaching biochemistry, neurochemistry, and molecular pharmacology at the undergraduate and graduate levels. A Ph.D. is required and postdoctoral experience desired. Submit curriculum vitae, names of at least three professional references, and representative publications to: **Director, Division of Life Sciences, The University of Texas at San Antonio, San Antonio, TX 78285-0662.** The closing date to receive applications is 1 May 1989. *The University of Texas at San Antonio is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION AVAILABLE IN IMMUNOLOGY

The Division of Life Sciences, The University of Texas at San Antonio, invites applications for a tenure-track assistant professor in immunology with an interest and experience in research related to the nervous system. Candidates must show demonstrated research productivity and substantial ability and interest in teaching immunology at the undergraduate and graduate levels. A Ph.D. is required and postdoctoral experience desired. Submit curriculum vitae, names of at least three professional references, and representative publications to: **Director, Division of Life Sciences, The University of Texas at San Antonio, San Antonio, TX 78285-0662.** Closing date to receive applications is 1 May 1989. *The University of Texas at San Antonio is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION IN PROKARYOTIC MOLECULAR GENETICS

Applications are invited for junior tenure-track faculty positions in the Department of Microbiology. We are interested in applications with research interest in prokaryotic molecular biology and/or bacterial genetics. Candidates should have made significant accomplishments in research and should be prepared to maintain an active, independent research program. Excellent salaries, start-up funds, and research facilities are available. Teaching responsibilities are minimal and include participation in courses for graduate, medical, and dental students. The department, among the top funded in the nation, which includes a newly funded AIDS Center and a National Cooperative Vaccine Development Group for AIDS, provides a stimulating scientific environment. In addition to research funding, the department also administers several NIH Institutional Fellowship programs that are available to provide stipend support for predoctoral and postdoctoral students.

The basic science departments of the University of Alabama at Birmingham Medical Center continue to recruit outstanding faculty with strong research programs in biochemistry, cellular biology and physiology, immunology, animal virology, and other areas. A particular strength of the institution is the close cooperation such as cancer biology, arthritis and rheumatology diseases, immunodeficiency disorders, bacterial and viral diseases, oral biology, and muscular-skeletal disorders.

Applicants should submit curriculum vitae, a statement of research plans, and the names of three people from whom letters of recommendation can be requested. Applications should be sent to: **Dr. Gail H. Cassell, Professor and Chairman, Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL 35294.**

*An Equal Opportunity/Affirmative Action Employer.*

**FOSSIL ENERGY POSTGRADUATE RESEARCH PROGRAM**—Opportunities at Energy Technology Centers in Morgantown (West Virginia) and Pittsburgh. Research positions in the areas of physical sciences, engineering, and microbiology available. Degree within last 3 years required as is U.S. citizenship or PRA status. Contact: **Fossil Energy Postgraduate Program, University Programs Division, Oak Ridge Associated Universities, Box 117, Oak Ridge, TN 37831-0117; Telephone: 615-576-3456.**

## POSITIONS OPEN

### FACULTY POSITION: MEDICAL GENETICS

The Division of Medical Genetics, Department of Pediatrics, Harbor-UCLA invites applications from physician-scientists with strong research interests in either biochemical or molecular genetics. Candidates are expected to develop an active research program and must be Board-certified or Board-eligible in medical genetics. Salary and rank will be commensurate with experience.

Interested individuals should submit curriculum vitae and the names of three references to: **Dr. Adam J. Jonas, Division of Medical Genetics, Harbor-UCLA Medical Center, 1124 West Carson Street, Torrance, CA 90502.**

### FACULTY POSITION IN NEUROPHYSIOLOGY

The Department of Physiology invites applications for a tenure-track position at the University of Texas Health Science Center at San Antonio. Applicants with research interests in all areas of neurophysiology will be considered and rank will be dependent upon qualifications and experience. The successful candidate will be expected to develop a productive, independent research program and to interact with physiology faculty on neurophysiology-related research problems. Applicants should also be capable of high-quality teaching in multidisciplinary medical neurobiology and graduate cellular physiology curricula. The position will be available 1 January 1990. Interested applicants should provide their curriculum vitae and arrange for three letters of reference by 1 May 1989, to: **Thomas C. Smith, Ph.D., Chair, Faculty Search Committee, Department of Physiology, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7756.**

*The University of Texas Health Science Center is an Affirmative Action/Equal Opportunity Employer.*

The Chemistry Department at the Johns Hopkins University invites applications for a position as **FULL PROFESSOR** in inorganic chemistry. The successful candidate should be in mid-career, an internationally recognized scholar, and a proven and dynamic leader with, for example, service on the editorial board of an inorganic chemistry journal and on an NIH study section. Applicants should send curriculum vitae, a list of publications, a description of research plans, and have sent three letters of recommendation to: **Professor Gary H. Posner, The Johns Hopkins University, Department of Chemistry, Baltimore, MD 21218** before 15 April 1989. *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

### HEAD DEPARTMENT OF EPIDEMIOLOGY AND COMMUNITY HEALTH

The School of Veterinary Medicine invites applications and nominations for the position of Head, Department of Epidemiology and Community Health. The Department is one of six in the School and is responsible for presentation of material in biometrics, data processing, avian medicine, epidemiology, preventive medicine, and food quality control to professional students. Graduate students may enroll in either master's or doctoral programs that currently emphasize analytic and clinical epidemiology, avian medicine, and preventive health medicine. Faculty in this department are actively engaged in cooperative teaching, research and service activities.

Position requirements include a D.V.M. or equivalent degree and demonstrated accomplishments in research and teaching or service. Preference given to candidates with additional academic training to include the M.P.H., M.P.V.M. or similar degrees or, especially, the Ph.D. The successful candidate should have demonstrated leadership abilities and should be eligible for the academic position of Professor and membership on the graduate faculty. This is a full-time, tenure-track fiscal year appointment available 1 July 1989. Salary and date of appointment are negotiable.

Applicants should submit a full résumé and the names of three references by 15 April 1989 to:

**Dr. Charles R. Short, Chair  
ECH Head Search Committee  
School of Veterinary Medicine  
Louisiana State University  
Baton Rouge, LA 70803**

*LSU is an Equal Opportunity Employer.*

## SCIENTIST —STAFF—

Norwich Eaton Pharmaceuticals, Inc., a Division of the Procter & Gamble Company, has an opportunity available at our Norwich, NY, Product Development Center. The position is at the Staff Scientist level in our Cardiotonic Section. The successful candidate should possess a Bachelor's Degree in Pharmacy, Physiology, or Biology with four or more years of relevant experience in in vitro and in vivo cardiovascular research. Experience with computer statistical data analysis and graphics plus excellent communication skills are important.

Norwich is located about 50 miles south of Syracuse in the beautiful Chenango Valley. The Company offers a stimulating environment for professional growth and a competitive employment package including paid relocation, and company paid health, dental and retirement benefits.

Resumes & inquiries to:

**Norwich Eaton**

A Procter & Gamble Company

**Nicholas W. Andrews**  
Personnel Representative  
17 Eaton Avenue  
Norwich, NY 13815

Equal Opportunity Employer

## DIRECTOR

### JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

The Joseph W. Jones Ecological Research Center in Baker County, Georgia invites applications and nominations for the position of Director. Candidate must have an outstanding record of research, exemplary scholarly achievements, strong leadership qualities, and a commitment to the field of ecology.

#### Challenges

- To build an independent, nonprofit ecological research institution of national stature.
- To develop a full-scale research program.
- To recruit and lead a prestigious staff of on-site senior researchers and fellows.
- To establish cooperative relationships with universities and other research institutions.
- To provide stewardship to one of the nation's most significant private ecological reserves.
- To effectively promote and demonstrate the importance of ecological relationships to human welfare.

#### Qualifications

- National research reputation in ecology and conservation sciences.
- Commitment to a holistic, multidisciplinary team approach to problem solving.
- Proven leadership, administrative and personal skills.
- Experience with complex, integrated programs.
- Demonstrated ability to successfully compete for research funds.

#### The Setting

The Joseph W. Jones Ecological Research Center will be located at Ichauway, a 28,000 acre natural area 35 miles south of Albany, Georgia. Ichauway contains one of the nation's most significant remnant longleaf/wiregrass ecosystems along with numerous other natural communities of species of national and statewide importance. It is the former shooting reserve of the late Robert W. Woodruff, longtime Chairman of The Coca-Cola Company. The Robert W. Woodruff Foundation, a major independent grantmaking foundation, will provide core funding for the Joseph W. Jones Ecological Research Center.

Applications and nominations should be sent to Charles H. McTier, President, Robert W. Woodruff Foundation, Suite 1400, 230 Peachtree Street, N.W., Atlanta, Georgia 30303, by April 1, 1989. Applicants should provide a brief statement of interest and a curriculum vitae. Salary will be competitive.

*The Joseph W. Jones Ecological Research Center is  
an equal opportunity/affirmative action employer.*



### RESEARCH INSTITUTE BETSY de WINDT CHAIR IN CANCER BIOLOGY

A national search is being conducted to identify a suitable candidate for the newly created Betsy de Windt Chair in Cancer Biology. This position represents an opportunity to develop a basic research program in cancer biology with emphasis on biochemistry and cellular and molecular biology. The chairman of this new department will have the opportunity to recruit several senior and junior level faculty. The program is part of the Research Institute of The Cleveland Clinic Foundation which consists of 9 departments comprising over 150 scientists and pre-and post-doctoral trainees.

The Department of Cancer Biology will form an important component of the Cleveland Clinic Cancer Center. The Cleveland Clinic Foundation is a major academic medical center with a tradition of excellence in research, teaching and patient care.

*Applicants should send their  
curriculum vitae to:*

**DR. THOMAS L. GAVAN**  
THE CLEVELAND CLINIC FOUNDATION  
ONE CLINIC CENTER  
9500 EUCLID AVENUE  
CLEVELAND, OHIO 44195-5134

The Cleveland Clinic Foundation is  
An Equal Opportunity Employer

## Important Contributions To An Essential Effort.

If you've been looking for an organization where your contributions will make a strong and positive impact, may we suggest The MITRE Corporation. A not-for-profit organization providing expert systems engineering solutions to military and civil agencies of the U.S. Government, we are currently providing technical support to manage the nation's hazardous waste problems for the EPA and to meet the mandates of the Defense Environment Restoration Act. These are the essential efforts that can make excellent use of your proven expertise.

## Toxicologists

McLean, VA & San Antonio, TX

We currently have openings at our Washington Center and our San Antonio Site for professionals with high levels of skill and dedication to provide quality assurance of human health risk assessments performed by contractors on Air Force Installation Restoration Sites. Specific responsibilities include evaluating work plans for adequacy of approach; reviewing risk assessments for accuracy, completeness and validity of conclusions; and analyzing expected risk reductions. You will assist the Air Force in coordinating activities with EPA regional and state offices to ensure regulatory compliance. To qualify, you must have an advanced degree in Toxicology or related discipline, plus at least 3 years of experience in conducting chemical exposure and risk assessments, preferably at hazardous waste sites. Familiarity with CERCLA/SARA, the RI/FS process and EPA guidelines for conducting risk assessment at NPL sites is essential. Excellent communications skills a must.

