

Books Received

Contributions from Breeding Forage and Turf Grasses. D. A. Sleper, K. H. Asay, and J. F. Pedersen, Eds. Crop Science Society of America, Madison, WI, 1989. xviii, 122 pp. Paper, \$15. CSSA Special Publication no. 15. From a symposium, Atlanta, GA, Dec. 1987.

Cosmic Catastrophes. Clark R. Chapman and David Morrison. Plenum, New York, 1989. viii, 302 pp., illus. \$22.95.

Cosmological Constants. Papers in Modern Cosmology. Jeremy Bernstein and Gerald Feinberg, Eds. Columbia University Press, New York, 1989. xiv, 328 pp., illus. Paper, \$29. Reprint, 1986 ed.

Data for Biochemical Research. Rex M. C. Dawson *et al.* 3rd ed. Oxford University Press, New York, 1989. xii, 580 pp., illus. Paper, \$43.95. Reprint, 1986 ed.

Debating Archaeology. Lewis R. Binford. Academic Press, San Diego, CA, 1989. xvi, 534 pp., illus. \$44.95. Reprinted essays and critiques.

Density-Functional Theory of Atoms and Molecules. Robert G. Parr and Weitao Yang. Oxford University Press, New York, 1989. x, 333 pp. \$55. International Series of Monographs on Chemistry, vol. 16.

Development, Maturation, and Senescence of Neuroendocrine Systems. A Comparative Approach. Martin P. Schreibman and Colin G. Scanes, Eds. Academic Press, San Diego, CA, 1989. xii, 432 pp., illus. \$59.50. Based on a symposium, New Orleans, LA, Dec. 1987.

Electroporation and Electrofusion in Cell Biology. Eberhard Neumann, Arthur E. Sowers, and Carol A. Jordan, Eds. Plenum, New York, 1989. xviii, 436 pp., illus. \$85.

The Endangered Kingdom. The Struggle to Save America's Wildlife. Roger L. Disilvestro. Wiley, New York, 1989. xiv, 241 pp., illus. \$19.95. Wiley Science Editions.

Knowledge-Based System Diagnosis, Supervision, and Control. Spyros G. Tsafestas, Ed. Plenum, New York, 1989. xii, 305 pp., illus. \$49.50. Applied Information Technology.

Made in America. Regaining the Productive Edge. Michael L. Dertouzos, Richard K. Lester, and Robert M. Solow. MIT Press, Cambridge, MA, 1989. xiv, 344 pp., illus. \$17.95.

Magnetic Critical Scattering. Malcolm F. Collins. Oxford University Press, New York, 1989. xii, 188 pp., illus. \$49.95. Oxford Series on Neutron Scattering in Condensed Matter, vol. 4.

The Many Faces of Imitation in Language Learning. Gisela E. Speidel and Keith E. Nelson, Eds. Springer-Verlag, New York, 1989. xvi, 342 pp., illus. \$69. Springer Series in Language and Communication, vol. 24.

Many-Particle Theory of Highly Excited Semiconductors. Roland Zimmerman. Akademie Verlag, Berlin, G.D.R., 1988 (U.S. distributor, VCH, New York). 176 pp., illus. Paper, \$22.50. Teubner-Texte zur Physik, vol. 18.

The Mathematical Structure of Raster Graphics. Eugene L. Fiume. Academic Press, San Diego, CA, 1989. xvi, 221 pp. \$29.95.

Mathematical Topics in Nonlinear Kinetic Theory. Nicola Bellomo, Andrzej Palczewski, and Giuseppe Toscani. World Scientific, Teaneck, NJ, 1988. xiv, 226 pp. \$48.

Metal Forming and the Finite-Element Method. Shiro Kobayashi, Soo-Ik Oh, and Taylan Altan. Oxford University Press, New York, 1989. xx, 377 pp., illus. \$65. Oxford Series on Advanced Manufacturing, vol. 4.

The Metallic Bond and the Structure of Metals. V. K. Grigorovich. Nova Science, Commack, NY, 1989. x, 311 pp., illus. \$78. Translated from the Russian edition (Moscow, 1988) by Al Peabody.

Oil Crops of the World. Their Breeding and Utilization. Gerhard Röbbelen, R. Keith Downey, and Amram Ashri, Eds. McGraw-Hill, New York, 1989. xviii, 554 pp., illus. \$39.95.

Physiological Function in Special Environments. Charles V. Paganelli and Leon E. Farhi, Eds. Springer-Verlag, New York, 1989. xxvi, 221 pp., illus. \$69. From a symposium, Buffalo, NY, Oct. 1985.

Proceedings, Third General Accelerator Physics Course. (Salamanca, Spain, Sept. 1988.) S. Turner, Ed. CERN, Geneva, 1989. xii, 241 pp., illus. Paper.

Programming Logics. An Introduction to Verification and Semantics. Raymond D. Gumb. Wiley, New York, 1989. xviii, 334 pp. Paper \$45.95.

Progress in Polyamine Research. Novel Biochemical, Pharmacological, and Clinical Aspects. Vincenzo Zappia and Anthony E. Pegg, Eds. Plenum, New York, 1988. xvi, 779 pp., illus. \$115. Advances in Experimental Medicine and Biology, vol. 250. From a symposium, Naples, Italy, June 1988.

Properties of Selected Ferrous Alloying Elements. Y. Touloukian and C. Y. Ho, Eds. Hemisphere, New York, 1989. xviii, 268 pp., illus. \$80. CINDAS Data Series on Mater Properties, vol. 3-1.

Prospects for Primary and Secondary Prevention of Cervix Cancer. G. Knox and C. Woodman, Eds. Published for Imperial Cancer Research Fund by Oxford University Press, New York, 1988. 562 pp., illus. Paper \$30. Cancer Surveys, vol. 7, no. 3.

Proterozoic Geology of the Southern Rocky Mountains. Jeffrey A. Grambling and Barbara J. Tewksbury, Eds. Geological Society of America, Boulder, CO, 1989. viii, 175 pp., illus. Paper, \$27.50. GSA Special Paper 235. From a symposium, Durango, CA, May 1984.

Putnam's Geology. Peter W. Birkeland and Edwin E. Larson. 5th ed. Oxford University Press, New York, 1989. viii, 646 pp., illus. \$49.95; paper, \$26.95.

Space, Time, and Thought in Kant. Arthur Melnick. Kluwer, Norwell, MA, 1989. viii, 561 pp., illus. \$99. Synthese Library, vol. 204.

Speaking. From Intention to Articulation. William J. M. Levelt. MIT Press, Cambridge, MA, 1989. xviii, 566 pp., illus. \$39.95. ACL-MIT Press Series in Natural Language Processing.

The Terminology of Biotechnology: A Multidisciplinary Problem

December 20, 1989
Sheraton Waikiki, Honolulu

Coinciding with the American Chemical Society's PACIFICHEM '89, this conference will consider many aspects of nomenclature and standards for biotech information.

Cosponsored by

United States Adopted Names Council
ACS Division of Chemical Information
ACS Committee on Nomenclature

For more information, contact:

Dr. Kurt Loening
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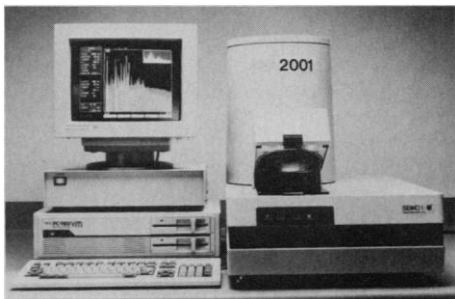
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Products & Materials

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The Seiko X-Ray Fluorescent SEA2001 Element and Composition Analyzer System reports the presence and compositional percentage of up to 20 elements in an unknown homogeneous sample. Results are reported



either by atomic percentage or percentage by weight at the choice of the user. Bulk samples are placed directly in the measurement chamber, while liquid or powder samples are placed in a special sample holder, with no prep procedures needed. The tabletop instrument reports the presence of elements from sodium through uranium in the periodic table. Seiko Instruments. Circle 477.

Integrated Laboratory for Complete DNA Analysis

The Integrated Cell Analysis Laboratory is designed to enhance the performance of complete DNA analysis with Becton Dickinson's flow cytometry and image analysis technology. Composed of the Becton Dickinson FACScan/CellFIT flow cytometer and the CAS 200 Image Analysis System, the Integrated Cell Analysis Laboratory allows users to perform a complete panel of immunologic and cytologic applications. It provides superior performance in all critical areas of quantitative DNA analysis, including linearity, resolution, doublet discrimination, and digital image analysis. Specific applications include DNA/immunoploidy

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.

analysis, multiparameter cell kinetic analysis, cell proliferation indices, leukemia/lymphoma immunophenotyping, immune status monitoring, and automated reticulocyte enumeration and morphometry studies of selected cell populations. Becton Dickinson. Circle 469.

Monoclonal Antibodies

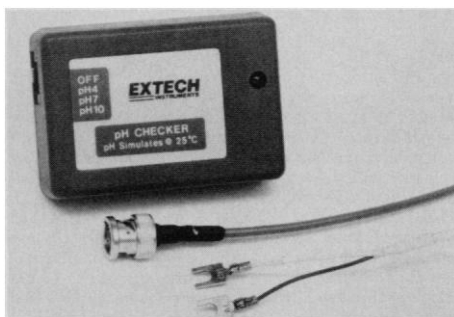
Two kits with a basic panel of six monoclonals: CD2-biotine, CD4-biotine, CD8-FITC, CD16-FITC, CD11a-FITC, CD19-FITC. Kit A consists of nonconjugated monoclonal antibodies; kit B consists of conjugated monoclonal antibodies. Janssen Biochimica. Circle 474.

Mouse monoclonal antibodies to human immunoglobulins including pan-IgG, IgG1, IgG2, IgG3, IgG4, κ light chain, λ light chain, IgA, IgA1, IgA2, IgM, IgD, and IgE. All the antibodies to IgG subclasses, IgM, and κ light chain are available conjugated to peroxidase, alkaline phosphatase, or biotin. Monoclonal rat antibodies to human leukocytes: Specificities include human CD1, CD2, CD5, CD6, CD9, CDw41, leukocyte common antigen, mature monocytes, and HLA class 2. Rat monoclonal antibodies to human interleukin-2 receptor and human immunodeficiency virus type-1 (HIV-1) are also offered. Zymed Laboratories. Circle 475.

FITC-conjugated antibodies to human T cell for use in flow cytometry to identify abnormalities of functional T cell subsets in immune disorders. Dako Corp. Circle 476.

pH Checker and Fault Locator

The pH Checker/Fault Locator simulates pH 4, 7, and 10 to evaluate if a pH meter is in calibration or needs an electrode replaced. It is used by simply connecting it to a pH



meter and switching it between pH values 4, 7, and 10 at 25°C. If the meter displays the value being simulated, it is in calibration. EXTECH Instruments Corp. Circle 480.

HIV-1 Research Test Kit

The ASQ HIV Kit is a research-only reagent kit for detection and identification of antibodies to the human immunodeficiency virus type-1 in serum or plasma. The test, which can be automated, is based on absorbance values of six antibodies compared with that of a positive control. The presence of antibody is shown by a colorimetric reaction, and the absorbance values are related to antibody reactivity. Antibody reactivities to different viral peptides vary during the course of the disease, and the test provides absorbance values that can be related to specific antibody reactivity for each peptide. Beckman Instruments. Circle 490.

Intracellular Ion Measuring System

The Nikon Intracellular Calcium Ion System (NICIS) enables advanced study of intracellular calcium and other ions, provides simultaneous data at two wavelengths, and offers both real-time display and automatic data storage. Accompanying software can automatically create, display, and store standard curves and ratios along with other information on ion concentration changes in single or multiple cells. Nikon Instrument Group. Circle 496.

Literature

New Product Catalog describes products including designer genes, probes, antibodies, and proteins for a wide variety of cytokines and growth factors and products for immunodeficiency virus research. Laboratory Products Division of British Biotechnology Limited. Circle 512.

1989 Restriction Enzyme Bulletin is a six-page flyer that lists the more than 85 different restriction enzymes, including information on recognition sequence, volume activity, the buffers supplied with each enzyme, and ordering information, available from Boehringer Mannheim Biochemicals. Circle 513.

Caltag Immunological Reagent Catalog lists more than 300 monoclonal and affinity-isolated polyclonal antibodies, either unconjugated or with various enzyme, fluorochrome, biotin, and agarose conjugates. Caltag Laboratories. Circle 515.

1989-90 Product Catalogue lists many new products, including protein minielectrophoresis systems, sequencing gel systems, and ministorage chambers for radioisotope shipping vials. Owl Scientific Plastics. Circle 516.

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 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 \times \$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

Neuroscientist, Ph.D. with anatomical (predoctoral) and electrophysiological (postdoctoral) experience seeks second postdoctoral position to study mammalian nervous system or skeletal muscle using molecular/cellular techniques. Grant Robinson, Physiology, AHSC, University of Arizona, Tucson, AZ 85724.

Pharmacologist/Clinical Research Ph.D. Basic research, neurochemistry and behavior, CNS drug development. Extensive clinical research experience in pharmaceutical industry, neuropsychiatry, anti-infective, immunology, GI, CVR, etc. Mature, reliable, hardworking team player/leader. FDA interactions, teaching experience. Seeks research and development clinical research/project management/regulatory position—middle/senior level. Biotechnology/pharmaceutical development. Contact Box 200, **SCIENCE**. You will be glad you did.

POSITIONS WANTED

Cell/Protein/Molecular Biologist, Ph.D. Five years of research on the cell biology, protein chemistry, and pharmacological (anti-tumor) implications of isoprenylation-dependent protein processing of nuclear and oncogene proteins. Expertise: protein purification, 1D/2D gels, Western/Northern/Southern, DNA/RNA/plasmid purification and analysis, immunoprecipitation/immunoblots. Seeking industrial/pharmaceutical research and development position. Box 190, **SCIENCE**.

Retrovirologist, Ph.D. Experienced and published in antiviral agents against HIV. Seeks research project leader or administrative position in government or industry in Washington, D.C., area. Box 201, **SCIENCE**.

POSITIONS OPEN

ANAEROBIC PARASITE BIOCHEMIST—Applications are invited for a tenure-track position as assistant professor of biology with research experience and expertise in anaerobic parasite enzymology and biochemistry. Preference will be given to individuals who (i) have research experience and expertise in trichomonad enzymology and biochemistry, (ii) are willing to collaborate on hydrogenosomal biogenesis research, (iii) initiate a research program on *Entamoeba*, and (iv) have experience with other parasites (*Leishmania*, *Trypanosoma*, etc.). The candidate must have postdoctoral experience (2 years minimum). The position will be within the Biology Department, as part of the OBOR Academic Challenge Program in Molecular Parasitology. Candidates will be expected to maintain an active research program in trichomonad enzymology and biochemistry and develop a research program in *Entamoeba* biochemistry. The candidates will be expected to develop graduate and undergraduate courses in areas of expertise and teach introductory biology. Applicants should send curriculum vitae, current reprints, research interest, and arrange to have three letters of recommendation sent before 25 November 1989 to: **Dr. Donald G. Lindmark, Department of Biology, Cleveland State University, East 24th and Euclid Avenue, Cleveland, OH 44115.** Equal Opportunity Employer, M/F/H.

ANATOMY DEPARTMENT: MUSCLE BIOLOGIST. The Department of Anatomy at The Medical College of Pennsylvania invites applications for a tenure-track position at the assistant/associate professor level, available July 1990. Candidate should have a Ph.D. and postdoctoral experience. The appointee is expected to develop a competitive research program in the area of contractile structure and function, complementing those of present faculty. Research involving EM techniques such as minimal dose imaging in amorphous ice, freeze-substitution, shadowing and image reconstruction, or regulation of contractile activity is preferred. Active participation in team-taught courses in cell biology, microscopic anatomy, or gross anatomy to medical and graduate students is required. Please submit a curriculum vitae, statement of research interests and goals, with representative publications and the names of three references to: **Rhea J. C. Levine, Ph.D., Department of Anatomy, The Medical College of Pennsylvania/Eppi Division, 3200 Henry Avenue, Philadelphia, PA 19129.** Equal Opportunity Employer, M/F.

ANIMAL PHYSIOLOGY AND MORPHOLOGY

Cornell University seeks a non-tenure-track instructor, with a Ph.D., to design and oversee the laboratory portions of an environmental physiology course and a vertebrate functional morphology course. The courses are taught in alternate spring semesters. Knowledge of animal physiology and anatomy and experience with instrumentation and microcomputers are required. Participation in a fall semester graduate seminar is expected and individual or collaborative research is encouraged. The 3-year appointment starts fall 1990 and is renewable. Applicants should send a letter describing their teaching and research experience and enclose curriculum vitae, copies of representative publications, and the names and telephone numbers of three references who will be asked by the candidate to send letters of recommendation. This material should be sent to: **Dr. F. Harvey Pough, Section of Ecology and Systematics, Corson Hall, Cornell University, Ithaca, NY 14853-2701.** The deadline for receipt of applications is 15 November 1989. *Cornell University is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are encouraged.*

POSITIONS OPEN

AQUATIC ECOLOGY KELLOGG BIOLOGICAL STATION MICHIGAN STATE UNIVERSITY

Kellogg Biological Station (KBS) of Michigan State University invites applications for a tenure-system assistant professor position in aquatic ecology. Annual year (12-month) appointment will include residency at KBS and a joint appointment in a campus-based department; position available 1 May 1990. Candidates should have an interest in interdisciplinary research that would enhance the station's mission in research, education, and extension. Areas of particular interest include watershed processes, species/trophic interactions, population/evolutionary biology, primary producers, and nutrient cycling. Emphasis is on research and graduate training. Teaching involves summer programs at KBS with periodic commitment to campus-based courses. Applications should include curriculum vitae, publications, statement of academic interests, and three letters of recommendation or the names and telephone numbers of three references. Submit by 1 December 1989 to:

Dr. Gary Mittelbach
Search Chair
Kellogg Biological Station
Hickory Corners, MI 49060
*Michigan State University is an
Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR DEVELOPMENTAL BIOLOGY DUKE UNIVERSITY

Applications are invited for a tenure-track position beginning fall 1990 in the Department of Zoology at Duke University. We are interested in candidates with high research promise in developmental biology, particularly in cellular or molecular aspects. Postdoctoral experience is desirable. Responsibilities include maintaining a vigorous research program and teaching an undergraduate course in developmental biology and a graduate course of choice. Send curriculum vitae, description of research interests, and the names and addresses of three references by 30 November 1989 to: **Chair, Developmental Biology Search Committee, Department of Zoology, Duke University, Durham, NC 27706.**

Duke University is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are strongly encouraged to apply.

