

duced a series of reviews that will be standard reading for the next five years or so. I mean this as a compliment; it is a measure of how far and fast marine ornithology has come in the last two decades. The next state-of-the-art review will inevitably have this one as a cornerstone.

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Muscle Contraction

Calcium in Muscle Activation. A Comparative Approach. JOHANN CASPAR RÜEGG. Springer-Verlag, New York, 1986. xiv, 300 pp., illus. \$98. Zoophysiology, vol. 19.

This book explores "the common principles that govern calcium signalling in the regulation of muscle contraction and cell motility," describing those "features of calcium regulation [that] may be common or fundamental to all muscles" and those that "are probably specializations that have evolved because of their suitability for specific functions" (p. 250). Physiology is the central focus; nevertheless, the approach is broad. Findings on intact muscles are analyzed with the aid of experiments on permeabilized preparations and isolated proteins. Relevant structural and biochemical studies are also considered in the evaluation of possible mechanisms.

The comparative approach employed by Rüegg is particularly suited for the elucidation of muscle function. In recent decades, muscle has become an outstanding example of how the convergence of different disciplines can lead to a fuller understanding of function. Identification of the muscle proteins and knowledge of their reactions have been of paramount importance in interpreting muscle structure. Structural studies have led to our present understanding of contraction at the molecular level. Kinetics of the actomyosin-ATPase cycle are closely interwoven with analysis of mechanical transients. Our understanding of the structural, biochemical, kinetic, and mechanical properties of muscles has advanced in a mutually dependent fashion.

The knowledge of control of contraction has been particularly enriched by comparative studies. Contraction of all muscles is triggered by the appearance of calcium in the myoplasm. Calcium is released from membrane-bound compartments as a result of depolarization of the cell membrane that may or may not be propagated depending

on muscle types and on species. Inward-conducting T-tubule membranes may or may not be present. The roles of specific calcium channels of the cell membrane and of secondary messengers such as cyclic AMP and inositoltriphosphate in the production of calcium transients depend on muscle types and species. The variations that contribute to the adaptation of a particular muscle to specific functions, including speed, duration, efficiency, rhythmicity, and oscillation, are described in detail, and their effects are carefully evaluated.

Calcium is a universal triggering ion since proteins can bind it with a high affinity and it can move rapidly to and from the binding site. Thus, at rest, its myoplasmic concentration can be kept low, and relatively small amounts need be released for activation. The binding site representing a particular amino acid sequence, the E-F hand, is present in a number of calcium-binding proteins: troponin-C, calmodulin, parvalbumin, and myosin light chains. Since calmodulin is a subunit of a number of proteins, it serves as a calcium sensitizer of several different systems including myosin light-chain kinase.

Regulation of contraction is essentially the inhibition of the interaction between actin and myosin. Calcium reverses this inhibition. The "on-off" switch, however, is quite different in different muscles and species. In vertebrate striated and cardiac muscles the regulatory proteins, the tropomyosin-troponin complex, are part of the thin filaments and act on actin. In molluscan muscles, vertebrate smooth muscles, and various motile cells, myosin itself is regulated, and the light chains serve as regulatory subunits. Molluscan myosins bind calcium directly; in contrast, smooth-muscle and nonmuscle myosins are activated by phosphorylation of the regulatory light chains catalyzed by the calcium-dependent myosin light-chain kinase.

Scallop myosin is uniquely suited for the study of the role of light chains in the regulation of myosin since its regulatory light chains can be reversibly removed. The isolated myosin is controlled with the same fidelity as intact muscle, and activation by calcium is associated with the rearrangement of light chains. Activation of vertebrate smooth muscles and other motile cells by means of the myosin light-chain kinase involves a cascade of events and opens up access routes to hormones and to cyclic AMP to modulate the speed and extent of light-chain phosphorylation.

The book is a rich source of experimental background on these processes. The reference list is large (over 800 papers), up-to-date, and valuable. The condensed style and large amount of material presented do not

make for rapid reading, but the book is carefully organized, with useful summaries after each chapter. The text is illustrated with a generous number of figures that help to acquaint readers with the experimental background of the conclusions and interpretations.

This is a rapidly growing field. Unanswered important questions remain. These include the mechanism of calcium release, the molecular mechanism of the action of regulatory proteins, the role of thin-filament regulation in smooth muscles, the nature and control of the maintained tension state, and "latch" and "catch" in smooth and molluscan muscles. Unresolved issues are pointed out without oversimplification, and alternatives in interpretation are presented fairly.

This is an unusually useful book for researchers and also for graduate and advanced undergraduate students interested in regulation. A less expensive paperback edition would facilitate the wide circulation it deserves.

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Products & Materials

Microplate Reader

The MR 300 Manual MicroELISA Reader is a single-wavelength photometer that measures and displays absorbance values to three decimal places. The user moves the plate; the MR 300 automatically centers the beam of light through the well. Four function keys provide stepping through the soft-



ware as well as configuration of the data transmission parameters and printer setup. Numbers and data are entered with a membrane keypad. Linear, semilogarithmic, and logarithmic-logarithmic regression analyses are possible. The MR 300 comes with a 410- and a 490-nm filter, and other filters between 400 and 650 nm are available. The MR 300 may be connected to a computer by means of an RS-232C cable. Dynatech Laboratories. Circle 552.

