

events that had occurred as long as two to six months prior to a particular monologue.

On the basis of these and other chapters in *Remembering Reconsidered*, it seems indisputable that the ecological approach has provided a wealth of new and interesting empirical facts about memory and has also contributed clever methodologies that serve to broaden significantly the scope of memory research. It is less clear, however, that ecological studies have led to any novel or important theoretical insights into the nature of memory. In fact, it is perhaps ironic that most of the exciting recent theoretical developments in memory research have emerged from within the walls of the laboratory. Thus, for example, the documentation of striking dissociations between explicit and implicit tests of memory has led to new distinctions among forms of memory; mutually productive links have been established between cognitive studies of intact memory on the one hand and neuropsychological and neurobiological investigations of memory disorders on the other, leading to a variety of promising ideas; and powerful new computational models deriving from notions of parallel distributed processing have been advanced. Ecological studies have played a minor if any role in these developments. Significantly, the two chapters in the present volume that are richest in new theoretical ideas are based on laboratory studies of implicit and explicit memory (Larry Jacoby) and computational approaches to cognition (Lawrence Barsalou).

As is demonstrated by *Remembering Reconsidered*, the ecological approach has clearly served the admirable purposes of expanding the scope of memory research and providing the psychological study of memory with a base in naturalistic observation that it lacked previously. But it remains to be seen whether it will play a significant role in advancing theoretical understanding of the nature of human memory.

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Some Other Books of Interest

Introduction to the Study of Meiofauna. ROBERT P. HIGGINS and HJALMAR THIEL, Eds. Smithsonian Institution Press, Washington, DC, 1988. 488 pp., illus. \$39.95.

This volume is concerned with a category of invertebrates—the “meiobenthos,” in a term coined in 1942—inhabiting marine and freshwater sediments and defined in terms of size, a practical criterion proposed

here being retention on a 42- to 1000-micrometer sieve. As several contributors note, a rapid growth of research on these organisms occurred in the 1960s in association with both a renewed interest in animal ecology and the development of better techniques, with the result that meiofaunal research can now help elucidate basic questions in ecology and phylogenetics. With this volume the editors hope further to promote the development of this “young discipline.” The group of papers opening the volume includes a “prospectus” and brief history of meiofaunal research and chapters summarizing what is known about the ecology of marine (Bruce C. Coull) and freshwater (Robert W. Pennak) meiofauna. A second group of papers deals with methodological matters—the assessment of abiotic and biotic environmental factors, sampling equipment and strategies, sample and organism processing, culture and experimental techniques, and data handling. Techniques for studying the smaller nanobenthos are also described. The third and final section of the book (p. 238ff.) is a taxon-by-taxon summary of the meiofauna, beginning with a discussion of “taxonomic and curatorial considerations” by Higgins and including accounts by various authors of the 40 groups, from Sarcostigophora to Tunicata. Subject and taxonomic indexes complete the book.—K.L.

Reptile Egg-Shells. SEM Atlas. H. HERMANN SCHLEICH and WERNER KÄSTLE. Fischer, Stuttgart, 1988 (U.S. distributor, VCH, New York). viii, 123 pp., illus. \$44.50.

Noting that reptile eggs, being harder to find and preserve and seemingly less variable, have attracted little attention relative to bird eggs, Schleich and Kästle here set out, by means of scanning electron micrographs, “to present a broad view of different shell types, to demonstrate general construction principles and to present detailed comparative descriptions” of reptile egg shells. In an introductory chapter they outline the general characteristics of reptile eggshells and the features that differentiate those of the orders Crocodylia, Testudines, and Squamata, briefly survey the literature starting with von Baer (1837), describe study techniques and shell constituents, and discuss functional morphology. The main body of the book consists of 45 plates, each occupying a page and comprising several parts and accompanied by a page of description and other information, often including structural drawings. Some 70 Recent species—including 35 snakes, 4 crocodiles, and 1 amphibaenian—are represented. The last seven

plates, preceded by a brief literature survey, show fossil sauropsid shells or deposits, tentatively assigned to seven groups, from nine European Tertiary sites. The volume includes a bibliography and an index.

—K.L.

Books Received

Competition in the Health Care Sector. Ten Years Later. Warren Greenberg, Ed. Duke University Press, Durham, NC, 1988. vi, 153 pp., illus. \$15. Reprinted from the *Journal of Health Politics, Policy and Law*, vol. 13, no. 2.

Computational Techniques for Fluid Dynamics. C. A. J. Fletcher. Springer-Verlag, New York, 1988. 2 vols. Vol. 1, Fundamental and General Techniques. xiv, 409 pp., illus. \$59.50. Vol. 2, Specific Techniques for Different Flow Categories. xii, 484 pp., illus. \$69.50. Springer Series in Computational Physics.

Conformal Field Theory and Solvable Lattice Models. M. Jimbo, T. Miwa, and A. Tsuchiya, Eds. Academic Press, San Diego, CA, 1988. xii, 426 pp., illus. \$59.50. Advanced Studies in Pure Mathematics, vol. 16. Based on a symposium, Kyoto, Japan, May 1986.

Conformational Motion and Disorder in Low and High Molecular Mass Crystals. B. Wunderlich *et al.* Springer-Verlag, New York, 1988. viii, 137 pp., illus. \$71.50. Advances in Polymer Science, vol. 87.

Electrophoresis '88. Claus Schäfer-Nielsen, Ed. The Protein Laboratory, University of Copenhagen, 1988 (U.S. distributor, VCH, New York). 502 pp., illus. Paper. \$95. From a meeting, Copenhagen, Denmark, July 1988.

Electrophysiology of the Sinatrial and Atrioventricular Nodes. Todor Mazgalev, Leonard S. Dreifus, and Eric L. Michelson, Eds. Liss, New York, 1988. xiv, 354 pp., illus. \$65. Progress in Clinical and Biological Research, vol. 275. From a symposium, Anaheim, CA, Nov. 1987.

Extinction and Survival in the Fossil Record. G. P. Larwood, Ed. Published for the Systematics Association by Clarendon (Oxford University Press), New York, 1988. x, 365 pp., illus. \$90. Systematics Association Special Volume no. 34. From a symposium, Durham, U.K., Sept. 1986.

Fabry-Perot Interferometers. G. Hernandez. Cambridge University Press, New York, 1988. xvi, 343 pp., illus. Paper, \$29.95. Cambridge Studies in Modern Optics. Reprint, 1986 ed.

The Forebrain of Reptiles. Current Concepts of Structure and Function. Walter K. Schwerdtfeger and Wilhelmus J. A. J. Smets, Eds. Karger, Basel, 1988. x, 182 pp., illus. \$117.50. From a symposium, Frankfurt am Main, F.R.G., Aug. 1987.

Forest and Crop Biotechnology. Progress and Prospects. Frederick A. Valentine, Ed. Springer-Verlag, New York, 1988. xx, 466 pp., illus. \$59. From a colloquium, Syracuse, NY, April 1985.

Formation and Evolution of Low Mass Stars. A. K. Dupree and M. T. V. T. Lago, Eds. Kluwer, Norwell, MA, 1988. xvi, 462 pp., illus. \$119. NATO Advanced Science Institutes Series C, vol. 241. From an institute, Viano do Castelo, Portugal, Sept.-Oct. 1987.

The Microenvironment of the Human Thymus. Marion D. Kendall and Mary A. Ritter, Eds. Harwood, New York, 1988. xii, 306 pp., illus. \$84. Thymus Update, vol. 1.

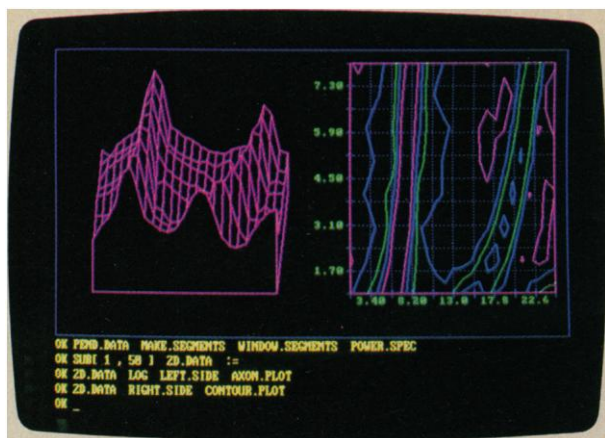
Models in Statistical Physics and Quantum Field Theory. Harald Grosse. Springer-Verlag, New York, 1988. x, 151 pp., illus. Paper, \$27.50. Trieste Notes in Physics.

Molecular Genetics and Immunoanalysis in Blood Coagulation. J. C. Giddings. Horwood, Chichester, U.K., and VCH, New York, 1988. 304 pp., illus. \$126. Ellis Horwood Series in Biomedicine.

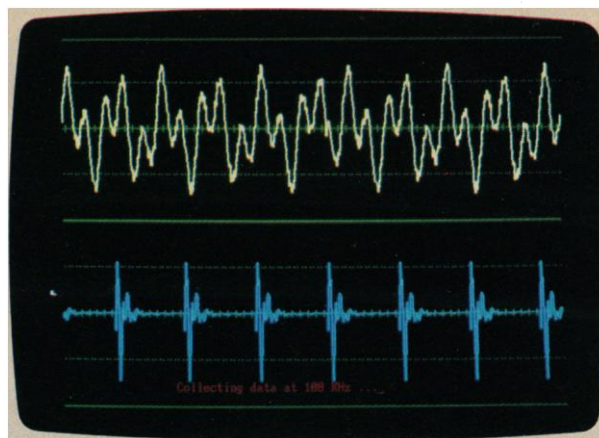
Molecular Inclusion and Molecular Recognition. Clathrates II. E. Weber, Ed. Springer-Verlag, New York, 1988. x, 246 pp., illus. \$89.50. Topics in Current Chemistry, vol. 149.

Neural and Massively Parallel Computers. The Sixth Generation. Branko Souček and Marina Souček. Wiley-Interscience, New York, 1988. xx, 460 pp., illus. \$49.95.

The Persistence of Error. Essays in Development Epistemology. Robert Kalechovsky. University Press of America, Lanham, MD, 1987. vi, 73 pp. \$17.25; paper, \$8.75.



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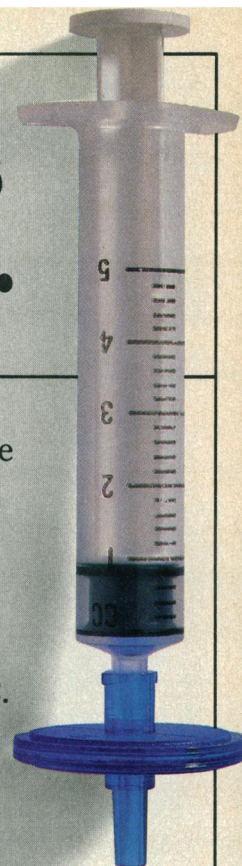
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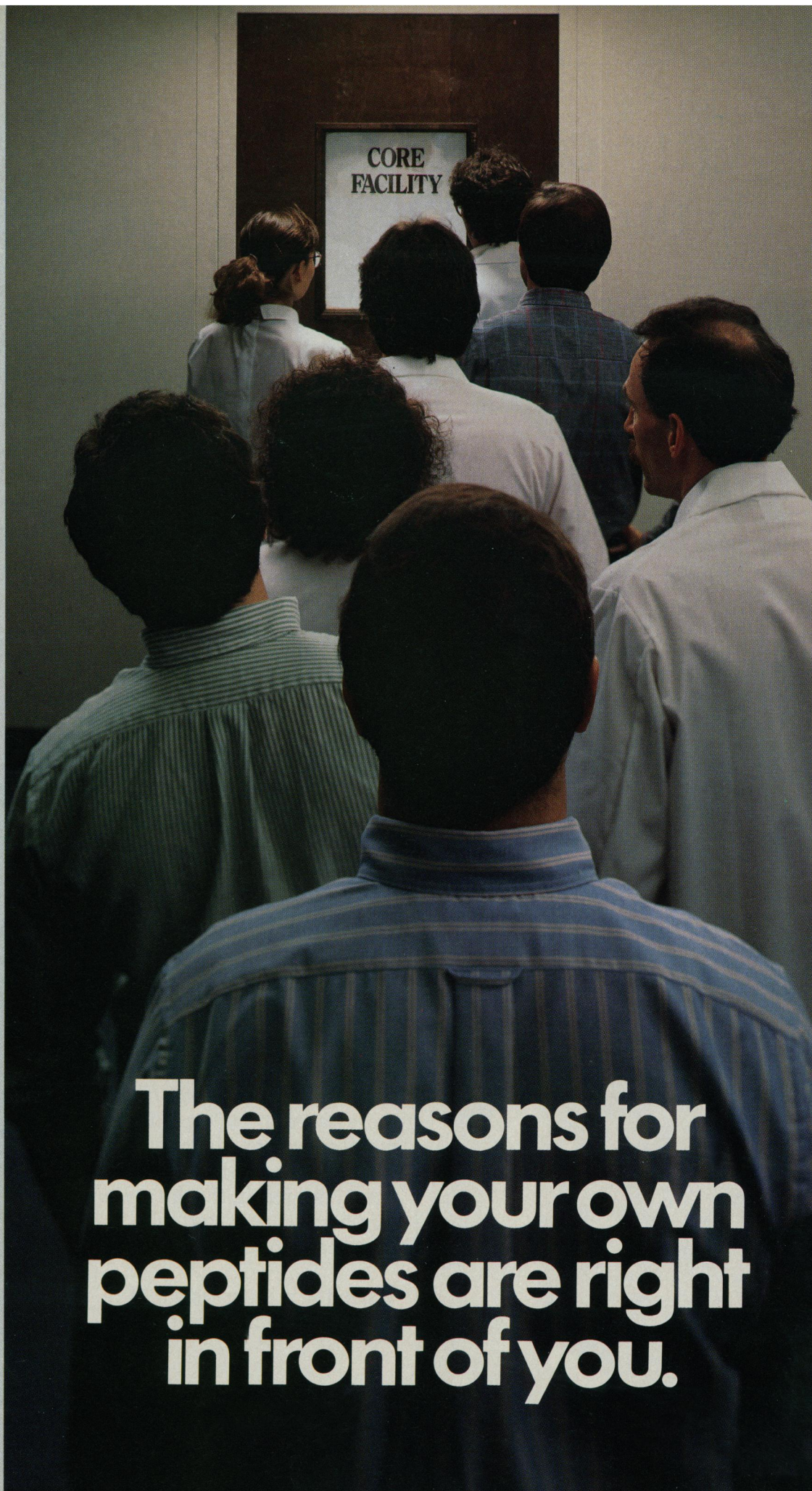
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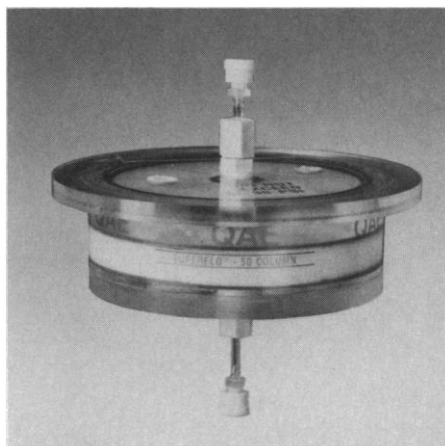
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available as empty, repackable acrylic or stainless steel columns with bed volumes of 50, 100, 250, 500, or 1500 ml or packed with protein A, hydroxylapatite, diethylaminoethyl, carboxyethyl, or quaternary aminoethyl with bed volumes of 50, 100, 250, or 500 ml. Beckman Instruments, BSG Consumables. Circle 438.

Graphics Software

SYGRAPH is a scientific graphics package for preparing interactive, exploratory, and presentation graphics of statistical data. The program creates two- and three-dimensional graphs, including box plots, bar charts, stem-and-leaf plots, histograms, scatterplots, maps, contour plots, casement plots, nonlinear scatterplot smoothing, and triangular coordinate plots. Plots can be rotated in three dimensions, overlaid, and printed in color. SYGRAPH provides a full-screen data editor and an extended data transformation language. It can read and write files in Lotus 1-2-3, dBase, and DIF formats, and it can exchange data with SPSS, STATA, and SAS through external ASCII files. Versions of SYGRAPH are available for computers with VMS, PC-DOS, or MS-DOS operating systems. SYSTAT. Circle 436.

Energy-Filtering Electron Microscope

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Literature

Liquid Particle Counting Systems is a brochure about a line of laser-based systems that size and count particles from 0.1 to 300 μm . Particle Measuring Systems. Circle 449.

Manufacturers Since 1888 is a 338-page catalog of pumps, racks, evaporators, bottles, beakers, clamps, tubes, and other laboratory products. Wheaton. Circle 451.

The brochure *250 Systems for Liquid Chromatography* describes modular, upgradable liquid chromatography systems. Perkin-Elmer. Circle 453.

The World's Most Advanced Weighing Technology is a brochure about balances, balance attachments, and related equipment. Sartorius Instruments. Circle 454.