ASSISTANT PROFESSOR, tenure-track, beginning fall 1990. Ph.D. in molecular biology or biochemistry with experience in recombinant DNA techniques and/or monoclonal antibody techniques. Commitment to undergraduate liberal education with teaching in biology and chemistry departments. Postdoctoral experience desirable. Salary competitive. Submit résumé, description of research area and official transcripts to: **Head, Department of Biology, James Madison University, Harrisonburg, VA 22807** by 10 November 1989. *The University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF ANATOMY

The Division of Anatomy, Department of Biomedical Sciences at Creighton University, invites applications for a tenure-track position at the assistant professor level starting July 1990. Research interests should preferably be in neuroscience or cell biology and the appointee will have the opportunity to interact with the newly developed Regulatory Peptide Center in the Department. Applicants should be capable of participating in the range of anatomy courses offered to freshman medical students.

Application, curriculum vitae, and addresses of references should be sent to:

Chairman
Department of Biomedical Sciences
School of Medicine
Creighton University
Omaha, NE 68178

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

POSITIONS OPEN

ASSISTANT PROFESSOR—The Philadelphia College of Pharmacy and Science seeks applications for a tenure-track position in the Department of Chemistry. A Ph.D. in chemistry or chemistry is required, with research in the area of biochemistry. Applicants should have a strong desire to teach and should be able to teach courses at the undergraduate and graduate levels in all areas of biochemistry, including molecular genetics. The successful applicant will be expected to develop an active research program in biochemistry, involving both undergraduate and graduate (M.S. and Ph.D.) students. Applicants should provide a cover letter, curriculum vitae, and names, addresses, and telephone numbers of three references to:

Julian Snow, Chairman
Biochemistry Search Committee
Philadelphia College of Pharmacy and Science
Woodland Avenue at 43rd Street
Philadelphia, PA 19104-4495

The Search Committee will begin reviewing applications after 15 November 1989. *Equal Opportunity Employer, M/F/H.*

HARVARD SCHOOL OF PUBLIC HEALTH ASSISTANT PROFESSOR

Applications are being accepted from persons with graduate training, postdoctoral experience, and proven accomplishment in nutrition or the following sciences related to nutrition: biochemistry, or cell or molecular biology. Applicants must demonstrate the ability to develop an independent research program and to participate in the teaching of a course on a biological approach to the effects of foods and their constituents. Preference will be given to candidates whose research has a biochemical, cellular, or molecular orientation. It is hoped to make an appointment as early as first half of 1990.

Expression of interest is particularly invited from qualified women and minority candidates.

Send curriculum vitae, a summary of past accomplishments, a statement of future interests in research and teaching, and the names and addresses of three references to:

Professor Peter Goldman
Harvard School of Public Health
665 Huntington Avenue
Boston, MA 02115

ASSISTANT PROFESSOR OF BIOLOGY

Oxford College, a 2-year undergraduate division of Emory University, located 35 miles east of Atlanta, invites applications for a tenure-track position for fall semester 1990. Teaching responsibilities include introductory biology, anatomy, and physiology. Candidates must have a Ph.D. or equivalent, and demonstrate a strong interest and ability in teaching undergraduates and a commitment to using investigative approaches to teaching biology. Submit curriculum vitae, transcripts, and the names, addresses and telephone numbers of at least three references by 3 January 1990 to: **Dr. William E. Baird, Chairman, Division of Natural Science and Mathematics, Oxford College of Emory University, Oxford, GA 30267.** *Emory University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT RESEARCH BIOPHYSICIST. The Department of Pharmaceutical Chemistry at the University of California, San Francisco (UCSF), seeks a biophysicist with 3 years of education or work experience in path integral and renormalization group methods applied to the statistical mechanics of polymer conformations. The candidate is also required to have experience with polymer lattice theory, computer simulation, and protein biophysics. This job entails the development of theory and simulations of the conformations of protein chains in folded and unfolded states using path integral and lattice computational methods. The salary is \$37,700 per year. Candidates should send curriculum vitae, list of publications, and three letters of reference to: **Professor Ken A. Dill, School of Pharmacy, UCSF, Box 1204, San Francisco, CA 94143.** *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply. Closing date for applications is 1 month after the appearance of this ad.*

POSITIONS OPEN

University of North Carolina at Chapel Hill: The Department of Chemistry invites applications for **ASSISTANT** or untenured **ASSOCIATE** tenure-track **PROFESSORSHIPS** for several open positions. Areas of specialization are open but special consideration will be given to biological, organic, and physical chemists. Applicants should send curriculum vitae and a brief statement of research plans and should arrange for the submission of four letters of recommendation. Review of applications will begin on 15 November 1989. Address applications to: **Eugene A. Irene, Chairman of the Search Committee, Department of Chemistry, CB# 3290, University of North Carolina, Chapel Hill, NC 27599-3290.** *UNC-CH is an Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL ASSISTANT PROFESSOR IN INVERTEBRATE BIOLOGY

The Department of Biology invites applications for a tenure-track appointment effective 1 July 1990 or later. The area of research interest is broadly defined to encompass comparative physiology, functional morphology, and neuroethology. Applicants should provide evidence that they will develop a strong, independent research program and that they possess a broad knowledge of invertebrates. Graduate teaching is in the area of research specialization; undergraduate teaching is in any of the following areas: biology of invertebrates, comparative physiology, neurobiology. Send curriculum vitae, reprints of publications, a statement of present and future research plans, and four letters of recommendation to: **Invertebrate Biologist Search Committee, Department of Biology, CB# 3280, Coker Hall, University of North Carolina, Chapel Hill, NC 27599-3280.** Priority will be given to applications received before 1 December 1989. *Applications from minority groups and women are strongly encouraged. The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR. To participate in teaching medical and graduate students and to study cellular immunology of human and murine intestine, particularly intestinal immunoregulation by cytokines. Requires experience in cellular immunology, cell isolation, cell cloning, T cell hybridoma technology, cytokine assays, in situ hybridization, and general immunochemical techniques, particularly as these apply to the study of intestinal lymphoid cell populations. Will be expected to interact on studies of human inflammatory bowel disease and to initiate independent studies on the regulatory effects of cytokines at mucosal sites. Position available immediately. Ph.D. in immunology and at least 2 years of postdoctoral experience required. Salary range \$25,000 to \$30,000 per year. Reply with curriculum vitae including three references by 15 November 1989 to: **Charles O. Elson, M.D., Director, Division of Gastroenterology, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.** *Equal Employment Opportunity/M/F.*

ASSISTANT PROFESSORS CELL BIOLOGY

The Cell Biology and Anatomy Department has four newly created positions open for tenure-track assistant professors in cell biology. A major research focus of the department will concern intracellular protein translocation, vesicular transport, and membrane and organelle assembly, approached with molecular and genetic techniques. Freshly renovated space and extensive research support facilities will be available. Applicants working in other research areas will be considered. Some of these appointments may be made at the rank of associate or full professor if appropriate. Ph.D.'s with demonstrated research prowess should send a curriculum vitae, one-page summary of research plans, recent publications, and the names, addresses, and telephone numbers of three references to: **Dr. Paul B. Lazarow, Chairman, Cell Biology and Anatomy, Box 1007, Mount Sinai School of Medicine, Fifth Avenue and 100th Street, New York, NY 10029-6574.** First priority will be given to applications received by 1 November 1989. *MSSM is an Equal Opportunity Employer; women and minorities are encouraged to apply.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOCHEMISTRY UNIVERSITY OF COLORADO, BOULDER

The Department of Chemistry and Biochemistry invites applications for a tenure-track faculty position with preference to candidates at the assistant professor level, but candidates at all levels will be considered. The appointment is part of a major expansion in staff and facilities in biochemistry. Applicants should have a Ph.D. in chemistry or biochemistry and a major commitment to conducting a vigorous and innovative research program in biochemistry. Highest priority is in x-ray crystallography or a related area of structural biochemistry; however, applicants in all areas of biochemistry are welcome and those with approaches that interface with other areas of chemistry are encouraged. Applicants should send curriculum vitae, representative reprints, and statement of research plans and have three letters of reference sent to: **Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Colorado, Campus Box 215, Boulder, CO 80309-0215.** Applications will be evaluated beginning 15 October 1989 with a final application deadline of 30 November 1989. *The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity in all areas. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities and disabled individuals.*

TWO ASSISTANT PROFESSORS—Experienced in invasive and noninvasive cardiology with an established record of investigation are sought for the cardiology section of the Palo Alto Veterans Administration Medical Center. Areas of particular interest include the application of new technologies for the diagnosis and treatment of heart disease, basic and clinical cardiac pharmacology concepts relating to the progression and regression of atherosclerosis, and basic mechanisms involved in the understanding and treatment of cardiomyopathy. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.* Deadline for application is 15 November 1989. Applicants should send curriculum vitae, a brief statement of their research interest, and names of references to: **John C. Giacomini, M.D., Search Committee Chairman, Palo Alto VA Medical Center, 111C, 3801 Miranda Avenue, Palo Alto, CA 94304.** Telephone: 415-493-5000, Ext. 5305 or Fax: 415-852-3473.

BARNARD COLLEGE ASSISTANT PROFESSORS OF BIOLOGY

The Department of Biological Sciences at Barnard College seeks two assistant professors for September 1990 to participate in undergraduate teaching and maintain active research programs in an undergraduate college that is affiliated with a large research institution, Columbia University.

EVOLUTIONARY BIOLOGY. Possible specialties include, but are not limited to, ecological genetics, population genetics, paleobiology. Teaching responsibilities include a lecture course in evolution, a laboratory course in organismal diversity, and courses in areas of specialty.

ANIMAL (INVERTEBRATE/VERTEBRATE) ANATOMY/PHYSIOLOGY. Possible specialties include, but are not limited to, neurobiology, endocrinology, embryology, functional morphology, environmental physiology. Teaching responsibilities include a lecture course and laboratory course in anatomy/physiology, participation in an introductory course, and course in area of specialty.

Ph.D. required; postdoctoral research and prior teaching experience desirable. Submit curriculum vitae, list of publications, brief statements of research and teaching interests, up to three representative publications, and three letters of recommendation to: **Ms. Lorin Johnson, Department of Biological Sciences, Barnard College, 3009 Broadway, New York, NY 10027** by 15 December 1989. *Women and members of minority groups are encouraged to apply.*

POSITIONS OPEN

ASSISTANT PROFESSOR POSITIONS DUKE UNIVERSITY MEDICAL CENTER SECTION OF CELL GROWTH REGULATION, AND ONCOGENESIS DUKE COMPREHENSIVE CANCER CENTER

Duke University Comprehensive Cancer Center invites applications for tenure-track positions in the Section of Cell Growth, Regulation, and Oncogenesis at the level of assistant professor. Investigators working at the molecular level in any area of cancer biology are encouraged to apply, but special consideration will be given to those working in the areas of growth factors, and their receptors, signal transduction, molecular basis of oncogene action including recessive oncogenes and multiple drug resistance. Minimally, applicants must have a doctorate, and 2 years of postdoctoral training. Candidates must have demonstrated high potential for imaginative substantial independent research. Successful candidates will also be appointed into a basic science department within the Medical Center.

Applicants should send curriculum vitae, a brief description of present and proposed research to: **Mr. Robert M. Bell, Head, Section of Cell Growth, Regulation, and Oncogenesis, Duke Comprehensive Cancer Center, Box 3711, Durham, NC 27710.** Applicants should arrange for three or more letters of recommendations to be forwarded to the same address.

To be assured of full consideration, the application should be received by 24 November 1989.

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

ASSISTANT/ASSOCIATE PROFESSORS OF BIOLOGY

The Department of Biology, San Francisco State University, invites applications for two tenure-track positions starting fall 1990. A Ph.D. is required and postdoctoral experience is desirable. Candidates should have a commitment to excellence in teaching, an established research record, and the potential to maintain an extramurally funded research program that includes supervision of M.A. student research. The department has a faculty of 40 with active groups in ecology, botany, marine biology, systematics, microbiology, molecular biology, neurobiology, and physiology.

MOLECULAR ENDOCRINOLOGIST. We seek a molecular endocrinologist whose primary responsibilities will be to (i) offer upper-division and graduate courses selected from the areas of endocrinology, mammalian physiology, molecular biology, or tissue culture; (ii) participate in lower-division courses on a rotational basis; and (iii) establish a research program in molecular endocrinology.

SYSTEMATIC MYCOLOGIST. We seek a systematic mycologist whose primary responsibilities will be to (i) offer upper-division and graduate courses in mycology and related fields; (ii) participate in lower-division courses on a rotational basis; (iii) curate the 90,000-specimen Harry D. Thiers Mycological Herbarium; (iv) establish a research program in systematic mycology. Our preference is for candidates with research expertise in both experimental and classical approaches.

Send curriculum vitae, statement of teaching interests and research goals, and three letters of reference by 1 December 1989 to: **Dr. John Hafernik, Chair, Hiring Committee, Department of Biology, San Francisco State University, San Francisco, CA 94132.** Women and minority candidates are especially urged to apply. SFSU is an Equal Opportunity/Affirmative Action Employer.

JAMES N. GAMBLE INSTITUTE OF MEDICAL RESEARCH CINCINNATI, OHIO

Positions are available at the **ASSISTANT, ASSOCIATE, AND FULL MEMBER LEVELS.** Rank and salary will depend on qualifications but a minimum of 2 years of postdoctoral experience will be required for the entry-level position. Applicants will be expected to develop independent research programs and collaborate in ongoing research projects in the areas of immunology and molecular biology related to herpes simplex virus or rotavirus disease. Send résumés and names of three references to: **David I. Bernstein (HSV) or Richard L. Ward (rotavirus), J. N. Gamble Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, OH 45219.** Telephone: 513-369-2582. Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR ANIMAL PHYSIOLOGY-DEVELOPMENTAL ZOOLOGY ELECTRON MICROSCOPY

The Biology Department at the University of Puget Sound seeks an animal physiologist or developmental zoologist with expertise in electron microscopy. Tenure-track position; to begin August 1990. Ph.D. and a strong commitment to undergraduate teaching and research. Teach three courses annually (participate in team-taught introductory biology course, advanced specialty course, undergraduate course in electron microscopy); initiate/maintain strong research program involving undergraduates; advise students, participate in departmental/university governance, and continue professional development. The department has nine full-time faculty with diverse expertise and modern facilities including an electron microscope laboratory with Zeiss EM 109 TEM and ISI SS40 SEM. Submit letter describing interests and goals as they relate to undergraduate teaching/research, curriculum vitae, transcripts, and names of three references by 3 November 1989, to: **Physiology-EM Search, University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407.** An Equal Opportunity/Affirmative Action Employer.

JPL ASSISTANT SCIENTIST

The Jet Propulsion Laboratory has an opening for an assistant scientist which requires an M.S. degree in physics plus 4 years of experience or a B.S. degree in astronomy plus 6 years of experience with two in physics or computer science.

The job responsibilities consist of participating in data analysis and experiment preparation for the ACRIM Flight Instrument series, a solar irradiance monitoring experiment.

Will assist in project and data management. Will travel for other NASA centers for project interaction. Must have experimental orientation and strong computer background with UNIX and FORTRAN skills. Postdoctorates may apply.

Please submit résumé to: **Professional Staffing, Department T-40.**

**Jet Propulsion Laboratory
California Institute of Technology
4800 Oak Grove Drive 249/104
Pasadena, CA 91109**

Equal Opportunity Employer, M/F/H/V.

MOREHOUSE SCHOOL OF MEDICINE ASSISTANT/ASSOCIATE PROFESSORS ANATOMY MOLECULAR GENETICS MOLECULAR IMMUNOLOGY

Morehouse School of Medicine (MSM) seeks candidates for a position in the Department of Anatomy at the level of assistant professor and for two positions in molecular genetics and molecular immunology at the level of assistant or associate professor. The molecular genetics and molecular immunology appointments will be made in the department appropriate to the academic qualifications and interests of the appointees. Applicants should have the Ph.D. or M.D. degree.

Candidates for associate professor should have well-established, independently funded research programs and several years of medical/graduate school teaching experience.

Candidates for assistant professor should have strong research training, including postdoctoral experience, records of research productivity and independence, and some teaching experience.

Morehouse School of Medicine is an expanding, new, private medical school with a strong commitment to the academic and scientific growth of minority students.

Initial screening of candidates will begin 1 November 1989.

Applications should include curriculum vitae, a statement of research interests including funding history, and the names, addresses, and telephone numbers of at least three references. Send applications to: **Thomas E. Norris, Ph.D., Senior Associate Dean, Morehouse School of Medicine, 720 Westview Drive, S.W., Atlanta, GA 30310-1495.**

POSITIONS OPEN

ASSOCIATE PROFESSOR with a documented record in basic or clinical cardiovascular research is sought for the cardiology section of the Stanford University School of Medicine. In addition, applicant should have an established record of excellence in clinical cardiology. Areas of interest include clinical arrhythmia and electrophysiology, pacemaker function, animal electrophysiology, cellular electrophysiology, and the basic mechanisms of arrhythmias in man or animal models. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.* Deadline for application is 15 November 1989. Applicants should send curriculum vitae, a brief statement of their research interest, and names of references to: **Richard L. Popp, M.D., Search Committee Chairman, Falk Cardiovascular Research Center, Stanford University School of Medicine, 300 Pasteur Drive, Stanford, CA 94305-5246.** Telephone: 415-723-7493 or Fax: 415-725-1599.

The University of California, San Diego, Department of Chemistry is interested in recruiting outstanding faculty at the **ASSOCIATE OR FULL PROFESSOR** level in biochemistry or physical chemistry. All applications received through 3 November 1989 will be given thorough consideration. Candidates must have a Ph.D. and demonstrated ability to teach at the undergraduate and graduate levels. Salary and rank will be commensurate with qualifications and based on the University of California pay scale. Candidates should send curriculum vitae, a list of publications, reprints of up to five representative papers, a summary of research plans, and names and addresses of three references to: **Chairman, Search Committee, Department of Chemistry, B-032, University of California, San Diego, La Jolla, CA 92093-0332.** The University of California is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY UNIVERSITY OF ARIZONA

BEHAVIOR: Applications are invited for a tenure-track position in the area of behavior, including its evolutionary aspects. Applicants pursuing field or experimental studies are of particular interest. High originality in research and talent as a teacher will be important criteria used in selecting among applicants. This appointment will probably be made at the assistant professor rank. Applicants should mail curriculum vitae, statement of research plans, reprints or preprints, and arrange to have at least three letters of reference sent to: **Conrad A. Istock, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721.** The period for applications closes 15 December 1989. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY FACULTY

The Department of Biochemistry of Kansas State University, a Land-Grant University, expects to make several tenure-track hires during the next 3 years, each with a part-time Agricultural Experiment Station appointment. All areas of contemporary biochemistry are of interest. One or more positions will be filled in the fall of 1990. Candidates at the assistant professor level should have postdoctoral experience and substantial published work, should be prepared to establish an independent, externally funded research program, and should be capable of teaching biochemistry to undergraduate and graduate students. Candidates having actively funded research programs may be eligible for appointment at higher rank. Applications including a résumé, a statement of research plans, and the names of three references should be sent by 1 December 1989 to: **Lawrence C. Davis, Department of Biochemistry, Willard Hall, Kansas State University, Manhattan, KS 66506.**

An Equal Opportunity/Affirmative Action Employer.