Molecular Software System

QUANTA is a graphics software system for molecular construction, modeling, and analysis. The program is based on and is fully compatible with HYDRA. Its capabilities include interactive structure sketching, two- to three-dimensional geometry conversion, and protein sequence generation. An unlimited number of molecular systems may be colored on the basis of on a wide range of structural attributes, and the systems may be graphically manipulated. QUANTA works with all classes of molecular structures, in-

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

cluding small organic structures, proteins and peptides, and crystal and polymeric systems. In addition to having its own applications, QUANTA also can act as an interface for other modeling and simulation programs, including CHARMm. The mouse-driven user interface features pull-down menus, graphic icons, and dialog boxes. QUANTA operates on the Silicon Graphics IRIS model 3000 and 4D/60 series graphics workstations and on the Evans & Sutherland PS 300 series with a DEC VAX or MicroVAX host. Polygen. Circle 565.

Fermentation Control System

The FZ9000 provides real-time control of environmental parameters in fermenters. The system houses a computer, a color display, data storage medium, amplifiers, and output controls in one unit. The system can perform line-trend analysis, post-run graphics, and spread-sheet data presentation. Alfa-Laval. Circle 553.

Microplate for DNA Sequence Reactions

The MicroSample Plate 2010-700 contains sixty 15- μ l wells. It has been designed as a holder for dideoxy DNA sequence reactions but may be used for any molecular biology reaction in which the volume does not exceed 15 μ l. Because the plate can be boiled and stored at -20°C , no manipulations need be performed in Eppendorf tubes. LKB-Produkter AB (Sweden). Circle 566.

MAbs Against Human Leukocytes

Monoclonal antibodies (MAbs) against human leukocytes have been developed from rats. These MAbs may be used in every existing application in which mouse MAbs to leukocyte markers are used. Serotec (England). Circle 578.

Agarose for PFGE

InCert agarose was developed to make gel plugs for the preparation of DNA strands millions of base pairs long from intact cells. InCert has both a low-gelling and a low-melting temperature. It has been certified for compatibility with digestion of DNA by key restriction endonucleases. The DNA, digested or intact in the agarose gel plug,

may be separated by pulsed-field gel electrophoresis or other alternating field electrophoretic techniques. FMC BioProducts. Circle 568.

Benchtop Autoclave

The Table Autoclave is an autoclave with a small footprint that has an automatic cycle and an automatic water shut-off. It has a slow exhaust for liquids, a fast exhaust for instruments, and a fast exhaust with drying



for porous loads. Constructed of heavy stainless steel, the unit's stainless steel safety door cannot be opened while the inside is pressurized. The Table Autoclave is available with a chamber 18 by 30 cm, 23 by 46 cm, or 25 by 46 cm. Harvard Apparatus. Circle 554.

Literature

The *1987 Guide to Custom Antibody Production* describes immunological techniques used in hybridoma development, polyclonal antibody production, ascites generation, and immunochemical hapten-carrier and antibody-reporter conjugations. Berkeley Antibody. Circle 556.

Interaction Ion Chromatography is a catalog of polymeric ion chromatography columns. Interaction Chemicals. Circle 557.

Microscopy Problems in Mineralogy and Crystallography is a series of six bulletins that help microscope users choose the most suitable equipment. Carl Zeiss. Circle 560.

HIC-6A is a brochure that describes a high-performance ion chromatograph with a built-in microprocessor control. Shimadzu Scientific Instruments. Circle 561.

XY Recorder BD 90/91 is a 6-page brochure featuring single-pen and dual-pen xy recorders. Kipp & Zonen. Circle 562.

The New Generation High Speed Microcentrifuge describes a line of microcentrifuges with a top speed of 12,000 rpm; one model is refrigerated. Jouan. Circle 563.

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Two-Dimensional Electrophoresis and Immunological Techniques. Bonnie S. Dunbar. Plenum, New York, 1987. xvi, 372 pp., illus. \$59.50.

Veterinary Virology. Frank Fenner *et al.* Academic Press, Orlando, FL, 1987. xii, 660 pp., illus. \$59.

Vision, Brain, and Cooperative Computation. Michael A. Arbib and Allen R. Hanson, Eds. MIT Press, Cambridge, MA, 1987. xiv, 730 pp., illus. \$65. Computational Models of Cognition and Perception. Based on a workshop, Amherst, MA, May 1983.

Webb Society Deep-Sky Observer's Handbook. Vol. 7, The Southern Sky. Kenneth Glyn Jones, Ed. Enslow, Hillsdale, NJ, 1987. xviii, 198 pp., illus. Paper, \$16.95.

When Time Breaks Down. The Three-Dimensional Dynamics of Electrochemical Waves and Cardiac Arrhythmias. Arthur T. Winfree. Princeton University Press, Princeton, NJ, 1987. xiv, 339 pp., illus. \$60; paper, \$19.95.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

LINE CLASSIFIED ADVERTISING DEADLINES:

Thursday, 10 a.m., 2 weeks prior to issue date (mailed on issue date).

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

LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$35.00 per line; \$350 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

To ESTIMATE ad cost:

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading, and/or extra line spaces, and all partial lines (including centered reply information) are counted as full lines. Ad titles located within the text are printed in boldface caps and are only 32 characters per line. In ESTIMATING the cost, multiply total lines \times \$35.00 = approximate cost of ad. (This is an approximate cost ONLY: Allow for variation between estimated lines and actual typeset lines and the resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.)

CANCELLATION POLICY:

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

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

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

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

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

Blind ad replies should be addressed as follows:

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

POSITIONS WANTED

Anatomist, Ph.D. 1984. Publications in neuromuscular physiology and histochemical, electromyographic, and morphometric aspects of feeding and locomotion; NIH postdoctoral fellow; teaching experience in gross anatomy, histology, embryology, and anthropology; seeks tenure-track academic position. Box 146, SCIENCE.