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ASSISTANT RESEARCHER, PHYCOLOGY. Isolation, identification, and cultivation of blue-green algae (cyanobacteria) for determination of antineoplastic activity. Applicants must have a Ph.D. in phyecology or equivalent, with appropriate research experience. Starting date: on/about 1 June 1989. Submit letter of application, curriculum vitae, and names of three references to: **Dr. Gregory M. L. Patterson, Department of Chemistry, 2545 The Mall, University of Hawaii at Manoa, Honolulu, HI 96822.** Telephone: 808-948-6031. Closing date: 1 May 1989.

ASSISTANT/ASSOCIATE PROFESSOR IN PHARMACOLOGY

Applications and nominations are invited for a tenure-track faculty position at the rank of assistant or associate professor. Applicants should have earned a Ph.D. degree. Postdoctoral research training, teaching potential and good interpersonal and communication skills are desirable. Candidates are expected to develop an externally funded innovative research program and participate in professional and graduate education. All qualified applicants are encouraged to apply, particularly those with expertise in cellular and molecular pharmacology or immunopharmacology. The salary is highly competitive and adequate research space and start-up funds will be provided. Although the deadline for applications is 31 May 1989, the search may be extended until a suitable candidate has been selected. Interested applicants should submit curriculum vitae, three letters of recommendation or the names of three referees, and a summary of current and future research interests to: **Pharmacology Search Committee, College of Pharmacy, North Dakota State University, Fargo, ND 58105.** *NDSU is an Equal Opportunity Employer.*

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In the world of biotechnology, we have a history. A history with a proven track record of growth and stability. Today, we are a world leader in the production of chemicals, instruments, and systems for industrial research, the life sciences and clinical diagnostics.

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Bio-Rad has a special need for Research Scientists who have a BS/MS/PhD in Biology or Life Science and experience in the research and development of enzyme immunoassays for the detection of infectious diseases.

The pace here is stimulating, often going from concept to market application in a very short time. Which helps explain why we have been able to maintain a 25% annual sales growth.

If being a part of our team sounds interesting to you, apply today by sending your resume to: Bio-Rad Laboratories, Inc., Human Resources, Dept. 271-SM0310, 1000 Alfred Nobel Drive, Hercules, CA 94547. An equal opportunity employer.

BIO-RAD Bio-Rad Laboratories

Research

BIONETICS IS REALIZING ITS POTENTIAL IN BIOMEDICAL RESEARCH.

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Under the Akzo Pharma Division, Bionetics Research in the greater Washington, D.C. area is pursuing a program of cancer and AIDS research and diagnostic product development. Positions in this group offer opportunities for collaboration with academic, industrial, and government investigators throughout the scientific community.

Director, Molecular Biology Research and Development

You will direct a group of scientists developing recombinant proteins for cancer and viral therapeutic and diagnostic use. You will also interact with other laboratory directors to coordinate research projects on cytokines, human tumor antigens, human monoclonal antibodies, immunotoxins, and recombinant viral proteins. Experience should include 5+ years of research in gene cloning and procaryotic and eucaryotic expression with sound supervisory and interpersonal skills.

Postdoctoral Fellow/Research Scientist - Biochemistry

You will be involved in the isolation and characterization of recombinant DNA products. Antigens to be targeted involve recombinant viral proteins from HIV I and HIV II. Experience in the purification of recombinant proteins in both soluble and insoluble forms is required. Some experience in bacterial fermentation is helpful.

Research Scientist - Molecular Virology

You will lead research in retroviruses and related pathogenic elements aimed at understanding mechanisms of viral infection and pathogenesis, and regulation of viral gene expression. These studies should contribute to development of vaccine and therapy for retrovirus infections. Experience in recombinant

DNA techniques and expression of retroviral genes in bacterial and eucaryotic systems, is required.

Senior Research Scientist - Immunology

You will develop and characterize new murine monoclonal antibodies for use in commercial immunoassay development and supervise the hybridoma laboratory staff of four. Duties will be performed in co-operation with the animal resources and product development laboratories.

Research Scientist - Molecular Biology

You will lead a small technical staff in basic research for diagnostic test development. Antigens to be targeted include human retroviruses. Expertise in the generation of cDNA libraries; manipulation of plasmids and vectors; expression in procaryotic and eucaryotic cells; assay development; and DNA sequencing, are requirements.

Postdoctoral Fellow - Cellular Immunology

You will characterize T cell responses to human tumor antigens and participate in studies on leukoregulin. Experience in T cell cloning, and surface marker antigen analysis, required.

All Scientist positions require a Ph.D. in an appropriate scientific discipline, 2-4 years' postdoctoral experience, and proven writing skills through publications in scientific journals.

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We offer excellent benefits including health, life and dental insurance and a generous, company-matched savings plan. For consideration, please submit a C.V., including salary requirements to:

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BR is an equal opportunity employer, M/F/H/V. Principals Only.



POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR YALE UNIVERSITY

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

ASSISTANT OR ASSOCIATE PROFESSOR—

Penn State: The Bioengineering Program of The Pennsylvania State University seeks an individual with doctorate in the engineering or physical sciences to expand the direction of its research and teaching. All areas of research interest will be considered for this tenure-track position; however, a strong commitment to working on problems related to immediate health care needs and interaction with basic scientists and clinicians is desirable. Send curriculum vitae and names of three references, by 24 March 1989, to: **Dr. Herbert W. Lipowsky, Chairman, Bioengineering Program, Box S, 233 Hallowell Building, The Pennsylvania State University, University Park, PA 16802. An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.**

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

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

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

POSITIONS OPEN

ASSOCIATE IN CLINICAL RESEARCH DEPARTMENT OF SURGERY BRIGHAM AND WOMEN'S HOSPITAL BOSTON, MASSACHUSETTS

Division of Cardiac Surgery at Harvard Medical School and Brigham and Women's Hospital has an opening for a clinical research associate. Applicant should have experience with data entry, and basic programming skills to head up large data bank for coronary artery surgery. Excellent wages and benefits. Send résumé to:

**Lawrence H. Cohn, M.D.
Chief, Division of Cardiac Surgery
Brigham and Women's Hospital
75 Francis Street
Boston, MA 02115**

ASSOCIATE IN RESEARCH DEPARTMENT OF SURGERY HARVARD MEDICAL SCHOOL AND BRIGHAM AND WOMEN'S HOSPITAL BOSTON, MASSACHUSETTS

Division of Cardiac Surgery at Harvard Medical School and Brigham and Women's Hospital has an opening for a research associate in cardiac surgical research. Applicant should have experience with in-vivo and in-vitro experimentation, chronic animal preparations and basic cardiac research techniques including isotopic blood flow measurement, cardiac biochemistry and ultrasonic crystals. Candidate should have a Ph.D., or M.D./Ph.D. in cardiovascular physiology, pathology, or related field and capacity for interdisciplinary research and growth. Please send résumé and references to:

**Lawrence H. Cohn, M.D.
Chief, Division of Cardiac Surgery
Brigham and Women's Hospital
75 Francis Street
Boston, MA 02115**

ASSOCIATE PROFESSOR with experience in female urology, urodynamics, adult and pediatric neurogenic bladder, spinal cord injury, impotence and prothetics. Qualifications: Two-year fellowship in the above fields with clinical research experience. Send three letters of reference and curriculum vitae to **E. Fraley, M.D., Professor and Chair, Department of Urologic Surgery, Box 394, UMHC, 420 Delaware Street, S.E., Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**

BIOLOGIST, GS-12, \$34,580 to \$44,957

The U.S. EPA Environmental Systems Laboratory, Las Vegas, Nevada, is seeking an experienced masters-level individual in the area of immunoassay development for environmental contaminants. Individual must have a background in analytical chemistry, as well as laboratory experience in various immunoassay formats, knowledge of chemical synthesis is desirable. Individual would perform laboratory functions as well as report writing. The selected candidate would work under the direction of the immunoassay technical program manager and be responsible for individual projects. The EMSL-LV has ongoing projects in both immunoassay development and evaluation. In-house development efforts include the use of specific antibodies for sample preparations, the integration of immunochemical methods into conventional analytical procedures, and the innovative applications of immunoassays to small molecules.

EPA is an Equal Opportunity Employer. For information about position, call: **Jeanette Van Emon, 702-798-2154.** For applications, contact: **EPA Personnel Office, P.O. Box 98516, Las Vegas, NV 89193-8516 by 7 April 1989.**

CELLULAR BIOLOGIST (IMMUNOLOGIST)—Tenure-track assistant professorship starting fall 1989. We seek a cellular biologist with expertise in immunology who will teach upper level and graduate courses in these areas, and share teaching general biology. Research opportunities include a modern laboratory and much equipment. Send curriculum vitae and three letters of reference by 17 April to: **Dr. Alfred Chaet, Search Committee Chairperson, Department of Biology, The University of West Florida, Pensacola, FL 32514. Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

BIOLOGY—TWO POSITIONS: The Biology Department at Pacific Lutheran University invites applications for two 1-year sabbatical replacement positions at the assistant professor level: **BEHAVIORAL BIOLOGIST** to teach animal behavior and ornithology, and to participate in teaching natural history of vertebrates, general biology for non-majors, and natural science for non-majors; and **GENETICIST** to teach genetics, cell biology at the freshman level, and a course of your choice during the January interim term. Each position requires the Ph.D., or near completion. Successful candidates must have a commitment to undergraduate teaching. Pacific Lutheran University, located in the Puget Sound region of western Washington, is a liberal arts institution with 4000 students. The Biology Department is housed in a new science center and includes 12 full-time faculty members. Applicants should send curriculum vitae, transcripts, statement of teaching and research interests, and three letters of recommendation to: **Dr. John T. Carlson, Chairman, Department of Biology, Pacific Lutheran University, Tacoma, WA 98447. Closing date: 31 March 1989. PLU is an Affirmative Action/Equal Opportunity Employer.**

CELL BIOLOGY/ANIMAL PHYSIOLOGY/GENERAL BIOLOGY: The Biology Department of the University of Central Arkansas invites applications for one or two **ASSISTANT PROFESSOR** positions to begin in August 1989 or January 1990. One position is temporary and will have teaching assignments in cell biology and/or general biology for non-science majors. The other position will be permanent tenure-track (contingent upon a faculty reassignment), with teaching responsibilities in cell biology, animal physiology and biology for non-science majors. Submit curriculum vitae, copies of transcripts, a summary list of science courses completed, a brief description of teaching and research career goals, and three letters of recommendation to: **Dr. Edmond E. Griffin, Chairman, Department of Biology, University of Central Arkansas, Conway, AR 72032; Telephone: 501-450-3146. Deadline for receipt of applications is 15 April 1989. UCA is an Equal Opportunity Employer.**

CYTOGENETICIST

The Department of Botany and Plant Sciences, University of California, Riverside, announces again, a position of cytogeneticist, available 1 July 1989. The position is a tenure-track, 11-month appointment in the College of Natural and Agricultural Sciences and in the Agricultural Experiment Station. Appointment will be at assistant, associate, or full professor level, depending on the experience of the successful candidate. A Ph.D. is required and postdoctoral experience is preferred. The appointee will be expected to develop a vigorous, innovative, independent research program in basic cytogenetics with applications to plant breeding. Research goals and objectives must be consistent with those of the Agricultural Experiment Station. Potential research areas may include, but are not limited to, molecular biology of plant transposable elements, molecular structure of plant chromosomes, or molecular mechanisms of recombination. One goal, but by no means the only one, might be the application of new molecular technologies to tree crops. The successful candidate will be expected to contribute to the departmental undergraduate teaching program and to offer an upper division/graduate course in plant cytogenetics. He/she must be willing to serve as major professor to graduate students and to participate in the graduate program.

Send relevant information including curriculum vitae, and arrange to have at least three confidential letters of recommendation sent to: **Dr. J. G. Waines, Chairman, Search Committee, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521. Application deadline is 21 April 1989.**

The University of California, Riverside, is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

DIRECTOR OF CORNELL PLANTATIONS

Director of arboretum, botanical garden, and natural areas of Cornell University. For description/requirements write: **Dr. Kenneth E. Wing, 102 Roberts Hall, Cornell University, Ithaca, NY 14853. Telephone: 607-255-7720. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

Cell Biologist

Cutter, a leading San Francisco Bay area manufacturer of biological products, has an immediate opening for a cell biologist. Design, conduct and analyze results from bioassays relating to recombinant protein and monoclonal antibody products. Participate in virological and microparticle screening projects. Develop new cell biological assays & maintain cell culture repository service.

BS or MS in Cell Biology, Microbiology or related discipline plus 5 years experience in mammalian cell culture or equivalent. Knowledge of protein secretion mechanisms, cellular growth factors and electronic cell counting required. Experience with transformation, tumorigenicity, and virological bioassays desirable. Good writing skills a must.

Qualified candidates please send resume with salary history to:

Debra Wilkins
P.O. Box 1986
Berkeley, CA
94701



Cutter Biological

AA/EOE

DISCOVER THE NCI-FREDERICK CANCER RESEARCH FACILITY

The National Cancer Institute's Frederick Cancer Research Facility (NCI-FCRF) has developed an international reputation in biomedical research. The reason is simple. Excellent resources and commitment.

Program Resources, Inc., (PRI) is the major operations and technical contractor in support of NCI programs at the FCRF in Frederick, Maryland. Our role here is vital. Yours will be too.

We need individuals with education and training at all levels to play key roles in the following areas:

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Lab Animal Science
Cellular and Molecular Biology
Clinical Immunology Monitoring
In-Vitro Drug & Cell Line Screening
Nucleic Acid and Protein Synthesis
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In addition to the exciting professional challenges you'll find at PRI, we provide a competitive salary and excellent benefits, including insurances, educational assistance, and a tax-deferred savings plan. To explore these opportunities, see our representatives at the FASEB Placement Service this week or send your resume to: Program Resources, Inc., Personnel Department, P.O. Box B, Frederick, MD 21701.



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RESEARCH SCIENTIST, PHARMACOLOGY

Nelson Research, a wholly-owned subsidiary of the Ethyl Corporation, situated on the campus of the University of California at Irvine, is a pharmaceutical research firm committed to the discovery and development of new drugs. The Company currently has an opening for a Pharmacologist.

The successful candidate will be involved in:

Development of bioassays using isolated tissues to evaluate the specificity and efficacy of new chemical entities developed by the company.

Coordination of various research programs with academic and industrial scientists worldwide.

Qualified candidates will have a Ph.D. with 3 or more years' postdoctoral experience in the physiology of smooth muscle and analytical pharmacology. Industrial pharmaceutical experience is desirable.

Excellent oral and written communication skills are essential.

Nelson Research offers a professional environment and competitive salary and benefits. Interested candidates may send resume with salary history to: **Personnel Manager, Nelson Research, 1001 Health Sciences Road West, Irvine, CA 92715.**

Ethyl

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Continued, rapid expansion at Rorer Central Research has created several new positions within our Drug Safety Division. This group is responsible for the design and interpretation of routine drug safety assessment studies as well as special studies designed to investigate mechanisms of toxicity.

PATHOLOGISTS

Two openings exist for ACVP Certified Pathologists to interpret and report pathology findings on drug safety studies. One of these positions has the additional responsibility for managing a Clinical Pathology Laboratory. Candidates should have a minimum of one year experience in the pharmaceutical industry.

TOXICOLOGISTS

Entry and senior level positions are available for Toxicologists to design, supervise and/or conduct toxicology and safety evaluation studies. A Ph.D in Toxicology or a related discipline is required. At the entry level, a minimum of two years post graduate experience is required, preferably in the pharmaceutical industry. The senior level position requires a minimum of five years post graduate experience. A broad background in toxicology and familiarity with GLPs are preferred for both positions.

Rorer Central Research offers a competitive salary, comprehensive benefits package and continued opportunities for professional development. Please submit your resume and salary history in confidence to: **Rose Havron, Manager, Staffing and Compensation, Rorer Central Research, 640 Allendale Road, King of Prussia, PA 19406.** An Equal Opportunity Employer, M/F/H/V.



Rorer Central Research

Building for the future with excellent people, quality programs and sense of urgency.

RESEARCH ASSOCIATE IN DNA SEQUENCING

Amgen, a recognized leader in biotechnology, has an immediate opportunity for a Research Associate in our DNA Sequencing Group. Responsibilities for this position include providing critical support for on-going exploratory research projects.

Candidates for this position must have a BS or MS degree in Biochemistry, Molecular Biology or a related field. Familiarity with basic laboratory techniques related to Molecular Biology is essential. Experience with DNA sequencing methodologies is highly desirable.

Amgen offers an excellent compensation and benefits package as well as the opportunity to contribute to a team effort in a challenging research environment. If you would like to be a part of a company that places a high priority on human resources, please send a resume, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #384
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

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AMGEN

Physical Biochemist

The Department of Pharmaceutics at Smith Kline & French Laboratories, in suburban Philadelphia, is seeking a qualified Physical Biochemist to join an innovative and rapidly expanding Biopharmaceutical Development Group. This position requires a Ph.D. in Biochemistry, Chemistry or Pharmaceutical Sciences. Some pharmaceutical industrial experience will be an asset.