BOTANY: GENETICS, ASSISTANT PROFESSOR, Ph.D., tenure-track. Begin 28 August 1990. Teaching and research in botany and genetics. Send curriculum vitae, three letters of reference, and all transcripts to: **V. A. Thiesfeld, Chair, Biology Department, University of Wisconsin-Stevens Point, Stevens Point, WI 54481.** Women and minorities are urged to apply.

**UNIVERSITY OF COLORADO
VISITING FACULTY AND
POSTDOCTORAL FELLOWSHIPS (1990-91)**

FOR RESEARCH IN

- atmospheric chemistry
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 - environmental chemistry and biology
 - environmental measurements and instrumentation
 - global change
 - remote sensing
- at the Cooperative Institute for Research in Environmental Sciences (CIRES).

Five competitive fellowships will be awarded to recent Ph.D. recipients and to senior scientists, including faculty on sabbatical leave. Stipends average \$26,500 for twelve months. Appointments can begin at any time during the year. Selection of awardees is made in part on the likelihood of active interaction with CIRES scientists. Senior CIRES-affiliated scientists working in these fields include James Avery, Susan Avery, Ben Balsley, Roger Barry, John Birks, Maurice Blackmon, William Bowman, Henry Diaz, R. Ray Fall, Lang Farmer, Fred Fehsenfeld, Alexander Goetz, Vijay Gupta, Howard Hanson, Michael Hardesty, William Hay, Murray Johnston, William Lewis, Uwe Radok, Colin Ramage, George Reid, Russ Schnell, and Robert Sievers. Candidates are encouraged to contact one or more of the senior investigators as they are preparing their proposals. Apply to

Prof. R. Sievers, Director of CIRES
Visiting Fellows Program, CB 216
University of Colorado
Boulder, CO 80309

Include resume, publications list, and brief description of proposed research. Also request that three persons familiar with your qualifications send letters of recommendation. Junior applicants must submit undergraduate and graduate transcripts. First consideration will be given to applications received by December 1. Final application deadline is February 15.

The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities, and disabled individuals.

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As a preeminent teaching facility, St. Michael's Hospital offers a caring and compassionate environment with a dedicated team of professionals. Our 701-bed progressive teaching facility, affiliated with the University of Toronto, is committed to maintaining high standards of health care through extensive research. To continue on that course, we require the expertise of an:

IMMUNOLOGIST, Ph.D.

A highly self-motivated individual, you will develop an independent research program using innovative approaches to address immunobiological mechanisms. Taking a proactive approach, you will initiate and develop projects as well as establish an externally-funded independent research program. Opportunities for collaboration extend to areas of platelet immunology, AIDS, haemophilia, blood transfusion serology, leukocyte function and membrane receptors.

A Ph.D. in Immunology or related field with at least 4 years' postdoctoral experience in Cellular Immunology, Immunohaematology or closely related area is required. Previous experience with flow cytometry, cell sorting, compliment, membrane receptor functions or platelet immunology is an asset.

Research experience in immunology together with a proven track record of success brings a competitive salary and benefits package. We invite interested applicants to submit a detailed curriculum vitae, a brief summary of current research activities, representative reprints and the names of three references to:

**Dr. John Freedman, Department of
Immunohaematology, St. Michael's
Hospital, 30 Bond Street, Toronto,
Ontario M5B 1W8**

POSITIONS OPEN

CANCER RESEARCH TECHNOLOGIST. Forty hours per week. 8:00 a.m. to 5:00 p.m. \$23,462 per year salary. To process tissues for histological, histochemical, and immunochemical studies; perform electron microscopy and high resolution electron microscopic autoradiography. Prepare special discs containing carcinogens and maintain animals for long-term immunogenic studies and transplant and maintain rats bearing pancreatic and liver carcinoma; photography; printing and developing electron microscopy; morphometric analysis. Education required, Bachelor Degree Arts and Science. Major field of study in medical technology. Two years of experience. Must be registered in Illinois and have passed the test required by the American Society of Clinical Pathologists. (ASCP) Metropolitan Chicago area. Send résumés to: **Illinois Department of Employment Security, 401 South State Street-3 South, Chicago, IL 60605, Attention: Marie E. Ninneman. Reference #9541-N. Employer paid ad.**

CARBOHYDRATE SCIENCE FACULTY

The University of Georgia Complex Carbohydrate Research Center (CCRC), currently with 90 members (faculty, staff, and students) will hire three tenure-track faculty this year. The CCRC, particularly well-equipped and well-organized for collaborative and interdisciplinary research, has recently occupied its own, new 40,000-square-foot building. Appointments will normally be at assistant professor level, but one senior distinguished professorship may be filled. Appointees expected to develop own research team in fundamental carbohydrate science. The CCRC particularly seeks carbohydrate chemists, and molecular biologists with demonstrated research ability in utilizing recombinant genetic techniques in the study of complex carbohydrates of plants, animals, or microbes. Individuals with interests in other areas of carbohydrate science are encouraged to apply. Applications received by 1 November 1989 considered then; later applications considered as received. Send letter of application, proposed research, complete curriculum vitae to: **Drs. Peter Albersheim or Alan Darvill, Directors, Complex Carbohydrate Research Center, The University of Georgia, 220 Riverbend Road, Athens, GA 30602. An Affirmative Action/Equal Employment Opportunity Institution.**

DEPARTMENT OF BIOLOGY CASE WESTERN RESERVE UNIVERSITY

A tenure-track faculty position at the assistant professor level is available in the area of

CELL, MOLECULAR BIOLOGY

Applicants will be considered with research interests in plant or animal systems, who have a strong commitment to research and undergraduate and graduate education. Interested persons should submit curriculum vitae plus a statement of current research interests, and have three letters of recommendation sent to: **Dr. Norman B. Rushforth, Chairman, Department of Biology, Case Western Reserve University, Cleveland, OH 44106. Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.**

CELLULAR AND MOLECULAR NEUROSCIENTIST OBERLIN COLLEGE

The Neuroscience Program and the Department of Biology invite applications for a full-time tenure-track position, commencing July 1990, which will carry the rank of assistant professor or higher. We seek a neuroscientist with experience in cellular and molecular neuroscience. Ph.D. required in either neuroscience, molecular biology, cell biology, neurochemistry, or some closely related field. Candidates with demonstrated abilities to conduct a vigorous research program in neuroscience and with teaching experience are preferred. Teaching responsibilities include an introductory course in cell and molecular biology with laboratory and an upper-level undergraduate course in cell and molecular neurobiology with laboratory. Applications, including curriculum vitae, academic transcripts, reprints, and at least three letters of recommendation should be sent to **Dennison Smith, Director, Neuroscience Program, Oberlin College, Oberlin, OH 44074 by 1 December 1989. Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

CELL BIOLOGIST-BIOCHEMIST ASSISTANT PROFESSOR

Cell or molecular biologist with background in biochemistry to teach courses in cell biology and biochemistry. Ph.D. required. Some postdoctoral experience desirable. Faculty are expected to conduct active research programs in which qualified undergraduates may be involved, and to take an active interest in introductory courses for majors and non-majors. Start-up funds for research are provided. Position available 1 July 1990. Please send curriculum vitae, statement of research/teaching interests, and three letters of reference by 15 November 1989 to: **Search Committee, Department of Biology, Williams College, Williamstown, MA 01267.**

An Equal Opportunity/Affirmative Action Employer, Williams College especially welcomes applications from women and minority candidates.

CHAIR DEPARTMENT OF BIOLOGICAL SCIENCES

Applications and nominations are invited for the position of Chair of the Department of Biological Sciences at the University of South Alabama. The Department has 16 faculty members and offers the B.S. and M.S. programs. Candidates should have a demonstrated commitment to research and teaching and show evidence of extramural funding. Prior administrative experience is desirable. The field of interest is open. Candidates should expect a strong interaction with other departments during the implementation of a doctoral program in marine sciences. Appointment level and salary will be commensurate with experience and will begin fall 1990. Applications will be accepted until 10 December 1989 or until a suitable candidate is selected. Applicants should send curriculum vitae, names and addresses of three references, and a description of future professional goals to: **Dr. John A. Freeman, Chair, Search Committee, c/o College of Arts and Sciences, University of South Alabama, Mobile, AL 36688. An Affirmative Action/Equal Opportunity Employer.**

MOREHOUSE SCHOOL OF MEDICINE CHAIR DEPARTMENT OF PHARMACOLOGY

Morehouse School of Medicine (MSM) invites applications for the position of Professor and Chair of the Department of Pharmacology to begin 1 July 1990. The candidate should be a well-established investigator in a current field of research who has demonstrated a strong commitment to teaching medical students. The applicant should also have demonstrated academic administration capabilities. Applicants must have the Ph.D. or M.D. degree.

Morehouse School of Medicine is an expanding, new, private medical school with a strong commitment to the academic and scientific growth of minority students. The position offers an excellent opportunity to develop an outstanding, progressive department in an institutionally supported atmosphere of cooperative growth and development. Initial screening of candidates will begin 1 November 1989. Applications or letters of interest along with curriculum vitae, including research, teaching, and administrative experience should be sent to: **Curtis L. Parker, Ph.D., Chair, Search Committee for the Chairperson of Department of Pharmacology, Morehouse School of Medicine, 720 Westview Drive, S.W., Atlanta, GA 30310-1495.**

CHAIRMAN, DEPARTMENT OF PATHOLOGY—Yale University School of Medicine and Yale-New Haven Hospital invite applications and nominations for the position of Chairman and Chief of the Department of Pathology. Candidate must be qualified for faculty appointment at the rank of professor and must be a recognized leader in the field with proven ability as a scholar, clinician, teacher, and administrator. Appointment is to be effective July 1990 or as soon thereafter as possible. Applications should be submitted prior to 15 November 1989. *Qualified women and minority group members are encouraged to apply.* Curriculum vitae and bibliography should be sent to: **The Chairman of the Search Committee: Dr. Frederick Naftolin, Department of Obstetrics and Gynecology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, CT 06510.**

POSITIONS OPEN

CHAIRMAN, Department of Pathology, Eastern Virginia Medical School. Nominations and applications are invited for the position of Chairman and Professor of Pathology. Candidates should have an M.D., with a record of excellence and continuing productivity in research and teaching, as well as abilities in administration. An excellent opportunity is available, with facilities and resources to build a vigorous departmental research program in modern pathology. The Chairman will be responsible for administration of the department, including directing research, teaching medical and graduate students, directing the residency program, and working closely with community faculty and pathology services of affiliated hospitals. Applicants should send curriculum vitae, and request three references be sent to: **Karl A. Schellenberg, M.D., Ph.D., Chairman of the Search Committee, Department of Biochemistry, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23501. Affirmative Action/Equal Opportunity Employer.**

CHEMICAL AND BIOLOGICAL SCIENCES at Oregon Graduate Center. Interdisciplinary programs in biotechnology (microbial and plant), membrane chemistry (physical and organic), metallochemistry (inorganic and enzymology). Intensive research experience in dynamic department with maximal student-faculty interaction. Research assistantships and tuition scholarships for qualified Ph.D. applicants. Write: **Dr. Ninian Blackburn, Department of Chemical and Biological Sciences, Oregon Graduate Center, Beaverton, OR 97006-1999. Telephone: 503-690-1070. Equal Opportunity Employer.**

CLAIBORNE CHAIR IN AIR QUALITY/ENVIRONMENTAL TOXICOLOGY

Louisiana State University invites applications and nominations for the Claiborne Chair, an endowed professorship in Environmental Toxicology in the Institute for Environmental Studies. The applicant will hold an academic 9-month tenured appointment within the Institute at the rank of professor. The candidate should have demonstrated expertise in environmental toxicology with emphasis in the development and design of mammalian cell culture systems for toxicological characterization of components and complex mixtures found in industrial and hazardous waste site emissions with emphasis on air pollutants as well as experience in interfacing cellular toxicology with applied and engineering sciences towards the identification, prioritization, and remediation of environmental pollutants found in complex mixtures that contaminate the environment. A history of funding from both federal and industrial sources and prior experience in organizing interdepartmental programs involving the basic and applied sciences is essential. The incumbent will be expected to maintain his/her research program in addition to teaching and service responsibilities. The involvement in the establishment of a campus-wide program in environmental toxicology will be a major responsibility. Letters of application are requested by 3 November 1989. The position will remain open until filled by a suitable candidate. Curriculum vitae, and three letters of reference should be submitted with the letter of application to: **Barbara S. Shane, Ph.D., Chair, Search Committee, Institute for Environmental Studies, Louisiana State University, Baton Rouge, LA 70803.**

DIRECTOR of the Graduate Center for Biomedical Engineering, University of Kentucky in Lexington. The Director of the Center is responsible for the planning, implementation, coordination, and management of the center's multidisciplinary programs and activities, and in consultation with the faculty of the center, for the development of policies concerning research and the center's graduate program. The director should have qualifications for a tenured position, experience in directing doctoral students, a record of high quality performance in research, and possess significantly broad research interests to interact with disciplines in engineering, medical, and biological sciences. Applications in the form of curriculum vitae should be sent to: **Dr. Donald T. Frazier, Chairman, Search Committee, Professor and Chairman, Department of Physiology and Biophysics, University of Kentucky College of Medicine, MS 507 Chandler Medical Center, Lexington, KY 40536-0084. The University of Kentucky is an Equal Opportunity/Affirmative Action Employer. All materials should be mailed by 1 December 1989.**

POSITIONS OPEN

CLINICIAN-INVESTIGATOR PSYCHIATRISTS UNIVERSITY OF OKLAHOMA MEDICAL CENTER

Several new faculty positions are available for psychiatrists with research interests in affective disorders, anxiety disorders, geropsychiatry, psychoactive substance use disorders, and schizophrenia. Individuals with expertise/interest in molecular medicine, neuroimaging, neurotransmitters, psychoendocrinology, psychopharmacology, and psychoimmunology are being sought. Appointments can be at any level from assistant to full professor, depending on qualifications. Applicants must have an M.D., be ABPN eligible, and be able to obtain medical licensure. A Molecular Medicine Center has been established at the medical center, a neurosciences group is organizing at the center, and a clinical research infrastructure is being developed at the departmental level. Please send curriculum vitae, statement of research interests, reprints of key publications, and names of three references to:

Joe Westermeyer, M.D., Ph.D., Chair
Department of Psychiatry
University of Oklahoma Medical Center
P.O. Box 26901, 5SP530
Oklahoma City OK 73190

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

COMPUTER SYSTEMS PRODUCT SPECIALIST/APPLICATIONS. Initiate and coordinate the development of clinical and developmental software for nuclear medicine applications; provide problem-solving modifications and/or improvements to existing VAX and Micro VAX-based image-processing systems; utilize knowledge of computers and mammalian physiology to provide in-house and on-site support, including training and assistance, to researchers, medical doctors and technologists in using and programming this graphics-oriented system; utilize biomedical instrumentation to design software which is able to diagnose medical problems; generate images using computer graphics; compile and analyze competitive product information and provide related support material for application; review and recommend the content of the operators manual. Position requires a Master of Science degree in biomedical engineering. Applicant must have completed at least one college-level course in mammalian physiology and one course each in: computer application for biomedical engineering; computer graphics and theory, and applications of electronic computers. Applicants must have designed an imaging graphics system capable of speaking and generating images simultaneously as well as programming on SUN to produce a rotary view of three-dimensional objects. Forty hours per week, Monday to Friday; 9:00 a.m. to 5:00 p.m.; \$33,500 per annum with no overtime. Send résumés to **Illinois Department of Employment Security, 401 South State Street - 3 South, Chicago, IL 60605. Attention: Mr. Robert S. Felton. Reference No. V-IL 9459-F.** *An employer-paid ad.*

DIRECTOR MT. LAKE BIOLOGICAL STATION AND PROFESSOR OF BIOLOGY

The Department of Biology of the University of Virginia proposes to appoint a tenured evolutionary biologist (professor or associate professor) who will serve as Director of the Mt. Lake Biological Station. Mt. Lake has an established summer program of research and teaching, attracting researchers, faculty, and students from around the nation. The station is located at 4000 feet in the Allegheny Mountains of Virginia. The successful candidate will (i) administer the academic program of the station, (ii) establish a personal research program in some aspect of evolutionary biology, (iii) seek external support for the station, and (iv) contribute to the teaching program of the Department of Biology. The closing date is 15 January 1989 or until the position is filled. Applications, including curriculum vitae, a statement of purpose and career goals, and the names of three referees, should be sent to: **The Chairman, Mt. Lake Search Committee, Department of Biology, University of Virginia, Charlottesville, VA 22901.** *The University is an Affirmative Action/Equal Opportunity Employer.*

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Cellular Transplants, Inc., an exciting new biotechnology company located in the Providence, Rhode Island area, is developing cell and tissue transplants for treatment of human disease. This is a rare opportunity to participate in an early-stage company developing core technologies for human health care.

Transplantation Immunologist

Ideal candidates will have a PhD in immunology or related field and experience in the understanding and manipulation of immunological reactions to transplanted allogeneic and xenogeneic tissue, implants and foreign bodies.

Neural and Islet Cell Biologists

Suitable candidates will have a PhD in cell biology or a related field. Experience in the isolation and culturing of various primary or transformed cells. Expertise with emerging developments in the therapeutic use of neural tissue, islets and other cell types for human transplantation.

Pre-Clinical Animal Scientist

Ideal candidates will be experienced in the design and implantation of animal studies for the evaluation of host reactions to implanted cells and devices. Ideal candidates will have 3-5 years of industrial experience with a PhD in a related area.

Biomedical Engineer

PhD in chemical, mechanical or biomedical engineering. Significant experience in biology, physiology and artificial organs. Industrial experience desirable.

Biomaterial Scientist or Engineer

Educational background combining exposure to life sciences/biomaterials with materials science or mechanical/chemical or biomedical engineering. PhD and 2-5 years of experience (academic/industrial) in design/development of implants/drug delivery or artificial organs.

Membrane Scientist or Engineer

Minimum of 3 years' experience in the formulation and fabrication of commercial membranes. Requires significant exposure to UF grade hollow fibers, hands-on knowledge of capillary and microencapsulation extrusion systems. Background in medical products helpful.