Gross Anatomy, Ph.D. training and teaching experience in gross anatomy in east-coast medical schools. Publications in neuroscience/neuroanatomy. Knowledge of computers and programming. Seeking teaching position in medical school setting, gross anatomy, neuroanatomy, light research. Will consider relocation. Box 147, SCIENCE.

Physiology, Ph.D. with several years of teaching experience in general human physiology, research experience in exercise physiology, electrolyte balance studies, spirometry, and body fat. Box 142, SCIENCE.

POSITIONS WANTED

Project Manager/Director, Ph.D. Biochemistry, diversified experience in pharmaceutical industry and hospital/medical center, know-how in preclinical and clinical R & D assessing the safety of new therapeutic agents, evaluation of toxicity reports destined to regulatory submission, familiarity with IND and NDA processes and international regulations, versed in clinical biochemistry and immunoassay methods. Administrative background in budget, project planning and management, demonstrated ability to manage a large group of scientific professionals, excellent interpersonal and communication skills. Seeks challenging position in industry or government. Box 148, SCIENCE.

Science Writer/Editor. Zoology/physiology Ph.D., biochemical research publications, anatomy textbooks; EPA documents editor; free-lance magazine and newspaper articles. Seeking writing/editing, ghostwriting, collaborative, consulting projects, any biomedical field. Write: Master Wordworks, Route 2 Box 332, Fulton, MO 65251. Telephone: 314-642-9749.

POSITIONS OPEN

ACADEMIC FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY MAYO CLINIC, MAYO MEDICAL SCHOOL, AND MAYO GRADUATE SCHOOL OF MEDICINE

Department of Biochemistry and Molecular Biology seeks applications for a faculty appointment at the assistant, associate, or full professor level, depending on qualifications. Preference will be given to outstanding molecular or developmental biologists with demonstrated expertise in somatic cell and germline gene transfer techniques. Highly qualified individuals with other molecularly oriented research interests are also encouraged to apply. The Mayo Clinic offers an outstanding research environment in a medical and academic setting. Send curriculum vitae, statement of research interests, and names of three references by 15 February 1988 to: Dr. Michael J. Getz, Chairman, Search Committee, Department of Biochemistry and Molecular Biology, Mayo Clinic/Foundation, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.

ANIMAL BEHAVIOR ASSISTANT PROFESSOR

Broadly trained applicants are desired with backgrounds in physiological and/or biochemical bases of animal behavior for a 3-year, tenure-track appointment requiring a Ph.D. degree. Postdoctoral experience desirable. Teaching responsibilities will include courses in animal behavior or related fields. Faculty are expected to conduct active research programs in which qualified undergraduates may be involved. Start-up funds for research are provided. Position available 1 July 1988. Please send curriculum vitae, statement of research/teaching interests, and names and addresses of three references by 6 November 1987 to: William C. Grant, Jr., Chair, Department of Biology, Williams College, Williamstown, MA 01267.

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

ASSISTANT PROFESSOR: Applications are invited for a position at the level of assistant professor (tenure track) in the Department of Chemistry at Stanford University with primary research and teaching interests in the general area of inorganic chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching at the undergraduate and graduate levels. In applying, please send curriculum vitae, list of publications, a brief statement of research interests (three pages or less), and, in addition, have three letters of recommendation sent to: Professor John Ross, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305. Stanford is committed to Equal Opportunity through Affirmative Action in Employment, and we are especially eager to identify minority persons and women with appropriate qualifications. Applications should be received by 6 November 1987.

POSITIONS OPEN

ANIMAL PHYSIOLOGY

The Department of Biology at the University of Utah has an opening for a regular faculty appointment (assistant or associate professor) in animal physiology. An invertebrate (especially insect) physiologist is preferred, but outstanding candidates in vertebrate physiology will also be given serious attention. We are particularly seeking individuals whose research concerns not only physiological mechanisms but also their relevance to contemporary issues in other areas of biology (e.g., animal behavior, development, ecology, evolution). Ours is a large and diverse department with special strength in cellular and molecular biology, ecology and evolutionary biology, and in genetics. Considerable potential exists for productive, interdisciplinary exchange; applicants who will benefit from such opportunity will be especially attractive. The successful applicant will be expected to maintain a vigorous research program and to contribute to student education and training at the undergraduate and graduate levels. Address applications and nominations to:

Dr. Dennis M. Bramble
Animal Physiology Search
Department of Biology
University of Utah
Salt Lake City, UT 84112

Please send résumé and three letters of reference by 15 November 1987.