The successful candidate will be designing and conducting experiments to correlate biochemical properties, including protein conformation and folding to stability and activity, as well as determining solutions to problems involving stabilization of biopharmaceuticals. Experience in spectroscopic methods of protein analysis and mechanisms of protein aggregation as well as good written and communication skills are required. Familiarity with interpreting calorimetric data on solid phase and solution protein preparations and analysis of activity of biopharmaceuticals are preferred.

For confidential review, please forward your C.V. and the names of three references to: Ms. Elizabeth McKendry, Associate Employment Administrator, L0038, Smith Kline & French Laboratories, Research and Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
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AIDS RESEARCH AT THE NATIONAL INSTITUTES OF HEALTH DIRECTOR OF PROTEIN EXPRESSION LABORATORY

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

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

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



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

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



IMMUNOCHEMICALS PRODUCTION MANAGER

SIGMA CHEMICAL COMPANY manufactures and distributes reagents for research and diagnostic use to an international market that relies upon our service and product quality backed by the integrity and professionalism of our employees. At its St. Louis headquarters, hundreds of staff personnel are involved in the development, manufacture, quality control, sales and marketing of more than 22,000 products.

An excellent opportunity exists at Sigma for an Immunochemicals Production Manager. The successful candidate will be involved with the development and implementation of sales and marketing programs for Sigma immunochemical reagents. Minimum requirements are a MS degree in a biological science with advanced training in immunology. Additional training in one or more of the following areas preferred: Immunoassay Development, Production and Characterization of Monoclonal Antibodies, Cell Surface Marker Assays, Immunohistology and Protein Purification. Demonstrated experience in the sales and marketing of research or clinical products a plus. This position requires a self-starter with good people and communication skills, a positive attitude and the ability to turn a plan into action.

Sigma can provide a competitive salary and a full company-paid benefits package. Send your resume and salary history to: **Personnel Manager (CAM), SIGMA CHEMICAL COMPANY, P.O. Box 14508, St. Louis, MO 63178.**

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SIGMA
CHEMICAL COMPANY

Inflammation/ Immunology Research



Pfizer Central Research, an industry leader in inflammation research, has several opportunities for scientists to contribute to the discovery of new drugs for the treatment of inflammatory and autoimmune diseases. You will join well established multidisciplinary research teams in the expanding Department of Immunology and Infectious Diseases and work in newly constructed facilities with state-of-the-art equipment. For each position, a PhD, appropriate postdoctoral training and a record of accomplishment in your research endeavors is required. Previous industrial research experience including project management skills is welcome but not essential.

Osteoarthritis - You will focus on developing and exploiting systems related to the pathogenesis and treatment of osteoarthritis. Appropriate fields of training include protein biochemistry, molecular biology, cell biology or experimental pathology. Expertise is particularly sought in relation to cartilage biochemistry/metabolism and its regulation by cytokines.

Cell Infiltration/Cell Biology - You will be involved in new therapeutic approaches based on regulation of cell trafficking into sites of inflammation. Appropriate fields of training include cell biology, immunology, protein biochemistry or experimental pathology. Expertise is particularly sought in the areas of leukocyte/endothelial cell interactions, adhesion molecules and other chemical regulators of cell movement. Experience with light and electron microscopic techniques is highly desirable.

Pulmonary Immunologist - You will contribute to the discovery of new anti-allergy/asthma therapy. Current interests encompass the pharmacologic manipulation of monocyte-macrophage/lymphocyte/eosinophil interactions in models of airway inflammation/hyperreactivity. Appropriate fields of training include immunobiology/immunogenetics and biochemistry with an emphasis on molecular biology. Prior research on problems associated with immediate and delayed hypersensitivity reactions in the lung is highly desirable. Expertise is particularly sought in the following areas: cellular immunology; isolation/characterization of cytokines; and models of airway inflammation/hyperreactivity.

These positions provide excellent opportunities for professional recognition and development. We offer an excellent salary, benefits and relocation package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume, including the names, addresses and phone numbers of three professional references, and indicating position of interest, to: J.K. Larson, PhD, Assistant Director, Employee Resources, Pfizer Central Research, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.

Director, Human Studies Division

Health Effects
Research Laboratory
Research Triangle Park, NC



**U.S.
Environmental
Protection
Agency**

An Equal Opportunity Employer

The U.S. Environmental Protection Agency (EPA) is seeking candidates for the position of Director, Human Studies Division, Health Effects Research Laboratory (HERL). This position is located in Research Triangle Park, NC and is a permanent full-time position with a salary range of \$57,158 to \$74,303 per annum commensurate with qualifications. Additional salary incentives are available should a physician be selected for this position.

*HERL has a staff of about 300, over 100 of whom hold doctoral level degrees. The Laboratory has a diverse program which includes *in vitro*, animal, human clinical, and epidemiological research designed to address issues related to the health effects of air and water chemical and biological pollutants.*

The Human Studies Division (HSD) is a multi-disciplinary program organized into two branches: Clinical Research and Epidemiology with a combined EPA staff of 35, with approximately 75 on-site contractor personnel. The Division is a focal point for planning, conducting, coordinating, supporting and evaluating a program of clinical and epidemiological investigations to improve the understanding of human health risks associated with environmental pollution. The program includes both intramural investigations and extramural arrangements with universities, industry, private research institutions and other government agencies. The primary responsibilities of the Director are to direct and manage

the program. This includes developing the program to meet the evolving needs of EPA, presenting the program, developing and managing budgets, supervising the staff, directing the progress of the program and ensuring the scientific quality and productivity of the program.

The preferred candidate for this position would possess the following qualifications:

- 1. Advanced degree in a biological or medical discipline or epidemiology with at least six years of professional experience in any of these areas. Applicable graduate coursework may be substituted for a portion of the preferred experience.*
- 2. Experience as a supervisor of a scientific/professional staff.*
- 3. Recognized scientific expertise as evidenced by multiple publications in peer-reviewed literature and invitations to participate in national and international meetings/panels.*
- 4. Proven ability to provide leadership in directing the development and progress of a creative and effective multidisciplinary human research program.*
- 5. U.S. citizenship is required.*

Forward curriculum vitae and names of three references prior to April 17, 1989 to: Dr. Lawrence W. Reiter, c/o Terri Burrell, HRMD (MD-29), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

POSITIONS OPEN

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

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

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

Senior tenure-track faculty appointment (full time) in the Department of Psychiatry as **DIRECTOR** of the University of Michigan Substance Abuse Center. Responsibilities include facilitation of University research efforts and coordination of educational efforts in substance abuse. Candidates must have documented track-record in research, teaching, and administration. Position requires a medical degree with Board certification in a specialty or doctoral degree in biological or social sciences, and eligibility for licensure in Michigan. Send letter of interest and curriculum vitae to: **Thomas P. Beresford, M.D., Search Committee Chairman, University of Michigan Alcohol Research Center, 400 East Eisenhower Parkway, Suite A, Ann Arbor, MI 48104.** The University of Michigan is a non-discriminatory/Affirmative Action Employer.

DIRECTOR FOR NEW AIDS RESEARCH CENTER AND LABORATORY

A strong basic scientist experienced in the molecular biology of AIDS is sought to direct the activities of the new Aaron Diamond AIDS Research Laboratory for the City of New York, sponsored and supported jointly by New York University (NYU) School of Medicine, the Department of Health of New York City, the Public Health Research Institute and The Aaron Diamond Foundation. Governance of the center is by a Board of Directors drawn in part but separate from the sponsoring institutions. Creation of a strong research environment and the prosecution of molecular virologic and/or immunologic research on AIDS and related diseases should be the Director's primary objectives; the center should serve as a focus for collaborative activities involving scientists and physicians throughout New York City. Abundant research space that will include BL-3 containment facilities is under construction. Start-up funds have been provided. The position carries a tenured professorship at NYU; salary will depend on qualifications. Inquiries including curriculum vitae and bibliography should be sent to the Chairman of the Board of Directors: **Dr. Edwin D. Kilbourne, Box 1124, Mount Sinai School of Medicine, 1 Gustave Levy Place, New York, NY 10029.** The Board is committed to Equal Opportunity/Affirmative Action in employment.

POSITIONS OPEN

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

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

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

MASSEY UNIVERSITY PALMERSTON NORTH, NEW ZEALAND DIRECTOR, IMAGE ANALYSIS UNIT

Applications are invited from both men and women for the above appointment which includes half-time lecturing in the Department of Physics and Biophysics. The Unit undertakes fundamental research into image analysis methodology and provides a client advisory service. The appointment is for an initial period of 3 years.

The appointee would be expected to contribute to electronics teaching in the Department of Physics and Biophysics. A practical knowledge and experience of DEC's VMS operating system, PC-DOS for the IBM-PC AT, "C" programming language and of general image analysis methodology is required. An ability to interact well with users is essential. Previous relevant management experience would be an advantage.

Salary is in the range NZ\$35,000 to NZ\$42,500 per annum.

Further information is available from: **Professor P. T. Callaghan, Head of Department of Physics/Biophysics (PN 69 099 extension 8364) and Professor D. A. D. Parry, Chairman, Image Analysis Advisory Committee (extension 7473).**

Applications including the names and addresses of three referees who may be contacted should be forwarded to: **Mrs. V. B. Bretherton, Personnel Section, Massey University, Palmerston North, New Zealand,** before 30 April 1989. Applicants resident in the UK should also send a copy to: **Appointments (36039), Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF,** from whom further information is also available.

ENDOWED PROFESSORSHIP IN IMMUNOLOGY

This professorship is designed to add an outstanding scientist to the newly-formed Department of Molecular Genetics, Biochemistry and Microbiology in the College of Medicine. The department has major research programs including the recent award of a Program of Excellence in Molecular Biology from the Heart, Lung and Blood Institute of NIH. The appointee will fulfill a pivotal role in expanding strength and interactions in the College. The University of Cincinnati is a comprehensive university in the state system. Curriculum vitae should be sent to: **Dr. Jerry B. Lingrel, Department of Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati, College of Medicine, Cincinnati, OH 45267-0524.**

Affirmative Action/Equal Opportunity Employer.

ENVIRONMENTAL GEOLOGIST/HYDROGEOLOGIST. The Geology and Environmental Science Departments at Allegheny College invite applications for a 1-year sabbatical replacement with teaching responsibilities that include process geomorphology, hydrogeology, and geography. Duties include participation in a team-taught seminar and advising undergraduate senior projects. Ph.D. or A.B.D. preferred. Applicants should submit curriculum vitae, letter of intent, and three letters of reference to: **Eric Pallant, Geology/Environmental Science Department, Allegheny College, Box E, Meadville, PA 16335.** Application review begins 15 March 1989. Position will be open until filled. Allegheny College is an Equal Opportunity Employer.

POSITIONS OPEN

EXTENSION AGRONOMIST—Extension assistant/associate professor, 80% extension/20% research. Primary responsibility will be to provide and coordinate state-wide educational programs on agronomic crop management. The major area of responsibility will be forage, pasture and grain crops for dairy/livestock production. Individual should be capable of, and interested in, organizing the extension effort around economic and environmentally sound (sustainable) practices. Research will be expected to complement the extension portion of the position. Before 31 May 1989, send letter of application, curriculum vitae, a list of publications, a summary of research and extension goals, and addresses of five references to: **Dr. William Jokela, Chair, Search Committee, Department of Plant and Soil Science, Hills Building, University of Vermont, Burlington, VT 05405; Telephone: 802-656-0480.** Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN INFECTIOUS DISEASES to participate in studies of HIV pathogenesis. Ph.D. with 3 or more years of experience in basic immunology or virology. Salary \$31,000 to \$55,000. Send curriculum vitae to: **Roy T. Steigbigel, M.D., Head, Division of Infectious Diseases, HSC T-15, 080, SUNY at Stony Brook, Stony Brook, NY 11794-8153.** An Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION MOLECULAR BIOLOGY

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

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

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

FACULTY POSITIONS IN APPLIED MOLECULAR BIOLOGY/BIOCHEMISTRY

The Department of Chemical and Biological Sciences at the Oregon Graduate Center is expanding its biotechnology program and invites applications for three faculty positions in molecular biology and protein engineering. We are interested in researchers in the fields of (i) molecular biology of yeast/fungi, (ii) molecular biology/biochemistry of prokaryotic soil microorganisms, and (iii) genetic engineering of proteins.

Rank and salary are open. Investigators who value an environment fostering excellence in research are encouraged to apply.

Minimum requirements: Ph.D., several years of post-doctoral experience, and ability to develop a strong research program and graduate level courses in areas of specialty. Appointments will be made at the level of assistant professor or higher depending on qualifications.

Send curriculum vitae, a statement of research interests, and the names, addresses, and telephone numbers of three references to:

**Dr. Michael H. Gold, Search Committee Chair
Department of Chemical and Biological Sciences
Oregon Graduate Center
19600 N.W. Von Neumann Drive
Beaverton, OR 97006-1999**

Equal Opportunity Employer.

POSITIONS AVAILABLE:

Assistant Professor, University of Minnesota Medical School Department of Laboratory Medicine & Pathology

A tenure track faculty position is available for candidates who hold a Ph.D. or M.D. in biomedical sciences, with minimum of three years postdoctoral experience in matrix protein molecular biology, or chemical synthesis of peptides to interact with group research effort on tumor metastasis, wound healing and diabetic complications. Individuals will also be expected to develop individual research program in area of interest to him/her. Demonstration of prior research productivity is necessary.

Individuals will be involved in teaching and assisting with graduate student advising.

Research Associate/Assistant Professor (Non-Tenured) University of Minnesota Medical School Department of Laboratory Medicine & Pathology

A research associate/assistant professor (non-tenured) position is available for candidates who hold a Ph.D. in basic biomedical sciences, with minimum of three years postdoctoral experience in molecular biology/recombinant DNA techniques to participate in group research effort on the structure/interactions of basement membrane/extracellular matrix macromolecules. Previous experience in this field is desired. Salary is negotiable.

Applicants should send curriculum vitae and three letters of reference to:

Leo T. Furcht, M.D.
Box 609 UMHC Department of Laboratory
Medicine & Pathology
420 Delaware Street SE
Minneapolis, MN 55455

Deadline for receipt of applications is April 30, 1989. The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

RESEARCH ASSOCIATE/ POSTDOCTORAL FELLOW DEPARTMENT OF MOLECULAR BIOLOGY CLEVELAND CLINIC FOUNDATION

In this newly formed Department several positions are immediately available for **research associates and postdoctoral fellows** in the following research groups. Excellent compensation and benefits are available for each position:

A.K. Banerjee: RNA virus gene structure, function and replication.

S. Banerjee: Molecular mechanisms in neoplastic transformation.

M.S. Galinski: Paramyxovirus gene expression/molecular mechanism of host-virus interaction.

M.L. Harter: Functional activities of DNA tumor virus proteins/gene expression and cellular transformation.

R.M. Ransohoff: Proliferation and class II MHC expression in cultured human glial cells.

G.C. Sen: Expression and functions of interferon inducible genes/tissue-specific expression of hypertension regulating genes.

D.W. Stacey: Biological functions of proto-oncogenes in normal and tumor cells.

Please address all applications or inquiries including curriculum vitae and names of references to:
Dr. M.L. Harter, Dept. of Molecular Biology,
The Cleveland Clinic Foundation, Bldg. NN1-13,
9500 Euclid Avenue, Cleveland, OH 44195-5178.

Protein Biochemist/ Enzymologist

Fritzsche Dodge & Olcott, a member of the BASF Group, is a leader in the creation of flavors and fragrances. Due to expansion, we are seeking a Research Scientist for our Corporate Research Laboratories in New York.

This individual will be involved in the examination of enzyme technology for the production of specialty chemicals. The successful candidate should have a Ph.D. in biochemistry with laboratory experience in the isolation and characterization of enzymes from plant sources. Familiarity with the development of enzyme assays and immobilization techniques is highly desirable, along with 2-4 years' industrial enzyme experience is required.

This position requires good communication skills and the ability to interact effectively with a multidisciplinary team. We offer a professional environment, competitive salary and comprehensive benefits package. For immediate consideration, please forward your resume and salary requirements in confidence to: **Human Resources Department, Fritzsche Dodge & Olcott, A Unit of BASF K&F Corporation, 76 Ninth Avenue, New York, NY 10011.** An Equal Opportunity Employer.

BASF Group

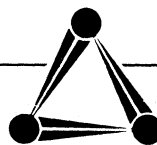


Cambridge NeuroScience Research is a research and development company which focuses on Neurobiology and its applications. We have a new, well-equipped facility located in Cambridge, Massachusetts, close to M.I.T. and Harvard University. We currently have a position available in our Neuropharmacology group.