**Please submit your resume to N.S. Scott, The MITRE Corporation, 7525 Colshire Dr., McLean, VA. 22102. U.S. Citizenship required. An Equal Opportunity Employer.**

# MITRE

## POSITIONS OPEN

### HISTOLOGY

Assistant or associate professor of histology. Requirements: Ph.D. with preparation in histology and anatomy; commitment to teaching podiatric medical students and graduate students; minimum 5 years of full-time teaching experience; postdoctoral teaching/research experience. Applicants should be engaged in active, ongoing research program. Responsibilities include lecture, laboratory, and student advising. Salary open. Send résumé, transcripts, and three letters of recommendation by 14 April 1989 to: **Sister John Karen Frei, O.P., Ph.D., Associate Vice President, Academic Health Science Center, Barry University, Miami Shores, FL 33161.**

**HUMAN EATING BEHAVIOR:** Position available at the Johns Hopkins University School of Medicine. Candidate for position should preferably have postgraduate degree (Ph.D.) but others will be considered. Should have knowledge of nutrition, dietetics, physiology, psychology or related field. Statistical background, data entry and analysis desirable; project management and administrative skills involved. Send curriculum vitae and three references to: **Dr. Barbara Rolls, Meyer 207, Johns Hopkins School of Medicine, 600 North Wolfe Street, Baltimore, MD 21205.** *Equal Opportunity/Affirmative Action Employer.*

### IMMUNOLOGY POSITION OPENING

Assistant/associate professor, tenure-track. Candidates should be prepared to pursue a vigorous research program. Send curriculum vitae, statement of research interests, and three letters of reference to: **H. K. Ziegler, Ph.D., Department of Microbiology and Immunology, Emory University School of Medicine, Atlanta, GA 30322.** *Equal Opportunity/Affirmative Action Employer.*

### CALIFORNIA INSTITUTE OF TECHNOLOGY JUNIOR FACULTY POSITION IN GEOLOGY

Applications are being accepted for a tenure-track Junior Faculty position in Geology in the Division of Geological and Planetary Sciences. The initial appointment is for 4 years. It is possible that a candidate with exceptional qualifications may be considered for a more senior position. Outstanding individuals with a strong commitment to original research and teaching in any areas of geology are encouraged to apply. We are particularly interested in scientists whose work relates to (i) tectonics/geophysics/structural geology, with special emphasis on the observational attack on current geologic processes as exemplified by those occurring over the past million years; and/or (ii) the structure and origin of the deep continental crust. A bridging between geology and geophysics, to achieve the full advantages of applying geophysical understanding in field-oriented geological studies, is a highly desirable feature of the contemplated appointment. Individuals with potential for interactions with existing programs in geophysics and geochemistry are encouraged to apply. Curriculum vitae including a list of publications and a brief description of proposed research activities should be sent to: **Professor G. J. Wasserburg, Chairman, Division of Geological and Planetary Sciences, 170-25 (APA), California Institute of Technology, Pasadena, CA 91125.** *The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Applications are encouraged from qualified women and minority candidates.*

### LABORATORY SUPERVISOR

**HISTOLOGY LABORATORY SUPERVISOR.** Experienced ASCP certified histology technician with supervisory experience is needed for a high volume private pathology research laboratory located in the Washington, DC metro area near Dulles International Airport. Salary commensurate with experience and qualifications. Benefits package includes paid vacation, health insurance, 401K retirement plan, and much more. Interested and qualified individuals should send résumés to: **Experimental Pathology Laboratories, Inc., P.O. Box 474, Herndon, VA 22070; or telephone: Cynthia Bono at 703-471-7060** for information. *Equal Opportunity Employer M/F/H/V.*

## POSITIONS OPEN

### JUNIOR INVESTIGATORS RESEARCH ASSOCIATESHIPS POSTDOCTORAL FELLOWSHIPS UNIVERSITY OF OTTAWA HEART INSTITUTE

The newly established University of Ottawa Heart Institute Research Centre has openings for the above positions in the field of receptors, signal transduction, regulation of gene expression as well as the biochemistry of cardiac and connective muscle tissue.

The centre offers excellent new physical facilities as well as the possibility of direct interaction with the clinical staff. *In accordance with Canadian Immigration requirements, priority will be given to junior investigators and research associates who are Canadian citizens or landed immigrants in Canada.*

Submit curriculum vitae, statement of research interests, and the names, addresses, and telephone numbers of three references to: **Dr. Adolfo J. de Bold, Director of Research, University of Ottawa Heart Institute, 1053 Carling Avenue, Ottawa, Canada, K1Y 4E9.**

### LECTURER IN MICROBIOLOGY/BIOLOGY

The Department of Microbiology, University of California, Davis, invites applications for a full-time, non-tenure position for the academic year 1989-90, with possibility of reappointment for up to 3 years, to teach introductory microbiology and introductory cell and molecular biology to science majors, as well as introductory biology to liberal arts majors. The principal duties will be to teach one large lecture course each quarter and to supervise teaching assistants. Salary will be commensurate with qualifications. A Ph.D. in microbiology or biology and college-level teaching experience are required. To apply, please send your curriculum vitae, including areas of concentration in undergraduate and graduate studies and teaching experience, plus the names and addresses of three references to:

**Dr. W. Pfeiffer  
Department of Microbiology  
University of California  
Davis, CA 95616**

Deadline 15 May 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer. This position is covered under a collective bargaining agreement.*

**MANAGER,** Laboratory for Isotope Biodynamics, starting 1 June 1989. Duties include operation and maintenance of an isotope-ratio mass spectrometer and associated equipment, conducting original research in the general area of isotope fractionations in biochemistry and biology, cooperating with others in the laboratory, and writing papers and grants based on this work. Requires Ph.D. in biochemistry, chemistry, geology, or related area, experience in dealing with stable isotopes, and experience in isotope-ratio mass-spectrometer operation and maintenance. Preference will be given to candidates with previous experience in dealing with enzyme systems or with plants. Salary \$30,000 to \$35,000 annually. Submit application, current curriculum vitae, statement of research interests, and have three letters of recommendation sent by 1 April 1989 to: **Marion H. O'Leary, Head, Department of Biochemistry, University of Nebraska-Lincoln, Lincoln, NE 68583-0718.** *Affirmative Action/Equal Opportunity Employer.*

**MARINE MICROBIOLOGY.** SUNY Stony Brook: A tenure-track, state-funded (9 months) **FACULTY POSITION** in marine microbiology is available starting 1 September 1989 at the Marine Sciences Research Center (MSRC), SUNY Stony Brook. We seek a process-oriented person capable of conducting creative independent research, teaching/advising graduate students, and interacting with colleagues, particularly in geochemistry and biological oceanography. MSRC emphasizes predominantly, but not exclusively, coastal oceanography. This position is at the assistant/associate professor level, although unusually outstanding senior candidates at full professor also will be considered. Salary commensurate with experience. Applications should be received by 1 April 1989. Send application letter including research interests, curriculum vitae, and names of at least three references to: **Professor R. C. Aller, MSRC, SUNY, Stony Brook, Stony Brook, NY 11794-5000.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK 27.*

## POSITIONS OPEN

**MEDICAL ENTOMOLOGIST,** permanent full-time research position, assistant/associate professional scientist, economic entomology, Illinois Natural History Survey (on campus of University of Illinois at Urbana-Champaign). Successful candidate must develop innovative research program on ecology of arthropod vectors of medical importance and work actively with public health agencies and other groups on issues of current concern (e.g., *Aedes albopictus*). Opportunities to teach and advise graduate students may be available through affiliation with university academic units. Ph.D. in entomology or related biological science is required; postdoctoral or work experience with arthropod vectors is desirable. Send curriculum vitae, description of research interests, reprints, and three letters of recommendation by 30 April 1989 to: **Dr. Catherine Eastman, Illinois Natural History Survey, 172 Natural Resources, 607 East Peabody, Champaign, IL 61820.** *Affirmative Action/Equal Opportunity Employer.*

### MOLECULAR BIOLOGIST

An assistant or associate professorship is available in the Department of Physiology, Boston University School of Medicine. Candidates should have significant research accomplishments in molecular/cellular physiology with skills in molecular genetic techniques. Previous teaching experience is desirable.

Applicants should send curriculum vitae, description of research interests and names and addresses of three referees to:

**Dr. Benjamin Kaminer  
Department of Physiology  
Boston University School of Medicine  
80 East Concord Street  
Boston, MA 02118**

Applications to be sent preferably by 30 April 1989. *Boston University is an Equal Opportunity/Affirmative Action Employer.*

**NEUROBEHAVIORAL POSTDOCTORAL POSITIONS** are available for an interdisciplinary neuro-psychobiological research training program. The program objectives are to facilitate the development of investigators who are familiar with the integrated concepts of neuropsychobiology as well as their individual anatomical, biochemical, physiological, or clinical research specialties. Rapidly developing technological areas that relate to the nervous system are periodically incorporated into the program; for example, molecular genetics, neuropsychimmunology, CNS virology (including AIDS), and in vivo metabolic imaging. In addition to the intensive research experience in one or more laboratory disciplines, the conceptual basis of neurosciences as it relates to an understanding of the normal and maladaptive development of human neurobiology and behavior is emphasized in seminars. For a catalogue of opportunities and application forms contact: **Dr. Everett H. Ellinwood, Duke University Medical Center, P.O. Box 3870, Durham, NC 27710.** *An Equal Opportunity Employer.*

**NEUROSCIENTIST, SYSTEMS PHYSIOLOGIST—**Tenure-track position available in department with active neuroscience group. Position is at assistant professor level (although outstanding candidates with more experience will be considered). Preference will be given to a systems physiologist with interest in the oculomotor system and in plasticity, learning and/or functional recovery from CNS injury. Position involves participation in teaching one course to medical students. Send curriculum vitae and three letters of recommendation to: **Dr. E. Hazel Murphy, Search Committee, Department of Anatomy, Medical College of Pennsylvania, 3200 Henry Avenue, Philadelphia, PA 19129.** *Equal Opportunity Employer, M/F.*

**PARASITOLOGIST/ENTOMOLOGIST.** Young, rapidly growing contract research company seeks enthusiastic, business-oriented scientist to design and manage projects, interact with corporate and government sponsors, and write proposals and reports. Located in rural community near major metropolitan center. Compensation, bonuses and incentives commensurate with experience/performance. Ph.D. preferred. Reply to: **Box 31, SCIENCE.**

## **GS-13 Biochemist**

### **Biological Response Modifiers Program, DCT, NCI**

The Laboratory of Molecular Immunoregulation, Biological Response Modifiers Program, Division of Cancer Treatment, National Cancer Institute, National Institutes of Health, Public Health Service, is accepting applications for a biochemist position.