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

ASSISTANT PROFESSOR ANATOMY AND NEUROBIOLOGY

Applications are invited for a tenure-track position commencing 1 July 1988. Applicants must have a doctoral degree and extensive postdoctoral experience. A funded research program in cellular or molecular neuroscience is desirable and preference will be given to candidates with experience in those fields. Teaching duties open but experience in histology or gross anatomy an advantage. Send curriculum vitae, list of publications, summary of research goals and at least three letters of recommendation to: **Edward G. Jones, Chairman, Department of Anatomy and Neurobiology, University of California, Irvine, CA 92717.** All applications should be received by 1 December 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSISTANT PROFESSOR, tenure-track position in zoology. Qualifications: Ph.D. in a field appropriate to responsibilities described below. Responsibilities: teaching in aquatic biology, limnology, fisheries, and general biology; commitment to scholarship/research. Effective: 11 January 1988. Send letter of application describing teaching and research interests, curriculum vitae, official transcripts, and three letters of recommendation to: **Dr. Robert Taylor, Search Committee, #33, Department of Life Sciences, Eastern New Mexico University, Portales, NM 88130** by 13 November 1987. *ENMU is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR: A position in exercise physiology for a Ph.D. with postdoctoral research experience in muscle tissue and its response to exercise. Individuals will be expected to obtain external funding, attract graduate students and to teach. Starting date: 16 January 1988. Submit letter of application, curriculum vitae, three reprints, and three letters of recommendation to: **Chairman of the Search Committee: R. M. Enoka, Ph.D., Department of Exercise and Sport Sciences, University of Arizona, Tucson, AZ 85721.** Application deadline: 26 October 1987. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT RESEARCH SCIENTIST. Postdoctoral position immediately available for candidate with Ph.D. in biochemistry/molecular biology for leukemia research involving drug-DNA-glutathione interactions. Knowledge of molecular biology and/or enzymology desirable. Send curriculum vitae and names of three references to: **Dr. Robert Silber, Department of Medicine, New York University School of Medicine, 550 First Avenue, New York, NY 10016.** *An Equal Opportunity Employer M/F.*

POSITIONS OPEN

ASSISTANT PROFESSOR CELLULAR BIOLOGY

The Department of Biology, Rice University, is soliciting applicants for an assistant professorship that will become available for the academic year 1988 to 1989. Of special interest are individuals with demonstrated research ability in the area of cellular signaling mechanisms but exceptional applicants in other areas of cellular biology working at the molecular level will also be considered. Applicants should send a résumé and a brief outline of future research to: **Cell Biology Search Committee, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251.** Applicants should also arrange for three letters of reference to be sent to this committee. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR NEUROBIOLOGY

The Department of Biology, Rice University, invites applications for a tenure-track appointment in neurobiology, starting in the 1988 to 1989 academic year. Applicants should have a strong interest in developing an independent research program. Particular areas of interest are related to intercellular communication and include developmental neurobiology, neuroendocrinology, and synaptic physiology. Qualified candidates in other areas of neurobiology will be seriously considered on their merits. Applicants should forward curriculum vitae and a general statement of future research interests to: **Chairman of Neurobiology Search Committee, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251.** Applicants should also arrange for three letters of recommendation to be sent to this address. *Rice University is an Equal Opportunity/Affirmative Action Employer.*

BROWN UNIVERSITY ASSISTANT PROFESSOR OF MEDICAL SCIENCE (ARTIFICIAL ORGANS AND BIOMATERIALS)

For a tenure-track position we are seeking a broadly trained medical scientist whose research interests are in the area of nerve regeneration and/or bioartificial organs. An M.D., Ph.D. or equivalent degree and at least 2 years of postdoctoral research experience (e.g., implant technology, tissue culture, neurobiology) are required. The position is linked to the Artificial Organ Laboratory, a multi-disciplinary group of faculty and graduate students, with emphasis on the biological aspects of tissue-biomaterial interactions, bioresorbable polymers and the development of membrane-protected tissue transplants. The successful candidate should demonstrate outstanding potential to develop an independent externally funded research program. Experience in the guidance of Ph.D. and M.D.-Ph.D. students is desirable. The major teaching requirements are in survey courses in the same fields. Undergraduate academic advising is a regular obligation of Brown faculty members. The appointment can begin 1 January 1988 or in the summer of 1988.

Applicants should submit curriculum vitae and a concise description of research interest and goals by 13 November 1987 and should arrange for three letters of reference to be sent to: **Professor E. H. Leduc, Division of Biology and Medicine, Box G, Brown University, Providence, RI 02912.** *We encourage applications from women and minority candidates. Brown University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR MOLECULAR BIOLOGY

The Department of Biochemistry, West Virginia University Medical Center invites applications for a tenure-track position to begin July 1988. Applicant must have postdoctoral experience and demonstrated expertise in molecular biology. Send curriculum vitae, a statement of research interests, and the names and addresses of three references to:

Biochemistry Search Committee
West Virginia University Medical Center
Morgantown, WV 26506

Application deadline: 30 November 1987 or until position filled. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR

The Food Research Institute (Department of Food Microbiology and Toxicology), University of Wisconsin-Madison, invites applications from qualified individuals for a tenure-track faculty position at the assistant or associate (with tenure) professor level. Applicants should have a Ph.D. in microbiology, bacteriology, or equivalent, productive postdoctoral experience, and demonstrated expertise in microbiological aspects of food safety and preservation. Working knowledge of food allergy and/or toxicology is highly desirable. Prior experience in the food industry or with a government agency involved in food regulation is also a plus. The primary duty of the incumbent is to establish a high-quality microbiological research program that is directly applicable to the problems of food safety. The incumbent will also be expected to deliver several lectures each semester in area of specialty to undergraduate and graduate students, perform University-related public service, and participate in activities contributing to the support of the department and the Food Research Institute. This is an exceptional annual (12-month) appointment offering excellent facilities in a challenging intellectual environment. Applicants should submit curriculum vitae and the names of three to five references by 1 December to: **Dr. M. W. Pariza, Director, Food Research Institute, University of Wisconsin, 1925 Willow Drive, Madison, WI 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR. Teach undergraduate and graduate courses in nutrition and health promotion. Conduct research. Ph.D. required, R.D. desirable. Closing date: 1 December 1987 or thereafter until filled. For detailed position announcement contact: **Dr. Guendoline Brown, Food and Nutrition Department, North Dakota State University, Fargo, ND 58105.** Telephone: 701-237-7474.