Staff Scientist — Neuropharmacology

The candidate should have a Ph.D. and at least 3 years of post-doctoral experience in the pharmacology/biochemistry of nervous system receptors, second messengers and functional assay systems. Experience/interest in the pharmaceutical industry and drug development is highly desirable. The successful applicant will be able to carry out an independent research program while interacting with synthetic chemists, molecular biologists, electrophysiologists and a pharmaceutical development team.

Cambridge NeuroScience Research offers a stimulating research environment with competitive salaries and excellent benefits, including Founders Stock. **Applicants for the above position should send their curriculum vitae and the names of three references to: CNS Research, Human Resources Manager, One Kendall Square, Building 700, Cambridge, MA 02139, U.S.A.**



CNS RESEARCH

Biology

Postdoctoral Scientist

Smith Kline & French Laboratories has excellent Postdoctoral opportunities available in our new state-of-the-art research facility near the Philadelphia suburb of Valley Forge.

We consider postdoctoral studies to be of major importance in a scientist's career and encourage publication of findings in leading journals and a full interaction with the scientific community. Our environment is designed to foster creative research and to promote personal and professional growth.

Our postdoctoral appointments are normally for a period of two years.

The Department of Biological Process Sciences of Smith Kline and French Laboratories is seeking a postdoctoral fellow to investigate methods of production and purification of anisotopically labelled proteins for structural studies. This individual will be involved in the fermentation of recombinant *E. coli* for the production of HIV proteins and in the purification and biochemical analysis of these proteins. This individual will join a multidisciplinary team involved in the structural and functional analysis of the proteins of HIV. The successful candidate must have a Ph.D. in Microbiology, Biochemistry, or a related field and less than three years of postdoctoral experience. Expertise in fermentation, microbial expression systems, and/or protein purification is highly desirable.

We offer an excellent compensation and benefits package. Interested candidates should send a resume to Barbara Schwartz, Employment Administrator, S0082, Smith Kline & French Laboratories, P.O. Box 1539, King of Prussia, PA. 19406-0939. We are an equal opportunity employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

Protein Chemists

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

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

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

 **SYNERGEN**

Assistant Scientists Research Opportunities



Pfizer Central Research has an excellent career opportunity at its modern Animal Health Research facility in Terre Haute, Indiana. As a member of a strong multidisciplinary project team, you will assist in developing and conducting basic and applied research toward the evaluation of potential immunomodulators.

We are seeking an individual with an MS in Microbiology or Immunology and a background in immunologic and cell culture laboratory techniques. This individual must be innovative, enthusiastic, have good communication skills and enjoy working as part of a team.

Pfizer offers excellent compensation, comprehensive benefits and relocation assistance. Qualified applicants should submit a current resume with names of three references to: Ms. Christina Batjer, Senior Personnel Supervisor, Pfizer Inc., P.O. Box 88, Terre Haute, Indiana 47808. An equal opportunity employer.

Research Manager; Research Supervisor; Researcher

Sandoz Ltd., Switzerland, a multinational chemical corporation with a history of over one century and long tradition, operates more than 160 affiliates in 45 countries around the world. Since 1960, Sandoz Pharmaceuticals, Ltd., Japan, has pursued research & development, production and marketing of pharmaceuticals attuned to the needs of the Japanese market. In 1988, annual sales in Japan were approx. US\$600 million, and employees numbered 1200. We now seek highly qualified supervisory personnel to promote establishment of an all-round basic research institute in Japan.

POSITIONS: Research Manager; Research Supervisor; Researcher

REQUIREMENTS: PhD or MD, with a thorough knowledge of:
— Pharmacology
— Pharmacokinetics
— Biology/Molecular Biology

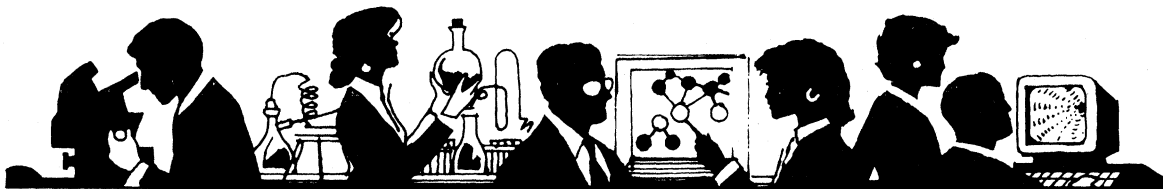
HOW TO APPLY: Send your resume to:
Mr. M. Misawa
Sandoz Pharmaceuticals, Ltd. Satellite Office
c/o Human Resources
Sandoz Pharmaceuticals Corp.
Rt. 10, P.O. Box 11, East Hanover
N.J. 07936

Your application will also be received at Federation of American Societies for Experimental Biology/Placement Service meeting in New Orleans (Mar. 20-23, '89). See FASEB brochure for detail.



Sandoz Pharmaceuticals, Ltd.
SANDOZ 4-17-30, Nishi-azabu, Minato-ku, Tokyo, Japan 106

For more than a century the employees of Burroughs Wellcome Co. have applied their talents to the discovery and development of important new medicines. Their abilities and initiative have brought our Company preeminence in both the pharmaceutical industry and the scientific world...as our recent Nobel winners give eloquent testimony.



GREAT PEOPLE MAKE A GREAT COMPANY

You can begin your career in the Wellcome Research Laboratories if you have interest and qualifications in the following areas:

Division of Pharmacology

Jr. Research Pharmacologist (Cardiovascular)

Pos.#60670-4

To participate in the discovery and development of therapeutic agents for cardiovascular diseases. Specified areas of research will be directed at defining the regulation of receptor mediated signal transduction. Candidates should have a Bachelor's degree in a biological or chemical science with two years laboratory experience in pharmacology OR a Master's degree in biochemistry or pharmacology. Experience with isolated tissues and performing in vitro cardiovascular studies preferred.

Pos.#60913-4

You will research the development of therapeutic agents for cardiovascular diseases with particular emphasis in hypertension. The successful candidate will have a Bachelor's degree in a biological or chemical science with two years experience in pharmacology in vivo research OR a Master's degree in pharmacology or physiology. Experience in cardiovascular pharmacology required. Knowledge of computers and in vitro techniques a plus.

Jr. Research Pharmacologist (Electrophysiology)

Pos.#3015-4

To assist the supervisory of the Biophysics Laboratory with the experimental investigation of the effects of potential CNS active drugs on synaptic transmission. Candidates need a Master's degree in a life science with coursework or experience in electrophysiology OR a Bachelor's degree in a life science with two years practical experience in electrophysiology.

Burroughs Wellcome Fellow (Postdoctoral)

Pos. #1411-4

To participate in the ongoing research to discover new agents with receptor and site selective actions. Candidates must have a Ph.D. in cardiovascular/autonomic pharmacology. Experience in in vivo techniques to study mechanisms of actions of cardiovascular drugs with special emphasis on hypertension required.

Pos.#60594-4

The study of neurotransmitter release and neurochemical indices of changes in CNS neuronal activity associated with the mechanism of action of antipsychotics and/or anxiolytics. Emphasis will be placed on detecting in vivo release of neurotransmitters utilizing microdialysis techniques. Candidates must have a Ph.D. in pharmacology, neurochemistry or biochemistry along with experience with in vivo brain microdialysis. Experience with measurement of catecholamines using HPLC.

Postdoctoral fellows are initially appointed for up to one year with renewal for a second year upon the mutual agreement of the employee and the Company.

Division of Organic Chemistry

Ph.D. Peptide Chemist

Pos.#60809-4

You will design and carry out experiments to determine peptide/protein sequence and amino acid composition using a variety of analytical methods. Candidates need a Ph.D. in chemistry or biochemistry including two years practical experience in the analysis of peptides and proteins from both synthetic and biological origin OR a Master's degree in chemistry or biochemistry with five years experience with chemical and enzymatic degradations/modifications.

The pride of working for an industry leader is one of our benefits here. But there are others more tangible...our salaries and the finest benefit program in the industry. It includes the best pension plan in the industry, comprehensive health and dental plans, an excellent savings plan...even fitness facilities. If you are interested in working for us, we would like to hear from you. Submit your resume indicating position applying for to: **Burroughs Wellcome Co., Scientific Recruiting and Staffing, 3030 Cornwallis Road, Research Triangle Park, NC 27709.**



Wellcome

BURROUGHS WELLCOME CO.

An Equal Opportunity Employer

POSITIONS OPEN

FACULTY POSITIONS IN X-RAY CRYSTALLOGRAPHY

The Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School and the Dana-Farber Cancer Institute are seeking applications to fill two positions at the assistant professor level to be located at the Dana-Farber Cancer Institute. Applicants should be interested in using crystallographic methods to solve problems in structural biology and biochemistry and should have an appropriate combination of related graduate and postdoctoral level research experience. Interested applicants should send an outline of future research plans, curriculum vitae, bibliography and the names of three to four references to: **Professor Christopher Walsh, Chairman, Biological Chemistry and Molecular Pharmacology, Search Committee, Harvard Medical School, 240 Longwood Avenue, Room C1-213, Boston, MA 02115.** Women and minorities are encouraged to apply. Harvard University and Dana-Farber Cancer Institute are Equal Opportunity Employers.

HUMAN ALERTNESS RESEARCH CENTER INSTITUTE FOR CIRCADIAN PHYSIOLOGY

FACULTY POSITIONS at the junior or senior level are available in the Human Alertness Research Center of the Institute for Circadian Physiology. We seek applicants with research interests in human circadian physiology, sleep-wake physiology, human performance or ergonomics/human factors. Successful applicants will have a record of outstanding research accomplishments and the ability to contribute to the multidisciplinary intellectual life of the Institute. Please send curriculum vitae, including a description of research interests and three letters of reference by 1 April 1989 to: **Dr. Martin Moore-Ede, Director, Institute for Circadian Physiology, 677 Beacon Street, Boston, MA 02215.** Equal Opportunity/Affirmative Action Employer.

FISHERIES/WILDLIFE BIOLOGISTS

Two assistant professors. Ph.D. required. Postdoctoral experience desired. Participation in International Institute for Renewable Natural Resources (emphasis southern Africa/Central America) anticipated. Telephone inquiries to **Dr. James Howard, 301-689-4168/4166.**

FISHERIES BIOLOGIST. Teach biology/fisheries courses, develop active research program in fresh water fish resources of North America and/or tropics. Two-year contractual—possible renewal as tenure-track.

WILDLIFE BIOLOGIST. Teach biology and wildlife courses. Develop research program emphasizing management of birds/mammals. Background conservation biology desirable. Three-year—fixed term (with benefits)—possible renewal as tenure-track position.

Frostburg State University, a part of the University of Maryland System, offers B.S. in biology and wildlife/fisheries management; M.S. in biology, wildlife management and fisheries management for approximately 250 majors. New M.S. in conservation biology being developed. Can direct Ph.D. candidates through UMD in conjunction with Appalachian Environmental Laboratory (FSU site). Subject to final funding approval by Legislature of the State of Maryland. Salary commensurate with experience. Send letter of interest, curriculum vitae, transcripts and names, addresses, and telephone numbers of at least three professional references, for contact (letters of recommendation desired) by 31 March 1989, to: **Mr. C. Douglas Schmidt, Director of Personnel Services, Frostburg State University, Frostburg, MD 21532.** Affirmative Action/Equal Opportunity Employer.

HISTOLOGY

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

POSITIONS OPEN

HIV MOLECULAR BIOLOGIST, a junior level research position in our Department of Virology and Immunology. We are seeking a scientist with research interests in the molecular biology of human immunodeficiency virus (HIV) infection. Candidates should have a Ph.D., M.D., or D.V.M. degree with accomplishments that demonstrate the ability to maintain an independent research program. The appointee will complement the current research in HIV infection conducted by **Drs. Jonathan S. Allan, Tran C. Chanh, Jorg W. Eichberg, Patrick Kanda, and Ronald C. Kennedy.** The program focuses on vaccines, therapeutics, and pathogenesis of HIV and SIV infection in nonhuman primate animal models.

The Southwest Foundation for Biomedical Research is a nonprofit, private research institution with a staff of 45 scientists and facilities for DNA sequencing, oligonucleotide and peptide synthesis, hybridomas, electron microscopy, flow cytometry, and computer modeling. It also has extensive nonhuman primate resources which include baboons, rhesus monkeys, and chimpanzees.

Interested candidates should mail curriculum vitae, brief summary of research goals, and names and telephone numbers of three references to: **Personnel Director (9), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** Equal Opportunity Employer M/F.

HUMAN POPULATION GENETICS

Department of Human Genetics, University of Michigan, is seeking a tenure-track **FACULTY MEMBER** in human population or quantitative genetics. Send résumé, statement of research interests, and names of three references to: **Dr. Myron Levine, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, MI 48109-0618.** An Equal Opportunity/Affirmative Action Employer.

IMMUNOCHEMISTRY

Seradyn Inc., a progressive medical diagnostic company has an immediate opening for an experienced **SCIENTIST** within the immunoassay products group. The position encompasses broad responsibilities from conception of technical ideas and reduction to practice to market introduction of new products.

The individual we seek should have 3 to 5 years of experience in immobilization of biological material in addition to experience in non-isotopic immunoassay development. The successful candidate should be highly self-motivated and goal oriented with strong oral and written communication skills. A Ph.D. is desired, but not necessary providing stated qualifications are satisfied.

Seradyn offers competitive salary and benefit programs. For confidential consideration, send résumé and salary history to: **Personnel Manager, Seradyn Inc., P.O. Box 1210, Indianapolis, IN 46206.**



Equal Opportunity Employer

MICROBIOLOGIST SWARTHMORE COLLEGE

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

POSITIONS OPEN

IMMUNOLOGY POSITION OPENING

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

INSECT-PLANT PHYSIOLOGIST to establish an active research program and to teach an undergraduate-level animal physiology course, a graduate course in insect physiology, and a course in his or her specialty area. Candidates must have a Ph.D. in entomology or related biological sciences with primary educational and research experience in fundamental aspects of insect-plant interactions, and at least 2 years of postdoctoral research experience in insect-plant interactions is required. Background in plant chemistry and neurophysiological mechanisms of behavior preferred. Salary range (\$28,000 to \$35,000) commensurate with qualifications and experience, 9-month, tenure-track position at the assistant professor level, to begin 17 August 1990. Applications, to be received by 15 April 1989, should be sent to: **Dr. William J. Bell, Chair, Entomology Department, Haworth Laboratory, University of Kansas, Lawrence, KS 66045.** Applications should include curriculum vitae, description of research and teaching interests, reprints of published articles, and three letters of recommendation. The University of Kansas is an Equal Opportunity/Affirmative Action Employer.

MATHEMATICAL STATISTICIAN

Laboratory in medical school seeks mathematical statistician to develop mathematical techniques for analysis of brain electrical activity. Candidate should have background in statistical analysis of time series. Please send curriculum vitae to: **Box 35, SCIENCE.**

MEMBRANE TRANSPORT

A **POSTDOCTORAL POSITION** is available immediately for an individual interested in pursuing studies on the structure and mechanism of ion-translocating ATPases. The ATPase in the plasma membrane of *Neurospora* is an electrogenic proton pump that operates via a phosphoryl-enzyme intermediate identical to those of the animal cell transport ATPases. Research will involve investigation of the biochemistry of this ATPase with the goal of elucidating its molecular mechanism. Send curriculum vitae to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7365.** Equal Opportunity Employer.

An M.D. trained in electrophysiology of vision and psychophysics of vision and their application to the study of diseases of the eye and visual system. Applicants should have at least 4 years of postdoctoral training/experience. This is a permanent position at the GS-13 level and the salary range is \$50,137 to \$62,233 per annum. Applicants should send curriculum vitae and bibliography to:

**MDDEED, Order Number 7072428
1100 North Eutaw Street, Room 212
Baltimore, MD 21201**

MOLECULAR BIOLOGIST: Roger Williams General Hospital seeks a Ph.D. in molecular biology who has demonstrated skills in conducting gene-regulation research in one of the following areas: growth factors, extracellular matrix, GI, or the liver. Candidates must qualify for a position on the faculty of Brown University as Assistant Professor of Medicine (Research). Requirements include expertise in areas such as gene cloning, sequencing, DNA-protein interactions, and PCR. The successful candidate will be expected to collaborate with other basic science research faculty. Please send curriculum vitae and a one-page statement of research interests by 24 April 1989 to: **Dr. Mark A. Zern, Chairman, Search Committee, Department of Medicine, Roger Williams General Hospital, 825 Chalkstone Avenue, Providence, RI 02908.** Roger Williams General Hospital is an Equal Employment Opportunity/Affirmative Action Employer and actively solicits applications from minority and protected groups.

Research Investigators

The Squibb Institute for Medical Research is an internationally recognized leader in the research & development of innovative pharmaceuticals. We are greatly expanding the scope of our research programs and currently have several exceptional opportunities available for qualified Ph.D.'s.