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POSITIONS OPEN

DEAN OF THE COLLEGE OF FOREST RESOURCES AND ASSOCIATE DIRECTOR OF THE MAINE AGRICULTURAL EXPERIMENT STATION UNIVERSITY OF MAINE

Applications and nominations are invited for the position of Dean of the College of Forest Resources and Associate Director of the Maine Agricultural Experiment Station at the University of Maine. The college's academic units include forestry, forest engineering, recreation and parks, wood technology, and wildlife. Candidates must have an earned doctorate in one of the major disciplines in the college and demonstrate outstanding leadership, scholarly, administrative, and communicative skills. The closing date for applications is 15 January 1990 or until a suitable candidate is found. The preferred appointment date is 1 July 1990. Nominations and applications accompanied by a current résumé including a list of three references should be forwarded to: **Dr. Gregory N. Brown, Chairperson, College of Forest Resources Dean's Search Committee, 201 Alumni Hall, University of Maine, Orono, ME 04469.** The University is the land grant university and sea grant college of the State of Maine and currently enrolls over 12,500 students. *The University is an Equal Opportunity, Affirmative Action Employer. Applications from and nominations of women and minority candidates are encouraged.*

The David Mahoney Institute of Neurological Sciences (INS) of the University of Pennsylvania is recruiting a **DEVELOPMENTAL NEUROBIOLOGIST** at the rank of assistant or associate professor. We are particularly interested in people working at the molecular or cellular level, either in genetics or in other aspects of nervous system development. The INS has over 100 members and already has several excellent laboratories working on cellular, molecular, and biochemical aspects of neural development and regeneration. Applicants should send their curricula vitae and names and addresses of three references to: **Michael E. Selzer, M.D./Ph.D., Department of Neurology Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104-4283.** *Equal Opportunity/Affirmative Action Employer.*

DIRECTOR EXPERIMENTAL THERAPEUTICS MEDICAL COLLEGE OF VIRGINIA MASSEY CANCER CENTER

The center encompasses eight basic research program areas along with seven core facilities with developing novel Cancer Control/Outreach and Education Programs. There are comprehensive inpatient/outpatient oncology facilities along with an eight-bed allogeneic and autologous Bone Marrow Transplantation Unit. This is an exciting opportunity for investigator with basic and clinical research skills to extrapolate laboratory discoveries into the clinics in this major 1800-bed university complex. There are opportunities to further develop national cooperative group programs. *Virginia Commonwealth University is an Equal Opportunity Employer. Women and minorities are encouraged to apply. Send curriculum vitae to:*

**Dr. I. David Goldman, Chairman
Division of Hematology/Oncology
Director, Massey Cancer Center
MCV Box 230, Richmond, VA 23298**

DIRECTOR JOINT CLINICAL NUTRITION PROGRAM

Position available for Director of a cooperative program between the University of Pittsburgh and Presbyterian-University Hospital.

Responsibilities include providing high-quality nutrition care, training, research, and supervision of staff. The Director will participate in teaching graduate-level programs for the joint program between the university and the hospital.

Must have master's degree in clinical nutrition and be a registered dietitian and an active member of the ADA. Minimum of 5 years of professional clinical dietetics/nutrition experience and 2 years of administrative experience required. Hospital background preferred.

Excellent salary and benefit package. Please send résumé and three professional references to: **Employment Department, Presbyterian-University Hospital, DeSoto at O'Hara Streets, Pittsburgh, PA 15213.**

POSITIONS OPEN

DIRECTOR, MACROMOLECULAR RE-SOURCE FACILITY. Duties include operation of new DNA/RNA and peptide synthesizers and protein sequenator. Applicants must have minimum of M.S. degree or B.S. degree and 2 years of experience in protein/nucleic acid chemistry, and be computer literate. Appointment is a university-funded, nontenure-track faculty position. Collaborative research is expected and independent research opportunities are available for applicants with Ph.D. Start date: 1 January 1990. Send résumé and three reference letters by 1 December 1989 to: **Chair, MRF Search Committee, Department of Biochemistry, Colorado State University, Fort Collins, CO 80523.** *CSU an Equal Employment Opportunity/Affirmative Action Employer. EO office: 314 Student Service Building.*

DIVISION DIRECTOR GYNECOLOGIC ONCOLOGY DEPARTMENT OF OBSTETRICS AND GYNECOLOGY UNIVERSITY OF ALABAMA AT BIRMINGHAM

The University of Alabama at Birmingham, Department of Obstetrics and Gynecology is seeking a Director of the Division of Gynecologic Oncology. The individual must be certified in the subspecialty, and have considerable experience in teaching and research, as well as radical surgery. Prior experience in fiscal and budgetary matters is mandatory.

Interested persons please apply by 15 November 1989 to:

**Brent L. Bodily
Executive Administrator
Department of Obstetrics and Gynecology
UAB Station
Birmingham, AL 35294**

An Equal Employment/Affirmative Action Employer.

THE UNIVERSITY OF VIRGINIA THALER CENTER FOR AIDS-RELATED RESEARCH ENDOWED PROFESSORSHIP IN AIDS RESEARCH

The University of Virginia Health Sciences Center is seeking an outstanding scientist to lead the newly created Thaler Center for AIDS-Related Research. The candidate should have a proven record of achievements in basic AIDS research and a willingness to provide leadership for new programs. The academic appointment will be at the level of professor in an appropriate department within the Health Sciences Center. The University of Virginia provides an outstanding environment and support facilities for basic research including active interdisciplinary research and training programs in immunology, cell and molecular biology, infectious diseases, and cancer research. Letters of nomination or application should include curriculum vitae as well as the names of four references and should be forwarded to: **Dr. J. Thomas Parsons, Search Committee, Thaler Center for AIDS Research, Department of Microbiology, Box 441, University of Virginia Health Sciences Center, Charlottesville, VA 22908.**

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

EVOLUTIONARY BIOLOGIST. The Department of General Biology, Vanderbilt University, invites applications for a tenure-track position in evolutionary biology to be filled at the level of assistant professor. The successful candidate will be expected to develop a strong externally funded research program. Individuals utilizing techniques including population, quantitative, or molecular/biochemical genetics to study evolutionary processes in plant or animal populations are especially urged to apply. Teaching responsibilities will complement the needs of the department, and will include a course in the candidate's area of specialty. Applicants should submit curriculum vitae and a description of research interests including recent publications, and arrange to have at least three letters of recommendation sent by 1 December 1989 to: **Search Committee, Department of General Biology, Box 1812B, Vanderbilt University, Nashville, TN 37235.** *Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ECOLOGIST

Applications are invited for a tenure-track faculty position at the assistant professor level. The successful applicant will be an ecologist with strength in both plants and invertebrates. Teaching responsibilities include upper-level courses in general ecology and invertebrate biology, and an introductory majors' course in ecology and evolution. The successful candidate will also be expected to offer one more course annually (which might rotate among an upper-level course in an area of specialization, a non-majors' liberal studies course, or an introductory plant biology course) and maintain an active research program which involves undergraduate students in supervised research projects. Please send a cover letter, curriculum vitae, graduate and undergraduate transcripts, and three letters of recommendation, no later than 8 December 1989 to: **Elaine Rubenstein, Chair, Department of Biology, Skidmore College, Saratoga Springs, NY 12866.** *Equal Opportunity Employer.*

ENDOWED PROFESSORSHIP IN CARDIOLOGY RESEARCH—Oregon Health Sciences University is seeking an M.D. or M.D., Ph.D. investigator doing basic or clinical research. The candidate should have an established research background and the skills to conduct and lead an investigative and teaching program. Resources are available to support a major research program. Please send curriculum vitae and letter of interest to: **James Metcalfe, M.D., Chairman, Edwards Chair Search Committee, Oregon Health Sciences University, 3181 SW Sam Jackson Park Road, Portland, OR 97201-3098.** The search will remain active until sufficient applications are received.

ENVIRONMENTAL CHEMIST

Exxon Biomedical Sciences, Inc., has an immediate opening for a qualified individual specializing in environmental chemistry. The successful candidate will have a Ph.D. in environmental chemistry or a related field, and 1 to 3 years of practical experience in analytical method and protocol development for analysis of environmental samples in water, soil/sediment, and fish tissues. In addition, the applicant should have a knowledge of EPA methodologies for conducting effluent toxicity identification and reduction evaluations and standard methods for contaminant analysis.

The successful candidate will act as a consultant to our ecotoxicologists and to our affiliates on matters pertaining to the assessment of environmental hazards associated with products, effluents, hazardous wastes, etc. by providing analytical expertise to the design and interpretation of these programs. Client interactions are an important aspect of our work, and thus, we are seeking an individual who has excellent communication skills. Please forward résumé to: **Christine Ramos, Human Resources.**

**Exxon Biomedical Sciences, Inc.
Mettlers Road, CN 2350
East Millstone, NJ 08875-2350**
Equal Opportunity Employer M/F/V/H.

FACULTY ASSOCIATE

Will plan, organize, direct, and supervise a research staff engaged in major research project. Will prepare research proposals for granting agencies, supervise lab spending for specific grants. Will define problems and solutions as determined by each research project. Establish procedures and relay to associates responsible for reviewing findings for research staff and submitting final results to department chairman. Will occasionally be required to present results of research data to professional groups and will prepare scientific documents for publication.

Research program is designed to clarify the genetic mechanisms involved in the development of resistance of multiple chemotherapeutic agents using normal mammalian cells in culture.

Ph.D. or equivalent in cell biology or molecular biology.

Salary: \$25,000 per year.

Apply at: **The Texas Employment Commission, Galveston, Texas,** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. # 5424327.** *Ad paid by an Equal Employment Opportunity Employer.*

Medical and Senior Staff Fellow

The Laboratory of Clinical Studies, National Institute on Alcohol Abuse and Alcoholism, Public Health Service, invites applications for one Fellowship position to study the pathophysiology, psychobiology, and molecular biology of alcoholism and its complications. Unique opportunity to become an active member of a multidisciplinary research team working with a 10 bed unit and outpatient clinic. State-of-the-art equipment and experienced technical support available. The position is that of a Medical or Senior Staff Fellow with a salary range of \$37,000 to \$52,000 per annum commensurate with qualifications and is located on the National Institutes of Health campus in Bethesda, Maryland. Interested candidates must be board certified or eligible internists, who are U.S. citizens or permanent residents. Position information and qualification requirements may be obtained by contacting Dr. George; Submit Curriculum Vitae and names of three references to:

Ted George, M.D.
NIH/NIAAA
9000 Rockville Pike
Building 10, Room 3B-19
Bethesda, Maryland 20892
Phone: (301) 496-9705

The position is now available.

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Post-Doctoral Position

Monsanto's Central Research Laboratories is seeking a Post-Doctoral Candidate for their Cell Culture/Biochemistry Department to study molecular biology of novel factors that regulate blood vessel function.

Applicant's should have a recent Ph. D. in Biochemistry/Biology and possess a strong background in molecular biology.

Interested candidates should forward their resume and references to: **Dr. Daniel T. Connolly; MONSANTO COMPANY; 800 N. Lindbergh Blvd; Mail Zone S2D; St. Louis, MO 63167.** Monsanto is an equal opportunity employer M/F/H/V.

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In this position you will take on a key role in developing solutions for the demanding technical problems of our customers in the medical industry.

The individual we seek will have 1-3+ years experience working with blood and blood products or related areas of Hematology or Clinical Immunology. A Ph.D. in Biomedical Engineering, Biochemistry, Microbiology or Physiology combined with an undergraduate degree in Engineering or Life Science are required. Some familiarity with anesthesia and breathing circuits would be a plus.

You will enjoy an excellent salary plus a complete benefits package at one of Long Island's largest employers. If you want to expand your horizons and are interested in a position with high visibility and room for upward mobility within a successful organization, send your resume in confidence to:



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Deanna Morton
Corporate Employment Manager (SS-308)

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PhD NMR SPECTROSCOPIST

The Biophysical Chemistry Department of Merck Sharp and Dohme Research Laboratories has a position for a PhD level NMR spectroscopist. This growing department consists of X-ray crystallographers, NMR spectroscopists, computational chemists, protein chemists and molecular biologists working in concert. The department aims to elucidate the structures of macromolecules that are targets for therapeutic intervention as well as investigate the details of receptor/ligand interactions.

The successful candidate will be involved in both the de novo determination of macromolecular structures, as well as the study of the conformations and interactions of ligand molecules with their receptors.

Applicants should have a PhD in biochemistry, chemistry or a related field with three or more years experience in the operation of NMR spectrometers. Experience in the application of NMR to macromolecular structure determination or to the study of macromolecule-ligand interactions is essential. Familiarity with modern pulse techniques (Indirect detection, TOCSY, etc.) as well as experience in biophysical chemistry, NMR pulse-programming, NMR data-processing and molecular modelling are highly desirable.

Merck Sharp & Dohme Research Laboratories are located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested candidates should submit their curriculum vitae with the names of three references and salary requirements to: **Ms. Susan Glinka, R80M-TL1, Merck & Co., P.O. Box 2000, Rahway, NJ 07065.**

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Merck & Co., Inc.

POSITIONS OPEN

EVOLUTIONARY ECOLOGIST, assistant or associate professor of zoology (12-month tenure-track). Preference will be given to ecologists with a strong record of teaching and research in theoretical or experimental ecology. Candidates with interests appropriate to a joint appointment in the NCSU Biomathematics Program will receive special consideration. Open summer 1990; applications will be accepted until 15 November 1989 or until a suitable candidate is found. Submit letter of application, statement of teaching and research goals, curriculum vitae, reprints of three major papers, and three letters of reference to: **Dr. Larry Crowder, Department of Zoology, North Carolina State University, Raleigh, NC 27695-7617.** *NCSU is an Affirmative Action/Equal Opportunity Employer.*

FACULTY OPENING IN PHYSICS UNIVERSITY OF CALIFORNIA BERKELEY

The Physics Department of the University of California at Berkeley, pending final budgetary approval, expects to make an appointment at the assistant, the tenured associate, or the full professor level, effective 1 July 1990. We encourage applications from both experimentalists and theorists in condensed matter physics, (including low-temperature physics), astrophysics and space physics, particle physics, atomic physics, and newly emerging subfields of physics.

Please send curriculum vitae, bibliography, statement of research interests, and list of references to: **Professor P. Buford Price, Chairman, Physics Department, University of California, Berkeley, CA 94720**, before 10 December 1989. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN ANALYTICAL CHEMISTRY AT IOWA STATE UNIVERSITY

Candidates with outstanding potential for, and commitment to, excellence both in research and teaching are sought to join a faculty with a strong tradition of research in analytical chemistry. The appointment will be at the level of assistant professor, and preference will be given to candidates in the area of separations chemistry. Candidates with appropriate research interests will also be considered for a joint appointment in the Ames Laboratory-USDOE. Applicants should submit curriculum vitae, transcripts, a documented summary of past accomplishments, and an explicit statement of research plans and teaching objectives to: **Analytical Search Committee, c/o Professor James H. Espenson, Chair, Department of Chemistry, Iowa State University, Ames, IA 50011.** Three or more letters of recommendation should also be sent. Evaluation of applications will begin November 1989. *Women and minority applicants are strongly encouraged to apply. Iowa State University is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF ROCHESTER FACULTY POSITION PLANT MOLECULAR/CELLULAR/ DEVELOPMENTAL BIOLOGY

The Department of Biology of the University of Rochester is committed to a major faculty recruiting effort over the next few years to strengthen its representation in the plant sciences. One tenure-track position will be open July 1990. We anticipate an assistant professorship, but in an exceptional case, a more senior person could be appointed. The successful candidate will be expected to develop an excellent research program in some aspect of plant molecular, cellular, or developmental biology and to be committed to high quality undergraduate and graduate education.

The Department of Biology has excellent support facilities for molecular, cellular, and developmental biology. Salaries are competitive, as are "start-up" funds for new faculty. Review of candidates will begin 1 November and will continue until an appointment is made. Interested candidates should send curriculum vitae, a statement of research interests, reprints, and three letters of recommendation to: **Chair, Plant Biology Search Committee, Department of Biology, University of Rochester, Rochester, NY 14627.** *The University of Rochester is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN



INSTITUTE OF CHEMICAL TOXICOLOGY WAYNE STATE UNIVERSITY

The Institute of Chemical Toxicology, Wayne State University, invites applications for tenure-track **FACULTY POSITIONS** at the **ASSISTANT, ASSOCIATE OR PROFESSOR LEVEL**; faculty research-track positions at all academic ranks are also available. Completely renovated laboratory and well-equipped support facilities are available along with substantial opportunities for collaboration. Emphasis is directed toward molecular/biochemical toxicology, respiratory toxicology, and metals toxicology. Preference within these areas will be accorded to applicants employing modern molecular and cellular approaches in the study of cell differentiation, cellular secretions, oncogene expression, gene regulation, transcriptional and posttranscriptional regulation, and chemically-mediated retrovirus activation. The successful candidates are expected to develop strong independent research programs, to collaborate in existing research projects, and to participate in biotechnology development. Highly competitive offerings of laboratory space and start-up funds accompany these positions. Applicants should have a Ph.D. and/or M.D. degree and relevant postdoctoral research experience. Send curriculum vitae by 30 December 1989 to:

Dr. Raymond F. Novak
Director, Institute of Chemical Toxicology
Wayne State University
2727 Second Avenue, Room 402
Detroit, MI 48201

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

FACULTY POSITION

The Microbiology Department of The University of Texas at Austin has an opening for an assistant professor. Appointment at a higher rank will be considered for individuals with an outstanding record of independent research. We wish to add additional faculty interested in immunology, virology, or cell biology of higher eukaryotes. However, highly qualified individuals with interests in molecular biology outside of these areas also will be considered. This is an outstanding opportunity to join an excellent department during a period of expansion. Please submit curriculum vitae, including names and addresses of three references, and a summary of research interests to: **Microbiology Department Search Committee, The University of Texas at Austin, Austin, TX 78712-1095.** *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION—BIOLOGY. Tenure-track assistant professor, starting fall 1990. Possible areas include ecology, microbiology, vertebrate biology. Should be willing to teach a field course; participation in introductory biology course expected. Research involving undergraduates encouraged. Ph.D. required; teaching experience desirable. Submit résumé and three letters of reference by 15 December 1989 to: **Dr. Margaret Simpson, Chairman, Department of Biology, Sweet Briar College, Sweet Briar, VA 24595.** *Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITIONS DEVELOPMENTAL BIOLOGY/GENETICS PRINCETON UNIVERSITY

The Department of Biology at Princeton University invites applications for tenure-track positions in the areas of developmental biology and developmental genetics. Candidates should have a Ph.D. degree and research experience in the development of eukaryotes. Appointments at either the junior or senior level will be considered. Applicants should send curriculum vitae, the names of at least three referees, and a summary of research interests to:

Developmental Biology Search Committees
Department of Biology
Princeton University
Princeton, NJ 08544

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITIONS IN PLANT PHYSIOLOGY/ MOLECULAR BIOLOGY

The Department of Botany, University of Iowa, invites applications for two tenure-track positions effective 1 August 1990. We seek candidates whose research interests emphasize molecular/biochemical approaches to fundamental problems in plant physiology and who complement the ongoing research activities of the Botany Department. The positions are approved at the assistant professor level, but applications from individuals with outstanding research records may be considered at a more senior level. We strongly encourage applications from women and minorities. Please send a current curriculum vitae, graduate transcripts, reprints, a summary of research goals, and three letters of reference to: **Dr. Richard Sjolund, Search Committee Chair, Department of Botany, University of Iowa, Iowa City, IA 52242.** Application deadline: 15 December 1989. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

Harvard University: The Department of Psychology is searching for candidates for an appointment to a **FULL PROFESSORSHIP** in the field of personality and psychopathology. Candidates should have major research interests in some area of human personality or psychopathology. Candidates are also expected to teach and advise at the graduate and undergraduate level. Applications, including a current curriculum vitae and the names and addresses of four referees should be sent to: **Jerome Kagan, Chairman, Department of Psychology, Harvard University, 33 Kirkland Street, Cambridge, MA 02138.** The closing date is 15 November 1989. *Applications from women and minority candidates are especially welcome. Harvard University is an Equal Opportunity/Affirmative Action Employer.*

HEAD OF THE MICROBIOLOGY DEPARTMENT AT THE UNIVERSITY OF ILLINOIS

The Microbiology Department in the School of Life Sciences of the University of Illinois at Champaign-Urbana is seeking applicants or nominations for the position of Head of the Department and Professor of Microbiology. The Microbiology Department, which has a long record of excellence in microbiology and molecular biology research, consists of 20 faculty members and 68 graduate students. Faculty members have strong, well-funded research programs and represent a variety of areas. Several openings exist for recruitment of new faculty members at all levels, and the university administration has made a strong commitment to further development of molecular biology and biotechnology. Resources for research include a Biotechnology Center which provides protein sequencing and nucleic acid synthesis, a Cell Sciences Center which provides monoclonal antibodies and cell sorting, and the Center for Prokaryotic Genome Analysis. The University also has an internationally known School of Chemical Sciences.