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY PROTEIN STRUCTURE/SPECTROSCOPY

The Department of Biochemistry, University of Virginia School of Medicine is seeking to fill a tenure-track position at the assistant or associate professor level. The position is available 1 July 1988. The Department is re-opening a search for candidates with research interests in the areas of protein structure or protein structure-function relationships of either membrane or globular proteins. Individuals with expertise in spectroscopic techniques, such as FT-IR and NMR, are particularly encouraged to apply. Candidates should have a strong background in quantitative biochemistry, biophysics, chemistry, or physics and must have a Ph.D. degree and significant postdoctoral experience or their equivalent. Interested individuals should submit curriculum vitae, a brief outline of future research plans, representative reprints describing past research, and three letters of reference by 1 November 1987 to:

Chairman, Faculty Search Committee
Department of Biochemistry
University of Virginia School of Medicine
Charlottesville, VA 22908

Equal Opportunity Employer/Affirmative Action

BIOCHEMISTRY FACULTY POSITION

The Department of Biochemistry, University of Minnesota, St. Paul seeks applications for two faculty positions, one at the rank of tenure-track assistant professor and one at any rank. Successful applicants will be expected to establish a vigorous research program, advise graduate students, and participate in undergraduate and graduate teaching. While outstanding applications from individuals in any area are welcome, the department plans to establish a strong group of faculty investigators using biochemical, biophysical and genetic approaches to the study of membrane-associated proteins and related systems. Applicants with interests in this general area will receive preferred consideration.

Applicants should submit curriculum vitae, representative reprints, a brief outline of research plans, and three letters of reference no later than 1 December 1987 to: **Search Committee, Department of Biochemistry, University of Minnesota, 1479 Gortner Avenue, St. Paul, MN 55108.** *The University of Minnesota is an Equal Opportunity Employer and Educator, and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

BIOCHEMIST/IMMUNOCHEMIST

Bacterial Genetics Group
Advanced Genetic Sciences, Inc.
6701 San Pablo Avenue
Oakland, CA 94608

Research directed towards exploitation of immunoassay detection technology. Applicant should hold a Ph.D. in biochemistry or immunology, or have equivalent postdoctoral experience. Experience with chemical modification of proteins preferable. Salary and level of appointment commensurate with experience. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Personnel Manager, Code QLX** at the above address.

BIOCHEMISTRY FACULTY POSITION. A tenure-track position is anticipated in the Biochemistry Division of the Chemistry Department at Wayne State University. Applicants at all levels are welcome. Candidates will be expected to establish an active research program in an area that complements the interests of the existing faculty and to teach in the biochemistry curriculum. The department has core facilities for DNA synthesis and sequencing and for large-scale fermentation. Biochemistry faculty participate in the University Centers for Molecular Biology and Chemical Toxicology and the Comprehensive Cancer Center of Metropolitan Detroit. Applicants should have a Ph.D. and postdoctoral experience. Send curriculum vitae, brief summary of research interests, and three letters of recommendation to: **Dr. Richard Lintvedt, Chairman, Department of Chemistry, Wayne State University, Detroit, MI 48202 by 15 November 1987.** *Wayne State University is an Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGY

INDIANA UNIVERSITY, BLOOMINGTON

The Department of Biology anticipates appointing a new **FACULTY MEMBER** who utilizes molecular and genetic approaches to study fundamental cellular processes. Applications from individuals with interests in neurobiology, oncogenes, growth factors, cell-cell communication, or intracellular traffic are particularly encouraged. The successful candidate will be expected to conduct a vigorous, independent research program, and contribute to teaching. Applicants should have postdoctoral research experience and demonstrated ability as creative scientists. While we expect to make the appointment at the assistant professor level, candidates at higher levels will also be considered. Send curriculum vitae, a brief description of research interests, and arrange to have three letters of reference from individuals familiar with your work sent to: **Dr. Tom Blumenthal, Chairman, Department of Biology, Indiana University, Bloomington, IN 47405.**

Applications received before 15 January 1988 will be assured of consideration.

Indiana University is an Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF HONG KONG CLINICAL PATHOLOGIST (BIOCHEMISTRY) (RE-ADVERTISEMENT)

Applications are invited for a newly established post of clinical pathologist in the Clinical Biochemistry Unit, Hospital Pathology Services of the University. Applicants should possess a recognized medical degree with appropriate postgraduate training and experience in chemical pathology and a background of research in related problems. Applicants studying for the M.R.C.Path. or equivalent will be considered but preference will be given to those who have attained a higher qualification. The appointee will work in the Clinical Biochemistry Unit which provides chemical pathology service to the Queen Mary Hospital under the supervision of a senior consultant.

Annual salary (superannuable) is on a 13-point scale: HK\$173,640 to 358,920 (US\$1=HK\$7.80 at 15 September 1987). Starting salary will depend on qualifications and experience. At current rates, salaries tax will not exceed 16½% of gross income. Housing benefits at a rental of 7¼% of salary, children's education allowance, leave and medical benefits are provided.

Further particulars and application forms may be obtained from: **The Association of Commonwealth Universities (Apts), 36 Gordon Square, London WC1H 0PF, or from the Appointments Unit, Registry, University of Hong Kong, Hong Kong.** Closes 15 November 1987.