MACROMOLECULAR CRYSTALLOGRAPHY

This recently established department is conducting research to understand mechanisms of molecular recognition. Initial studies will concentrate on antibody-antigen complexes with significant opportunity for self-directed study of other macromolecules. Requires a Ph.D. in Biochemistry, Chemistry or related discipline and a minimum of 2 years post-doctoral experience and a record of productivity in macromolecular crystallography. (Two positions available).

CELL BIOLOGY

The principal focus of this department is to gain a basic understanding of the pathophysiological mechanism involved in the initiation and progression of atherosclerosis. There are two positions available.

GENE REGULATION: You will be responsible for running a basic research laboratory devoted to investigating the regulation of gene expression at both the transcriptional and translational levels. There will also be research into the coordinate regulation of multigene metabolic pathways. Requires Ph.D. in Molecular Biology or related discipline and a minimum of 2 years post-doctoral experience in the molecular biology of gene regulation. Experience with homologous recombination in eukaryotic cells would be useful.

PROTEIN SYNTHESIS AND SECRETIONS: You will be responsible for running a basic research laboratory devoted to investigating the intracellular synthesis of proteins, and their processing, intracellular transport, and secretion. A major emphasis will be placed on the understanding of the assembly of macromolecular lipoprotein complexes in the endoplasmic reticulum and the intracellular transport of these complexes. Requires a Ph.D. in Cell Biology or related discipline and a minimum of 2 years post-doctoral experience in the cellular mechanisms of synthesis and secretion of proteins in higher eukaryotic systems.

For confidential consideration, please submit your resume to: **The Squibb Institute For Medical Research, Human Resource Department 146, P.O. Box 4000, Princeton, NJ 08543.** An equal opportunity employer.



RESEARCH SCIENTISTS MAMMALIAN CELL GENE EXPRESSION

Amgen, an industry leader in applied biotechnology, has an immediate need for 2 Research Scientists to contribute to our research programs in mammalian cell gene expression.

RESEARCH SCIENTIST CELLULAR PHYSIOLOGY

Dept. #347

This position requires a Ph.D. in mammalian cellular physiology and/or somatic cell genetics as well as a minimum of 2 years' postdoctoral experience in growth regulation and differentiation of animal cells. Familiarity with culturing various primary and established cell lines as well as experience in cloning and sorting cells and selecting metabolic and drug resistant mutants are essential. Some understanding and experience in cell culture scale-up are desirable.

RESEARCH SCIENTIST GENE REGULATION

Dept. #348

Qualified candidates for this position will have a Ph.D. and a minimum of 2 years' postdoctoral experience in eukaryotic post-transcriptional gene regulation, including protein processing and secretion. Familiarity with glycosylation pathways and signal transport at the molecular level is essential.

Amgen offers an exciting and challenging research environment as well as an excellent compensation and benefits package including equity offerings. Qualified applicants should send a c.v. including references, in confidence, to:

Recruitment, Specify Dept. #

AMGEN

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CA 91320

Equal Opportunity Employer

AMGEN

HEAD, ENDOTHELIAL CELL RESEARCH

Berlex Laboratories, Inc. is a leader in basic research of endothelial cell function. We currently seek an internationally recognized scientist in endothelial cell biology to join our highly visible team to ensure progress of on-going programs, to initiate new research directions and to be part of future breakthroughs which can be applied to better understanding and novel treatment of atherosclerosis. The successful candidate will have the title of Investigator, the second highest rank in our scientific ladder.

To qualify, your background should include a Ph.D. in cell biology, biochemistry, physiology or molecular biology, at least five (5) years of post-doctoral training and an excellent publication record. Experience with endothelial cell biology is highly desirable.

Berlex Laboratories is part of a global family of companies engaged in the research, development, manufacturing and marketing of chemical-pharmaceutical products in 120 plants and subsidiaries in 140 countries, employing over 25,000 people. Combined sales are in excess of \$2.7 billion.

At Berlex Laboratories, you will be supported, recognized and encouraged to pursue your scientific career and ideas. In addition to the excellent resources and stimulating research environment, the position offers an attractive salary and benefit package. For immediate, confidential consideration, send your CV and salary history to: **Joan Bianchini**, Human Resources Representative, R&D, **BERLEX LABORATORIES, INC.**, 110 East Hanover Avenue, Cedar Knolls, NJ 07927. Equal opportunity employer M/W/H/V.

BERLEX

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Technology Management and Policy Analysis

Battelle, Pacific Northwest Laboratories located in Richland, Washington, is seeking qualified candidates to join its multidisciplinary team of professionals in researching regulatory and policy aspects of technology.

Senior Researcher and Technical Group Leader

Will focus on the application of risk analysis, cost-benefit analysis, policy analysis, and decision analysis to nuclear regulation, environmental regulations, energy conservation and utilization, national security, and international issues.

Desired background for both positions includes an advanced degree in science, engineering, policy analysis or law with industrial and/or governmental experience in technology issues, and strong communication skills. Knowledge of nuclear or other energy technologies is desirable.

To pursue these career options, request a recruiting bulletin or send your resume to: **Anthony F. Gasperino, Employment, Battelle-Pacific Northwest Laboratories, P.O. Box 999, Dept. 096, Richland, WA 99352.** An equal opportunity employer. U.S. citizenship required.



Battelle

Pacific Northwest Laboratories

ASSISTANT/ ASSOCIATE PROFESSORS

AIDS PROGRAM AT THE SALK INSTITUTE

We are initiating a comprehensive research program to study the biology of AIDS. We seek candidates working in the areas of **HIV replication** and **HIV-host** interactions. Our aim is to develop a program that will be interactive with other major areas of research at The Salk Institute which include **Cancer Biology, Receptor Biology, Immunology, Neuroendocrinology, Retrovirology, Developmental Biology** and **Human Genetics**. Interested candidates should apply by **May 15, 1989** by submitting a curriculum vitae, a brief description of future research plans and three references. Send application to: **Dr. Inder M. Verma, AIDS Search Committee, The Salk Institute, P.O. Box 85800, San Diego, CA 92138.**

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1515 BROADWAY
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POSTDOCTORAL TRAINEESHIPS IN MOLECULAR BASIS OF CANCER AT MICHIGAN CANCER FOUNDATION

As part of a continuing commitment to excellence in cancer research, MCF is offering postdoctoral training in the following programs:

BREAST CANCER BIOLOGY: Dr. Sam Brooks
MOLECULAR BIOLOGY: Dr. Judith Christman
CANCER IMMUNOLOGY: Dr. Gloria Heppner
CARCINOGENESIS: Dr. Charles King
METASTASIS: Dr. Avraham Raz
CELL TRANSFORMATION: Dr. Jose Russo
GENETICS: Dr. Sandra Wolman

Applicants will be selected on potential for achievement in cancer research. Previous training in molecular biology preferred. Salaries are \$22,000-\$24,000 depending upon experience.

Submit CV, summary of previous research and statement of areas of current interest along with names of three references to:

Ms. Judith Jenkins
 Michigan Cancer Foundation
 110 E. Warren Avenue
 Detroit, Michigan 48201



An Affirmative Action Equal Opportunity Employer.

DIRECTOR

MOLECULAR GENETICS DIVISION

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

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

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

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

Equal Opportunity Employer



Australian Research Council

QUEEN ELIZABETH II FELLOWSHIPS

The Australian Government has established the Queen Elizabeth II Fellowships to encourage research by young scientists of exceptional promise and proven capacity for original work. Under this Scheme, 15 awards will be made annually. Fellowships may be taken up in industry, universities, colleges of advanced education or government research organisations in Australia and are normally for three years. Tenure of the Fellowships expected to commence within nine months of the announcement of the award.

Qualifications

Fellowships will be awarded to persons holding a PhD or equivalent qualifications, or equivalent research or professional experience. The decisions regarding equivalent qualifications will be made on a case by case basis. Recommendations for the award of Fellowships will be made to the Minister for Employment, Education and Training by the Australian Research Council. Fellowships will in general be restricted to applicants who are not more than 30 years of age when applications close, but consideration will be given to older people with less than five years post doctoral experience who have had an interrupted or late start to their academic career.

Eligibility

Fellowships will be awarded on merit to suitably qualified persons.

Salary

\$31,143 (Australian) per annum increased to **\$33 738** per annum at age 28 years.

Travel Expenses

Necessary travel expenses are payable.

Research Support Grants

An additional supporting grant of up to \$3 000 per annum to help cover research costs is available.

Applications

Persons interested in applying for the above Fellowships should obtain application forms and a statement of the Conditions of award from:

Director
Research Fellowships
Research Policy and Grants Branch
Department of Employment Education
and Training
GPO Box 9880
CANBERRA ACT 2601 Australia

The next round of fellowships will be announced in October 1989. Applications received after the closing date of 14 April 1989 will not be considered.

POSITIONS OPEN

MOLECULAR AND CELLULAR BIOPHYSICS CORNELL UNIVERSITY POSTDOCTORAL RESEARCH ASSOCIATE

Research in cellular biophysics and molecular cell biology, particularly on cell surface receptor dynamics and transmembrane signalling mechanisms utilizing the facilities of our Development Resource for Biophysical Imaging and Optoelectronics. Current group interests include F_c receptors, lipoprotein receptors, intramembrane receptor interactions, conformational transformations and mechanoceptor mechanisms. The position includes some service as a cell biological and biochemical consultant for the Resource, and collaboration with its multidisciplinary users and collaborators and its largely biophysical staff. For measurements on cells in culture available technologies include the latest developments in quantitative electro-optical and confocal microscopic image acquisition, digital image analysis, picometer sensitivity interferometry, fluorescence photolysis and photobleaching photochemistry, and fluorescent photochemical indicators of cellular electrochemistry. Supporting facilities for tissue and cell culture, biotechnology, molecular biology, analytical biochemistry and physical and computer services are available.

Position appropriate for biophysical chemist, molecular cell biologist, cellular biophysicist or biochemist with background capability for interdisciplinary research and motivation to learn biophysical technologies.

Send résumé, statement of research interests, names of three referees or letters of recommendation to: **Professor Watt W. Webb, Cornell University, Applied Physics, Clark Hall, Ithaca, NY 14853-2501.** *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR IMMUNOLOGIST SAN DIEGO STATE UNIVERSITY

The Department of Biology invites applications for a tenure-track position at the assistant, associate, or full professor level in molecular immunology. Applicants must hold a Ph.D. or equivalent degree and have postdoctoral experience. We seek candidates with research interests in the molecular biology of the immune system with preference for studies involving immune system-HIV interactions. Teaching responsibilities will be at the undergraduate and graduate levels in the area of expertise. Applications, including curriculum vitae, brief description of research interests, and the names and addresses of three professional references should be sent by 5 April 1989 to: **Molecular Immunologist Search Committee, Department of Biology, San Diego State University, San Diego, CA 92182.** *Applications from women, ethnic minorities, and disabled individuals are especially encouraged. SDSU is an Affirmative Action/Equal Opportunity Employer.*

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

PLANT ECOLOGIST (TERRESTRIAL). Assistant professor. Tenure-track. Ph.D. required. Teach biology and wildlife courses. Experience in eastern deciduous and tropical forest systems desired. Participation in developing International Institute for Renewable Resources (emphasis southern Africa/Central America) desired. Telephone inquiries to **Dr. Wayne A. Yoder, 301-689-4177.** Subject to final funding approval by Legislature of the State of Maryland. Salary commensurate with experience. Send letter of interest, curriculum vitae, transcripts and names, addresses and telephone numbers of at least three professional references, for contact (letters of recommendation desired) by 31 March 1989, to: **Mr. C. Douglas Schmidt, Director of Personnel Services, Frostburg State University, Frostburg, MD 21532.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

MULTIDISCIPLINARY MODELER

The Department of Oceanography at Texas A&M University in College Station, Texas, is seeking a multidisciplinary modeler for a tenure-track, assistant professor position, available 1 September 1989. Emphasis will be placed on potential contributions that the candidate can make to ongoing interdisciplinary efforts in the dynamics of ecosystems. Present studies in the Gulf of Mexico emphasize the coupling between physical processes, marine food chains and the cycling of organic matter.

The Department of Oceanography is in the College of Geosciences and includes 30 full-time faculty, a research and support staff of 85 and a graduate student body of 92 students. The Department's graduate education program is composed of Sections in the disciplines of biology, chemistry, physics, and the earth sciences. Interdisciplinary research programs are carried out within a Geochemical and Environmental Research Group (GERG), and the U.S. office of the World Ocean Circulation Experiment (WOCE). Facilities include a VAX computer center, a pool of common use marine sampling gear and chemical analytical facilities and services, a mechanical shop, a marine science working collection (library), a systematics collection of marine organisms, a phytoplankton culture collection, an ROV and the 182-foot R/V Gyre berthed at the Galveston campus. The College of Geosciences includes the Texas Sea Grant Program and the headquarters of the Ocean Drilling Program. Facilities available in the Texas A&M University System include undergraduate marine science education and research facilities at the Galveston campus, an Offshore Technology Center in the College of Engineering and mariculture facilities at the Texas Agricultural Experiment Station in Corpus Christi. Please send letters of inquiry, résumé, statements of research interests, and names of three references to: **Dr. Gilbert T. Rowe, Head, Department of Oceanography, College Station, TX 77843.** *Texas A&M is an Equal Opportunity Employer.*

NEUROSCIENCE FACULTY POSITIONS VANDERBILT UNIVERSITY MEDICAL CENTER

The Department of Molecular Physiology and Biophysics solicits applications for two tenure-track faculty positions in neuroscience, one as **ASSISTANT** and one as **ASSOCIATE PROFESSOR**. Preference for one position will be given to an individual who uses electrophysiological techniques to study molecular properties and regulation of ion channels. The research focus of the second position is open, but for both positions the ability to interface and interact with current departmental strengths in regulation of gene expression, intracellular signalling mechanisms, membrane biophysics, and metabolic regulation will be important. Applications (curriculum vitae and three letters of recommendation) or requests for information should be directed to: **Neuroscience Search Committee, Department of Molecular Physiology and Biophysics, Vanderbilt University Medical Center, Nashville, TN 37232-0615.** *Equal Opportunity/Affirmative Action Employer.*

U.S. ARMS CONTROL AND DISARMAMENT AGENCY PHYSICAL SCIENTIST, GS-13/14 \$41,599 to \$63,172

The U.S. Arms Control and Disarmament Agency is seeking a physical scientist at the GS-13/14 level for its Verification Division to serve as a staff specialist and expert in conducting important technical analysis relating to verification aspects of arms control treaties. The successful candidate for this position should combine a strong scientific background with an interest in foreign policy applications especially in arms control. This person will assume the role of verification staff expert and will provide technical and scientific analysis, support, and representation to the various complex verification regimes which have emerged as a result of the INF Treaty. Ideally, applicants will combine an understanding of scientific and engineering principles and of political decision-making, especially in the area of arms control. U.S. citizenship and Top Secret level security clearance by ACDA are required before entry on duty. Applicants should contact: **Mr. Wiles 202-647-2034** for a vacancy announcement and submit form SF-171 before 24 March 1989.

POSITIONS OPEN

PLANT GENETICIST

Skidmore College invites applications for a 1-year, full-time faculty position at the assistant professor rank. The successful candidate will be expected to teach plant biology (in both fall and spring terms), genetics, plant physiology or some other, upper-level plant course, and guide students in plant-related senior research projects. Applicants should have an earned Ph.D. Send curriculum vitae, graduate and undergraduate transcripts, and three letters of recommendation by 30 March 1989 to:

**Elaine Rubenstein, Chair
Department of Biology
Skidmore College
Saratoga Springs, NY 12866**

An Affirmative Action/Equal Opportunity Employer M/F.

PLANT-MICROBE MOLECULAR BIOLOGISTS

The Department of Microbiology at the University of Vermont is continuing to expand its research base in molecular biology. Tenure-track positions at the assistant and/or associate professor level are available in areas of molecular microbiology relevant to the agricultural sciences. Areas of interest include, but are not limited to, (i) molecular aspects of microbe-plant interactions (including viral, bacterial and fungal pathogens and symbionts) and (ii) molecular biology of photosynthetic microorganisms. Applicants' research programs are expected to address questions that relate to gene structure, expression or function. A Ph.D. and postdoctoral experience are required. The Department will be housed in a new Microbiology Center currently under construction. Start-up funds and interim renovated space are available. Faculty members hold appointments in both the College of Agriculture and Life Sciences and the College of Medicine. The Department's primary emphasis is on research; teaching responsibilities are to undergraduate, graduate and medical students.

The University of Vermont enrolls approximately 10,000 students and is ranked among the top "Public Ivies" for its academic excellence and agreeable atmosphere. Scenically located near the Green Mountains and on the shores of Lake Champlain, Burlington offers excellent cultural and recreational opportunities as well as proximity to Montreal and Boston.