This position is available for an outstanding Ph.D., M.D. investigator with expertise in protein purification and analysis procedures as well as a strong background in biochemistry and molecular biology. Incumbent will serve as a Senior Investigator responsible for planning biological, immunological and biochemical approaches to the questions of lymphocyte regulation of normal and abnormal human leukocyte development and function. Incumbent will exercise a high degree of independent judgment as to formulating research approaches and supervising other members of his/her laboratory research staff in attaining these objectives. Responsibilities include developing and teaching other members of his laboratory research staff as well as outside collaborators the techniques necessary to study the role of lymphocytes in the growth and maturation of normal leukocytes and their possible therapeutic use in man. Research interests should focus on analysis of the role of several important regulatory molecules, such as interleukin 1, tumor necrosis factor and chemotactic factors in the activation and development of biologically mature, normal leukocytes; the purification, identification and molecular cloning of new factors which affect leukocyte development, maturation and function; the production, and mechanisms by which these proteins are processed into functional molecules; the interactions of these proteins with substrates in the target cells; and the development of monoclonal and polyclonal antibodies to these target proteins for use in more sensitive assays and as screening

reagents for human leukemias. The incumbent must possess extensive experience in and thorough knowledge of all aspects of lymphocyte biology (production, purification, assays, functions) and immunology and demonstrate research potential and accomplishment as evidenced by scientific publications. Experience with application of basic research findings to clinical situations, in order to pursue the work along clinically important lines, are critical for the success of the research.

The position will be a Civil Service position with an annual salary between \$41,121 and \$53,460 (based upon experience). Incumbent will be eligible for all benefits including health insurance, life insurance options, vacation and sick leave.

Applicants should submit CV and three letters of recommendation to:

**Dr. Joost J. Oppenheim**  
**Chief, Laboratory of Molecular**  
**Immunoregulation**  
**Biological Response Modifiers**  
**Program**  
**Division of Cancer Treatment**  
**National Cancer Institute**  
**Frederick Cancer Research Facility**  
**Building 560, Room 21-89A**  
**Frederick, MD 21701-1013**  
**Telephone: (301) 698-1551**



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*Deadline for applications is April 30, 1989.*

## POSITIONS OPEN

### MICROBIOLOGIST SWARTHMORE COLLEGE

The Biology Department of Swarthmore College seeks a microbiologist for a 1-year faculty position beginning September 1989. Teaching includes introductory microbiology, an advanced undergraduate course in the area of specialty, and participation in introductory biology. Ph.D. or A.B.D. required. Swarthmore College is an undergraduate liberal arts institution, which emphasizes teaching and research. Excellent laboratory facilities are available. Please send curriculum vitae and statement of teaching and research interests, and have three letters of recommendation sent to: **Dr. N. V. Hamlett, Department of Biology, Swarthmore College, Swarthmore, PA 19081.** Review of applications will begin on 24 March 1989 and continue until a successful candidate is found. *Women and minorities are encouraged to apply. Swarthmore College is an Equal Opportunity Employer.*

### FIELD MUSEUM OF NATURAL HISTORY PALEONTOLOGIST

Applicants are invited for a career-track position in paleontology, preferably at the level of assistant curator. Specimen-oriented research is required in invertebrate or vertebrate paleontology, paleobotany, or related fields. Our principal criteria are research excellence and an ability to interact with staff in other areas of paleontology. Responsibilities also include curation of relevant collections, limited participation in exhibition and education programs, and some administrative work.

The Department of Geology has eight curatorial positions (seven in paleobiology) and six supporting positions. The department maintains extensive collections in nearly all areas of paleontology, and actively participates in the programs of universities in the Chicago area. Applicants should have a Ph.D. and should mail curriculum vitae, description of current and future research program, and names of three references (with telephone number, if possible) to: **Search Committee, Department of Geology, Field Museum of Natural History, Chicago, IL 60605,** by 30 March 1989. *An Equal Opportunity Employer.*

### PHYSIOLOGIST

Assistant professor tenure-track beginning September 1989, Ph.D. required. One course each in general physiology and experimental physiology, participation in a team-taught principles of biology course, and guiding students in research. Send curriculum vitae and letters of recommendation no later than 10 April 1989 to: **Dr. James R. Vaughan, Department of Biology, Muhlenberg College, Allentown, PA 18104-5586.** *Equal Opportunity Employer.*

**PLANT BREEDER/GENETICIST**—Assistant Professor, Floriculture, The University of Minnesota, Department of Horticultural Science is seeking an assistant professor for a 12-month, tenure-track position beginning 1 July 1989 or as soon thereafter as possible. The faculty member will conduct research centered around the genetic improvement of floricultural crops important or potentially important to Minnesota. The faculty member will also teach at least one course in floriculture and advise undergraduate and graduate students. The application deadline is 15 April 1989. For further application information, contact: **Dr. James J. Luby, Department of Horticultural Science, 305 Alderman Hall, 1970 Folwell Avenue, University of Minnesota, St. Paul, MN 55108. Telephone: 612-624-3453.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

**POSTDOCTORAL ASSOCIATE POSITION** with the U.S. Department of Agriculture, Agricultural Research Service, is available immediately to join a project conducting molecular biological research on wheat gene expression, the transfer of plant genes and the basis of quality characteristics of cereal cultivars. Applicant should be experienced in some of the following: molecular biology, including recombinant DNA technology; protein purification and analysis; plant tissue culture and regeneration; plant biochemistry and physiology. For information contact: **Dr. Olin D. Anderson, Western Regional Research Center, USDA, 800 Buchanan Street, Albany, CA 94710. Telephone: 415-559-5773.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL ASSOCIATE** position available immediately in the area of peptide synthesis related to the development of novel AIDS vaccines. Position requires individual to participate in the design and synthesis of peptides which mimic anti-receptor antibody variable region structures to be used for the induction of anti-HIV responses in animals. This position is under the direction of **Dr. Patrick Kanda,** within our Department of Virology and Immunology. Southwest Foundation is a private non-profit institution funded, in part, by NIH. Annual postdoctoral salaries range upward from \$21,070 with consideration for prior, relevant postdoctoral experience. Applicants should have a background in biochemistry and/or organic chemistry or related area, with an interest in immunology. Please send curriculum vitae and names and telephone numbers of three references to: **Personnel Director (868), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

**POSTDOCTORAL FELLOW:** Position available at the National Institute on Alcohol Abuse and Alcoholism, for studies of basic mechanisms of receptor-effector coupling and neuropeptide actions in brain, and the effects of alcohol on these processes. Candidates should have a strong biochemical and/or pharmacological background, working knowledge of basic molecular biological techniques, and some postdoctoral experience. Salary is commensurate with training and experience. *Only U.S. citizens or permanent residents are eligible for this position. NIH is an Equal Opportunity Employer.*

Send curriculum vitae and three letters of recommendation to:

**Dr. P. Hoffman  
NIH, Building 10, Room 3C103  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone: 301-443-5800**

**POSTDOCTORAL FELLOW** to study cytokine (interleukin-1) regulation of the hypothalamic-pituitary axis after burn injury. Experience in small animal surgery, RIA, ELISA or HPLC required. Knowledge of molecular biology or tissue culture techniques helpful. Joint appointment at Shriners Burns Institute, Massachusetts General Hospital and Harvard Medical School. Résumé to: **Hans Bode, M.D., 51 Blossom Street, Boston, MA 02124.** *Equal Opportunity Employer.*

### POSTDOCTORAL FELLOWSHIP MOLECULAR BIOLOGY OF INBORN ERRORS

Position immediately available for qualified Ph.D. interested in the molecular biology investigation of inborn errors of metabolism. Research interests include galactosemia, cystinuria, and maple syrup urine disease. Background in protein purification desired. Will train in recombinant DNA techniques. Send statement of research interests, curriculum vitae, and three letters of reference to: **Stanton Segal, M.D., Division of Biochemical Development and Molecular Diseases, The Children's Hospital of Philadelphia, Philadelphia, PA 19104.** *We're an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available at Harvard Medical School to study structural and functional aspects of the mammalian Y chromosome. The candidate should have a strong background in molecular genetics. The position will involve close interaction with other members of the group. Send curriculum vitae and three letters of recommendation by 1 May 1989 to: **Dr. Ulrich Muller, Division of Genetics, The Children's Hospital, 300 Longwood Avenue, Boston MA 02115.** *Harvard Medical School is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately for someone interested in studying the transcriptional control of gene expression in the developing nervous system. A variety of approaches are currently being used in the laboratory to study this, including gene transfer by cell transfection, production of transgenic mice, and isolation and/or molecular cloning of transacting factors. Send curriculum vitae, a summary of interests, and names of references to: **James A. Waschek, Ph.D., UCLA, Neurobiochemistry Research Group, 760 Westwood Plaza, Room 68-225 NPI, Los Angeles, CA 90024-1759.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately in molecular biology/immunology to study pathogenic mechanisms of Simian Immunodeficiency Virus (SIV) in nonhuman primates under the direction of **Dr. Jonathan S. Allan.** Our AIDS program is comprised of five investigators currently funded in immune mechanisms, vaccine development, chemotherapeutics, pathogenesis, and molecular biology. Southwest Foundation is a nonprofit biomedical research facility supported, in part, by NIH-funded research, and has available various nonhuman primates for AIDS studies. Postdoctoral salaries range up from \$21,070, considering prior relevant, postdoctoral experience. Candidates should have an M.D., D.V.M. and/or Ph.D. and training in molecular biology or immunology. Interested individuals should send curriculum vitae with names and telephone numbers of three references to: **Personnel Director (6), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

**POSTDOCTORAL POSITION** available for Ph.D. in lipoprotein metabolism and atherosclerosis in nonhuman primates under the supervision of **Dr. Rampratap S. Kushwaha,** associate scientist. Applicant should be experienced with methods in protein biochemistry and metabolism. Annual salary ranges upward from \$21,070, with consideration for prior relevant postdoctoral experience. Position is available for 2 years with opportunities for further extension or conversion to a staff position. Please send curriculum vitae, a description of research interests, and names and telephone numbers of three references, including major professor, to: **Personnel Director (6), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

**POSTDOCTORAL POSITION** available to study  $Ca^{2+}$ -dependent phospholipid binding proteins (placental anticoagulant proteins) and their role in blood coagulation. Suitable for Ph.D. or M.D. with background/interest in biochemistry or molecular or cell biology. Send curriculum vitae and references to: **Dr. John Tait, Department of Laboratory Medicine SB-10, University of Washington, Seattle, WA 98195.**

**POSTDOCTORAL POSITION** presently available for research in developing sensitive enzyme immunoassays of steroid hormones. The candidate will be expected to develop new steroid enzyme ligands and develop immunoassays under the direction of **Dr. P. N. Rao.** It is essential that applicants have a strong background in synthetic organic chemistry, preferably in steroid hormone chemistry and enzymology with special emphasis in enzyme reactions. Annual starting salary ranges upward from \$21,700, with consideration for prior relevant postdoctoral experience. Initial appointment will be for 1 year. Two additional yearly extensions are available with an opportunity to obtain a regular staff appointment dependent upon performance and ability to generate independent research funding. Please send curriculum vitae with names and telephone numbers of three references to: **Personnel Director (7), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

**POSTDOCTORAL POSITION** available in the field of protein crystallography to determine structures of proteins as targets for drug design: Herpes thymidine kinase, HIV reverse transcriptase and tat protein. Requirements include recent Ph.D. with 3 to 4 years of experience in computer programming, crystallographic data collection, analysis and structure determination. Send curriculum vitae and references to: **Dr. Thomas A. Steitz, Department of Molecular Biophysics and Biochemistry, Yale University, 260 Whitney Avenue, P.O. Box 6666, New Haven, CT 06511.** *Yale University is an Affirmative Action/Equal Opportunity Employer.*



## Protein Biochemists



Continued expansion of the Pfizer Central Research Molecular Genetics Research Department has created employment opportunities for protein and nucleic acid biochemists. The research activities of this Department are focused on highly collaborative and multidisciplinary investigations of the underlying mechanisms of human diseases and the search for novel therapeutic entities. Positions are opening for individuals with expertise in the following areas:

**Synthetic Peptide Chemistry** - Responsibilities will include the synthesis, isolation and characterization of biologically active peptides and proteins and analogues of important mediators of biological processes.