The Microbiology Department is responsible for providing courses in microbiology for undergraduate and graduate students in the School of Life Sciences and for providing instruction in medical microbiology for first and second year medical students.

Candidates should have a Ph.D. degree in a relevant discipline, a record of outstanding, well-funded research in microbiology, cell biology, or molecular biology and the ability to work with scientists representing diverse research areas.

Inquiries, nominations and applications should be directed to the search committee chairman: **Dr. Robert Switzer, c/o Microbiology Head Search Committee, Department of Microbiology, 131 Burrill Hall, 407 South Goodwin, University of Illinois, Urbana, IL 61801.** Telephone: 217-333-1142. Applications should be received by 15 December 1989. Some interviews may be held before the closing date but all applications arriving by 15 December 1989 will receive full consideration. Salary is negotiable depending on qualifications and experience. Preferred starting date is 1 August 1990.

The University of Illinois is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from women and minority candidates.

POSITIONS OPEN

FISHERIES ECOLOGIST

The Center for Aquatic Ecology of the Illinois Natural History Survey invites applications from Ph.D.-level scientists for a full-time, state-supported research position, preferably at the assistant level. This position will be based at one of four field research stations located at the Sam Parr experimental ponds, Lake Michigan, Lake Shelbyville/Kaskaskia River, or the Illinois River. The successful candidate will be expected to attract extramural funding and to develop an innovative research program. Applications will be accepted until 15 November 1989, or until a suitable candidate is found. Send résumé, a statement of research interests, and the names, addresses, and telephone numbers of four references to: **Dr. Peter B. Bayley, Center for Aquatic Ecology, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, IL 61820. Telephone: 217-244-2141.** *The Illinois Natural History Survey is an Equal Opportunity/Affirmative Action Employer.*

HEAD, DEPARTMENT OF ZOOLOGY

The University of Georgia Department of Zoology invites nominations and applications for the position of head. The department is comprised of 26 tenure-track faculty, with specialties ranging from cellular and molecular biology to ecology. The department currently has open positions and resources to support expected growth in neurobiology and immunology/parasitology. Future openings also are projected in organismal and environmental biology. Candidates should have outstanding records of research achievement in any area of zoology and evidence of ability to provide leadership for all aspects of this broad department. Candidates are also expected to maintain an active, externally funded research program. Applicants should submit curriculum vitae, statement of academic philosophy, and the names and addresses of four references to: **Chair, Search Committee, Department of Zoology, University of Georgia, Athens, GA 30602 (Fax: 404-542-4271).** Closing date for applications is 15 December 1989.

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

HEAD DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

Energetic faculty seeks dynamic scholar for leadership in teaching, research, and extension. Located in the heart of the Willamette Valley, Oregon State University ranks among the top Land-Grant/Sea-Grant universities in the country in research support. Active participation in teaching, research, and extension programs is expected. Qualifications include a Ph.D. in food science or closely related field, experience in budget and personnel management, an established reputation for excellence in teaching, research and/or extension, and an appreciation of the Land-Grant/Sea-Grant System. The department currently has 19 full-time faculty, 28 technical and support staff, 47 undergraduate and 42 graduate students. Applicants should submit a letter of interest, résumé, and the names, addresses and telephone numbers of three to five references (references will not be contacted before conferral with the candidate) by 30 December 1989 to:

Dr. Mina R. McDaniel
Chair, Search Committee
Department of Food Science and Technology
Oregon State University
Corvallis, OR 97331

OSU is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973. OSU has a policy of being responsive to the needs of dual-career couples.

IMMUNOLOGIST, FACULTY POSITION. A full-time tenure-track position in the Pathology Department at the rank of assistant or associate professor, M.D. or Ph.D. with demonstrated leadership in teaching and research. Establish research program competitive for external funding. Position includes participation in educational programs in department and hospital service responsibility in immunopathology laboratory. Send curriculum vitae and references to: **C. Robert Baisden, Chief, Section of Clinical Pathology, Medical College of Georgia, Augusta, GA 30912.** *Equal Opportunity Employer/Affirmative Action Program.*

POSITIONS OPEN

IMMUNOLOGISTS: The University of Washington seeks highly qualified applicants for tenure-track appointments in the newly formed Department of Immunology. Applicants must have a Ph.D. or M.D. degree, appropriate postdoctoral training, and must have demonstrated their ability to establish strong independent research programs in immunobiology. We invite applications from molecular and cellular immunologists, particularly those interested in applying molecular genetic techniques to the elucidation of mechanisms of antigen recognition, signal transduction, or lymphocyte development. The Department of Immunology offers superb new laboratory space with access to flow cytometry, biopolymer synthesis, and transgenic animal facilities. Send curriculum vitae, a brief description of proposed research, and three letters of recommendation (by 1 December 1989) to: **R. M. Perlmutter, M.D., Ph.D., Chairman, Department of Immunology, SL-05, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Employment/Affirmative Action Employer.*

LIFE SCIENCES EDITOR

Cambridge University Press (American Branch) has an immediate opening for an acquisitions editor in the life sciences. Our publishing program of advanced level monographs and texts covers a wide range of biological disciplines, including physiology, neuroscience, cell and molecular biology, animal behavior, and experimental psychology. Candidates with some graduate training will be preferred. Publishing experience is desirable but not necessary. Please apply in writing and indicate your salary requirements. Write to: **Editorial Director, Cambridge University Press, 40 West 20th Street, New York, NY 10011.**

MARINE MAMMALOGIST—Baja Mexico. School for Field Studies (SFS) seeks resident director for new marine mammals center offering undergraduate semester programs of field study and research to open in February 1990. Successful candidate will have Ph.D. in appropriate field, significant experience with traditional and experiential teaching, administrative/leadership ability, and Spanish capability. Annual salary \$35,000, including support. To apply send résumé, detailed letter, four references with telephone numbers to: **Baja Search, SFS 16 Broadway, Beverly, MA 01915.**

POSITION FOR MOLECULAR BIOLOGIST/GENETICIST

The Molecular Genetics Department of Northrup King Co. is recruiting an M.S.-level molecular biologist/geneticist to conduct research with molecular markers (i.e., isozymes, RFLP's, etc.) in field and sweet corn. Experience in Southern blotting and plasmid preparation as well as a fundamental understanding of genetics is required. Computer knowledge and familiarity with DNA sequencing and PCR technology desirable. The position will be located at the Northrup King Research Center, Stanton, Minnesota; and starting salary will be commensurate with experience/accomplishments.

Send application/résumé to:

Dr. Ed Weck
Northrup King Co.
Research Center
Highway 19
Stanton, MN 55081

MOLECULAR BIOLOGISTS

The Department of Biological Sciences is strengthening a group in molecular biology and is expanding its faculty at the **ASSISTANT/ASSOCIATE PROFESSOR** level. Applications from individuals in all areas of molecular biology are encouraged, but the department has particular interests in cell-cell interaction, signal transduction, growth regulation, gene expression, and microbial genetics. There is ample opportunity for interaction with existing faculty in molecular and developmental genetics of both eukaryotic and prokaryotic organisms. Generous start-up funds and competitive salaries are offered. Send curriculum vitae, selected reprints, and names and addresses of three referees by 1 December 1989 to: **Dr. M. R. Felder, Molecular Biology, Search Committee, Department of Biological Sciences, University of South Carolina, Columbia, SC 29208.**

Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

MEDICINAL CHEMIST—The Department of Chemistry of the Philadelphia College of Pharmacy and Science is accepting applications for a full-time tenure-track position for a medicinal chemist at the assistant or associate professor level. This position begins on 15 August 1990 but may be started earlier. The successful candidate will hold a Ph.D. in medicinal chemistry and should have postdoctoral experience in this field. The applicant must demonstrate excellence in teaching at both the undergraduate and graduate levels, with previous teaching experience being a definite plus. It is expected that a vigorous research program in medicinal chemistry emphasizing structure-activity relationships will be developed and that this person will be able to supervise the research of M.S. and Ph.D. students. Salary is negotiable and commensurate with experience.

Send letter of application, curriculum vitae, and the names, addresses, and telephone numbers of three references to:

Kristin J. Burns, Director of Personnel
Philadelphia College of Pharmacy and Science
43rd Street and Woodland Avenue
Philadelphia, PA 19104

Equal Opportunity Employer M/F/H.

WASHINGTON AND JEFFERSON COLLEGE MOLECULAR BIOLOGIST

Washington and Jefferson College, a 1,200-student liberal arts college in southwestern Pennsylvania, with approximately 200 biology majors, is adding a staff position in molecular biology for fall 1990. Departmental duties will include developing and teaching courses in molecular biology and experimental biology, participation in the beginning course, supervising independent studies, and advising. Experimental biology should be molecular in orientation and might include more in-depth work in areas such as recombinant DNA techniques, monoclonal antibody procedures, molecular separations, sequencing, etc. Applicants should send résumés to: **The Executive Assistant to the President, Washington and Jefferson College, Washington, PA 15301.** No references unless requested. *Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICIST

The Department of Pathology at The Children's Hospital is searching for a qualified individual to supervise a service laboratory in molecular genetic diagnostic testing. For the appropriate candidate, an academic appointment would be available in the University of Colorado School of Medicine, along with opportunities to pursue research efforts. Applicants must have a Ph.D. in molecular biology or a related field, have experience in molecular genetic testing, and be eligible for board certification in Molecular Genetics by the American Board of Human Genetics on or before June 1990.

Send curriculum vitae, a statement of career objectives and current and/or planned research, and the names, addresses, and phone numbers of three individuals who have agreed to act as references to: **Dr. Vincent Wilson, Director of Molecular Genetics, Pathology Department, The Children's Hospital, 1056 East 19th Avenue, Denver, CO 80218-1088.** *Equal Opportunity Employer M/F.*

MOLECULAR IMMUNOLOGIST IOWA STATE UNIVERSITY

The Department of Biochemistry and Biophysics invites applications for a tenure-track position at the level of **ASSISTANT OR ASSOCIATE PROFESSOR**. The successful applicant will be expected to develop an independent research program in some molecular aspect of the immune system; possible areas of interest include, but are not limited to, protein chemistry, molecular structure, and molecular genetics. The appointee will be expected to have an interest in interacting with existing research programs in the department, to assume moderate teaching duties, and to participate in the interdepartmental immunobiology program. Generous start-up funds and laboratory space in the new Molecular Biology Building are available. Applicants should send curriculum vitae, statement of research plans, and the names and addresses of three references by 15 December 1989 to: **Dr. Alan M. Myers, Department of Biochemistry and Biophysics, 397 Gilman Hall, Iowa State University, Ames, IA 50011.** *Iowa State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CENTERS FOR DISEASE CONTROL CENTER FOR INFECTIOUS DISEASES DIVISION OF HOST FACTORS MEDICAL OFFICER (PATHOLOGIST)

A position is available to study molecular pathologic mechanisms for laboratory and epidemiologic investigations of leukemias, tumors, and other abnormal cell growth. Emphasis is on detection of infectious agents as possible etiologic agents in neoplasia. Experience is necessary in studies related to myeloperoxidase gene expression and monoclonal antibody production to myeloperoxidase. This position is with **Bruce Evatt, M.D.**, Director Division of Host Factors. Minimum qualifications include a medical degree or equivalent, Board certification in anatomic pathology, experience in molecular research in myeloperoxidase gene expression, and experience in the conduct of independent and collaborative investigations. The position may be filled either in the competitive Civil Service or in the Public Health Service Commissioned Corps. The salary range is \$50,137 to \$63,553. Candidate should send curriculum vitae and the names and addresses of three references by 15 November 1989 to:

Mr. William V. Nelson
Personnel Management Office, Building 1
Room 1058, MS DO1
Centers for Disease Control
1600 Clifton Road, N.W.
Atlanta, GA 30333

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MOLECULAR BIOLOGIST. The Department of Horticulture at The Pennsylvania State University invites applications for a tenure-track faculty position at the assistant or associate professor level. The individual will be expected to develop a research program to study fundamental mechanisms of plant growth, development, or response to stress of horticultural crops. It is anticipated that the research can include but not be limited to studies of gene expression, gene isolation and cloning, or gene transfer technology. Collaboration with other faculty in the department and college, and participation in the plant physiology or genetics graduate programs will be encouraged. The individual will also have the opportunity to join the Biotechnology Institute at Penn State. Applicants should have a Ph.D. and postdoctoral experience in the plant sciences with training in plant molecular biology. Send a letter of application, résumé, statement of research objectives, and request that three professional letters of reference be sent by 31 January 1990 to: **Dr. Stephen J. Wallner, Professor and Head, Department of Horticulture, Box E, The Pennsylvania State University, University Park, PA 16802.** *An Affirmative Action/Equal Opportunity Employer; women and minorities encouraged to apply.*

ORGANIC CHEMISTRY/BIOCHEMISTRY

The Department of Biological and Physical Sciences invites applications for a tenure-track position at the assistant professor level commencing August 1990. Responsibilities include teaching, at the undergraduate level, an introductory non-majors course, a lower-level organic chemistry course for nursing and allied health students, and upper-level organic chemistry and biochemistry courses. Although teaching is a prime responsibility, research and service are also required. Publication is expected.

Desired qualifications include an earned doctorate, preferably in organic chemistry or biochemistry, and college-level teaching experience in chemistry. Salary is competitive and includes an excellent fringe benefits package.

Send résumé, copies of undergraduate and graduate transcripts, and the names, addresses and telephone numbers of at least three references by 15 November 1989 to:

Dr. Robert Roales
Chairperson, Department of Biological
and Physical Sciences
Indiana University-Kokomo
P.O. Box 9003
Kokomo, IN 46904-9003

Indiana University-Kokomo is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

MOLECULAR PHARMACOLOGY: Mayo Medical School invites applications for a tenure-track **FACULTY POSITION** in Department of Pharmacology, available 1 January 1990. Ideal candidate will have primary interests in pharmacology and be actively using the methods of molecular biology. Special attention will be given to individuals working on the molecular aspects of drug receptors and ligand-gated ion channels, but those with other interests will also be considered. Generous space and start-up funds provided in addition to an attractive package of salary and benefits. Academic rank will be determined by qualifications; established investigators are also encouraged to apply. Applicants should submit curriculum vitae and names and addresses of three or more referees to: **Stephen Brimjoin, Ph.D., Department of Pharmacology, Mayo Medical School, 200 First Street Southwest, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Employer.*

NEUROBIOLOGY/CELL BIOLOGY

Position at assistant/associate professor level available immediately in the Biology Department at Tuskegee University. Candidates should have a Ph.D. degree, evidence of excellence in teaching, and an active research program that will involve undergraduates and graduates. Teaching will be in the areas of neurobiology, cell biology, and introductory biology. A research laboratory, seed funds, and released time to prepare a grant will be provided. Applicants should submit curriculum vitae, transcripts, a description of teaching and research interests, and three letters of references with telephone numbers sent to: **Dr. J. E. Thomas, Department of Biology, Tuskegee University, Tuskegee, AL 36088.** *Tuskegee University is an Equal Opportunity/Affirmative Action Employer.*

NEUROPHARMACOLOGISTS

We are seeking highly motivated research scientist to join the School of Pharmacy at the University of Southern California to conduct research and development of central nervous system (CNS)-active agents under a contract from CoCensys, Inc. CoCensys, Inc., is an innovative start-up company focused on the frontier of molecular therapeutics as it relates to diseases of the CNS.

The candidate should have a Ph.D. degree with at least 2 years of postdoctoral experience in neuropharmacology. Knowledge in the in vivo and in vitro screening of CNS active agents is essential. Skills in electrophysiology are highly desirable. The successful candidate must be able to conduct independent research and supervise junior scientists.

Send résumé and three references in strictest confidence to: **Dr. Nancy Lan, USC School of Pharmacy, Los Angeles, CA 90033-1086.**

Affirmative Action/Equal Opportunity Employer.

University of Southern California

POSITIONS IN IMMUNOLOGY, MICROBIOLOGY

The Department of Microbiology at the Medical College of Ohio invites applications for two tenure-track faculty positions at the assistant/associate professor level.

• **IMMUNOLOGY:** Preference will be given to applicants using molecular approaches for the study of humoral or cellular immunity. Those with a major interest in the interaction of bacteria or viruses with the immune system are encouraged to apply.

• **BACTERIAL PATHOGENESIS:** We are interested in candidates whose research focuses on contemporary approaches to the study of bacterial pathogenesis.