Send nominations and applications with curriculum vitae, present and future research plans, and at least three letters of reference to:

**Search Committee
Department of Microbiology, Given Building
University of Vermont
Burlington, VT 05405**

Review of applications will begin immediately, and continue until the positions are filled. *An Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.*

PLANT PHYSIOLOGIST. Position search reopened. Butler University is seeking to fill a tenure-track position at the assistant professor level to begin fall 1989. Butler emphasizes liberal education for undergraduates. Candidates should be broadly trained biologists with teaching and research interests in plant cellular or molecular physiology. Teaching responsibilities will include participation in introductory biology and plant physiology as well as supervising undergraduate research projects. A Ph.D. is required. Send curriculum vitae, three letters of recommendation, and statements of teaching strategies and research interests by 31 March 1989 to: **James L. Shellhaas, Department of Biological Sciences, Butler University, Indianapolis, IN 46208.** *Butler University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION—PROTEIN BIOCHEMISTRY. Available in 1989 to study molecular interactions of peptide toxins with voltage-dependent ion channels and related proteins. A novel saxitoxin-binding protein is waiting to be cloned. A new class of scorpion peptides is being developed as probes of K-channels. Excellent HPLC and sequencing facilities; single-channel analysis. Recent Ph.D.'s with experience in biochemistry or molecular biology are invited to send curriculum vitae and references to: **Dr. Edward Moczydlowski, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510.** *An Equal Opportunity Employer.*

ENDOWED PROFESSORSHIP IN MOLECULAR GENETICS

The University of Cincinnati and the State of Ohio have created an endowed professorship in the area of Molecular Genetics. This professorship, named the Ohio Eminent Scholar, is designed to add an outstanding scientist to the newly formed Department of Molecular Genetics, Biochemistry and Microbiology in the College of Medicine. Areas of interest include immunology, differentiation and development and human genetics. The department has major research programs including the recent award of a Program of Excellence in Molecular Biology from the Heart, Lung and Blood Institute of NIH. The Eminent Scholar will fulfill a pivotal role in expanding strength and interactions in the College. The University of Cincinnati is a comprehensive university in the state system. Curriculum vitae should be sent to:

Dr. Jerry B Lingrel
Department of Molecular Genetics,
Biochemistry & Microbiology
University of Cincinnati
College of Medicine
Cincinnati, Ohio 45267-0524

Affirmative Action/Equal Opportunity Employer

Molecular Geneticist

Lawrence Livermore National Laboratory, located in the San Francisco Bay Area, is seeking applicants for a career staff position in the Biomedical Sciences Division. A multidisciplinary project in cytogenetic and molecular biology of somatic cell mutations in humans and cultured human cell has an opening for a senior scientist. Laboratory research and supervision of a research group will be expected.

PhD with an effective background in molecular genetics and expertise in molecular analysis of gene expression in mammalian systems is required. Expertise in mapping the relation between physical and recombinatorial maps also is highly desirable. Ability to work in a team environment with engineers and physicists is essential.

Send curriculum vitae to **Earl G. Morrell, Personnel Operations Division, Lawrence Livermore National Laboratory, P.O. Box 808, L-725, Dept. KSC3A902B, Livermore, CA 94550.** An Equal Opportunity Employer.

SCIENTISTS

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is **Carter Wallace** and you. As the expansion of our Diagnostic Research & Development group continues at our East Windsor, NJ facility, we are looking for qualified Scientists at all levels to conduct basic and applied research leading to the development of rapid, in vitro diagnostic tests.

We need individuals with strong backgrounds in Microbiology, Biochemistry, Molecular Biology or Immunochemistry, and who have hands on experience in Antigen Purification, Protein Chemistry, HPLC, ELISA Methodologies, and/or Conjugate Preparation. You will be provided opportunities to work independently as well as to be a team player in product design and development. Your creativity, enthusiasm, and desire to be the best in your field will allow you to make significant contributions to the industry.

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To determine if you and **Carter Wallace** create the formula for mutual success, please send your resume or CV in confidence to:

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Personnel Manager

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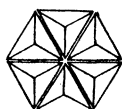
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CNS Postdoctoral Fellow Behavioral Pharmacology

Bristol-Myers Pharmaceutical Research and Development Division is seeking a Postdoctoral Fellow trained in animal behavioral paradigms designed to assess in vivo preservation of function after CNS insult or trauma to join its Neurodegenerative Diseases Program. Previous experience using relevant behavioral paradigms is required. Experience using techniques such as the Morris Water Maze, computer controlled operant systems (SKED, SAS) and species such as rat, mouse, gerbil, and pigeon would be assets. Responsibilities will include implementing a plan of research utilizing behavioral techniques to demonstrate drug potential in CNS recovery, protection or cognitive enhancement.

The candidate must have completed or be near completion of the R.H.D. or equivalent degree in the Neurosciences, Psychology or a related discipline, and may also have postdoctoral training. The successful candidate will be eager to collaborate with other CNS laboratories and colleagues in the Cardiovascular Therapeutic Area. Publication of results of the studies completed during the postdoctoral tenure will be encouraged.

The appointment will be for one year with possible renewal for a second year. All funding, including support, salary and benefits, is provided by **Bristol-Myers Company, Pharmaceutical Research and Development Division, Dept. SS12/SCZ, P.O. Box 5100, Wallingford, CT 06492.** An Equal Opportunity Employer.



Bristol-Myers Company

Pharmaceutical Research & Development Division

POSITIONS OPEN

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

POSTDOCTORAL POSITION available immediately to study developmentally regulated penicillin-binding proteins in *Bacillus subtilis*. Experience in molecular biology desired. Send curriculum vitae and names of three references to: **Dr. C. Buchanan, Department of Biological Sciences, Southern Methodist University, Dallas, TX 75275.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately in group investigating the biogenesis and structure of membranes. Ongoing studies involve (i) the isolation of recently discovered enzymes of phospholipid metabolism, (ii) the localization of these enzymes within cells, (iii) the delineation of metabolic pathways to which these enzymes contribute, and (iv) the isolation and characterization of recently discovered membrane proteins that contain covalently bound isoprene groups. Send curriculum vitae, three letters of recommendation, and summary of career goals to: **Dr. John A. Glomset, Howard Hughes Medical Institute, SL-15, University of Washington, Seattle, WA 98195.** *The Howard Hughes Medical Institute is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION to study mechanisms of tinnitus. Applicant should have Ph.D. with experience in single cell recording from auditory pathways, histology, pharmacology, and computers. Send curriculum vitae and names of three references to: **Dr. Pawel J. Jastreboff, Department of Surgery, Yale University School of Medicine, P.O. Box 3333, 333 Cedar Street, New Haven, CT 06510.** *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

Available immediately for person interested in studying gene structure, regulation or evolution in chromophytic and rhodophytic algae. Applicants should submit curriculum vitae, description of relevant experience, and three letters of reference to: **Dr. R. A. Cattolico, Botany, KB-15, University of Washington, Seattle, WA 98195.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available immediately for biochemists, biophysicists and molecular biologists to study (i) the mechanism and regulation of gene expression in both prokaryotic and eukaryotic systems, and (ii) the nucleic acid-protein interactions. Send résumé and three letters of recommendation to: **Professor Cheng-Wen Wu, Department of Pharmacological Sciences, SUNY Stony Brook, Stony Brook, NY 11794-8651.** *SUNY Stony Brook is an Affirmative Action Equal Opportunity Educator and Employer. AK34.*

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

POSITIONS OPEN

POSTDOCTORAL POSITION—Molecular biology and biochemistry of hormone receptors. Send résumé and request that three recommendations be sent to: **Dr. Gerald Litwack, Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS—Available immediately to investigate the biochemistry, pharmacology and developmental expression of sensitivity of sarcoplasmic reticulum calcium channels. Ph.D. in biological science and experience with biochemical, molecular and/or electrophysiological techniques are necessary. Send curriculum vitae and three letters of reference to: **John L. Sutko, Ph.D., Department of Pharmacology, University of Nevada School of Medicine, Reno, NV 89557.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. The Protein Data Bank has an opening available in spring 1989 for a postdoctoral research associate to participate in an ongoing research project designed to develop strategies for identifying regions in deposited structures that may be subject to error, and to study the effects of environmental factors such as crystal packing on the average geometries of proteins in the solid state. Excellent dedicated computational facilities are available for this work, including a high-performance graphics workstation. It would be useful for applicants to have knowledge of refinement protocols currently employed in crystallographic studies of both large and small molecules. Applicants with a background in applied mathematics and a desire to learn about computational aspects of protein crystallography will be considered. Proficiency in FORTRAN programming is required. The initial appointment will be for 1 year, with extension possible. Applicants should send curriculum vitae and names of three references to: **Dr. Enrique E. Abola, Chemistry Department, Brookhaven National Laboratory, Associated Universities, Inc., Long Island, New York, NY 11973.** *Equal Opportunity Employer M/F.*

Biology

Postdoctoral Scientist Molecular Genetics/Biology

The Department of Cell Biology at Smith Kline and French Laboratories, located in suburban Philadelphia in a new state-of-the-art research complex, has an immediate opening for a postdoctoral scientist to join a research team investigating the role of polypeptide growth factors and their receptors as therapeutic agents.

Responsibilities will include cloning, expression and purification of epidermal growth factor (EGF) receptor. Candidates are required to have a Ph.D. in Molecular Genetics/Biology with relevant experience in random and site directed mutagenesis, cloning and expression of biologically active proteins and good communication and publication record. Experience in polypeptide growth factors is preferred but not essential.

We consider postdoctoral studies to be of major importance in a scientist's career and encourage publication of findings in leading journals and a full interaction with the scientific community. Our environment is designed to foster creative research and to promote personal and professional growth. Our postdoctoral appointments are normally for a period of two years.

We offer an excellent compensation, benefits and relocation package. For confidential consideration send your curriculum vitae to Ms. Barbara J. Schwartz, Employment Administrator, S0087, Smith Kline & French Laboratories, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an equal opportunity employer. M/F/H/V.

SK&F
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RESEARCH SCIENTIST PHARMACOLOGY

Amgen is a dynamic, growing organization producing human therapeutic products through recombinant DNA technology. Our leadership in the development of Erythropoietin and Granulocyte Colony Stimulating Factor has placed us at the leading edge of the biotechnology industry. Our continued growth has created an immediate opportunity for a Research Scientist in our Pharmacology Group.

Applicants must possess a Ph.D. in Pharmacology or a related discipline with a strong background in whole animal research and experience in one or more of the following areas: inflammation, wound repair, immunopharmacology, hematology and oncology. Proficiency in statistical analysis of data is essential, and postdoctoral training is highly desirable.

Amgen offers a competitive compensation and benefits package, including equity participation, as well as a challenging and stimulating research environment. Our location one hour northwest of Los Angeles offers the best in Southern California living. Qualified applicants should direct a resume and a list of 3 references, in confidence, to:

**Recruitment, Dept. #372
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320**

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AMGEN

Biochemist Virology

Greenford, England

We are currently looking for an experienced Biochemist to join our expanding Virology Department, currently based at Greenford, but moving to our new research headquarters in Stevenage in a few years time.

You will lead a small group studying the mechanism of action of novel anti-herpes agents and developing novel anti-herpes targets.

You should have substantial experience in protein biochemistry (including a PhD or equivalent) and have specialised in enzyme kinetics, protein purification

and related analytical methods.

In addition to an excellent salary and bonus scheme other benefits will include 25 days' holiday, subsidised sports, social and restaurant facilities as well as full assistance with relocation where appropriate.

Please send a c.v. or phone for an application form to Ted Smith, Senior Personnel Officer, Glaxo Group Research, Greenford Road, Greenford, UB6 0HE, England. Telephone 01-422 3434, ext. 2934, quoting reference number G89035.

Glaxo Group Research



For over 100 years, Abbott Laboratories has provided quality healthcare products and services worldwide. Now approaching \$5 billion in sales, our ongoing expansion provides opportunity for qualified professionals in the following areas.

DRUG DELIVERY

Bioanalytical Chemist

Responsibilities include development, validation and supervision of novel, highly sensitive and selective analytical methods for drugs and metabolites in biological matrices. We require experience in bioanalytical methods development, functional group derivatization, chemical kinetics, pharmacokinetics, statistics and computer applications. A Ph.D. in Bioanalytical Chemistry and a high level of proficiency in technical writing are required. Job #1

Pharmacokineticist

Responsibilities primarily include the design, data analysis and reporting of animal and clinical pharmacokinetic and biopharmaceutic studies. Selected candidate is also responsible for the supervision, validation and implementation of method development. Sound knowledge of chromatographic techniques, bioanalytical procedures, pharmacokinetics, biopharmaceutics, metabolism, physiology and statistics required. A Ph.D. in Pharmacokinetics, Biopharmaceutics, or equivalent with a minimum of 2 years experience is essential. You must have highly proficient writing skills. Computer software familiarity and programming skills are desirable. Job #2

Abbott Laboratories offers a stable, well-managed environment which promotes superior scientific discovery. We also provide excellent compensation with benefits that include profit sharing and stock retirement plans.

Abbott representatives will be at the FASEB meeting in New Orleans, March 20th-23rd.

To arrange an interview, or if you will not be able to attend, send your resume indicating job number interested in to: Patricia Handy, Corporate Placement, Dept. SCI/3-10, Abbott Laboratories, Abbott Park, IL 60064. Abbott is an Affirmative Action Employer.

DRUG DISCOVERY

Ph.D. Renal Pharmacologist/ Physiologist

Cardiovascular Research Division

We seek a senior research pharmacologist with a minimum of 2 years postdoctoral experience to evaluate drug agents in models of acute and chronic renal failure. The selected candidate will possess extensive knowledge of hemodynamics and renal function. A working knowledge of receptor pharmacology is desirable. Job #3

Electrophysiologist

Neuroscience Research Division

Responsibilities include extracellular, intracellular and patch-clamp recording from a variety of preparations. To qualify, the selected candidate will have at least 1-2 years of experience in electrophysiology and have a Master's degree, or a B.S. in Biology or Physiology with experience equivalent to a Master's degree. Job #4



ABBOTT LABORATORIES

POSITIONS OPEN

POSTDOCTORAL POSITION IN MARINE AND ESTUARINE SCIENCES

The University of Maryland Center for Environmental and Estuarine Studies (UMCEES), Horn Point Environmental Laboratories, located on Chesapeake Bay, is seeking to fill a postdoctoral position in any one of a broad spectrum of disciplines. These include: physical oceanography; phytoplankton, zooplankton and bacterioplankton dynamics; ecology of vascular plant communities; nutrient cycling processes; benthic ecology and geochemistry; invertebrate behavior, development and physiology; and seafood technology. The position is available from 1 November 1989, for 1 year with possible renewal for a maximum of 2 years. Send résumé and three letters of reference by 30 April 1989 to: **Dr. W. Michael Kemp, Chairman, Postdoctoral Search Committee, Horn Point Environmental Laboratories, P.O. Box 775, Cambridge, MD 21613.** The University of Maryland is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE.

Research in carcinogenesis of aromatic hydrocarbons and estrogens, with emphasis on the one-electron oxidation mechanism. Biochemical analysis and identification of metabolites and DNA adducts by HPLC, ³²P-postlabeling, and DNA sequencing. Salary: \$19,000. Send résumé to: **Dr. Eleanor G. Rogan, Eppley Cancer Institute, University of Nebraska Medical Center, Omaha, NE 68105.** Affirmative Action/Equal Employment Opportunity Employer.

POSTDOCTORAL RESEARCH POSITION

available in neurobiology to study the neurophysiology and neuropharmacology of single neurons. The studies will involve basic neurophysiological techniques, neurotransmitter receptors, and microinjection methods for transmitter agonists and antagonists. The candidate should be a recent Ph.D. with training and experience in the above referenced fields or in a related area. Please send curriculum vitae and names of three references to: **M. Kalia, M.D., Ph.D., Department of Pharmacology, Jefferson Medical College, Thomas Jefferson University, Room 329 Jefferson Alumni Hall, Philadelphia, PA 19107.** Telephone number: 215-928-7971. Thomas Jefferson University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS CELLULAR AND MOLECULAR NEUROSCIENCE

Two positions (Ph.D. and/or M.D.) are available immediately to study endogenous opioids and receptors in neural cancers and/or developing brain. Position I focuses on protein purification and characterization, and antibody production. Position II involves gene expression of neuropeptides and receptors. This applicant should have experience in recombinant DNA, cloning, and molecular biology. Send curriculum vitae and names of three references to: **Dr. Ian S. Zagon, Department of Anatomy, The Pennsylvania State University College of Medicine, P.O. Box 850, Hershey, PA 17033.** Deadline for receipt of applications is 31 July 1989. An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.