**Protein Biochemistry** - Major responsibility will be the application of quantitative 2-D protein gel technology to the investigation of the mechanism of action of novel drugs and to the identification of important new biological mediators.

**Protein Isolation and Characterization** - Responsibilities include the development of a microtechniques lab for the isolation and characterization of small quantities of unknown proteins and peptides.

**Physical Biochemistry** - Major responsibility will be the physical, chemical and spectroscopic characterization of synthetic and recombinant proteins and peptides.

These positions require a PhD in a relevant field with a minimum of two years of postdoctoral training and a record of achievement documented by publications. More senior applicants and those having industrial research experience are also encouraged to apply.

These positions offer excellent opportunities for professional recognition and growth. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Dr. Jerry K. Larson, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.

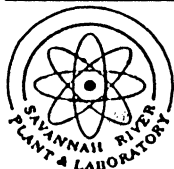
## Applied Plant Ecologist

**The SAVANNAH RIVER SITE offers three clear advantages: CAREER CHALLENGES, CAREER OPPORTUNITY, AND LOCATION NEAR AIKEN, SOUTH CAROLINA**

**The Savannah River Laboratory** is seeking an applied plant ecologist to join a multidisciplinary team of ecologists. Initial responsibilities will include writing and reviewing environmental reports. Long-term research opportunities exist in the areas of waste site closure, applied forestry, and soils. Strong statistical background and good writing skills required. Minimum requirements include Ph. D. in botany, forestry, or related field and two years experience.

**Operated** for the United States Department of Energy, the Savannah River Site produces radioactive isotopes for national defense, medicine, and America's space program. While the outstanding professional environment broadens your career horizons, our geographical location offers a mild climate with access to some of the Southeast's most attractive cultural and recreational resources.

**Salary** is commensurate with your training and experience. Our highly regarded benefits program includes relocation assistance. For confidential consideration, please send resume and salary history to: Professional Staffing Division, Building 719-4A, Room 113-9, Savannah River Plant, Aiken, SC 29808.



An Equal Opportunity Employer M/F/H/V  
U.S. Citizenship Required

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available to construct genetic maps in humans by analyzing single sperm using PCR. A good background in molecular biology and human genetics is required. Experience in using PCR techniques on very small amounts of starting material is essential. Salary: \$22,000. Send curriculum vitae and three reference letters by 30 April 1989 to: **Dr. Norman Arnheim, Molecular Biology, SHS 172, University of Southern California, Los Angeles, CA 90089-1340. Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available for 1 to 2 years in a medicinal chemistry laboratory. Candidate must have Ph.D. in pharmacology with experience in CNS-pharmacology including rodent behavioral tests, receptor binding with DA, NE, 5HT systems and related analytical techniques. Salary is competitive. Apply with detailed résumé before 1 April 1989 to: **Dr. Koppaka V. Rao, Chairman, Medicinal Chemistry Department, Box J-485 JHMC, College of Pharmacy, University of Florida, Gainesville, FL 32610.**

**POSTDOCTORAL POSITION** open for NIH-funded studies of lung macrophage function: chemotaxis, phagocytosis, motility, respiratory burst, surface receptors, proliferation. Experience desirable in one or more of the following: tissue culture, cytoskeletal research, fluorescence, video microscopy. A background in cell biology, biophysics, or biochemistry is appropriate. Interest is particularly invited from women and minority candidates. Send résumé and names of three references to: **Dr. Peter Valberg, Respiratory Biology Program, Building 1-307, 665 Huntington Avenue, Boston, MA 02115.**

**POSTDOCTORAL POSITION**—Join research team studying loblolly pine tissue culture and rejuvenation. Primary experimentation will involve application of growth regulator, especially cytokinin, assays to pine. Also, develop own interests related to pine tissue culture. Ph.D. with strong background in plant biochemistry required. Experience with immunochemistry desirable. Competitive salary and benefits. Position available 1 June 1989 through 31 December 1990 with continuation possible. Send résumé and names of three references by 31 March 1989 to: **Dr. H. V. Amerson, Botany Department, Box 7612, North Carolina State University, Raleigh, NC 27695-7612.**

## POSTDOCTORAL POSITION

Available now to investigate mechanisms of regulation of lipoprotein lipase and hepatic lipase gene expression, protein synthesis, and catalytic activities. Cell culture (liver, adipocyte, endothelial), molecular biology, immunochemical (monoclonal antibodies), and recombinant DNA technique approaches are employed. Applicants should have training in biochemistry or molecular biology. Experience with recombinant DNA desirable. Send résumé and names of three references to: **Dr. Andre Bensadoun, Division of Biological Sciences and Nutritional Biochemistry, 321 Savage Hall, Cornell University, Ithaca, NY 14853.**

**POSTDOCTORAL POSITIONS IN BIOCHEMICAL ENGINEERING.** The Department of Chemical and Materials Engineering at The University of Iowa is conducting several major research programs in biochemical engineering and enzyme technology and invites applications for several postdoctoral positions. Specific research areas include enzymatic catalysis in organic solvents, enzyme-catalyzed synthesis of phenolic plastics, lignin modification and degradation, development of biodegradable plastics, and bioseparations. These activities include direct interaction with the Biocatalysis Research Center and other programs in basic and applied biotechnology. Positions available immediately for individuals with Ph.D.'s in biochemistry, chemistry, biochemical engineering, or related fields. Salary dependent upon qualifications. Send curriculum vitae plus three letters of recommendation to: **Professor Jonathan S. Dordick or Professor David D. Rethwisch (biodegradable plastics and bioseparations), Department of Chemical and Materials Engineering, 137 Chemistry-Botany Building, University of Iowa, Iowa City, IA 52242. Telephone: 319-335-1414 or 319-335-1413. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

### POSTDOCTORAL POSITION MOLECULAR BIOLOGY OF PATHOGENS

Research associate position available to study molecular biology and genetics of *Pseudomonas* virulence determinants expressed in infections afflicting Cystic Fibrosis patients. Qualifications: a doctorate in biological science required and some research experience in recombinant DNA and/or protein analysis desirable. Send curriculum vitae and names of three references to: **Dr. V. Deretic, Department of Microbiology, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7758. Telephone: 512-567-3962. The University of Texas Health Science Center is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION NMR AND PROTEIN ENGINEERING CALIFORNIA INSTITUTE OF TECHNOLOGY

Unique research opportunity in protein design. Immediate openings for postdoctoral research in protein engineering and NMR studies of protein structure and dynamics. Synthetic metal-binding proteins and proteins stable in hostile environments. Ph.D. and experience in molecular biology or 2D NMR required. *Caltech is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.* Send résumé and names of three references to: **Professor Frances Arnold, Division of Chemistry and Chemical Engineering 206-41, Caltech, Pasadena, CA 91125.**

### POSTDOCTORAL POSITION TUMOR VIROLOGY NYU MEDICAL CENTER

We have recently discovered RNA covalently linked to SV40 TAg and to the oncogene product p53. The RNAs, the bonding and the possible significance to oncogenic transformation will be studied. Must be U.S. citizen or permanent resident. Send curriculum vitae and names of three references to:

**Dr. Robert Carroll  
Department of Pathology  
New York University Medical School  
550 First Avenue  
New York, NY 10016**

**POSTDOCTORAL POSITIONS.** Molecular genetics/RNA biochemistry positions available summer or fall for work on small essential RNAs of *E. coli* and yeast. Genetic, biochemical and biophysical strategies are used to characterize the structure and function of *E. coli* 4.5S RNA and small nuclear RNAs of *Saccharomyces cerevisiae*. The 4.5S RNA appears to have a role in translation initiation [*Nature* 325, 281-284 (1987)] and one cloned snRNA is involved in maturation of 18S ribosomal RNA [*Mol. Cell. Biol.* 8, 3282-3290 (1988)]. Current emphasis is on assessing the physiological effects of small RNA loss, biochemical identification of RNA binding proteins, mutagenic mapping of RNA domains, in vitro function assays, and characterization of suppressor genes. Experience with relevant methods preferred. Salary up to \$25,000. Send résumé and names of three references to: **Dr. M. J. Fournier, Department of Biochemistry, University of Massachusetts, Amherst, MA 01003. Deadline for applications: 17 March 1989 or until suitable candidates are identified. Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH** on the mechanism of action of DNA polymerases and reverse transcriptases and the effects of nucleotide analogs on these enzymes. The position will be available 1 July 1989 in an ongoing research project related to the basis for the anticancer and antiviral activity of several nucleoside analogs. Candidates should have experience in enzyme kinetics, and preferably some experience with DNA research. Training will be provided in methods for studying DNA polymerases, including the use of transient state kinetics. Starting salary: from \$22,000 depending on postdoctoral experience. To apply send curriculum vitae and three references to: **Dr. R. L. Blakley, Department of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101. An Equal Opportunity Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** available to study DNA transformation in the nematode *C. elegans*, to investigate RNA processing especially focusing on mechanisms of both cis- and trans-splicing, or to study the role of cellular growth factors in development. The work is supported by NIH funding and will be carried out in the Developmental Biology Laboratory at Synergen, Inc. Background in molecular biology, genetics or biochemistry required. Please send curriculum vitae, bibliography, and names of references to: **Dr. David Hirsh, Synergen, Inc., 1885 33rd Street, Boulder, CO 80301.**

### POSTDOCTORAL POSITIONS THE UNIVERSITY OF IOWA

Postdoctoral positions are available to study the molecular biology of virulence factors and high frequency switching in *Candida albicans* under the joint supervision of **Drs. David Soll and Thomas L. Ray.** Send curriculum vitae and names of two references to: **Dr. David R. Soll, Department of Biology, University of Iowa, Iowa City, IA 52242. Women and minorities are encouraged to apply. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITIONS

Applications are invited for positions in a multidisciplinary research group studying the biogeochemistry of inorganic pollutants in the aquatic environment. Current research topics include trace element speciation, exchange processes and the sediment-water interface, metal-bioaccumulation by aquatic organisms, sulfur cycling. Applicants with a Ph.D. in such fields as analytical chemistry, geochemistry, biochemistry or toxicology should send their curriculum vitae to: **Dr. P. G. C. Campbell, R. Carignan or A. Tessier, Institut National de la Recherche Scientifique-Eau, C.P. 7500, Sainte-Foy (Québec), G1V 4C7, Canada.**

**TWO POSTDOCTORAL POSITIONS** available 1 July 1989. One position involves the investigation of cytoplasmic factors regulating DNA synthesis in lymphocytes. The second involves mechanisms of tumor cell adhesion to endothelial and parenchymal cells and regulation of this interaction by cytokines. Experience in molecular biology, biochemistry, and/or protein purification is desired; knowledge of immunology would be helpful. Send curriculum vitae, statement of interests, and names and addresses of three references to: **Dr. Stanley Cohen, Department of Pathology, Hahnemann University, Broad and Vine Streets, M.S. 435, Philadelphia, PA 19102-1192.**

### POSTDOCTORAL RESEARCH ASSOCIATE—

A position is available immediately in the laboratory of **Dr. Martin Nemer**, at the Institute for Cancer Research for a molecular/developmental biologist who will investigate mechanisms and function of cell-type specific gene expression in developing embryos. The expression of metallothionein and tubulin gene families in sea urchin embryos is being studied as a model of this type of regulation. Approaches involving gene sequencing and gene transfer experiments are directed at elucidating the role of *cis* and *trans* regulatory factors. Applicants should submit curriculum vitae, a statement of research interest, and three references to: **Personnel Department, MN, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. The Center is an Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH IN FETAL PHYSIOLOGY:** The Department of Reproductive Medicine at the University of California, San Diego (UCSD), has an immediate opening for a postdoctoral fellow (postgraduate research physiologist). Studies include physiological regulation of cardiovascular and endocrine systems, and of fluid balance in the fetus. Background in animal physiology and experimentation desired. Salary: \$24,000 per year. Send letter, curriculum vitae, and names and addresses for three references to: **Robert A. Brace, Ph.D., Department of Reproductive Medicine T-002, UCSD Medical Center, 225 Dickinson Street, San Diego, CA 92103. All applicants must be received by 14 April 1989. An Affirmative Action/Equal Opportunity Employer.**

## Protein Chemists

Synergen Inc., an established biotechnology company in Boulder, Colorado, seeks to hire Ph.D.'s with experience in Protein Chemistry and Protein Biochemistry. Successful candidates will have experience in purifying proteins and in characterizing proteins and peptides. Synergen's interests include the discovery of proteins important in the physiology of inflammation and wound healing, and in the molecular basis of intercellular communication. Persons who have experience with developing assays and characterizing proteins involved in these processes are especially encouraged to apply.

Positions are available for persons who have recently completed postdoctoral training as well as for more experienced scientists. Please send a CV, bibliography and names of references to:

Director of Recruitment  
Synergen, Inc.  
1885 33rd Street  
Boulder, CO 80301



## AIDS RESEARCH AT THE NATIONAL INSTITUTES OF HEALTH

### DIRECTOR OF PROTEIN EXPRESSION LABORATORY

The Office of the Director of the National Institutes of Health seeks a senior scientist to direct the Protein Expression Laboratory at the campus in Bethesda, Maryland. The principal function of this new laboratory will be to express and purify HIV proteins in large quantities for structural, biochemical, and pharmacological studies. This Laboratory will be part of the existing effort at the NIH to develop therapeutic agents, based on structural and mechanistic considerations, that will interfere with the HIV life cycle. The Director of the Protein Expression Laboratory will be expected to recruit additional senior scientists, post-doctoral fellows, and technicians.

Requirements include a Ph.D. in Molecular Biology or Biochemistry, at least three years of post-doctoral experience, expertise in the use of recombinant DNA techniques for the expression of proteins, as well as expertise in the purification of proteins. Salary is negotiable, dependent upon experience.

Interested candidates should send a *curriculum vitae* and names and telephone numbers of at least 3 references to:

**Dr. Joseph E. Rall**  
Deputy Director for Intramural Research  
Building 1, Room 126  
National Institutes of Health  
9000 Rockville Pike  
Bethesda, Maryland 20892

The National Institutes of Health, which is located 10 miles from the center of Washington, D.C., is the largest biomedical research institution in the world, and is an Equal Opportunity Employer.



## CHEMISTRY OPPORTUNITIES

A mammalian cell culture manufacturing company seeks the following professionals for the Analytical Quality Control Department.

### GROUP LEADER, PROTEIN CHEMISTRY

The successful candidate should have an MS Biochemistry or Chemistry with 2-3 years experience in medical laboratory or clinical/medical academic research. Some supervisory experience is desirable. Prior work experience should include protein/peptide analysis by HPLC, amino acid analysis, Western blots and peptide mapping protocols.

### GROUP LEADER, IMMUNOCHEMISTRY

The successful candidate should have an MS in Immunology, Biochemistry or a related field with 2-3 years experience in medical research or academic laboratory. Some supervisory experience is desirable. Prior work experience should include RIA immunoassays and serum proteins. PANDEX or other automated immunoassay system experience helpful.

Please submit your resume to:

Michael G. Harris  
Vice President  
Human Resources  
INVITRON CORPORATION  
4649 LeBourget Drive  
St. Louis, MO 63134



An Equal Opportunity Employer, M/F

Ph.D. Toxicology

## REGULATORY MANAGER

Squibb Corporation is a Fortune 200 Company and an internationally recognized leader in the research, marketing and manufacturing of innovative pharmaceuticals and related health care products. Currently, we have a position available for a Regulatory Manager to join us at our New Jersey facility.

The successful candidate will possess a Ph.D. in Toxicology or related discipline along with previous experience in regulatory or industrial toxicology areas. Individuals with an MS in Toxicology or a related discipline with considerable experience in regulatory and/or industrial toxicology research will be considered.

Specific responsibilities include managing, reviewing and tracking of preclinical pharmacology and toxicology documents for regulatory filings on a worldwide basis. In this position, you will also interact with the FDA on preclinical regulatory issues.

We offer a very competitive compensation package and participation in our comprehensive benefits program. Interested candidates should submit their resume, including salary history, to: **Squibb Technical Operations, Dept. LH/E01489, P.O. Box 191, New Brunswick, NJ 08903.** An equal opportunity employer.



**SQUIBB®**

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH:** Biodehalogenation, microbial, enzymatic, and active site dehalogenation reactions:  $^{14}\text{C}$  synthesis, metabolism, quantitation of pathways and kinetics, active site chemistry. Available 1 February 1989. Send résumé and three letters of recommendation to: **Dr. C. E. Castro, Nematology Department, University of California at Riverside, Riverside, CA 92521.**

**POSTDOCTORAL RESEARCH.** A 5-year position for research on glial-axonal relationships, using morphological and biochemical technologies. Ideal backgrounds include: (i) electron microscopy, especially morphometric and cytochemical skills, or (ii) membrane biochemistry. Send inquiries, curriculum vitae, and references to: **Richard Wiggins, Ph.D., Chairman, Anatomy Department, 4052 HSN, WVU Health Science Center, Morgantown, WV 26506.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL/RESEARCH ASSOCIATE** position available to study information processing in the somatosensory cortex. Experience with intra- or extracellular recording from single neurons in the CNS desirable. Salary and position dependent on training and experience. Send curriculum vitae and names of references to: **Dr. Robert LaMotte, Department of Anesthesiology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** Telephone: 203-785-5141.

**POSTDOCTORAL RESEARCH POSITION** available 1 July 1989 to participate in on-going studies of human muscle function and disease. Current studies are concerned with human muscle fatigue utilizing nuclear magnetic resonance spectroscopy and electrophysiologic techniques. A background in neurophysiology or muscle physiology is required. Starting salary range between \$20,000 and \$30,000 per year depending upon experience. Send curriculum vitae and names of three references to: **Robert G. Miller, M.D., Director of Neuromuscular Research, Children's Hospital of San Francisco, 3700 California Street, San Francisco, CA 94119.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL TRAINING POSITIONS AVAILABLE** in the Immunobiology of Aging Program co-sponsored by Cornell University Medical College and The New York University School of Medicine. Interested applicants please send curriculum vitae to:

**Dr. Gregory W. Siskind  
Cornell University Medical College  
1300 York Avenue, Room A-463  
New York, NY 10021**

## REPRODUCTIVE GENETICS

The Division of Reproductive Genetics, Department of Obstetrics and Gynecology at the University of Tennessee, Memphis/University Physicians Foundation, Inc. has an opening at the **INSTRUCTOR** level beginning 1 July 1989. Applicants should desire a career in academic medicine. Must be board-certified or eligible by the American Board of Obstetrics and Gynecology and the American Board of Medical Genetics.

This position will involve participation in all of the clinical services, including the Prenatal Clinics, Maternal Serum Alpha-fetoprotein Screening Program and Consultation services. In addition, there will be teaching responsibilities to medical students, house officers and fellows with particular emphasis to the education and career development of the fellows in the Division. The Fellowship Program emphasizes laboratory training and research in cytogenetics, DNA analyses, inborn errors of metabolism, immunogenetics, and population genetics. The individual will also be responsible for general duties in obstetrics and gynecology.

Applicants should send curriculum vitae to:

**Sherman Elias, M.D.  
Director, Division of Reproductive Genetics  
University of Tennessee, Memphis  
University Physicians Foundation, Inc.  
853 Jefferson Avenue, Room E102  
Memphis, TN 38163**

*The University of Tennessee, Memphis is an Equal Employment Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

## POSITIONS OPEN

**POSTGRADUATE POSITION IN MICROBIOLOGY** to do research in Microbial Coal Cleaning Section of the Pittsburgh Energy Technology Center. Project involves isolation of bacteria that remove sulfur from model compounds and coal. Graduate degree within past 3 years and U.S. citizenship or PRA status required. Contact: **Fossil Energy Postgraduate Program, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117; Telephone: 615-576-3456.**

## NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Chemistry Division is seeking qualified candidates for the position of **PROGRAM DIRECTOR**, Experimental Physical Chemistry. This position is excepted from the competitive civil service and will be filled on a permanent basis, beginning on or about September 1989. The salary range is from \$48,592 to \$75,473 per annum.