POSITIONS OPEN

BIOCHEMISTRY OF MACROMOLECULES

Research associate positions are available to study the role of macromolecular interactions in the regulation of enzyme catalysis (pyruvate kinase and phosphofructokinase) and gene expression (*E. coli* cyclic AMP binding protein). Successful candidates should be highly motivated, creative and independent individuals. A background in physical and/or molecular biology is desirable. Send curriculum vitae and names of three references to:

Dr. James C. Lee
Department of Biochemistry
St. Louis University
School of Medicine
1402 South Grand Boulevard
St. Louis, MO 63104

CELL SORTER SPECIALIST

The MIT Cell Culture Center is searching for a person to operate a cell sorter laboratory which provides a service to researchers in the greater Boston area. A B.S. or M.S. in biology or related field with experience in operating a flow cytometry system (Ortho System 60H and/or Coulter EPICS-C preferred) is required. Salary will be commensurate with level of experience. Please send résumé and references to: **Donald J. Giard, Director, Cell Culture Center, Massachusetts Institute of Technology, 77 Massachusetts Avenue, (E19-239), Cambridge, MA 02139.**

MIT is an Affirmative Action/Equal Opportunity Employer.

The University of Texas at Arlington (UTA) seeks a **CHAIRPERSON, DEPARTMENT OF PSYCHOLOGY** for 1 September 1988. UTA is centrally located in the Dallas-Fort Worth metropolitan area, with about 23,000 students. The Department of Psychology offers the Ph.D. in general experimental psychology, broadly defined. Qualifications include the Ph.D. degree, a record of teaching and scholarship to merit a senior-level appointment, a commitment to excellence in teaching and research, and demonstrated leadership and administrative skills. Applications or nominations should include curriculum vitae and names and addresses of four references. Send to: **Dr. E. D. Brodie, Jr., Chairman, Search Committee, Psychology Department, Box 19528, The University of Texas at Arlington, Arlington, TX 76019.** Applications will be received until 1 December 1987 or until a suitable candidate has been found.

An Affirmative Action/Equal Opportunity Employer.

THE CHINESE UNIVERSITY OF HONG KONG

Applications are invited for appointment to the position of **CHAIR PROFESSOR OF STATISTICS**. Applicants should have outstanding academic qualifications, considerable teaching and research experience at university level, and scholarly publications of originality and merit. They must also possess proven leadership in teaching and research in the discipline.

Minimum salary is HK\$417,240 per annum. (The current exchange rate is approximately US\$1=HK\$7.8; £1=HK\$12.90). Fringe benefits include long leave accumulated at the rate of one-sixth of the period of service, contributory superannuation (University 15% of salary, appointee 5%), medical benefits, education allowance for children, accommodation on campus (rental at 7.5% of salary) and passage benefits for the appointee as well as his/her dependants.

Applications, together with a résumé, a list of publications, and the names and addresses of three referees, should be forwarded to: **The Personnel Section, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong** before 15 December 1987. Please quote reference number 78/509/2/87 and mark "Recruitment-Professor" on cover.

CYTOGENETICIST: The Genetics Center is seeking an assistant director for our large, full-service cytogenetics laboratory. Certification or eligibility by the American Board of Medical Genetics is preferred. Responsibilities include supervising the clinical laboratory, developing clinical or basic research projects, and teaching. Send curriculum vitae to: **Wendy L. Golden, Director, Cytogenetics Laboratory, The Genetics Center, Case Western Reserve University, Cleveland, OH 44106.**

POSITIONS OPEN

COORDINATOR, PROTEIN AND DNA SEQUENCING AND SYNTHESIS FACILITY

The Pennsylvania State University Biotechnology Institute is seeking a person to manage the operation of its Macromolecular Sequencing and Synthesis Laboratory. The Laboratory is equipped with instrumentation for the automated hydrolysis, derivatization, gas-phase based sequencing and on-line analysis of peptides and proteins. Instrumentation for automated nucleic acid extraction, oligonucleotide synthesis, DNA sequencing, and peptide synthesis will be added shortly. Applicants should hold a Ph.D. or have extensive experience operating sequencing and/or synthesis instrumentation. The successful applicant will be expected to oversee the operation, maintenance, and improvement of the facility and to provide instruction in the theory and operation of the instrumentation. Send curriculum vitae and three letters of recommendation to: **Dr. Jean E. Brechley, Director, Biotechnology Institute, 519 Biotechnology Headquarters Building, The Pennsylvania State University, University Park, PA 16802.** Review of applications will begin 9 November 1987 and continue until the position is filled. *An Equal Opportunity/Affirmative Action Employer.*

DEAN COLLEGE OF AGRICULTURE IOWA STATE UNIVERSITY AMES, IOWA 50011

Iowa State University invites nominations and applications for the position of Dean of the College of Agriculture and Director of the Iowa Agriculture and Home Economics Experiment Station. The College of Agriculture is one of nine colleges in a university with more than 26,000 students. The college is composed of 16 departments with 21 major curricula. Fifteen of the departments offer master's and 14 offer Ph.D. degree programs. The college has 260 faculty members and enrolls 2900 students.

The dean is expected to provide innovative and dynamic leadership in a college with a long tradition of excellence in teaching, research, and agricultural extension. Candidates for the position must hold a doctoral degree in a relevant field, have substantial administrative experience, have a distinguished record of scholarly and creative achievements, be committed to excellence in teaching and research, and be qualified for appointment to the rank of professor in a department of the college.

Persons interested in the position should submit a letter of application and curriculum vitae, with names and addresses of at least three references to:

The Chair of the Search Committee:
Norman L. Jacobson
Associate Vice President for Research
201 Beardshear
Iowa State University
Ames, IA 50011

Applications will be accepted until 25 November 1987. Nominations of qualified persons are also invited.