The University of California, San Diego, **POST-GRADUATE RESEARCH BIOCHEMIST/MOLECULAR BIOLOGIST.** The Chemistry Department has a position starting in the winter/spring quarter of 1989 for structure-function studies of transforming growth factors and protein kinases. Candidate must have a Ph.D. and a strong background in molecular or cell biology and biochemistry. Support is available for 2 years. All applications received through 21 April 1989 will be given thorough consideration. Salary commensurate with experience and based upon published University of California pay scales. Candidates should send curriculum vitae and names and addresses of three references to: **Professor Daniel J. Donoghue, Department of Chemistry, B-022, University of California San Diego, La Jolla, CA 92093-0322.**

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

POSITIONS OPEN

POSTDOCTORATE IN POTATO PROCESSING. A 3-year position for a Ph.D. Food Technologist to be filled at the International Potato Center (CIP), Peru. The successful applicant will collaborate with plant breeders to improve potato processing quality, oversee potato processing facilities in Peru, and establish and maintain international scientific links with national potato programs and NGOs interested in potato processing. Applicants should have related experience, proficiency in English, and a desire to work in a multidisciplinary team. Submit curriculum vitae, and statement of professional goals to: **Dr. David Midmore, Physiology Department—CIP, Apartado 5969, Lima, Peru,** to arrive before 15 April 1989.

PROFESSOR AND HEAD DEPARTMENT OF PLANT PATHOLOGY AND MICROBIOLOGY TEXAS A&M UNIVERSITY

Texas A&M University invites nominations and applications for the position of Professor and Head of the Department of Plant Pathology and Microbiology. We seek an individual who is devoted to academic excellence, has a superior record of leadership in current basic plant pathology research, and possesses evidence of administrative ability. The successful candidate will be expected to spearhead research initiatives that integrate molecular plant pathology with existing research programs and to develop new programs that address basic scientific questions. The department head will have responsibility for the state-wide Teaching-Research-Extension programs in plant pathology that are part of the land grant system. The new head will be an accomplished scientist and will be expected to maintain an active research program.

The new head will have the opportunity to recruit new faculty members and can expect substantial support for new resources and facilities. Additionally, he/she will be expected to continue to develop cooperative research among other departments within the College of Agriculture and Life Sciences and departments in other Colleges having Life Science components. Applications and nominations should be received by 1 May 1989. It is desired that the position be filled by 1 September 1989. Interested individuals should submit a letter of intent, their philosophy of the future direction of a department of plant pathology, curriculum vitae, a brief description of research activities, and names and addresses of five references to:

Dr. F. G. Maxwell
Chairman, Search Committee
Professor and Head, Department of Entomology
Texas A&M University
College Station, TX 77843-2475
TAMU is an Equal Opportunity/Affirmative
Action Institution.

RESEARCH ASSOCIATE

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

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

RESEARCH ASSOCIATE. To investigate properties of membrane-associated enzymes. The applicant must have a Ph.D. in biochemistry; three or more years of postdoctoral experience in the areas of protein purification and membrane-protein interactions; and have demonstrated, through content of publications in refereed journals, a practical and theoretical knowledge of enzymology, phospholipid membranes and spectroscopy, especially light scattering and CD. Send curriculum vitae and three letters of recommendation to: **Dr. Gary Nelsestuen, Department of Biochemistry, University of Minnesota, 1479 Gortner Avenue, St. Paul, MN 55108,** and should be received by 31 May 1989. The University of Minnesota is an Equal Opportunity/Affirmative Action Employer and specifically invites and encourages applications from women and minorities.

POSITIONS OPEN

DANA-FARBER CANCER INSTITUTE HARVARD MEDICAL SCHOOL PROFESSOR OF CELLULAR AND MOLECULAR PHYSIOLOGY

Harvard Medical School and the Dana-Farber Cancer Institute are seeking a professor of cellular and molecular physiology in the field of epithelial cell biology with a particular emphasis on the control of growth and differentiated functions in normal and cancer cells. The candidate will be expected to teach cellular and organ physiology to medical students, and to train research fellows and Ph.D. candidates in this field.

Interested parties should send curriculum vitae, bibliography and statement of research interests to:

Karin E. Wetmore
Harvard Medical School, A-302
25 Shattuck Street
Boston, MA 02115

Applications should be submitted by 31 March 1989.

Affirmative Action/Equal Opportunity Employer.

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

RESEARCH ASSOCIATE. To investigate properties of membrane-associated enzymes. The applicant must have a Ph.D. in biochemistry; three or more years of postdoctoral experience in the areas of protein purification and membrane-protein interactions; and have demonstrated, through content of publications in refereed journals, a practical and theoretical knowledge of enzymology, phospholipid membranes and spectroscopy, especially light scattering and CD. Salary: \$29,000 per year. Send curriculum vitae and three letters of recommendation to: **Dick Hewetson No. 9-43, MDTT, 390 North Robert Street, Room 124, St. Paul, MN 55101.**

RESEARCH FELLOW—Utilizing clinical experience in the treatment of bone diseases, seeking research fellow to develop therapeutic agents for the treatment and/or prevention of osteoporosis and other bone disorders. Develop animal models for assaying bone growth stimulators. Histological and electronmicroscopic examination as well as biochemical and certain mechanical analysis will be required for the evaluation of bone samples. Development of in vitro models for screening drug candidates for osteogenesis. Cellular and molecular biological methods are utilized for evaluation. Candidate must possess knowledge of the mechanism of action of drug candidates and mastery of in vivo and in vitro techniques, including molecular, cellular and animal/human biology, with special emphasis on the skeletal system. Relevant publications necessary. Required are medical degree and 2 years of research experience in combination of bone, molecular and cellular biology, and osteoporosis and 2 years of orthopedic clinical experience. Hours 8:30 a.m. to 5:00 p.m.; 40-hour week; salary \$4,800 per month. Send résumé to: **Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, Order No. 4241373.** An Equal Opportunity/Affirmative Action Employer.



WHEN 1,000 MINDS GET TOGETHER THE RESULTS ARE AMAZING.

One mind working alone rarely accomplishes as much as a team of top minds working together.

The Cytomegalovirus test, shown in the photo, was created by such a team from Syva Company. This amazing test that can deliver clear, reliable results in only 48 hours was created through the combined efforts of 1,000 employees of a leader in medical diagnostics.

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We offer you the same opportunity. You can further our advanced research in diagnostics — research that has yielded nearly 200 patents and over 22 laboratory-based assays.

You can put your talent to work in research teams or management, assisting us in developing our next generation of tests.

At the same time, you'll enjoy the benefits of a company that encourages staff members to expand their expertise through publication, professional seminars and a policy of progressive responsibility.

Come to Syva, and be part of our innovative team. You'll be amazed by the results. For information about available positions, contact Denise Pringle at: Syva, Professional Staffing, Dept. SC9, P.O. Box 10058, Palo Alto, CA 94303. We're an equal opportunity employer.



Postdoctoral Researchers

Genentech, Inc., a leader in the field of biotechnology, has added a dimension to our existing postdoctoral training program. This new program, administered by Dr. David Botstein, features opportunities for research and training across the whole spectrum of Research and Development. A number of positions is currently available in this new program.

Genentech is committed to maintaining a standard of excellence that encourages creativity and provides personal and professional growth. Many postdoctoral alumni have gone on to academic positions at major research universities, or have gone on to research positions in the biotechnology industry.

We expect Genentech Postdoctoral Fellows to conduct independent research in the areas of our scientific interests, publish in the leading scientific journals, attend and present their work at scientific conferences, and maintain close ties with the academic community.

Genentech offers an attractive salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, please send your resume to: Genentech, Inc., Attn: Yvonne Davino, Human Resources Dept. DB, 460 Point San Bruno Blvd., South San Francisco, CA 94080. We actively support Affirmative Action and Equal Opportunity. Women and minorities are encouraged to apply.

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DIRECTOR ANALYTICAL RESEARCH AND DEVELOPMENT

Ross Laboratories, a division of Abbott Laboratories, and the leading producer of infant and adult nutritional products, has a need for a **Director of Analytical Research and Development**.

This assignment is responsible for the management of a large technical staff involved in the development and execution of analytical, biochemical, physical, and microbiological techniques. Qualified candidates will have a Ph.D. (Chemistry preferred) and proven management experience in leading a technical organization. Foods, pharmaceuticals and cosmetics industry experience is most applicable. This is an outstanding opportunity for an individual seeking challenge and responsibility in a highly successful organization.

Ross Laboratories is located in Columbus, Ohio, a rapidly growing Midwestern city providing varied lifestyles at a moderate cost of living. Interested persons should send resume in confidence to: **Management Recruiter**.



ROSS LABORATORIES
Division of Abbott Laboratories, USA
625 CLEVELAND AVENUE
COLUMBUS, OHIO 43216

An Equal Opportunity Employer M/F

ROSS LABORATORIES

DRUG DISCOVERY Neuroscience Research Division

TEAM LEADER—COGNITION

The selected candidate will lead an interdisciplinary research team developing novel drugs for use in the treatment of CNS neurodegenerative disorders including Alzheimer's disease. The qualified candidate will have an extensive background in radioreceptor binding, receptor-effector coupling mechanisms and isolated cell and tissue assays, plus a broad knowledge of the cognition field. Strong evidence of innovative research and leadership skills are essential. We require a Ph.D. in Pharmacology, Neuroscience or Biochemistry with 5-10 years experience, as well as a solid record of scientific accomplishment in the field. Previous experience in drug development and management of a scientific team or leadership of an academic research laboratory are highly desirable. **Reply to job TL.**

NEUROPHARMACOLOGIST— COGNITION

The qualified candidate will be involved in a multidisciplinary research program which develops novel drugs for the treatment of cognitive disorders. You must have experience in radioreceptor binding assays, second messenger systems and *in vitro* cell and tissue assays. A Ph.D. in Pharmacology, Neuroscience or Biochemistry with 2-5 years of industrial or postdoctoral work are required. Communication and supervisory skills are essential. **Reply to job C.**

NEUROPHARMACOLOGIST— PEPTIDES

The qualified scientist will participate in an interdisciplinary research effort to discover novel therapeutic entities based on peptide neurotransmitters. Experience with radioreceptor binding assays, receptor-effector coupling and *in vitro* systems is essential. A Ph.D. in Pharmacology, Physiology, or Biochemistry is required, along with 2-6 years postdoctoral training. Exceptional communication, interpersonal and supervisory abilities are also necessary. Previous work in pharmaceutical drug development is desirable. **Reply to job P.**

Abbott offers an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive suburban area 30 miles north of Chicago.

*Abbott representatives will
be at the FASEB meeting in
New Orleans, March 20th-23rd.*

To arrange an interview, or if you will not be able to attend, send your resume indicating job interested in to: Patricia Handy, Corporate Placement, Dept. SCI/3-10, Abbott Laboratories, Abbott Park, IL 60064. Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



Postdoctoral Research Associates

The Agricultural Research Service as the principal scientific research agency of USDA, conducts research to solve technical food and agricultural problems of broad scope and high national priority. The agency's work is carried out under six specific research objectives--conservation of national resources, crop production and protection, animal production and protection, human nutrition, postharvest research, and integration of management systems. Overall aim of ARS research is to ensure the continuation of an adequate supply of food and fiber of high quality to meet the needs of American people and for export.

ARS is currently recruiting for 100 postdoctoral positions throughout the country. Opportunities exist in many research areas, including:

- Human Nutrition
- Genetics
- Immunology
- Virology
- Biochemistry
- Chemistry
- Microbiology
- Animal Science
- Entomology
- Plant Physiology
- Plant Pathology
- Agronomy
- Soil Science
- Engineering



Successful candidates will be hired under excepted appointments up to 2 years in duration. Salary for these GS-11/12 positions (\$28,852 to \$34,580) will be based on qualifications and experience.

For written descriptions of positions and application procedures, write to:

N.L. Bakes
Personnel Division (S)
USDA/ARS/BARC-W
Bldg. 003, Room 101
Beltsville, MD 20705

or call:

Ms. Kim Carpenter
(301) 344-2796

ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

RESEARCH ASSOCIATE CELL CULTURE BIOASSAY

Amgen, an emerging leader in the development of human pharmaceutical products through applied biotechnology, has an immediate opportunity for a BS or MS level scientist to join an innovative group providing cell culture and assay support for on-going research efforts. Responsibilities will include maintenance of a variety of tissue culture lines and performance of *in-vitro* bioassays related to our research efforts in hematopoiesis, wound healing and other project areas.

Qualified candidates for this position must have a BS or MS in Cell Biology or a related discipline and a minimum of two years' experience in the handling of suspension and adherent cell lines. Familiarity with hematopoietic cell proliferation assays is highly desirable.

Amgen offers an excellent compensation and benefits package as well as the unique opportunity to contribute to challenging research programs on the cutting edge of biotechnology. If you have the necessary qualifications and would like to be a part of an organization that maintains a commitment to the development of significant health care products through scientific excellence, send a resume, in confidence, to:

AMGEN, INC.
Recruitment, Dept. #386
1900 Oak Terrace Lane
Thousand Oaks
CA 91320

Equal
Opportunity
Employer

AMGEN

Research Assistant/ Associate Molecular Cell Biology

Genentech, Inc., a leader in the field of biotechnology, has a Research Assistant/Associate position available in our Medicinal and Biomolecular Chemistry Department.

The individual will be involved in the study of structure function relations of cell surface receptors with their ligands, using cell and molecular biology, as well as biochemical approaches. Requirements include a BS/MS in Biochemistry/Molecular Biology or related field, with a minimum of 2 years' experience in cell and molecular biology techniques.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, please send your resume to: Yvonne Davino, Human Resources Dept. SB, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer. Women and minorities are encouraged to apply.

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POSITIONS OPEN

RESEARCH ASSOCIATE POSITION—Penn State: Position available to study pituitary cell structure and function; prolactin and estrogen involvement in immune modulation. Candidate must have experience in ELISA, intracellular and cell surface immunofluorescence, bioassays, lymphokine receptor assays and gel electrophoresis. Ph.D. in immunology and knowledge of endocrinology required. A minimum of 2 years of postdoctoral experience required. Salary range: \$22,000 to \$26,000 per year. Standard university benefits package. To apply, send curriculum vitae and names of three references by 24 March 1989, to: **Dr. W. C. Hymer, 401 Althouse, Molecular and Cell Biology, The Pennsylvania State University, University Park, PA 16802.** An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.

RESEARCH INSTRUCTOR—Perform research on the efficacy of new types of human vaccines for the prevention of meningitis and pneumonia in children and immunodeficient individuals. Investigations of the immune response in various body fluids. Studies of the antibody producing cells and the role of various factors derived from white blood cells. Long-term tissue culture, specific immunoassays, and immunofluorescence microscopy are the main methods to be applied in the studies. Will teach postdoctoral fellows, graduate students, and laboratory personnel. M.D. or Ph.D., with 2 years of postdoctoral research studies involving human subjects. Instructor responsibility requires a working knowledge in mucosal immunology. Salary: \$22,500 per year. Send résumé to: **George E. Johns, Job order #AL552803, Alabama State Employment Service, 1816 8th Avenue North, Birmingham, AL 35203.**

RESEARCH POSITION—The Monell Chemical Senses Center seeks individuals with a background in biochemistry/physiology for multidisciplinary studies of the chemical senses, nutrition, and appetite. Research areas include basic mechanisms and clinical aspects of diet selection, food and fluid intake, learned flavor preferences, and cephalic phase digestive reflexes. Appointments may be made at the postdoctoral or assistant member level, depending on experience and qualifications. Send curriculum vitae, names of three references, and statement of research interests and objectives to: **Director, Monell Chemical Senses Center, 3500 Market Street, Philadelphia, PA 19104.**

RISK ASSESSMENT IN SUPERFUND

The Office of Emergency and Remedial Response (Superfund), U.S. Environmental Protection Agency (EPA), Washington, D.C., invites professionals currently employed in state government, university, or nonprofit organization and experienced in health- or environmental risk assessment to apply for temporary employment in Washington, D.C. Opportunity to develop risk assessment guidance for Superfund, provide technical support and analysis to improve site-specific risk assessments, develop quality assurance program, set national research and testing agenda. Employment under Intergovernmental Personnel Act for 6 months to 2 years; experienced gained benefits home institution upon return. Reply to: **David A. Bennett, Chief, Toxics Integration Branch (OS-230), U.S. EPA, Washington, DC 20460; telephone: 202-475-9486.**

Beth Israel Hospital—Harvard Medical School solicits applications for a **STAFF RESEARCH POSITION** in the Department of Pathology in the field of blood clotting and vascular wall biology. Candidates should be well-trained cell biologists with an M.D. or Ph.D. degree. They should have experience in vascular organ culture and expertise in the molecular biology and cloning of plasma clotting proteins. Evidence of substantial research productivity is required. The individual selected will need to obtain independent research funding. Harvard Medical School appointment at the level of instructor or assistant professor. Please send curriculum vitae and the names of three references to: **Dr. Harold F. Dvorak, Department of Pathology, Beth Israel Hospital, 330 Brookline Avenue, Boston, MA 02215.** We are an Equal Opportunity Employer.

POSITIONS OPEN

DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

RESEARCH MOLECULAR BIOLOGIST/MICROBIOLOGIST, Respiratory Disease Research, National Animal Disease Center (NADC), Ames, Iowa.