Applicants must have a Ph.D. or equivalent experience in chemistry, plus 6 or more years of successful experience in research and education. A record of strong research accomplishment and broad knowledge of experimental physical chemistry and its practitioners are key qualifications. Questions of a technical nature may be directed to **Dr. K. N. Houk, Director, Division of Chemistry at 202-357-7947.**

Applicants should send an SF-171, Application for Federal Employment, to: **National Science Foundation, Division of Personnel and Management, 1800 G Street, NW, Washington, DC 20550.** Attention: **Announcement Number EX 89-25.** For additional information, call: **Ann Cook, 202-357-9529.** Hearing impaired individuals should call: **TDD 202-357-7492.** NSF is an Equal Opportunity Employer. Applications from women, minority, and disabled chemists are strongly encouraged. The closing date for receipt of applications is 31 March 1989.

**RENAL PHARMACOLOGIST.** The Renal Division at Brigham and Women's Hospital/Harvard Medical School is seeking to appoint an M.D./renal pharmacologist as instructor in medicine. Candidates should be fully trained clinical nephrologists with extensive experience in dialysis and transplantation, and also have advanced training in basic pharmacology and at least 3 years of postdoctoral experience in studying toxic renal injury, preferably utilizing magnetic resonance flow imaging and ion-selective microelectrodes. Direct inquiries to: **Dr. B. M. Brenner, Director, Renal Division, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.**

*BWH/HMS are Equal Opportunity/Affirmative Action Employers.*

A position as **RESEARCH ASSISTANT** is available to investigate dihydrofolate reductase, an important target for several anticancer drugs such as methotrexate. The appointee will be required to perform kinetic assays of the enzyme, determine individual steps of the catalytic cycle, and elucidate drug-enzyme interaction with the use of ultraviolet-visible spectrophotometers, spectrofluorimeters, and stopped-flow spectrophotometers. It will also be necessary to present and discuss this work in local and national conferences and to collate and organize the data for publication in specialized journals. Candidates must have a Ph.D. in bio-organic chemistry with training in enzyme kinetics and experience in enzyme purification, enzyme kinetics, computer language and data analysis. Starting salary from \$22,000 depending on postdoctoral experience. Send curriculum vitae and names of three references to: **Jack Hilzheim, Tennessee Job Service, 1309 Poplar Avenue, Memphis, TN 38104.**

## RESEARCH ASSOCIATE

Opportunity to join a research team working on molecular basis of action of retinoic acid on carcinogenesis. Experience in recombinant DNA technology and cell biology is required. Ph.D. in biochemistry, molecular biology, or related field. Send résumé and three reference letters to:

**Dr. A. K. Verma  
University of Wisconsin  
Clinical Cancer Center  
K4/532  
600 Highland Avenue  
Madison, WI 53792**

## POSITIONS OPEN

**RESEARCH ASSISTANT:** The University of Virginia, Department of Internal Medicine, is seeking a research assistant to perform radioimmunoassays, maintain a research laboratory, be articulate in quality control and have a working knowledge of sophisticated laboratory equipment. Candidates must be a college graduate and hold a degree in biology or chemistry. Please send curriculum vitae and references to: **Dr. Robert M. Carey, Box 482, Department of Internal Medicine, University of Virginia, Charlottesville, VA 22908.**

Cedars-Sinai Medical Center has an excellent opportunity for a **RESEARCH ASSOCIATE** at the postdoctoral level. This position is in the Division of Endocrinology's Bone Center and will join a team of basic and clinical investigators in establishing a broad based research program in mineral metabolism and metabolic bone disease and participate in research on the actions and regulation of gene expression of a newly identified human parathyroid hormone related tumor factor. Candidates we seek must hold a Ph.D. and be trained in aspects related to molecular biology and/or cell biology. We offer an excellent compensation/benefits package. For consideration, send curriculum vitae to:

**Rebecca Chandler  
Cedars-Sinai Medical Center  
Employee Relations Department  
8700 Beverly Boulevard  
Brown Building, 1st Floor  
Los Angeles, CA 90048**

Prostate cancer research group seeks **RESEARCH ASSOCIATE** with background in clinical medicine and research experience emphasizing physiology and endocrinology of small rodents. Must have basic understanding of pathology and endocrinology of human cancer through working with human cancer patients or human tumor biopsies. M.D. and M.A. or Ph.D. in physiology, with medicine and physiology the major fields of study, required. One year of experience in research in medicine, molecular biology, or physiology required. Applicant must be able to do fine microsurgery on rodents, including removal of male organs and surgical castration, able to establish primary cell cultures using cell fractionation techniques, and apply RNA analysis including northern blotting and cDNA cloning. References required. Forty hour work week, Monday to Friday 8:00 a.m. to 5:00 p.m. Basic rate of pay \$18,500 per calendar year. Qualified applicants send résumé or application letter to: **Arizona DES Job Service, Attention: 732-A Re: 0803088, P.O. Box 6123, Phoenix, AZ 85005.** Job Location: Tucson. Employer paid ad; proof of authorization to work in the United States required if hired.

**RESEARCH ASSOCIATE/INSTRUCTOR** for college in northwest Ohio to perform classroom teaching, laboratory demonstration and instruction in platination (preparation, processing, and impregnation of tissue and organ parts of human cadavers with a polymer to create relatively permanent specimen for viewing and handling); research scientific and educational correlations between anatomical platinated cross-sections and modern imaging (computerized tomography, magnetic resonance, and echocardiography). Requires M.S. in anatomy and 1 year of experience in job described or 1 year of training or experience in process of platination. Forty hours per week, 8 a.m. to 5 p.m. \$23,000 per year. Qualified applicants reply immediately with résumé to: **R. Lechler, JO# 0020424, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

## JOHNS HOPKINS SCHOOL OF MEDICINE EPR LABORATORIES

A position is available immediately for a **RESEARCH FELLOW** with 3 or more years of postdoctoral experience in EPR spectroscopy in the area of physical chemistry, metalloproteins and biological chemistry. The candidate should have experience and interest in the development of instrumentation, computer software and hardware interfacing for EPR data acquisition/analysis to study free radicals in biological systems. Salary commensurate with experience. Please send curriculum vitae to: **Dr. Jay L. Zweier, B1-S, Division of Cardiology, FSKMC, 4940 Eastern Avenue, Baltimore, MD 21224.**

## PHARMACOLOGY FACULTY POSITION OHIO UNIVERSITY

The Program in Physiology and Pharmacology at Ohio University seeks to fill a tenure-track pharmacology faculty position at the assistant or associate professor level. A Ph.D. degree in pharmacology and two years of post-doctoral research experience is required. This position is a joint appointment in the College of Osteopathic Medicine and the Department of Zoological and Biomedical Sciences. The successful candidate is expected to develop a strong, independent and externally fundable research program. Collaboration opportunities exist in several areas including: biochemical pharmacology particularly signal transduction and second messengers in stimulus response coupling, cardiovascular and autonomic pharmacology, endocrinology, molecular and cellular biology, smooth muscle physiology and neurobiology. The successful candidate is required to participate in teaching of pharmacology to osteopathic medical students, and to participate in training of graduate (M.S./Ph.D.) students in the Program in Physiology and Pharmacology.

The letter of application, curriculum vitae, description of current and future research plans, copies of most significant publications and three letters of recommendation must be received by March 31, 1989. Address to: Dr. Huzoor-Akbar, Chairperson, Pharmacology Search Committee, Room 228 Irvine Hall, Ohio University, Athens, OH 45701.

Those attending the Federation meeting in New Orleans (March 19-23, 1989) and wishing to make personal contact with Dr. Huzoor-Akbar or Dr. Leon Wince may leave a message at the message center, FASEB placement services or at the Hilton Hotel.

Ohio University is an Affirmative Action/Equal Opportunity Employer

## PCR

### PRODUCT MANAGER: RESEARCH REAGENTS

Cetus Corporation, a leader in biotechnology, has an opening in its newly formed PCR Division for an individual whose experience combines science and project management.

Reporting to the Sr. Director of PCR Product Development, the Product Manager for Research Reagents will initiate and supervise development of new reagent products for research uses of Cetus' GeneAmp™ polymerase chain reaction (PCR) process. The products will be commercialized through Perkin-Elmer Cetus Instruments, a joint venture between Perkin-Elmer Corporation and Cetus. Based in Emeryville, California, the Product Manager will supervise up to two laboratory technicians and coordinate activities with Cetus' research, engineering, product development and reagent manufacturing groups, and Perkin-Elmer's engineering and manufacturing groups. In addition, this individual will identify new reagent projects, prepare technical product specifications and ensure that projects are completed within budget and on schedule.

Requirements include an MS or PhD in a relevant field of biological sciences. Experience in managing product development is highly desirable.

Cetus offers an excellent benefits package along with an environment that encourages innovation and growth. For consideration, please send your resume to Cetus Corporation, Box JR, 1400 Fifty-Third Street, Emeryville, CA 94608. We are an Equal Opportunity Employer.



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## SCIENTISTS

PANLABS is expanding its U.S. laboratory facilities to accommodate rapid growth in the Pharmacology Services Division and the Microbial Products Services Division. Applications for positions in the following areas are currently being accepted:

### BIOCHEMICAL PHARMACOLOGY

*Ph.D. 2-5 years experience*

We have an opportunity for a scientist with a demonstrated record of scientific innovation and independence to participate in the start-up and development of a new biochemical pharmacology laboratory. Responsibilities include implementation, validation and automation of high-throughput assays for drug discovery and characterization, including radioligand binding, enzyme activity, and cellular functional responses. Background in immunopharmacology and industrial experience desirable. The successful candidate will play an important role in determining future research directions and staffing for the lab.

### NATURAL PRODUCTS/BIOORGANIC CHEMISTS

*Ph.D. 0-5 years experience*

*MS Scientists 3+ years experience*

The successful candidates will be part of a multidisciplinary team including biochemists, pharmacologists and molecular biologists. One of the initial responsibilities of these positions will be to purify small bioactive molecules from fermentation broths using standard chemical procedures in combination with liquid chromatography (HPLC).

PANLABS is a growing U.S. based international company that has provided R & D services to pharmaceutical companies and the fermentation industry worldwide for almost 20 years. Located in the high tech corridor north of Seattle, Panlabs offers excellent salaries and benefits. Please send CV with names and phone numbers of three references to:



### PANLABS, INC.

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## POSITIONS OPEN

**RESEARCH ASSOCIATE IN CELL AND MOLECULAR BIOLOGY:** Position available to study mechanisms of anti-sense RNA inhibition of gene expression in higher eukaryotes. Retroviral vectors are employed to deliver anti-sense constructs targeted to genes of clinical and biological interest. The applicant should have an M.D. or Ph.D. with a background in cell and/or molecular biology. Send curriculum vitae and references to: **Dr. Edward Holmes, Department of Medicine and Biochemistry, Box 3034, Duke Medical Center, Durham, NC 27710.**

**RESEARCH FACULTY**—The University of Michigan Medical Center, Division of Pediatric Gastroenterology is recruiting a scientist with an interest in smooth muscle physiology and intracellular messengers. Applicant must be willing to assist ongoing investigations and develop a related independent research program. Must have Ph.D. and previous experience in this or related field. Salary support for 2 years will be provided. Submit curriculum vitae and references to: **A. Craig Hillemeier, M.D., Director Pediatric GI, Room 1510 E MSRB I, University of Michigan Medical Center, Ann Arbor, MI 48109-0658.** *The University of Michigan is an Equal Opportunity/Affirmative Action Employer.*

### RESEARCH SCIENTIST (ASSISTANT PROFESSOR)

The Department of Medical Microbiology and Immunology, Ohio State University Medical Center, is seeking a person to work collaboratively with a research group in the area of central nervous system/immune system interactions. Applicant should hold an M.D. or Ph.D. degree with experience in an area concerned with neuroimmune interactions. Salary commensurate with experience. Submit curriculum vitae, including reprints, and three letters of recommendation to: **Ronald Glaser, Ph.D., Department of Medical Microbiology and Immunology, The Ohio State University College of Medicine, 333 West 10th Avenue, Columbus, OH 43210.**

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

The Environmental Defense Fund, a private not-for-profit organization, is seeking Ph.D. **SCIENTISTS** with research experience in the following areas: (i) Atmospheric science or (ii) Forest ecology. Applicants should have an interest in atmosphere-biosphere interactions and biogeochemical cycles. Salary will be commensurate with previous research experience. Position offers the opportunity for scientific research in a public policy context.