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

PENN STATE BIOLOGY FACULTY POSITIONS

The Department of Biology, The Pennsylvania State University Commonwealth Education System invites applications for three tenure-track positions available January 1988. Hazleton Campus, Hazleton, Pennsylvania. Duties include teaching general biology and basic human anatomy, physiology, and microbiology for allied health majors. McKeesport Campus, McKeesport, Pennsylvania. Botanist/Microbiologist. Position requires teaching general biology and introductory courses in botany, genetics or microbiology. Fayette Campus, Uniontown, Pennsylvania Plant scientist. Preferred areas: botany, genetics, or microbiology. Duties include teaching general biology and introductory courses in one or more of the above subject areas. Candidates must have Ph.D. degree. Continuing scholarly activity, including research and publication, will be required. Salary and rank commensurate with qualifications. Application deadline: 15 November 1987 or until suitable applicants are found. *Separate application materials are required for each position.* Send curriculum vitae, transcripts and three letters of reference to: **Dr. William Neff, Box G, 208 Mueller Building, University Park, PA 16802.**

An Affirmative Action/Equal Opportunity Employer.

CARDIOVASCULAR PHARMACOLOGIST

The Parke-Davis Pharmaceutical Research Division has an immediate opening for a Senior Associate Scientist in Cardiovascular research. The qualified candidate will perform experiments in non-human primates, summarize and report data as well as assist in the development of protocols.

Qualified applicants should possess the following:

- BS/MS in biological sciences.
- 2-5 years experience with technical expertise in measurement cardiovascular parameters in non-human primates.
- Experience utilizing laboratory computers desirable.

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Interested, qualified candidates should forward curriculum vitae and salary requirements to: **Ms. S. Hultquist, Human Resources, WARNER-LAMBERT/PARKE-DAVIS, 2800 Plymouth Rd., Ann Arbor, MI 48105.**

**WARNER
LAMBERT**

"EQUAL OPPORTUNITY IN ACTION."

POST DOCTORAL FELLOW

To study the molecular mechanisms of immunodeficiency virus (HIV) infections using molecular biology techniques. Qualifications include a Ph.D. degree or the equivalent in molecular biology or biochemistry, with experience in tissue culture, cloning and gene sequencing preferred. Position available immediately with funding support for at least 2 years. Please send application, with curriculum vitae and 2 names for reference purposes (and quoting Post Doctoral position), to: **Dr. B.R.G. Williams/Dr. A.S. Lau, Division of Infectious Diseases.**



555 University Avenue, Toronto, Ontario M5G 1X8

THE HOSPITAL FOR SICK CHILDREN

BIOCHEMIST/ CELL BIOLOGIST

BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc. is seeking a Biochemist/Cell Biologist for the Biochemistry Department at our Research and Development Center in DANBURY, CONNECTICUT.

This position is responsible for developing a research program in cellular regulatory mechanisms and overseeing a departmental tissue culture facility. The incumbent will work closely with an interdisciplinary group of Scientists in support of our anti-inflammatory and immunology programs.

Requirements include a Ph.D. and Post-doctoral training in cell biology, biochemistry or immunology. Experience in molecular biology and gene regulation is desirable.

BOEHRINGER INGELHEIM offers a highly competitive compensation and benefits package including relocation assistance and the opportunity to have your contributions recognized.

Please submit your curriculum vitae to: Dept. JC-1J, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT. 06877. We are an equal opportunity employer m/f/h/v.



**Boehringer
Ingelheim**

Viral Immunologist

The Upjohn Company, a leader in worldwide research, manufacturing and marketing of pharmaceuticals, chemicals and agricultural products, is seeking a Ph.D. scientist to join a growing research team dedicated to the development of novel vaccines for diseases of veterinary interest.

Applicants will be expected to have specific expertise in the research technologies needed to define viral proteins which confer serologically and cellularly mediated protection. They must be able to conceptually and strategically advance our knowledge in the area of epitope immunology and immunopotential as it applies to the development of novel vaccines, both through individual projects, and through interaction with other scientists.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate. Upjohn offers an excellent salary commensurate with experience and an outstanding benefits program. For confidential consideration, please call toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you. Please refer to Ad Number 21960-F when calling. An Equal Opportunity Employer M/F

Upjohn

Our commitment to scientific excellence continues...

POSITIONS OPEN

DEAN GRADUATE SCHOOL OF LIBRARY AND INFORMATION SCIENCE UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)

UCLA invites applications and nominations for the position of Dean of the Graduate School of Library and Information Science, effective 1 July 1988, or as soon thereafter as possible. The Dean has responsibility for the academic and administrative operation of the School, which currently has 16 faculty positions (full- and part-time inclusive) and 170 graduate students, most of whom are full-time and are professional master's and Ph.D. candidates. As a vital professional school located in the industrial center of Southern California, the Graduate School of Library and Information Science has the full support of the UCLA Administration in its efforts to develop new and improved programs.

Acting under authority delegated by the Chancellor, the Dean participates in campus-wide planning and is responsible for supervision of the School's budget, allocation of resources, review of faculty, development and administration of academic and research programs, and direction of the School's professional relations. Candidates should have academic qualifications appropriate to the rank of full professor. Salary will be commensurate with background and experience.