The new faculty members will be provided with generous financial assistance and expected to develop independent, competitively funded research programs. Applicants will find that the laboratory and support facilities at the Medical College of Ohio are outstanding. Salaries are competitive and will be commensurate with experience. Demonstration of a strong commitment to teaching of medical and graduate students also is important in candidate evaluation. Applicants must have postdoctoral experience and should submit curriculum vitae, a statement addressing specific research goals and plans, copies of three representative publications, and names of three references. Send applications to: **Earl H. Freimer, M.D., Chairman, Department of Microbiology, Medical College of Ohio, P.O. Box 10,008, Toledo, OH 43699.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

PHARMACOLOGY—MOLECULAR PHARMACOLOGY

Applications are invited for tenure-track positions at the assistant or associate member level in the Program of Developmental Therapy and Clinical Investigation of the Sloan-Kettering Institute. Candidates with a Ph.D. or M.D. degree who have demonstrated outstanding research capabilities in cancer-related pharmacology will be considered. We are especially interested in candidates with a strong interest in mechanisms of drug action at the molecular level, and with interests in clinical application. Additional areas of research emphasized include mechanisms of drug resistance, protein structure and drug design, signal transduction and DNA repair. Please send a detailed curriculum vitae and a statement of research interests by 1 November 1989 to: **Dr. Joseph R. Bertino, Program Co-Chairman of Developmental Therapy and Clinical Investigation, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.**

Sloan-Kettering Institute is committed to Equal Opportunity through Affirmative Action and, therefore, members of minority groups are encouraged to apply.

Ph.D. POSTDOCTORAL POSITION in the Division of Endocrinology, Department of Pediatrics, Children's Hospital of Pittsburgh. Project involves isolation, purification, and cloning of peptide hormone receptor(s). Experience/extensive training in molecular biology and biochemistry essential. Position offers opportunity for career advancement and subsequent independent research in related field of developmental endocrinology and physiology. Apply with curriculum vitae and four references to: **Mark A. Sperling, M.D., Chairman, Department of Pediatrics, Children's Hospital of Pittsburgh, 3705 Fifth Avenue, Pittsburgh, PA 15213.** *An Equal Opportunity Employer.*

PHYSICIAN/SCIENTIST—Tenure-track position at the assistant or associate professor level, Division of Hematology/Oncology. Applicant should have intensive basic research training and experience in cellular or molecular biology and a well-defined research plan. Extensive support available for the initiation of the applicant's research program and protection of time for research. Opportunities to participate in a variety of multidisciplinary research programs of the Massey Cancer Center and utilize the center's extensive core facilities. *Virginia Commonwealth University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.* Send curriculum vitae to:

Dr. I. David Goldman, Chairman
Division of Hematology/Oncology
Director, Massey Cancer Center
MCV Box 230
Richmond, VA 23298

PLANT SCIENTIST

Applications are invited for a permanent USDA—Agricultural Research Service position (*US citizenship required*) at the USDA-ARS/UC—Berkeley Plant Gene Expression Center. The applicant will also be considered for appointment as an adjunct professor at UC-Berkeley, which would include teaching and graduate student training. The position will be available on or about 30 June 1990. Candidates must have a Ph.D. in an appropriate discipline and at least 2 years of postdoctoral experience. The applicant's research program should address an agriculturally important problem, using biochemical, molecular, or genetic approaches, and should complement existing programs in phytochrome molecular biology, transposon biology, plant hormone action, pollen development, plant stress, and plant development. Applications should be submitted by 20 November 1989 and should include a résumé, a statement of research plans and objectives, and three letters of recommendation, addressed to: **Dr. S. McCormick, Plant Gene Expression Center, 800 Buchanan Street, Albany, CA 94710.** *The USDA is an Equal Opportunity/Affirmative Action Employer.*



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**Research Associate
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Policy and
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To work with senior faculty member to plan, supervise and participate in investigations related to environmental health policy with an emphasis on risk communication.

Requirements: Ph.D. in a social science or interdisciplinary program, experience in research on environmental issues and in supervision of graduate students, broad background in both the social and physical sciences, demonstrated scholarship through publications. Specialization in public education, communication and involvement in policy making and/or risk perceptions and communication related to public health or environment preferred.

Interested candidates should submit two copies of a cover letter referencing **Job No. R89-193** to: **James H. McCarthy, MIT Personnel Office, Bldg. E19-239, 400 Main Street, Cambridge, MA 02139.**

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The Upjohn Company has initiated a broad multi-disciplinary postdoctoral program in the biomedical, pharmaceutical, and computer sciences.

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Areas of particular interest are atherosclerosis, Alzheimer's disease and mental performance, inflammation biology, diabetes, thrombosis and thrombolysis, oxygen radicals and ischemic injury, cardiovascular diseases, cancer, cellular growth and differentiation, molecular biology of plants, immunology, virology, parasitology and growth regulation of animals.

Upjohn's commitment to its employees is demonstrated by its competitive compensation and benefits package in addition to a stimulating multi-disciplinary research environment at our modern research laboratories in Kalamazoo, Michigan. Interested applicants are invited to forward their resume and a statement of their research interests and experience in strict confidence to: The Upjohn Company, Position #5637-BA, Corporate Employment, Kalamazoo, MI 49001. We are an Equal Opportunity Employer M/F.

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Position Available

**NATIONAL INSTITUTE OF MENTAL HEALTH
U.S. Public Health Service
Department of Health and Human Services**



Director, Division of Intramural Research Programs

The National Institute of Mental Health (NIMH), one of three scientific Institutes of the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), is seeking nominations and applications for the position of Director of the Division of Intramural Research Programs (DIRP). DIRP is the largest scientific research center in the world focused on mental health, mental illness, and behavioral and brain research. Its diverse research programs are conducted by over 700 employees, including over 200 doctoral-level scientists.

Responsibilities of the Director, DIRP, include the overall management of all scientific, fiscal, and personnel resources. The Director is involved in planning and directing basic and clinical research, supervising the training of scientists, implementing national science policy, and administering and evaluating research programs.

This is a Senior Executive Service career-reserved position with an annual salary range of \$68,700 to \$78,600. Physicians may be eligible for a Physician's Comparability Allowance of up to \$20,000 per year. Minimum qualification requirements include a degree of Doctor of Medicine, Doctor of Philosophy, Doctor of Osteopathy, or a bachelor's or higher degree in an academic field related to the health sciences, and progressively responsible experience in developing, administering, and evaluating mental health programs. Further, candidates should have demonstrated research scholarship in a scientific area relevant to the study of mental illness and have experience in science administration and the implementation of science policy.

Additional information about the position and qualifications requirements may be obtained by contacting Ms. Leslie Everheart, (301) 443-5030. An SF-171 (Application for Federal Employment) accompanied by a current curriculum vitae and bibliography should be submitted to Ms. Everheart at the Division of Personnel Management, Alcohol, Drug Abuse, and Mental Health Administration, Room 15C-26, 5600 Fishers Lane, Rockville, Maryland 20857. Complete application material (including the SF-171) must be postmarked by the closing date of November 13, 1989. Resumes are not acceptable for entrance into the Senior Executive Service.

Applications from women and minority group members are encouraged.

ADAMHA is an Equal Opportunity Employer

POSITIONS OPEN

PHYSICIANS/SCIENTISTS

H. T. McCormick Inc., a nationally recognized executive search firm, has exclusive openings in leading pharmaceutical and biotechnology companies in the United States and Europe for: **Medical Directors/Clinical Research** in cardiology, nephrology, endocrine/metabolism, and infectious disease. Board-certified physicians with residency. Compensation to six-figure range. **Clinical Research** positions available for Pharm.D.'s and Ph.D.'s. **Clinical Research Associate** openings for experienced monitors. Salary considerations from mid \$30's to mid \$50's; **Manager of Manufacturing Support** to lead group of 40 scientists involved in diagnostics products transfer. Extensive experience in diagnostics research, development, and production, M.S./Ph.D. biochemistry. Salary to \$90,000. **Assistant Director, Immunobiology**, to supervise production and development of new human monoclonal antibodies. Ph.D. in cellular immunology, 5 years of postdoctoral experience in hybridoma development. Salary to \$70,000. **Group Leader, Biochemistry**, to lead group of 12 protein chemists. Assay development, protein purification, and managerial experience. Ph.D. in biochemistry with 8 to 10 years in research. Salary to \$65,000. **Manager, Cancer Diagnostics**, to build group of six scientists. Ph.D. in biochemistry, microbiology, or immunology. Solid experience in development of cancer diagnostic products. Salary to \$65,000. **Manager, Infectious Disease Diagnostics**: Development of rapid diagnostic kits for the detection of sexually transmitted diseases. Ph.D. required. Salary to \$65,000. **Senior Research Scientists Opportunities**: Development of novel expression systems for the production of antibodies to be used for diagnostic imaging and therapy. Gene expression experience. Ph.D. in molecular biology; development of prototype essays to evaluate cancer markers. Experience with tumor-associated antigens. Ph.D. in biochemistry/immunology; development of innovative strategies for large-scale purification in the production of therapeutic monoclonal antibodies. Optimization, validation scale up. Ph.D. in biochemistry. Salary considerations to \$60,000. **Product Services Manager** to provide medical information to sales and marketing. Pharm.D. with drug information experience. Salary considerations commensurate with experience. Company-paid fees. Company-paid relocation if required. Submit curriculum vitae in confidence to: **Ann Lees, Vice President, Scientific Division, H. T. McCormick Associates, Inc. P.O. Box 2106, Princeton, NJ 08540.**

PLANT BIOCHEMIST. ASSISTANT OR ASSOCIATE PROFESSOR. Tenure-track, 12-month appointment, initially 100% research. Teaching may eventually include a graduate-level course. Research emphasis in biochemistry of crop plants and associated weed species. Ph.D. and demonstrated abilities in biochemical or molecular aspects of plant physiology required. Submit letter of application with a complete curriculum vitae and transcripts; and arrange for three letters of recommendation to: **Dr. C. J. Scifres, Head, Department of Agronomy, Oklahoma State University, Stillwater, OK 74078**, by 1 December 1989. *OSU is an Equal Opportunity/Affirmative Action Employer.*

POPULATION GENETICIST

The Department of Zoology, University of Florida, invites applications for a 9-month tenure-track position, beginning August 1990, at the assistant professor level. We are seeking a population geneticist with research emphasis in evolutionary, ecological, or conservation genetics. The successful candidate is expected to maintain a productive research program, teach an undergraduate course in general genetics, and develop a graduate course in his/her specialty. Applicants should submit curriculum vitae; a succinct statement of research interests; a detailed outline of a proposed graduate course; representative publications; and names, addresses, and telephone numbers of four references by 4 December 1989 to: **Dr. Thomas C. Emmel, Chair, Population Geneticist Search Committee, Department of Zoology, University of Florida, Gainesville, FL 32611.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE with background and experience in the field of membrane proteins, particularly isolation and reconstitution. Research will involve functional and structural studies of the interaction of drugs, anesthetics, and alcohol with membrane proteins and investigation of the role of lipids. Experience in some relevant aspects of membrane biochemistry is required. Position is available immediately or as soon as possible. Send curriculum vitae and the names of references to: **Dr. C. D. Stubbs, Room 271, Jefferson Alumni Hall, Thomas Jefferson University, Philadelphia, PA 19107.** *An Equal Opportunity Employer.*

The Department of Rehabilitation Medicine, Jefferson Medical College, Thomas Jefferson University, seeks a Ph.D.-level muscle physiologist, with interest in spinal cord injury, to perform research in an existing Spinal Cord Injury Center, devoted to the investigation of neural recovery and functional enhancement. Send curriculum vitae and the names of three referees to: **G. J. Herbison, M.D., 1015 Walnut Street, Room 617, Curtis Building, Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA 19107.** *An Equal Opportunity Employer.*

POSTDOCTORAL (Ph.D.) Fellow with interest in fibronectin, cell adhesive proteins or integrins. Send résumé to:

Dr. W. J. Martin
Indiana University Medical Center
1001 West 10th Street, OPW 425
Indianapolis, IN 46202-2879

POSTDOCTORAL PHOTOSYNTHESIS available January 1990 for studies of water oxidation reaction centers, and properties of membrane surfaces. Approaches include structural biochemical, biophysical and molecular biological. The position is for 1 year with the possibility of extension. Salary is highly competitive. Additional postdoctoral, sabbatical, and graduate student opportunities are available to U.S. citizens under NRC and AWU competitive programs. Send curriculum vitae, short statement of research interests, and names of three references, with telephone numbers, to: **Dr. Michael Siebert, Solar Energy Research Institute, 1617 Cole Boulevard, Golden, CO 80401.** *We are an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITION available immediately for an individual interested in basic problems in plant population biology. The topics include the genetics of plant population structure, initial colonization of new habitats, chemical aspects of plant-animal interactions, temperature-sensitive gene expression, incompatibility, and flower color polymorphisms. Experience of DNA probe technology and/or plant developmental genetics would be advantageous. The position is to help **Dr. David A. Jones** establish his research laboratory and is available for 2 years in the first instance. Please send curriculum vitae, research experience, and the names and addresses of three referees to: **Dr. David A. Jones, Chairman, Department of Botany, 220 Bartram Hall, University of Florida, Gainesville, FL 32611** by 30 November 1989.

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POSTDOCTORAL POSITION available in the area of biochemical/molecular biological studies on the structure and purification of adenosine receptors. Recent Ph.D. in biochemistry or molecular biology required. Experience in molecular biological techniques required. Send curriculum vitae and names of three references to: **Dr. Gary L. Stiles, Departments of Medicine and Biochemistry, P.O. Box 3444, Duke University Medical Center, Durham, NC 27710.**

POSTDOCTORAL POSITION is available immediately in a laboratory studying post-translational modifications of GTP-binding regulatory proteins [see *J. Biol. Chem.* **264**, 13298-305 (1989)]. The project will employ a variety of cell and molecular biological techniques, including those of recombinant technology, site-directed mutagenesis, and transfection. Please send curriculum vitae and description of research experience to: **Dr. David Manning, School of Medicine, University of Pennsylvania, Philadelphia, PA 19104-6084.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately in the biochemistry and molecular biology of lipid metabolism. The applicant will join an active group of molecular biologists working on lower plant systems, and must have demonstrated experience in enzymology/molecular biology. Experience can be with algae, plants, or other organisms, but applicant must have interest in working with eukaryotic microalgae with potential for biotechnological exploitation. Reply with curriculum vitae and a list of three references to: **Lewis Brown, Solar Energy Research Institute, 1617 Cole Boulevard, Golden, CO 80401.** *SERI is the prime federal laboratory devoted to solar energy research. We are an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITION available for October 1991 to study development and developmental plasticity of the mammalian spinal cord. Experience with spinal cord surgery on prenatal eutherian mammals or early postnatal marsupials will be important, and knowledge of axonal tracing methods and immunocytochemistry is preferred. Please submit a letter describing your research experience, your curriculum vitae, and two letters of recommendation to:

Dr. George F. Martin
Department of Anatomy
The Ohio State University
333 West 10th Avenue
Columbus, OH 43210
*Ohio State is an Equal Opportunity/
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POSTDOCTORAL POSITION available immediately to study the effects of ellagic acid on hydroperoxide production, glutathione-dependent detoxification, and the molecular events linked to the promoting component of skin tumorigenesis in mice. Strong background in biochemistry and chemical carcinogenesis desirable. Send résumé and references to: **Dr. J. P. Perchellet, Anti-Cancer Drug Laboratory, Division of Biology, Ackert Hall, Kansas State University, Manhattan, KS 66506.** *KSU is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION: molecular genetics of mammalian development. Projects include design and construction of retroviral vectors for insertional mutagenesis and derivation and analysis of mouse developmental mutants using embryonic stem cells and transgenic mice. Experience in molecular biology, tissue culture, or embryo manipulation required. Send curriculum vitae and three references to: **Dr. Michael Kuehn, Department of Genetics (M/C 669), University of Illinois College of Medicine, 808 South Wood Street, Chicago, IL 60612.**

POSTDOCTORAL POSITION available immediately for a recent Ph.D. in biochemistry or related field to investigate signal transduction mechanisms in normal and diabetic peripheral nerve. Experience preferred in techniques for study of receptor-mediated phospholipid metabolism and/or protection phosphorylation. Send curriculum vitae and letters from three references to: **Dr. Joseph Eichberg, Department of Biochemical and Biophysical Sciences, University of Houston, Houston, TX 77204-5500.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to characterize the virus which causes erythrocytic inclusion body syndrome in salmonid fish. Description of the epizootiology and development of diagnostic methodology are goals of the project. Ph.D. in microbiology or related field required. Experience with virological and basic immunological techniques is required. Experience with biophysical techniques for characterization of viruses is preferred. Send a letter of application, curriculum vitae, and the names of three references to: **Dr. J. S. Rohovec, Department of Microbiology, Nash Hall, Oregon State University, Corvallis, OR 97331-3804** before 20 October 1989. *Oregon State University is an Affirmative Action/Equal Employment Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973 and has a policy of being responsive to the needs of dual-career couples.*

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African swine fever (ASF) is a highly contagious exotic disease which poses a major threat to the swine industries of the Western Hemisphere. ASF virus—an icosahedral cytoplasmic DNA virus of the family Iridoviridae—is the only family member that infects mammals, and is the only known DNA arbovirus. Control of ASF worldwide has been frustrated because: there is no effective vaccine; the virus persists in natural reservoirs in soft ticks and wild Suidae; some clinical forms of the disease are difficult to recognize; and inapparent carriers exist among domestic pigs in enzootic areas.

This Center is creating a major new multidisciplinary research program to meet the challenge of ASF. The program has exceptionally strong base funding, there are well-equipped laboratories and skilled technical support, and the Center's high-security animal biocontainment facilities are the most extensive in the world.

Postdoctoral Research Associate positions are available in ASF molecular virology, immunology and pathogenesis, and offer an unusual and highly productive opportunity for those who would like to build their careers by tackling a very important and intellectually challenging international disease problem. Eight positions for virologists/immunologists/molecular and cell biologists are open in the following areas:

1. ASF viral attachment proteins/cellular receptors on swine macrophages;
2. characterization of ASF virus genes associated with viral virulence;
3. the molecular basis of ASF virus persistent infection;
4. characterization of ASF virus immediate-early/early gene expression
5. alterations in cytokine secretion by ASF virus-infected leucocytes;
6. the mechanism of viral clearance in ASF virus infection;
7. humoral and cellular protective immune responses to ASFV infection;
8. characterization of viral antigens responsible for protective immunity.

The Center is situated off the northeast tip of Long Island, New York. High speed ferry service to Orient Point, NY and Old Saybrook, CT, allows a choice of living on Long Island or in Connecticut.

Appointments are for two years from January 1, 1990 (or by arrangement) and, based on qualifications, will be at the GS-11 (\$28,852 to \$37,510/year) or GS-12 level (\$34,580 to \$44,957). Relocation expenses will be paid. Successful candidates must have a PhD in a relevant discipline. Individuals with experience in Herpesvirus, Poxvirus or Iridovirus systems are particularly encouraged to apply. Applicants should send a curriculum vitae along with the names and corresponding addresses of three references to:

Dr. D. L. Rock, African Swine Fever Research Leader,
USDA-ARS, Plum Island Animal Disease Center, P.O. Box 848,
Greenport, LI, NY 11944, Telephone (516) 323-2500, Ext. 330.

Applications must be received by November 17, 1989. Please indicate the number of the position(s) for which you are applying.