No phone calls please. Send résumé to:

**Global Atmosphere Program  
Environmental Defense Fund  
257 Park Avenue South, 16th Floor  
New York, NY 10010**

### SENIOR CHEMIST

Responsibilities include supervising the research and development of new inks and related materials in connection with the company's ink projects; characterizing and defining suitable inks for print testing; checking compatibilities and setting up analytical quality control methods. Responsible for the work of three chemists. An applicant must have a Master of Science degree with a concentration in either inorganic or physical chemistry and either 2 years of experience as a senior chemist or 10 years of experience in physical or inorganic chemistry. Also required is a strong background and experience in organic chemistry, including dye and solvent chemistry; a strong background and experience in analytical chemistry, including HPLC, GC, FTIR, UV-VIS, AA, fluorescent, colorimetry, and DSC; and a strong background and experience in surface chemistry and solution chemistry. Salary range \$47,000 to \$53,000 per year. Send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to job order # 3042844. *An Equal Opportunity Employer.*

## POSITIONS OPEN

**RESEARCH POPULATION ECOLOGIST:** U.S. EPA, Environmental Research Laboratory, Corvallis, Oregon, is seeking a quantitative ecologist to conduct research on the effects of various environmental stresses on population dynamics of terrestrial wildlife. This is a full-time position and requires a Ph.D. in animal population ecology, or a closely related discipline. Candidates must be able to demonstrate the following skills: (i) an ability to plan, implement, and lead complex research programs; (ii) experience in developing ecological models for terrestrial wildlife populations; and (iii) proven ability to communicate research results both orally and in the peer-reviewed literature. *Position only open to U.S. citizens.* Salary range: \$34,580 to \$63,172 per annum depending on qualifications. To receive information on application procedures, send a résumé by 3 April 1989 to: **Dr. Bill Williams, EPA, 200 S.W. 35th Street, Corvallis, OR 97333, or call: 503-757-4679/4600.**

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**SENIOR DETECTOR SCIENTIST**—To design, test, analyze space-qualified infrared detectors, optimize design and specifications for components and materials for commercial and aerospace applications. To supervise technicians, engineers. Full responsibility for thermal detector manufacturing and test program development. Ph.D. in Solid State Physics or Materials Science with concentration in Diffusion and Electromigration in Pb-based alloys plus 2 years of related experience in teaching or as laboratory supervisor or alternatively 3 years of experience in materials processing and in diffusion and electromigration in Pb-based alloys plus 2 years of related experience in teaching or as laboratory supervisor. Forty hours per week; \$38,000 per year. Send résumé to: **Job Service Technical Unit, Connecticut Department of Labor, 200 Folly Brook Boulevard, Wethersfield, CT 06109.** Refer to Job Order #3043935.

### SENIOR SCIENTIST

Difco Laboratories, Ann Arbor, Michigan, is offering a challenging opportunity for a senior scientist who will supervise research and development of diagnostic test systems in clinical microbiology. The successful candidate should have fundamental training in microbiology and knowledge or experience in microbial growth and biochemical activities as well as medical microbiology. A Ph.D. in microbiology is required with several years of experience in research and development or clinical microbiological settings. Send résumé, publications list, references, and salary history to: **D. S. Kerschbaum, Difco Laboratories, R&D Center, 1180 Ellsworth Road, Ann Arbor, MI 48108.** *Equal Opportunity Employer, M/F.*

**SENIOR SCIENTIST—EXPERIMENTAL NUCLEAR PHYSICS:** Act as CEBAF program manager for the large acceptance spectrometer and leader of the CEBAF Hall B Physics Group developing the physics program in collaboration with CEBAF users. Program will detect multiple particle final states in photo- and electroproduction experiments, as well as experiments using tagged photons and polarized targets. Develop conceptual design and supervise construction for a large acceptance magnetic spectrometer to carry out the envisioned physics program. Forty hours per week, 9 a.m. to 5 p.m., \$81,000 per year. Ph.D. in physics and 5 years of experience in job or 5 years of research experience in photonuclear physics. Prior experience must include the design, construction, and operation of large acceptance detection device for electron accelerators. Publications in electromagnetic nuclear physics. Demonstrated ability as research group leader. Will supervise five persons. Mail or hand carry résumé with copy of ad attached to: **M. J. Hotchkiss, VEC, 5145 East Virginia Beach Boulevard, Norfolk, VA 23502.**

The European Molecular Biology Laboratory (EMBL), an international research institute, has a vacant **STAFF SCIENTIST** post to research theoretical techniques to build protein tertiary models from primary sequences. Methods include database searches of all known tertiary structures, energy minimization, molecular dynamics and new creative approaches. Computer programming and molecular graphics experience is important. Modeled structures include viral proteins. An above-average salary and renewable 3-year contract are offered. Write for an application form, quoting number 89/01, to: **EMBL, Personnel Section, Postfach 10.2209, D-6900 Heidelberg, Federal Republic of Germany.**

## POSITIONS OPEN

**SENIOR STAFF SCIENTIST**—Wanted to conduct experiments in theory and methodology in pulse saturation recovery electron spin resonance spectroscopy, spin-label oximetry and measurement of the permeability of synthetic lipid bilayers and biological membranes. Ph.D. in biophysics and 1 year of experience in pulse electron spin resonance spectroscopy required. Education and experience may be concurrent. 8 a.m. to 5 p.m.; \$25,000 per year. Résumés to: **Otto Petersen, Milwaukee Job Service, 819 North 6th Street, Milwaukee, WI 53203.** Employer paid ad. *Equal Opportunity Employer.*

**STAFF SCIENTIST:** Conduct biochemical and immunochemical research aimed at developing new genetic engineering techniques and crop plants. Responsible for directing hybridoma facility and research program in plant photomorphogenesis. Direct research program such that immunochemical approaches are integrated into ongoing plant molecular biology projects. Initiate and direct projects in plant growth and development as influenced by light (photomorphogenesis). Requires Ph.D. in plant physiology or plant cell biology and 5 years of experience in immunochemical and plant photomorphogenesis research. Experience must include 5 years of experience with immunochemistry, including at least 3 years of experience with monoclonal antibodies, their production and use to study the relationship of structure to function of plant protein; and 5 years of experience developing and directing research programs in plant photomorphogenesis. Competence, as demonstrated by publication of refereed articles, in following areas required: development and application of radioimmunoassays, enzyme-linked immunosorbent assays, immunoaffinity chromatography, immunocytochemistry and immunoblotting; immunization of mice, performing fusions, screening, cloning, expansion and preservation of hybridomas, and purification to homogeneity of resultant monoclonal antibodies; protein biochemistry, including gel electrophoresis, protein purification, dual wavelength spectrophotometry in general and as applied to phytochrome assay, and HPLC. Prior laboratory supervisory experience required. Forty hours per week, \$59,509 per year. Job Order No. NC 8105061, DOT Code 041.061-078. Interested candidates should send their curriculum vitae, including list of refereed articles to: **Job Service, 516 North Mangum Street, Durham, NC 27701** or their nearest Job Service office.

**TENURE-TRACK POSITION** in physiology for assistant/associate professor. Candidates are expected to develop independent research program and teach graduate and professional courses. Preference given to candidates with expertise in nutrition/digestion/metabolism/cardiovascular physiology. Individuals with expertise in other areas of physiology are encouraged to apply. Submit curriculum vitae to: **Dr. C. H. Clark, Department of Physiology, College of Veterinary Medicine, Auburn University, AL 36849** by 30 June 1989. *An Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.*

University of California, Los Angeles (UCLA) Urology Division seeks Board-certified **UROLOGIST** with expertise in renal transplantation for faculty position. Requirements: proven ability to organize clinical training; ability to collaborate in immunology research; experience in reconstructive and pediatric urology; excellent surgical skills. Applicants should contact: **The UCLA Division of Urology, Los Angeles, CA 90024-1738.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

**UROLOGY:** Urologic oncologist with 2 years of postgraduate cancer research in an established major cancer center. Major interest in kidney cancer research and experienced in cancer surgery. *Equal Opportunity Employer.* Reply to: **Box 32, SCIENCE.**

**ZOOLOGIST**—Assistant Professor, tenure-track fall 1989. Ph.D. expected. Strong interest and training in field aspects of evolution/ecology required. Will participate in introductory and advanced biology courses, college-wide programs and a research program involving students. Prefer persons who integrate quantitative or molecular approaches or specialize in tropical or aquatic studies. Send curriculum vitae, transcripts, and three letters of reference by 24 March 1989 to: **Dr. David Jordan, VPAA, Austin College, Sherman, TX 75091.** *Equal Opportunity Employer.*

## ROCKEFELLER FOUNDATION BIOTECHNOLOGY CAREER FELLOWSHIPS

The Rockefeller Foundation announces a program of career development fellowships designed to enable scientists from developing countries, trained at outstanding centers for advanced research in biotechnology, to continue to work at those or other institutions for three months each year, over a period of at least three years, conducting advanced research and keeping abreast of new developments in their fields. The program will focus upon the development and application of advances in molecular and cellular biology and immunology relevant to agriculture, health, and reproductive biology.

Funding will be shared between the Foundation and the host laboratory, with the Foundation providing travel and per diem support. It is hoped that the fellowships will encourage the establishment of ongoing working relationships between outstanding younger scientists working at third world institutions, and research teams at advanced laboratories.

Applicants to this program should have at least Ph.D.- or M.D.-level training, a proven record of scientific productivity, and a permanent position at a research or teaching institution in their home country. A written project proposal must be developed and submitted jointly by the candidate and the laboratory sponsor.