ARS is seeking a scientist to lead a team research project and conduct independent research on diseases of the respiratory tract of cattle. Objectives are to determine the pathogenesis of *Pasteurella haemolytica* in the disease process and to develop methods to prevent colonization of the nasal cavity and subsequent pneumonia.

The candidate must have knowledge of infectious agents affecting the bovine respiratory tract, of the bovine immune system; of immunological techniques, and skills to lead a multidisciplinary research team and to conduct independent research.

Ph.D. is desirable. Must be U.S. citizen. Salary is commensurate with experience (\$41,121 to \$74,303). For information on the position, contact: **Dr. Randall C. Cutlip, NADC, on 515-239-8316.** For information on application procedures/forms contact **Janie E. Carr on 301-344-4569.** Applications in response to this should be marked 9N013.

Applications must be received by 2 June 1989.

Mailing address:

**USDA, Agricultural Research Service
Personnel Operations Branch
Northern Section
Building 419, BARC-East
Beltsville, MD 20705**
An Equal Opportunity Employer.

STAFF SCIENTIST

Ph.D. in biological science with experience in cloning and expression in heterologous microbial and mammalian systems needed for exciting new technology developed at Cal Tech. Should have broad interests in genetic engineering applications. Excellent communication skills and problem-solving capabilities are essential. This position offers ample opportunity for growth, travel and interaction with other biotechnology laboratories. Candidates should contact: **Neil L. Diver, Exogene Corporation, 2585 Nina Street, Pasadena, CA 91107. Telephone: 818-577-8989.**

SUPERVISORY NEUROSCIENTIST GM-14

To serve as Research Team Leader, Neurotoxicology Branch, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland. Responsible for supervising, managing and conducting research on either (i) the molecular mechanisms of action of neurotoxic threat agents or (ii) the effects of neurotoxic agents on the integration of neural events, system function and behavior. Research is focused on biological toxins (e.g., saxitoxin, brevetoxin, etc.), and the development of concepts of prophylaxis and therapy. Qualified applicants must have established expertise in electrophysiology, membrane biophysics, neuropharmacology, integrative neural systems, experimental psychology and/or neurotoxicology as indicated by peer-reviewed publications. Demonstrated ability in multidisciplinary research program planning and administration is highly desirable. The ideal candidate will have a Ph.D. in one of the basic animal sciences, physiology, pharmacology, psychology, or a closely related discipline. Salary range is \$48,592 to \$63,172 per annum. U.S. citizenship is required and the applicant must be able to obtain a security clearance. Résumés must be received by 17 April 1989. Send to: **Commander, U.S. Army Aberdeen Proving Ground, Attention: STEAP-CP-RT (Ms. C. Davis), Aberdeen Proving Ground, MD 21005-5001.** Equal Opportunity Employer.

Columbia University/Howard Hughes Medical Institute Protein Chemistry Laboratory has two openings: (i) Amino acid analysis **TECHNICIAN**. B.S. in chemistry or equivalent required. (ii) **PEPTIDE CHEMIST** for peptide synthesis and purification. M.S. or B.S. in chemistry required; experience preferred. Both will assist in DNA synthesis and peptide sequencing. Competitive salary, excellent benefits. Equal Opportunity Employer. Send résumé to: **Box 34, SCIENCE.**

POSITIONS OPEN

SUPERVISORY NEUROSCIENTIST GM-15

To serve as Chief of the Neurotoxicology Branch, Pathophysiology Division, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland. Responsibilities include supervising and managing research on the mechanisms of action of neurotoxic threat agents with particular emphasis on biological toxins (e.g., saxitoxin, brevetoxin, etc.). The goals of these research initiatives are the development of effective medical treatment regimes for threat agents. Qualified applicants should have a background in neurophysiology, neuroanatomy, neuropharmacology, experimental psychology and neurotoxicology as indicated by peer-reviewed publications. Demonstrated ability in multidisciplinary research program planning and administration is highly desirable. The ideal candidate will have a Ph.D. in one of the basic animal sciences, physiology, pharmacology, psychology, or a closely related discipline. Salary range is \$57,158 to \$74,303 per annum. U.S. citizenship is required and the applicant must be able to obtain a security clearance. Résumés must be received by 17 April 1989. Send to: **Commander, U.S. Army Aberdeen Proving Ground, Attention: STEAP-CP-RT (Ms. C. Davis), Aberdeen Proving Ground, MD 21005-5001.** Equal Opportunity Employer.

SUPERVISORY PHARMACOLOGIST OR RESEARCH CHEMIST, GM-14

Supervisory Pharmacologist or Research Chemist, GM-14, to serve as Chief of the Pharmacodynamics Team, Biochemical Pharmacology Branch, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland. Responsible for supervising and managing fundamental research on mechanisms of action of toxic agents, and the development of concepts of prophylaxis and therapy. Qualified applicants must have established expertise in pharmacokinetic modeling, neurotransmitter pharmacology, enzyme kinetics, toxicokinetics or molecular biology as indicated through peer reviewed publications. Demonstrated ability to effectively manage and supervise research in the above areas is highly desirable. Salary range is \$48,592 to \$63,172 per annum. Position requires Bachelor's Degree (or higher) in an appropriate discipline and 3 years of professional experience. Ph.D. desired. U.S. citizenship is required and the applicant must be able to obtain a security clearance. Résumés must be received by 15 April 1989 and sent to: **Commander, U.S. Army Aberdeen Proving Ground Support Activity, Attention: STEAP-PA-CR-D (Ms. Davis), Aberdeen Proving Ground, MD 21005-5001.** Equal Opportunity Employer.

SUPERVISORY PHARMACOLOGIST OR RESEARCH CHEMIST, GM-15

Supervisory Pharmacologist or Research Chemist, GM-15, to serve as Chief of the Biochemical Pharmacology Branch, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland. Responsible for supervising and managing fundamental research on mechanisms of action of toxic agents, and the development of concepts of prophylaxis and therapy. Qualified applicants must have established expertise in biochemical pharmacology as indicated through peer-reviewed publications. Demonstrated ability to efficiently and effectively manage and supervise interdisciplinary research teams is highly desirable. Salary range is \$57,158 to \$74,303 per annum. Position requires Bachelor's Degree (or higher) in an appropriate discipline and 3 years of professional experience. Ph.D. desired. U.S. Citizenship is required and the applicant must be able to obtain a security clearance. Résumés must be received by 15 April 1989 and sent to: **Commander, U.S. Army Aberdeen Proving Ground Support Activity, Attention: STEAP-PA-CR-D (Ms. Davis), Aberdeen Proving Ground, MD 21005-5001.** Equal Opportunity Employer.

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

SCIENTISTS

Molecular and Cellular Biology

IDEXX Corp. (formerly AgriTech Systems, Inc.) an innovative, rapidly growing biotechnology company is seeking several highly motivated individuals to join our Research Group.

Positions are available at the Research Associate and Senior Scientist levels for individuals with demonstrated research skills in the area of Molecular Biology, in particular nucleic acid probe technology.

A post-doctoral position for the development of feline immunodeficiency virus as an AIDS animal model is also available for a candidate with experience in cellular or molecular biology.

IDEXX offers an excellent salary and benefits package and a challenging, multidisciplinary scientific environment. Our location, in the southwestern coastal Maine city of Portland, offers an unsurpassed quality of life with excellent recreational opportunities.

Interested applicants should forward a resume and salary requirements to:

Dr. Calvin Vary
IDEXX Corp.
100 Fore St.
Portland, ME 04101

IDEXX

CONFERENCE

The Second International Workshop on Cytokines

10 to 14 December, 1989
Hilton Head, South Carolina

This meeting has as its goals a) to encompass and integrate the most recent data concerning cytokine synthesis, release, regulation, actions, and interactions, and b) to assess the in vivo effects of these cytokines on cell, tissue, organ and organism metabolism, physiology, and immunity. The topics to be covered include structure, gene expression, regulation of synthesis and release, receptors and post receptor events, cytokine activities, alone and in combination, assays for and inhibitors of the cytokines. Among the cytokines to be considered are the interleukins, the interferons, TNF, TGF, PDGF, chemotactic factors, the various colony stimulating factors, bone and connective tissue growth factors, as well as newly identified activities/factors. The significance of these cytokines and their interactions in growth, development, and in protection against, as well as pathogenesis of, illness and injury will also be considered.

Among the invited speakers are: Robert Friedman (interferons), Tadimitsu Kishimoto (IL-6), Thomas Maciag (ECGF), Lloyd Old (TNF), Russell Ross (PDGF), Ruth Sager (GRO), Arthur Silverstein (historical perspective). The content of the rest of the meeting will be based on the submitted abstracts.

Abstracts will be published in the premiere issue of CYTOKINE (W B Saunders Company). Deadline for receipt of abstracts is 15 June 1989. For abstract forms, meeting information, and registration forms contact: Sherwood M. Reichard, Cytokines, c/o RES Society, Box 3044 MCG, Augusta, GA 30912 USA.

ENVIRONMENTAL RESEARCH CHEMIST

For over four decades, Los Alamos National Laboratory has challenged the frontiers of science, combining basic sciences with engineering and technological advances. As one of the largest multiprogram national laboratories in the United States, we are also internationally recognized as one of the most prestigious scientific and engineering institutions in the world.

As a member of a multidisciplinary team, your responsibilities will include theoretical analyses of the behavior of chemicals in the environment. You will assist in designing, analyzing and interpreting radionuclide solubility experiments that emphasize computer modeling. You will also be expected to make presentations, prepare reports and peer-review publications.

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VERTEBRATE BIOLOGIST

Assistant professor, tenure-track position, beginning fall 1989. Must have Ph.D. and demonstrated commitment to both teaching and research. Postdoctoral training desirable. The successful candidate will be expected to teach one or more of the following courses: Comparative vertebrate anatomy, embryology/developmental biology, vertebrate zoology, mammalogy, and ornithology; to conduct independently funded research; and to direct graduate student research. Individuals with training in functional and/or evolutionary zoology and use of computers are encouraged to apply.

Send letter of application, curriculum vitae, transcripts, copies of recent publications, a brief statement of professional goals, and at least three letters of reference to: **Daniel H. Stern, Chairperson, Department of Biology, 012 Biological Sciences Building, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110; Telephone: 816-276-1385;** within 5 weeks of the appearance of this advertisement. *UMKC is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANTSHIPS

BIOLOGY GRADUATE ASSISTANTSHIPS

Ph.D. program characterized by close faculty-student interaction has assistantships available for qualified students. All students supported with 12-month stipends of approximately \$9,900, plus tuition waiver and dependency allowances. Active research programs in cell and developmental biology, developmental genetics, evolution and quantitative genetics, comparative physiology, and neurophysiology and behavior. Contact: **Peggy Miano, Graduate Admissions, Department of Biology, Wesleyan University, Middletown, CT 06457. Telephone: 203-347-9411, X2656.**

CONFERENCES

TRANSGENIC MICE AND MUTANTS IN MHC RESEARCH

**The Jackson Laboratory, Bar Harbor, Maine
24 to 28 June 1989**

Organized by **Dr. Igor Egorov, The Jackson Laboratory** and **Dr. Chella David, Mayo Clinic**. Sessions: Expression and function of class I and class II MHC genes in transgenic mice; Mutant models of MHC antigen expression and function; Regulation of MHC gene expression; Transgenic models of disease; Both mouse and human MHC will be discussed. Contact: **Linda Fournier, The Jackson Laboratory, Bar Harbor, ME 04609; Telephone: 207-288-3371.**

GRADUATE TRAINING

GRADUATE TRAINING IN BIOMEDICAL SCIENCES WITH SPECIALIZATION IN MICROBIOLOGY. The Microbiology and Immunology Department at the University of South Carolina Medical School has research assistantships available for qualified candidates wishing to pursue a Ph.D. degree. Areas of specialization include cell biology, molecular virology, viral and bacterial pathogenesis, analytical microbiology, and immunology. For more information contact: **Dr. Alvin Fox, Graduate Director, Department of Microbiology and Immunology, University of South Carolina School of Medicine, Columbia, SC 29208.** *The University of South Carolina is an Equal Opportunity/Affirmative Action Employer.*

LECTURESHIP

UNIVERSITY OF OXFORD UNIVERSITY LECTURESHIP IN METAMORPHIC PETROLOGY IN ASSOCIATION WITH ST. CROSS COLLEGE

Applications are invited for a lectureship, to be filled from 1 October 1989 or as soon as possible thereafter, within the field of metamorphic petrology. The lecturer will be responsible for teaching metamorphic petrology, and may have research interests in any area within this subject. Stipend will be according to age on the scale £9,865 to £20,615 per annum, together with membership of the University's Superannuation Scheme. The lectureship, open to men and women, will be held in conjunction with an Official Fellowship at St. Cross College. Further particulars may be obtained from: **Professor J. F. Dewey, Department of Earth Sciences, Parks Road, Oxford OX1 3PR** to whom application (four copies, or one in the case of overseas applicants) including curriculum vitae, a statement of experience and research interests, a list of publications, and the names and addresses of three referees should be sent so as to arrive before 30 March 1989.

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Information: **Dr. Peter Jones 213-224-6503**

FELLOWSHIPS

INTERNATIONAL CANCER RESEARCH FELLOWSHIP

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

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

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

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

GRADUATE FELLOWSHIPS IN BIOCHEMISTRY, ANATOMY OR PHYSIOLOGY are available for research studies in the **Regulatory Peptide Center of the Department of Biomedical Sciences, Creighton University, Omaha, NE 68178**, starting in the fall of 1989. The applicant should state the discipline of interest when requesting further information from the Department Chairman. *CU is an Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

PREDOCTORAL FELLOWSHIPS IN MOLECULAR, CELLULAR, AND ORGAN PHYSIOLOGY OF THE CARDIOVASCULAR SYSTEM

The Department of Medical Physiology at Texas A&M University offers the Ph.D. degree in medical sciences. Faculty research includes molecular biology of angiogenesis, microcirculation, vascular cell biology, membrane biophysics, instrumentation, hypertension, diabetes, blood volume control, systems modeling, fluid exchange, and exercise. Faculty research programs are well funded and the department offers above average stipends.

Contact: **Dr. Gerald Meininger, College of Medicine, Department of Medical Physiology, Texas A&M University, College Station, TX 77843-1114. Telephone: 409-845-7491.**

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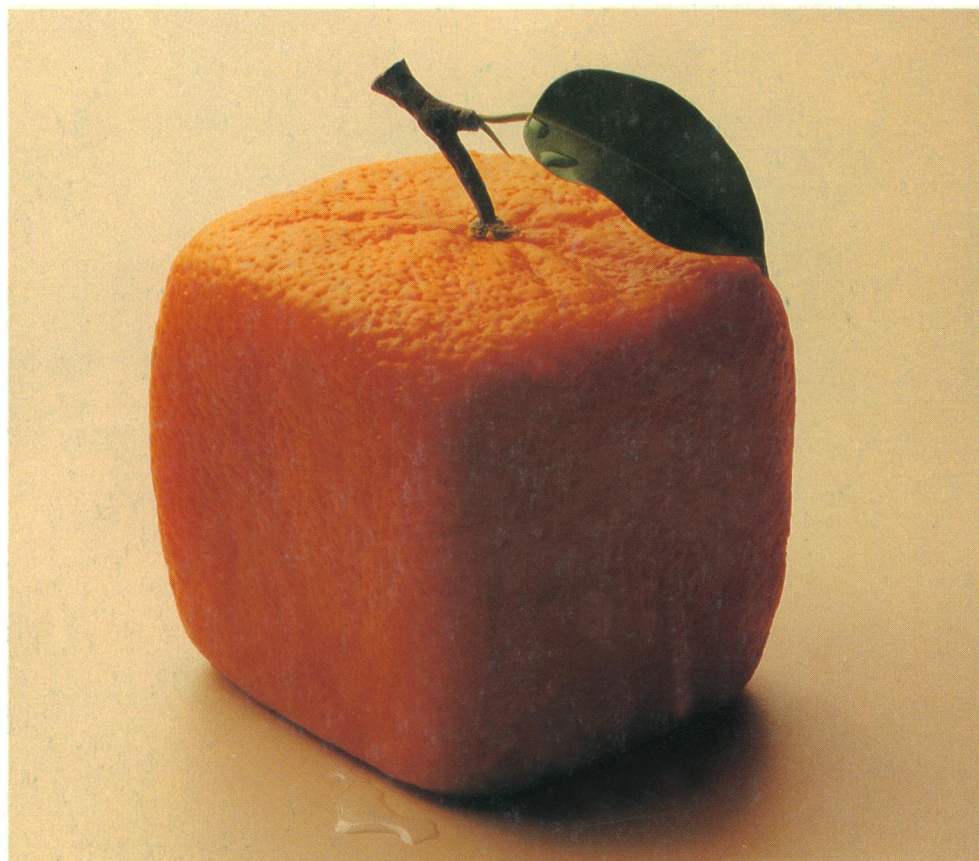
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