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WOMEN AND MINORITIES ARE ENCOURAGED TO APPLY.



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POSITIONS OPEN

POSTDOCTORAL POSITION—EGF ACTION: to participate in studies aimed at elucidating the mechanism(s) of signaling between the EGF receptor and other proteins involved in cellular responses. A current emphasis is the reconstitution of these proteins into lipid bilayers and mechanism(s) of phosphorylation in signal transduction. Experience with protein purification, enzymology and some experience in recombinant DNA methodologies is desirable. Position available immediately. Applicants with Ph.D. in biochemistry and molecular biology should send curriculum vitae and names of three references no later than 15 December 1989 to: **Dr. Tzipora Goldkorn, Co-Head Receptor Biology, Sloan-Kettering Institute, 1275 York Avenue, New York, NY 10021.**

POSTDOCTORAL POSITION MOLECULAR PHARMACOLOGY DANA-FARBER CANCER INSTITUTE HARVARD MEDICAL SCHOOL

We are seeking to fill a postdoctoral research position in the Division of Cancer Pharmacology. Will study the molecular mechanism of anti-cancer drug activation and acquired drug resistance using biochemical, molecular, and cellular approaches. Strong basis research experience in biochemistry, molecular biology, and/or pharmacology highly desirable. Joint appointment in the Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School. Flexible start date. Send curriculum vitae, copies of representative publications, and names of three references to: **Dr. David J. Waxman, JF-525, Dana-Farber Cancer Institute, Harvard Medical School, 44 Binney Street, Boston, MA 02115.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION IN IMMUNOLOGY at Brown University. Position available for individual interested in areas of viral immunology and/or regulation of lymphocyte proliferation in vivo. Previous experience in immunology, biochemistry, or molecular biology required. Please send curriculum vitae and a list of three references to: **Dr. Christine A. Biron, Division of Biology and Medicine, Box G-B602, Brown University, Providence, RI 02912.** Applications are expected by 10 November 1989. Screening will begin on that date and continue until a successful candidate has been identified or the search is closed. *Brown University is an Equal Opportunity/Affirmative Action Employer.*

POSTGRADUATE POSITION IN MICROBIOLOGY at Pittsburgh Energy Technology Center—Research position available immediately in Microbial Coal Cleaning Section of PETC. 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, Science/Engineering Education Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117.** Telephone: 615-576-3456 or 412-892-5884.

POSTDOCTORAL POSITION available for NIH-funded research on protein folding in two-chain, α -helical, coiled coil proteins. Experience in biochemistry/biophysical chemistry, especially protein preparation, purification, modification, and physical characterization (e.g., CD) preferred. Send curriculum vitae with names and addresses of three references to: **Professor A. Holtzer, Campus Box 1134, Washington University, One Brookings Drive, St. Louis, MO 63130.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION MOLECULAR IMMUNOLOGY

A postdoctoral position is available immediately to study the influence of the host environment on B-cell repertoire expression. The research combines cellular immunology and molecular biological techniques to study the murine non-immune and immune *Salmonella*-specific B-cell repertoires. Experience in molecular and cellular immunological techniques is essential. Send curriculum vitae and a list of references to: **Dr. Eleanor S. Metcalf, Department of Microbiology, Uniformed Services University of the Health Sciences, Bethesda, MD 20814-4799.** Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION ENVIRONMENTAL SCIENCE PROGRAM UMASS-BOSTON

Postdoctoral position for 1 year, renewable for a second year, available in the Environmental Sciences Program, University of Massachusetts at Boston. Candidates should have completed all requirements for a Ph.D. or D.Sc. and should have an interest in, and experience with, organic pollutant biogeochemical research in aquatic ecosystems, preferably with sediment water exchanges and bioavailability. Send résumé, statement of research interests, and have three letters of reference sent to: **Prof. John W. Farrington, Director, Environmental Sciences Program, University of Massachusetts at Boston, Harbor Campus, Boston, MA 02125-3393.** Applications received before 1 November 1989 will receive priority consideration. An Affirmative Action/Equal Opportunity/Title IX Employer.

POSTDOCTORAL POSITION IN PHARMACEUTICS

An FDA-funded position, to evaluate antiviral drug interactions, is available immediately for a Ph.D. or equivalent in pharmacy or related field. Experience in analytical methods and pharmacokinetics is preferred. Send curriculum vitae and two letters of reference to:

**J. M. Gallo
College of Pharmacy
University of Georgia
Athens, GA 30602**

Telephone: 404-542-5762. *The University of Georgia is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION, MOLECULAR NEUROBIOLOGY—New academic laboratory with a postdoctoral position available, salaried at \$25,000 to \$30,000, depending on experience. The project involves the analysis of genes associated with neural differentiation and degeneration. Experience in molecular biology is required. Applicants should forward curriculum vitae and two letters of recommendation to: **Dale Bredeesen, University of California—Los Angeles, 710 Westwood Plaza, Los Angeles, CA 90024-1769.** An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

Two positions are available immediately to study the mechanism of action of specific deoxynucleotide-metabolizing enzymes as well as the regulation of their genetic expression in eukaryotes and prokaryotes. Gene isolation and amplification of their protein products will be required. Once obtained, substrate and regulatory sites on the protein products will be determined by functional group-specific reagents and affinity labels. In addition, site-specific mutagenesis will be employed to establish the relation of structure to function in these enzymes. Cloning and sequencing experience desirable. The research will be conducted in a well-equipped core facility. Compensation from Health Research Inc. dependent upon experience. Send résumé and three references to: **Dr. Frank Maley, Wadsworth Center for Laboratories and Research, Empire State Plaza, Box 509, Albany, NY 12201.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS available for: Position A—**ASSISTANT RESEARCH SCIENTIST:** Candidate will be a recent graduate with a Ph.D. in cell biology—related discipline and will join an ongoing research project involving the establishment of cell lines derived from primary mammalian tissue using gene transfection. Experience in tissue culture is required; familiarity with plasmid DNA manipulation desirable but not essential. Salary: \$20,000 to \$25,000 per year. Position B—**POSTDOCTORAL FELLOW—Ph.D.** in biochemistry or molecular biology to participate in research project studying the enzymology of adrenergic systems, cloning of adrenergic enzymes and receptors. Background in biochemistry, enzymology, immunology, or molecular biology essential.

Please send curriculum vitae, indicating position of interest, and names of three references to: **Ms. Singh, Personnel Department, New York University Medical Center, 550 First Avenue, New York, NY 10016.** An Equal Opportunity Employer M/F.

POSITIONS OPEN

POSTDOCTORAL POSITIONS UNIVERSITY OF PENNSYLVANIA

Postdoctoral positions are available for study and training with a group of investigators interacting in programs concerning the metabolism and molecular biology of connective tissues. Areas of endeavor include: molecular biology of collagen genes; cell and molecular biology of extracellular matrix; molecular biology of elastin; cell biology of vascular cells, and analysis of embryonic development. Send résumé to: **Nicholas A. Kefalides, M.D., Ph.D., Director, Connective Tissue Research Institute, University of Pennsylvania, University City Science Center, 3624 Market Street, Philadelphia, PA 19104.**

Candidates should hold U.S. citizenship or permanent resident status. *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Educator and Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE to join multidisciplinary group of basic and clinical scientists investigating neural mechanisms of cardiovascular regulation. Emphasis is currently on application of molecular biology techniques to address relevant questions, but a broad range of other research provides an unusual opportunity for basic and clinical interaction. Send letter of inquiry and curriculum vitae to: **Dr. David Robertson, Pharmacology Department, Vanderbilt University, Nashville, TN 37232-2195.**

POSTDOCTORAL RESEARCH ASSOCIATE BLUE CRAB ECOLOGY AND FISHERIES

Incumbent will manage research program on the population dynamics of the blue crab in Chesapeake Bay. Responsibilities include direction of field personnel and logistics, field and lab activities, data management and analysis, report preparation and publication, and statistical analysis of existing long-term data on blue crab abundance. Ph.D. required. Non-tenure, but program designed for more than 1 year with potential for additional grant funding. Experience desired in statistical analysis and modeling, particularly with complex, long-term fisheries, or ecological data sets. This 12-month position as assistant research scientist has an annual salary of \$26,000 and full benefits. Send letter of interest, curriculum vitae, and three references by 27 October 1989 to: **Dr. Romuald N. Lipcius, Chair, Postdoctoral Research Associate Search Committee, The College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, VA 23062.** Position will be available 1 November 1989. *The College of William and Mary is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS AVAILABLE to investigate signal transduction events, receptors, secretion, and extracellular components in cultural oligodendrocytes. Strong background in cell/molecular biology and biochemistry essential. Send résumé and names of three references to: **Dr. Sara Szuchet, Department of Neurology, BH Box 425, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.** Affirmative Action/Equal Opportunity Employer.

PRESERVE MANAGEMENT. The Nature Conservancy seeks two professionals to focus efforts on the protection of 1600-acre nature preserve in Weston, Connecticut. **PRESERVE DIRECTOR/FIRE MANAGEMENT SPECIALIST:** Responsible for preserve protection, maintenance, and administration. Also insures development of an effective fire management program in the NE region. Advanced degree in biological science and background in fire ecology/prescribed burning required. **ASSISTANT DIRECTOR:** Responsible for administrative and secretarial functions and some educational programs. Ability to work independently and knowledge of word processing required. Degree in natural sciences preferred. Send résumé to: **The Nature Conservancy, 294 Washington Street, #740, Boston, MA 02108.** Equal Opportunity Employer.



Molecular Biology and Enzymology Research

Senior and Associate Scientists

CIBA-GEIGY's Pharmaceuticals Division is consistently at the forefront in the scientific research and development of life-saving and life-enhancing products. The expansion of our drug discovery efforts using molecular biology and enzymology has created exciting opportunities for Senior and Associate Scientists.

Senior Scientist/Molecular Biology

Will be responsible for the innovative use of molecular biology in drug discovery programs in inflammation and cardiovascular diseases. Candidates should have a Ph.D. in Molecular Biology, Biochemistry, or related areas. Postdoctoral experience is preferred.

Senior Scientists/Enzymology

Will be involved in the identification of enzymes as targets for drug development. You will be performing kinetic and mechanistic studies, enzyme purification, assay development and the identification of inhibitors. A Ph.D. in Biochemistry, Chemistry or a related field is required as is several years of postdoctoral experience in a research environment. The ability to interact as a member of a development team is essential. Experience in molecular biology is desirable.

Associate Scientists

Will participate in molecular biology research in our drug discovery programs. An M.S. or B.S. in Biology, Chemistry, or related areas is required. Experience in recombinant DNA methodology including gene cloning and expression, *in vitro* mutagenesis, and DNA sequence analysis is desirable.

CIBA-GEIGY offers competitive salaries, excellent benefits, superb research facilities and opportunity for substantial professional growth. Please send your resume with salary requirements to: **Al Aronson, Staffing Center, CIBA-GEIGY Corporation, Pharmaceuticals Division, Dept. 315, 556 Morris Ave., Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

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PH.D. ANIMAL VIROLOGISTS — Requires 1-2 years' experience in animal virology and cell culture.

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Responsibilities include a variety of safety and characterization studies to evaluate commercial biotechnology products. Will have direct interaction with major biopharmaceutical companies in the U.S., Europe and Japan.

MOLECULAR BIOLOGY/BIOTECHNOLOGY — BS or MS technicians required for cell culture, virology, mycoplasma and bacteriology laboratories. Molecular biology technicians should possess 2+ years of laboratory experience in restriction enzyme analysis, southern and slot blots, electrophoresis, DNA extraction/hybridization and plasmid preparation.

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VICE PRESIDENT FOR RESEARCH AND GRADUATE STUDIES THE OHIO STATE UNIVERSITY Columbus, Ohio

The Ohio State University invites nominations and applications for the position of Vice President for Research and Graduate Studies. The Vice President will report to the President and be responsible for supervision and coordination of all research at the University. This individual will work closely with the Vice President for Academic Affairs/Provost and the Dean of the Graduate School in further strengthening the University's activities in both basic and applied research. The position especially demands innovation and leadership in research, including increased cooperation with business and industry.

Candidates should have a record of outstanding achievement in research, a commitment to graduate education, and demonstrated administrative ability. The University seeks candidates who have an understanding of the missions of a large, public, land grant institution of higher education. Experience in grant and contract activities with government agencies and industry is necessary.

The Ohio State University is located on a 3250-acre campus in Columbus with regional campuses in Lima, Mansfield, Marion and Newark, and the Agricultural Technical Institute and Ohio Agricultural Research and Development Center in Wooster. Approximately 59,000 students are enrolled in 19 colleges, seven schools, the Graduate School, and other related programs, including an extensive health sciences and medical complex.

In addition to having a large undergraduate program, Ohio State is the principal center for graduate and professional education in the state and a major international research institution.

Review of candidates will begin October 1; applications received after October 31, 1989, may not be able to be considered. Nominations and applications should be sent to:

Dean William R. Wallace
Chair, Search Committee
Vice President for Research & Graduate Studies
c/o Office of the President
The Ohio State University
205 Bricker Hall, 190 North Oval Mall
Columbus, OH 43210-1358

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

POSITIONS OPEN

PROFESSIONAL FACULTY—assistant research scientist. Incumbent will manage research program on population ecology and genetics of sharks, including direction of fieldworkers, laboratory analysis, computer analysis, and report preparation and publication. Must be experienced in long-line operations, age and growth of elasmobranchs, and population ecology. Ph.D. required. Non-tenure, but program designed for 4 years with potential for additional grant and contract funding thereafter. Full benefits. Send letter of interest, curriculum vitae, and three letters of recommendation by 27 October 1989 to: **Dr. J. A. Musick, Head, Vertebrate Ecology and Fisheries Section, Virginia Institute of Marine Science, The College of William and Mary, Gloucester Point, VA 23062.** *The College of William and Mary is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

PROTEIN SCIENTIST:

A protein company in the Midwest is employing recent advances in protein chemistry. You will develop the application of protein in the food and animal industries.

Our company offers an exciting research and development environment with brand new facilities. Salaries and benefits are highly competitive while including excellent future opportunities.

Please send your résumé in confidence to: **Box 193, SCIENCE.**

RESEARCH ASSOCIATE

Stanford University Pathology Department seeking Ph.D. to study molecular pathogenesis of infectious disease. Proven ability to publish a must. Experience to include DNA techniques, protein purification, peptide synthesis, blotting and/or PCR. Send curriculum vitae to: **Dr. W. Ruehl, Stanford University, RAF-1, Quad 7, Building 330, Stanford, CA 94305.**

SENIOR INSTRUCTOR. Two Research Positions are immediately available to study oncogene rearrangement, mutation, deletion, and amplification in human cancer. Applicants must have M.D. or Ph.D. degree with minimum 3 years of postdoctoral or appropriate experience in cancer research. Expertise in advanced techniques of molecular biology required. Experience in cytogenetics preferred. Salary: \$35,000 per year. Send résumé with complete reference information to: **Jorge J. Yunis, M.D., Professor and Vice Chairman, Hahnemann University, Broad and Vine Streets, Philadelphia, PA 19102.** *Affirmative Action/Equal Opportunity Employer.*

RESEARCH GENETICIST (PLANTS)

The U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Plant Physiology and Genetics Research, Urbana, Illinois, is seeking a Research Geneticist/Cytogeneticist to conduct a cytogenetic research program on soybeans. Research objectives are to: identify and characterize chromosomal variants in the soybean germplasm collection and employ them in cytogenetic and genetic studies; identify new and expand existing linkage groups using traditional and molecular biology methods; develop and refine techniques for assessing and characterizing genetic diversity in the germplasm collection; and identify potentially useful traits from the soybean germplasm collection using cytogenetic, genetic, and molecular screening procedures. Candidates must have knowledge of techniques in plant cytogenetics and in molecular biology and have the ability to isolate, purify, and characterize plant DNA. Ph.D. or equivalent in genetics is desirable. Salary is commensurate with experience (\$34,580 to \$63,172). U.S. citizenship required. For information on the research program, contact: **R. W. Rinne, USDA, ARS, MWA, S-306 Turner Hall, University of Illinois, 1102 South Goodwin, Urbana, Illinois 61801.** Telephone number: 217-333-1117. For information on application procedures/forms, contact: **Angela B. Canterini at 301-344-1542.** Applications in response to this advertisement must be marked 9N035 and received by 29 December 1989.

USDA/ARS is an Equal Opportunity Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE

Position available immediately to study Ca^{2+} release protein in skeletal sarcoplasmic reticulum. Requires Ph.D. degree in physiology/biochemistry with 2 to 3 years of postdoctoral experience in protein chemistry, immunological techniques, Ca^{2+} transport studies. Familiarity with protein reconstitution is desirable. Salary is \$23,000 and negotiable, depending on qualifications. Reply with curriculum vitae and three letters of recommendation to: **Dr. Guy Salama, 670A Scaife Hall, Department of Physiology, University of Pittsburgh, Pittsburgh, PA 15261.** *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH SCIENTIST BLOOD COAGULATION

HemoTec, Inc., has an immediate opening for an individual qualified to do research and development of clinically relevant coagulation tests and assays. Experience required in the areas of blood coagulation, platelet function, immunoassays, enzyme assays, and protein isolation and characterization. Good communication skills required. Qualified applicants will have a Ph.D. and postdoctoral experience or equivalent. Salary dependent on qualifications. Submit curriculum vitae or résumé in confidence to:

**Dr. Robert F. Baugh
HemoTec, Inc.
7103 South Revere Parkway
Englewood, CO 80112
*An Equal Opportunity Employer.***

SENIOR SCIENTIST: Faculty position available in research-oriented Department of Otolaryngology, Wayne State University. Applicants should have a minimum of 7 years of experience and potential for funding in related field. Tenure available. Salary and rank negotiable. Letter of inquiry and curriculum vitae should be sent to: **Robert H. Mathog, M.D., Professor and Chairman, Department of Otolaryngology, Wayne State University School of Medicine, 540 East Canfield 5E-UHC, Detroit, MI 48201.**

RESEARCH ASSOCIATE—CHEMISTRY. Hours: 40 hours per week, 9:00 a.m. to 5:00 p.m. Salary: \$22,972 per year. Requirements: Ph.D. in organic chemistry including 3-credit hours in academic research using techniques of: (i) the synthesis, isolation, and purification of organic compounds; (ii) use of radioactive compounds in tracer studies; (iii) purification and isolation of enzymes. Duties: Perform research on two enzymes, GABA-T and MAO, responsible for the chemical imbalances which cause convulsions and depressions, respectively; perform synthesis of organic molecules by using techniques of chromatography, infra-red spectroscopy, nuclear magnetic resonance spectroscopy. Using radioactive compounds, sensitive biochemicals, and enzyme kinetics, ascertain the component of the enzymes necessary for conversion of compounds which result in these two chemical imbalances. **Reference #V-IL 9565-S. Attention: Joan Sykstus.**

RESEARCH ASSOCIATE—PHYSICAL/ORGANIC CHEMISTRY. Hours: 40 hours per week, 8:00 a.m. to 5:00 p.m. Salary: \$23,560 per year. Requirements: Ph.D. in organic chemistry including 3-credit hours in academic research using techniques of (i) measurement of acidity of weak organic acids in DMSO; (ii) synthesizing new organic compounds; (iii) vacuum line technique; 1 year in position or 1 year's experience performing research-synthesizing new organic compounds. Duties: Synthesize weak organic acids; measure their equilibrium acidities and the oxidation potentials of their conjugate bases, both in DMSO solution; and measure the rates of electrophiles with these conjugate bases. **Reference #V-IL 9506-F. Attention: Robert S. Felton.** Send résumés to: **Illinois Department of Employment Security, 401 South State Street—3 South, Chicago, IL 60605.** *An employer-paid ad: This is a university position.*

POSITIONS OPEN

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL SENIOR EUKARYOTIC GENETICIST

The Department of Biology invites applications from outstanding eukaryotic geneticists for a senior faculty position. Generous space in a new building, salary, and set-up funds are available. The successful candidate will be expected to conduct a vigorous research program and participate in teaching. Applicants should send curriculum vitae and the names of four referees to: **Thomas D. Petes, Chair, Search Committee, Department of Biology, CB# 3280 Coker Hall, University of North Carolina, Chapel Hill, NC 27599-3280.** Priority will be given to applications received before 1 December 1989. Nominations are also welcome. *Applications from minority groups and women are strongly encouraged. The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer.*

STAFF SCIENTIST PARKINSON'S PROGRAM

Transplant neurobiology section seeks neuroscience Ph.D. with 2 plus years of experience to direct overall project goals and team. Must be effective communicator with management skills. Previous background in transplantation, immunology, biochemistry/molecular biology, and surgery skills preferred.