Information about application procedures can be obtained by writing to **Biotechnology Career Fellowships, Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036, USA.**

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## Associate Senior Investigator Cellular/ Molecular Immunology

The Division of Molecular Genetics at SmithKline Beckman Animal Health Products, a multinational leader in the Animal Health Care Industry, located in suburban Philadelphia, Pennsylvania, is seeking a qualified candidate to join its innovative and expanding animal vaccine research effort. Primary duties will include:

- Plan and design both in vitro and in vivo experiments to evaluate the cell mediated immune response elicited by various vaccine candidates in several animal species. Purification and characterization of relevant immune molecules will be required.
- Apply state-of-the-art bioanalytical techniques including ELISA, Protein Blotting, Electrophoresis, and the generation and use of monoclonal and/or polyclonal antibodies.
- Supervise and perform such experiments as well as assist in collaboration with program teams. Publication in qualified scientific journals is encouraged.

Candidates are required to have the following qualifications:

- Ph.D. in cellular/molecular immunology with a minimum of 2 years postdoctoral experience.
- Experience with the design and execution of bioassays in cellular/molecular immunology.
- Experience with viral and/or parasite pathogens is desirable.
- Demonstrated ability to work independently in area of expertise.
- Excellent verbal and written skills.
- Demonstrated publication record.

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Responsibilities include sequence analysis for the probe design, investigation of hybridization techniques and procedures for detection of infectious agents in clinical specimens.

We seek individuals with at least two to three years experience in a commercial diagnostics company and a PhD in a relevant scientific area. For consideration, please send your resume and compensation history to:



Human Resources Department  
Molecular Biosystems, Inc.  
10030 Barnes Canyon Rd.  
San Diego, California 92121

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## POSITIONS OPEN

**WHOLE PLANT PHYSIOLOGIST**—Assistant professor, floriculture. The University of Minnesota, Department of Horticultural Science is seeking an assistant professor for a 12-month tenure-track position beginning 1 July 1989 or as soon thereafter as possible. The faculty member will conduct research centered around plant growth and reproductive processes of floricultural crops. In collaboration with designated colleagues in entomology, plant pathology, and soil science, develop and conduct an educational program that addresses the needs of the commercial floriculture industry in Minnesota. The faculty member will be expected to collaborate with other faculty and to secure extramural funding, and will have the opportunity to advise graduate students. The application deadline is 15 April 1989. For further application information contact: **Dr. Emily E. Hoover, Department of Horticultural Science, 305 Alderman Hall, 1970 Folwell Avenue, University of Minnesota, St. Paul, MN 55108; telephone: 612-624-6220.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

## ASSISTANTSHIPS

### GRADUATE RESEARCH ASSISTANTSHIPS IN GEOCHEMISTRY

Assistantships are currently available for graduate studies leading to a Ph.D. in geochemistry. Candidates with degrees in chemistry, geology, geochemistry, chemical physics or physics are encouraged to apply. Applications may be submitted at any time. Areas of research include: diffusion and transport processes, isotope and trace element geochemistry, chemistry of volatiles in silicate liquids and crystals, micro-inclusions in diamonds and the nature of fluids and melts at high pressures, solar system chronology, chemistry of interstellar gas and dust, chemical and physical processes accompanying the formation of the solar system, photochemistry of planetary atmospheres, and mineral spectroscopy, development of micro-analytical techniques (including laser-enhanced ionization) for chemical and isotopic studies. For information, write to: **Professor G. J. Wasserburg, Chairman, Division of Geological and Planetary Sciences, Mail Code 170-25, California Institute of Technology, Pasadena, CA 91125.** *Caltech is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## WORKSHOPS



### HEALTH EFFECTS INSTITUTE SIXTH ANNUAL CONFERENCE AND OZONE SYMPOSIUM

The Health Effects Institute's Sixth Annual Conference and Ozone Symposium will be held in Cambridge, Massachusetts, on Sunday, 9 April to Wednesday, 12 April 1989. The purpose of the meeting is to foster communication between scientists, government officials, and motor vehicle industry representatives.

The meeting on Monday, 10 April 1989 is devoted to diesel, methanol, and aldehyde emissions, and will include lectures on the environmental impact of methanol fuels and a discussion of the HEI research program in these areas.

The Ozone Symposium on 11 and 12 April will include lectures by internationally recognized scientists, poster presentations by HEI-funded and invited investigators, and panel discussions. The aim of the symposium is to consider the state of the art in research dealing with the health effects of tropospheric pollution by ozone and other photochemical oxidants. Topics include: chemistry, epidemiology, clinical studies, animal toxicology, mechanisms and carcinogenesis. One session will be devoted to the ozone air quality standard, the societal implications and research needs.

Registration fee for the meeting is \$75. Participation is limited and by pre-registration only. For further information contact: **Health Effects Institute, 215 First Street, Cambridge, MA 02142. Telephone: 617-491-2926.**

## WORKSHOPS

### PENN STATE BIOTECHNOLOGY INSTITUTE WORKSHOP HYBRIDOMA AND MONOCLONAL ANTIBODIES

A 3 1/2-day workshop will provide researchers with both practical and theoretical background on hybridoma and monoclonal antibody production. The course will emphasize laboratory experience starting with immunization and covering all aspects through ascites production. 16 to 19 May 1989. Limited to 18 participants. Cost: \$750. Contact: **Jeannette Bachman, 333 Wartik Laboratory, University Park, PA 16802. Telephone: 814-865-0921.**

## COURSE

**METHODS IN COMPUTATIONAL NEUROSCIENCE**, 6 August to 2 September 1989. This intense, advanced lecture and laboratory course presents the basic techniques necessary to study single cells and neural networks using simulation software developed at the California Institute of Technology. Limited to 20 students. Co-Directors: **James M. Bower** and **Christof Koch**, California Institute of Technology. Application deadline: 15 May 1989. For further information and application forms, contact: **Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543; Telephone: 508-548-3705, extension 216.**

## SYMPOSIUM

### A CANADIAN INTERNATIONAL NEUROSCIENCE SYMPOSIUM

5, 6 and 7 June 1989 Guelph, Ontario, Canada, on the topics of: Neurogenetic disease, lentiviral and unconventional slow viral CNS disease, neuronal abiotrophies. Advanced Registration: \$250 Canadian. After 15 March 1989: \$325. Special rate for graduate students. Contact: **Ms. Sandra Brown, Department of Pathology, University of Guelph, Guelph, Ontario, Canada N1G 2W1** for registration package.

## TRAINING PROGRAM

**POSTDOCTORAL FELLOWSHIP**, July 1990—Pathologist or other biomedical scientist (M.D., D.D.S., D.V.M., Ph.D) for 1- or 2-year program at the Armed Forces Institute of Pathology beginning July 1990. Excellent research training and educational opportunity position; women and minorities encouraged. Send curriculum vitae and brief statement of interests and qualifications to: **Box 33, SCIENCE** by 1 September 1989.

## FELLOWSHIPS

### POSTDOCTORAL RESEARCH FELLOWSHIP

Postdoctoral research fellowship available to individual interested in cardiac surgery or cardiovascular physiology. NIH-funded research explores the mechanisms associated with the minimization of ischemic injury to the heart and the improvement of posts ischemic ventricular function. The position is designed to be filled by an M.D. currently in a surgical residency or cardiothoracic fellowship, but candidates with a Ph.D. and surgical experience and/or training in cardiovascular physiology are invited to apply. Available 1 July 1989. Send curriculum vitae and three letters of recommendation to: **David G. L. Van Wylen, Ph.D., Department of Surgery, State University of New York at Buffalo, BB201, Clinical Center, 462 Grider Street, Buffalo, NY 14215.**

### THE WETLANDS INSTITUTE SUMMER RESEARCH FELLOWSHIPS

Two fellowships will be awarded during summer 1989 for field research on coastal organisms and/or environments of the Cape May Peninsula. Applicants should have a Ph.D. Awards provide a \$2500 stipend, laboratory space and housing at the Institute. For details and application information, contact: **Executive Director, The Wetlands Institute, Stone Harbor, NJ 08247. Telephone: 609-368-1236.** Applications must be received by 1 April 1989.

## FELLOWSHIPS

### INTERNATIONAL CANCER RESEARCH FELLOWSHIP

The Hayashibara Mutual Aid Fund, a nonprofit-making organization within the Hayashibara Group, announces a fellowship program. Two awards will be made annually. Fellowship will be taken up at the newly opened Fujisaki Cell Center, which is devoted to basic and applied research related to the problems in human cancer. The fellowship is normally made for 1 year and is renewable for up to 5 years. The fellowship will be expected to commence within 6 months of the announcement of the awards. The awards are for high quality research work in one of the three categories described below.

1. Fundamental Leukemia-Lymphoma Research,
2. Cytokine-Lymphokine Research,
3. Hematopoietic Cell Cultures.

Qualified person, who has a Ph.D., an M.D., or equivalent qualifications, will be awarded on merit to suitably qualified research proposal and experiences. Additional information and application forms will be obtained from: **Jun Minowada, M.D., Director, Fujisaki Cell Center, 675-1, Fujisaki, Okayama 702, Japan.**

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# POSTDOCTORAL POSITIONS

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offmann-La Roche, a research-intensive pharmaceutical firm located in suburban New Jersey, just 12 miles from New York City, is expanding its Research Associate (Post-doctoral Fellow) program. Roche Research Associates have an opportunity to carry out basic exploratory research while interacting with multidisciplinary teams of colleagues who are skilled in translating basic information into therapeutic approaches. Publication of basic research results is encouraged. We are currently seeking a number of Research Associates in the following focus areas:

## MOLECULAR BIOLOGY AND PROTEIN BIOCHEMISTRY

Individuals to study structure/function relationships of recombinant proteins; biochemistry and molecular biology of membrane receptors and cell adhesion proteins; and processing of polypeptide hormones in mammalian cells.

## MOLECULAR ONCOLOGY

Individuals to isolate and characterize cell surface molecules involved in the recognition of tumor cells by activated macrophages; to study biochemical and molecular biological aspects of oncogenes and tumor suppressor genes; and to investigate regulation of gene expression by retinoids.

## MOLECULAR VIROLOGY

Individuals to study mechanisms of action and structure-function relationships of HIV regulatory proteins and other viral gene products.

## CARDIOVASCULAR RESEARCH

Individuals to study signal transduction mechanisms and covalent modification in heart muscle-cell pathobiology.

Hoffmann-La Roche offers an environment conducive to discovery as well as an attractive compensation package. Candidates must possess a doctoral degree and have relevant research experience. For consideration, please indicate your preferred focus area and send your curriculum vitae along with names and addresses of three references, to: **Mr. Richard H. Stevenson, Assistant Director of Exploratory Research, Hoffmann-La Roche Inc., 340 Kingsland Street, Nutley, New Jersey 07110.** We are an equal opportunity employer.



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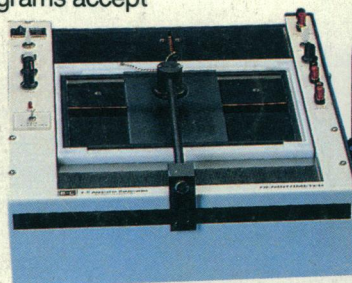
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