We offer a competitive salary and compensation package, including stock purchase. Reply to: **Hana Biologics, Inc., Dept 5-945, 850 Marina Village Parkway, Alameda, CA 94501.**

Equal Opportunity Employer.

STAFF SCIENTIST PHYSICIST: Conducts independent research in theoretical nuclear physics with emphasis on the electromagnetic structure of few-body nuclei and their inclusive/exclusive response to the electromagnetic probe. Collaborates with colleagues in the theory group and actively engages in the research effort. Forty hours per week, 8:00 a.m. to 5:00 p.m. \$30,000 per year. Applicants must have Ph.D. in theoretical nuclear physics and have 3 years of experience as a scientist in nuclear physics. Also required are publications in the area of few body nuclei (A-2, 3 and 4) relating to their electromagnetic structure and response, 3 years of experience in performing realistic calculations of electromagnetic response functions involving few body nuclei with the use of the Monte Carlo technique, and ability to utilize supercomputers to effectively program large-scale computations in Fortran. To apply: Mail or hand carry with copy of ad attached to: **Attention: Michael J. Hotchkiss, Virginia Employment Commission, 5145 East Virginia Beach Boulevard, Norfolk, VA 23502. J.O. # VA 9084721.**

TENURE-TRACK FACULTY POSITIONS DEPARTMENT OF ANATOMY UNIVERSITY OF ARIZONA

As part of a university-wide expansion of biological sciences and biotechnology, the Department of Anatomy at the Arizona Health Sciences Center is seeking two new tenure-track faculty members. While preference will be given to applicants with research interests in the cellular or molecular aspects of vertebrate developmental or reproductive biology, outstanding candidates in other areas also will be seriously considered. Candidates should have pertinent postdoctoral experience. We prefer candidates at the assistant professor level, but more senior appointments may be made for exceptional individuals. Successful candidates will be expected to establish an excellent research program and participate in the instruction of graduate and/or medical students. Submit curriculum vitae, two copies of relevant papers, a detailed description of research goals, and have three supporting letters sent to: **Dr. Joseph T. Bagnara, Search Committee, Department of Anatomy, University of Arizona, 1501 N. Campbell, Tucson, AZ 85724.** To insure consideration, applications should be received by 15 November 1989; however, applications will be accepted until the positions filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from females and minority groups are strongly encouraged.*

FELLOWSHIP IN NEUROCHEMISTRY

National Institutes of Health

The Laboratory of Neurosciences, National Institute on Aging, invites applications for the position of Staff Fellow/Medical Staff Fellow to study the postmortem human brain in relation to age, Alzheimer's disease and Down Syndrome, coordinated with ongoing clinical program. Animal models of disease (e.g., murine trisomy 16) and actions of centrally acting drugs will be examined. Applications are invited from individuals having a Ph.D. and/or M.D., plus experience in neurochemistry, molecular approaches to gene expression (including in situ hybridization) or neuroanatomy (including quantitative autoradiography). Salary is commensurate with qualifications. Appointments vary in duration from 2 to 7 years and are tenure-track. Interested applicants should send Curriculum Vitae plus two letters of recommendation to:

Stanley I. Rapoport, M.D.
Chief, Laboratory of Neurosciences
National Institute on Aging, NIH
Bldg. 10, Room 6C-103
9000 Rockville Pike
Bethesda, MD 20892



NIH IS AN EQUAL OPPORTUNITY EMPLOYER

Faculty Positions, University of Maryland, College Park NEUROSCIENTISTS

The University of Maryland, College Park, invites applications for three tenure-track, assistant professor positions. Under the University's affirmative-action program for outstanding women and minorities, increased funding may be available for an appointment at a higher rank. The successful candidates will be expected to attract research funding, direct graduate research, and participate in graduate and undergraduate teaching programs. Applicants should submit a curriculum vitae, a statement of research and teaching interests and representative publications. For best consideration, applications should be received by December 1, 1989.

DEVELOPMENTAL NEUROSCIENCE: The inter-departmental Center for Neurosciences seeks a neuroscientist with interests in either **development or aging of the nervous system**. Submit applications and three letters of reference to: Dr. William Hodos, Center for Neurosciences, Room 1145D, Zoology - Psychology Building, University of Maryland, College Park, MD 20742.

SENSORY PHYSIOLOGY: The Department of Psychology seeks a neuroscientist with interests in **sensory physiology**, although other areas such as **behavioral endocrinology, neuroethology or neuropharmacology** will be considered. Submit applications and three letters of reference to: Dr. Steven E. Brauth, Biopsychology Search Committee, Department of Psychology, University of Maryland, College Park, MD 20742.

CELLULAR or MOLECULAR NEUROBIOLOGY: The Department of Zoology seeks an individual with interests in **cell or molecular biological approaches to the study of neuronal function, integration or communication**. Submit applications including names, addresses and phone numbers of at least three referees to: Dr. Herbert Levitan, Department of Zoology, University of Maryland, College Park, MD 20742.

The University of Maryland is an equal opportunity / affirmative action employer.

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Research Scientist

The Medical Research Division of American Cyanamid has an excellent opportunity in the Metabolism Research Department for an accomplished Research Scientist.

In this key position, you will be responsible for developing bioanalytical methods (primarily HPLC and GC) to determine drug concentrations in biological fluids for pharmacokinetic and metabolism studies. Responsibilities will include instrument operation, data analysis by computer, in vivo preclinical work, and report writing.

Qualified candidates will have a Master's degree in Chemistry or equivalent with 3-5 years' experience in bioanalytical methods development, or a Ph.D. in Chemistry or equivalent with up to 2 years experience.

We offer a competitive salary and excellent benefits. We are located in Rockland County, New York, just twenty-five miles north of New York City. For immediate consideration, send your resume/c.v. and salary requirements to: Professional Employment Representative, Medical Research Division, Lederle Laboratories, Middletown Road, Pearl River, NY 10965. An Equal Opportunity Employer m/f.



POSITIONS OPEN

TOXICOLOGY/PHARMACOLOGY: ASSISTANT PROFESSOR. Tenure-track position beginning fall 1990. Teach upper-level undergraduate courses in toxicology-pharmacology and others in area of specialization. Application deadline is 15 November 1989. Provide evidence of quality teaching. Send letter, curriculum vitae, transcripts, and three letters of reference to: **Dr. Duncan R. Jamieson, Dean, School of Sciences, Ashland University, Ashland, OH 44805.** *Equal Opportunity/Affirmative Action Employer.*

PROGRAM

PROGRAM IN SOCIAL ECOLOGY ASSISTANT PROFESSOR— CRIMINOLOGY/LAW AND SOCIETY

The program in Social Ecology, University of California, Irvine, has an opening at the assistant professor level for a person with research/teaching commitments in the area of the ecology of crime and delinquency. There is particular interest in recruiting a person who studies the development of criminal behavior or efforts to correct criminal behavior in terms of such factors as spatial arrangements, the physical environment and public policies related to it, population density, demographic change, and geography. Salary and benefits are comparable to those at the very best research universities, as are the expectations for scholarly productivity.

Recruitment is for the subunit within the Program in Social Ecology entitled Criminology, Law and Society. There are nine faculty members in that subunit, with backgrounds in sociology, psychology, and planning, and four have J.D.'s in addition to Ph.D.'s. The Program in Social Ecology is an interdisciplinary academic unit that grants B.A., M.A., and Ph.D. degrees.

Candidates should submit a brief letter, curriculum vitae, and a list of referees to:

Chair, Search Committee
for Criminology, Law and Society
Program in Social Ecology
University of California
Irvine, CA 92717

Closing date for applications is 15 December 1989. The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates encouraged to apply.

PROGRAM IN TOXICOLOGY

The Department of Pharmacology at the University of Minnesota has recently established a training program in toxicology. This program is a broadly based, multidisciplinary curriculum directed to the predoctoral and postdoctoral training of individuals who wish to pursue careers in toxicology in either academic, industry, or government. The core faculty and their interests are:

Jordan L. Holtzman, M.D., Ph.D. Biochemical Toxicology of Oxidative Stress.
David Ann, Ph.D. Molecular Regulation of Gene Expression.
Khalil Ahmed, Ph.D. Nuclear Phosphoprotein Kinases.
Bianca Conti-Tronconi, M.D. Molecular Biology of Muscarinic Receptors.
John W. Eaton, Ph.D. Biochemical Toxicology of Oxidative Stress.
Patrick Hanna, Ph.D. Arylamine Carcinogenesis.
Allen Levine, Ph.D. Nutritional Aspects of Opiate Toxicology.
Jonathan Li, Ph.D. Estrogen Carcinogenesis.
Herbert Nagasawa, Ph.D. Biochemical Toxicology of Ethanol Toxicity.
Paul Pentel, M.D. Clinical Toxicology of Tricyclic Antidepressants.
Norman Sladick, Ph.D. Biochemical Toxicology of Antineoplastic Agents.
Sheldon Sparber, Ph.D. Behavioral Toxicology.
Kendal Wallace, Ph.D. Biochemical Toxicology of Oxidative stress.

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

Direct all inquiries to:

Dr. Jordan L. Holtzman
Department of Pharmacology
3-249 Millard Hall
University of Minnesota
Minneapolis, MN 55455

PROGRAM

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Dr. D. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.**

FELLOWSHIPS

AMERICAN MUSEUM OF NATURAL HISTORY FELLOWSHIPS AND GRANTS

FELLOWSHIPS—American Museum of Natural History Research/Museum Fellowships are available to postdoctoral researchers and established scholars starting in summer and fall 1990. Areas include vertebrate and invertebrate zoology, paleozoology, anthropology, mineral sciences, and the field of museum education as it relates to natural history museums or planetariums. Deadline for applications, including Chapman Fellowships (ornithology), is 15 January 1990.

GRANTS—American Museum of Natural History Grants are available to advanced predoctoral candidates and recent postdoctoral researchers in the fields of zoology and paleontology. Awards range from \$200 to \$1000. Deadline dates vary for each Grant Program.

- **Frank M. Chapman** (ornithology)—15 January 1990
- **Theodore Roosevelt** (N.A. fauna)—15 February 1990
- **Lerner-Gray** (marine)—15 March 1990.

Request information booklet and applications from: **The Office of Grants and Fellowships, Department H, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.**

ALEXANDER HOLLAENDER DISTINGUISHED POSTDOCTORAL FELLOWSHIP PROGRAM provides research opportunities in the life, biomedical, and environmental sciences. Fellowships are tenable at various Department of Energy and university laboratories with programs supportive of the Office of Health and Environmental Research. Stipend is \$35,000. A doctoral degree received after 1 April 1988 is required as is U.S. citizenship or PRA status. Deadline is 16 January 1990. For application materials contact: **Hollaender Postdoctoral Fellowships, Science/Engineering Education Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.**

POSTDOCTORAL FELLOWSHIP—Molecular biological studies of oncogene transcriptional regulation in human neoplasms. Focus on *myc* transcriptional misregulation, defective transcriptional attenuation, regulation of *myc* expression by endogenous antisense RNAs. This research project is a component of a comprehensive program in molecular and cellular biology at the Medical College of Virginia Massey Cancer Center. Background in molecular biology highly desirable. Send curriculum vitae and the names of three references:

Geoffrey Krystal, M.D., Ph.D.
Medical College of Virginia, MCV Box 230
Richmond, VA 23298

POSTDOCTORAL FELLOWSHIPS: Opportunities are available through an NIH-sponsored program in the areas of cancer cell/molecular biology, carcinogenesis, biochemistry, endocrinology, virology, pathophysiology of cancer, environmental cancer, and nutrition. Postdoctoral fellows should forward curriculum vitae, three letters of recommendation, and an expression of research interest. *Funding is restricted to U.S. citizens or permanent residents.* For complete information write to: **Donald Nagel, Ph.D. Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha NE 68105.** *Affirmative Action/Equal Opportunity Employer. Reference position #9-6198.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP: Position available for biochemist/cell biologist in the laboratory of **Dr. Subal Bishayee** to study the mechanism of action of growth factor receptors [see *JBC* 264, 11699-11705 (1989)]. Previous experience in protein purification/cell biology desirable but not essential. Submit curriculum vitae and names of three references to: **Coriell Institute for Medical Research, Personnel Department, 401 Haddon Avenue, Camden, NJ 08103.** *Equal Opportunity Employer/Affirmative Action.*

POSTDOCTORAL FELLOWSHIPS DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS UNIVERSITY OF VERMONT BURLINGTON, VERMONT

Postdoctoral Research positions are available in individual laboratories for candidates who have demonstrated exceptional research promise at the predoctoral or postdoctoral level. The emphasis of research in the department is in the areas of molecular genetics, recombinant DNA technology, and cell biology. The faculty who currently have openings in their laboratories are:

Dr. John Burke: Self-splicing RNA; ribozymes as antiviral agents.

Dr. Paula Fives-Taylor: Molecular bases for bacterial virulence with a focus on mechanisms of adhesion and invasion of host cells.

Dr. Yoke W. Kow: Mechanism of action of DNA repair enzymes.

Dr. Joan M. Moehring: Molecular approaches to the study of mammalian cell resistance to diphtheria toxin, *Pseudomonas* toxin and viruses.

Dr. Thomas J. Moehring: Molecular investigation of the encyctic and biosynthetic pathways involved in the interaction of toxins and viruses with host cells.

Dr. David S. Pederson: Structure and assembly of transcription complexes in chromatin, using yeast as a model organism.

Dr. Karen Pratt: The role of DNA methylation in regulating transcription in mammalian cells using the regulatory sequences of the AIDS virus genome as a model system.

Dr. Susan S. Wallace: Cellular processing and biological consequences of oxidative DNA lesions.

Requests for additional information should be sent to the relevant faculty member, **Department of Microbiology and Molecular Genetics, University of Vermont, Burlington, VT 05405.**

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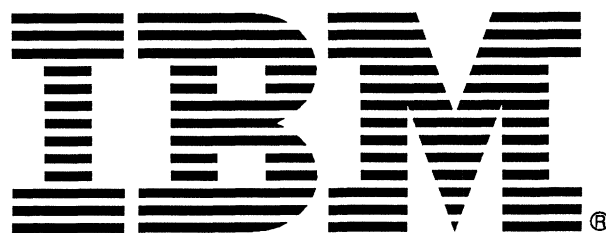
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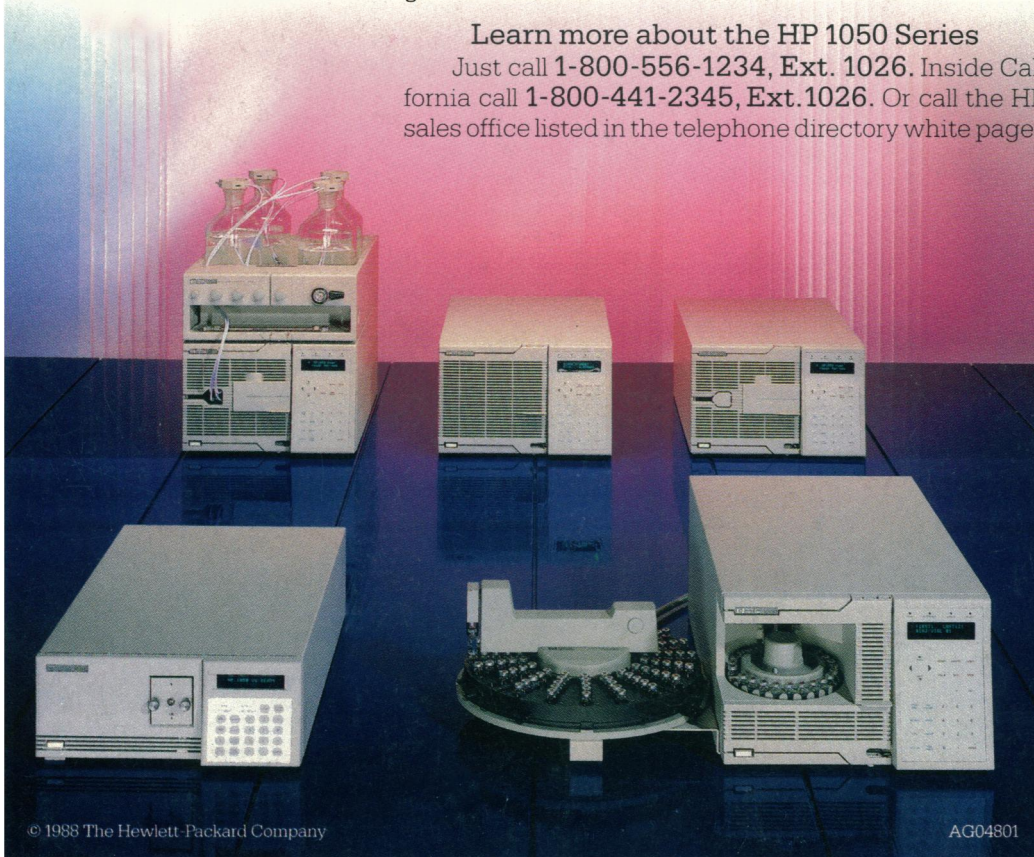
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