To be ensured of full consideration, nominations and letters of application should be sent by 15 December 1987 to: **GSLIS Dean Search Committee, c/o Ms. Rene Dennis, Office of the Chancellor, University of California, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer, and specifically encourages applications from women and minorities.*

The University of Kentucky is soliciting nominations and applications for the combined position of **DEAN OF THE COLLEGE OF MEDICINE AND VICE CHANCELLOR OF THE MEDICAL CENTER FOR CLINICAL PROFESSIONAL SERVICES.**

Please address expressions of interest and suggestions accompanied by résumés and other relevant information to:

Dr. Robert Straus
Chair, Search Committee
College of Medicine Office Building
University of Kentucky
Lexington, KY 40536-0086

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

DEVELOPMENTAL GENETICIST—Tenure-track position open in fall 1988, for assistant professor. Candidates must have Ph.D. with research abilities (as demonstrated by publications) in some area of eukaryotic developmental genetics, though research emphasis could involve problems in gene regulation, evolution, or other specialty. Postdoctoral experience is preferred. Teaching duties include undergraduate courses in genetics and graduate course in specialty. Candidates are expected to demonstrate excellent teaching abilities and to develop external research support. Send curriculum vitae, four letters of recommendation, and copies of representative publications by 15 January 1988 to: **Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019.** *An Equal Opportunity/Affirmative Action Employer.*

DEVELOPMENTAL PSYCHOLOGIST

The Department of Psychology, University of Rochester, anticipates filling one or possibly two tenure-track positions in developmental psychology for the 1988 to 1989 academic year. Although both appointments are at the junior level, outstanding candidates at more senior levels will also be considered. Research areas of interest include (but are not limited to) cognitive, language, social, and emotional development. The ability to develop and maintain an independent program of research and to contribute to both undergraduate and graduate teaching is a key consideration. *Women and minority candidates are particularly encouraged to apply.* Send curriculum vitae, statement of research interests, and three letters of recommendation to: **Richard N. Aslin, Department of Psychology, Meliora Hall, University of Rochester, Rochester, NY 14627.** Deadline for receipt of application materials is 15 November 1987. *The University of Rochester is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER DEVELOPMENTAL, CELLULAR, AND MOLECULAR BIOLOGY

The Department of Cellular and Structural Biology invites applications for three faculty positions in the areas of developmental, cellular, and molecular biology. Areas of particular interest are: eukaryotic developmental genetics, cellular motility and membrane-cytoskeleton interactions; processing, sorting and assembly of membrane receptors and other proteins. The successful candidate will use various cellular, molecular, and genetic approaches. Emphasis is on appointments at the assistant professor level; applications for associate professorships will be considered. Appointees are expected to establish an independent, productive research program and to participate in the teaching of courses offered by the department.

Investigators with a Ph.D. or M.D. degree and a research record indicating exceptional skills and high creativity are encouraged to apply. Applications including curriculum vitae, list of publications and of grant support, a one-page summary of research plans, and the names of at least three references should be submitted by 15 December 1987 to:

Claude P. Selitrennikoff, Ph.D.
Chairman, Cell Biology Search Committee
Department of Cellular and Structural Biology
University of Colorado School of Medicine
4200 East Ninth Avenue, B-111
Denver, CO 80262

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

DIRECTOR HEALTH EFFECTS RESEARCH LABORATORY RESEARCH TRIANGLE PARK, NORTH CAROLINA \$64,700 to \$70,500

The U.S. Environmental Protection Agency (EPA) is seeking highly qualified candidates for the position of Director, Health Effects Research Laboratory (HERL). The HERL is responsible for providing health effects research that serves as the foundation for health-related regulatory decisions. The Laboratory is organized into three staff offices and six research divisions, with a total of approximately 325 EPA employees and 250 on-site contractor and cooperative agreement employees. Research is carried out using a variety of approaches: animal research, including in vitro and in vivo studies; human clinical investigations; and epidemiologic studies. Disciplines represented within HERL include neurotoxicology, reproductive toxicology, pulmonary and cardiovascular toxicology, genetic toxicology, immunotoxicology, and microbiology.

The Director provides scientific leadership for the mission-oriented research programs and directs and supervises the multidisciplinary scientific staff. Included in the Director's responsibilities are research planning, implementation, and evaluation, scientific input into the development of health science policy, direction of technical and administrative activities, and management of HERL's \$45 million per year budget.

To meet the requirements of the position, applicants should have an advanced degree (doctorate preferable) in either the biological, health, or physical sciences, and substantial professional experience demonstrating scientific leadership and research management experience. Applicants must meet the technical and executive qualifications described in the Vacancy Announcement. Call or write for a copy of the Vacancy Announcement and application form SF-171 to: **Edna Morse, Environmental Protection Agency, SES and Executive Resources Unit, PM-224, 401 M Street, SW, Washington, DC 20460.** The telephone number is 202-382-3328.

Applications must be postmarked by 30 November 1987.

EPA is an Equal Employment Opportunity Employer.

DOCTORATES, any field considered. Mature attitude, excellent teaching ability, congenial personality, and professional presence necessary. We train you for intensive laboratory instruction of surgeons. Permanent instruction sites in New York City, West Palm Beach, Chicago (Arlington Heights), or Los Angeles area (Orange). Some travel required. Not a sales position. Salary \$40,000. Write for application information to: **Director, Midas Rex Institute, 2929 Race Street, Fort Worth, TX 76111.** New applicants only, please.



INTERNATIONAL LIVESTOCK CENTRE FOR AFRICA AGRICULTURAL EDUCATOR, TRAINING MATERIALS AND METHODS VACANCY INT/008/87

GENERAL

The International Livestock Centre for Africa (ILCA) with headquarters in Addis Ababa, Ethiopia is one of 13 international agricultural research organizations which are supported by the Consultative Group on International Agricultural Research (CGIAR).

The Centre has research activities in some 14 sub-Saharan African countries and has administrative offices in Kenya, Mali and Nigeria.

POSITION

The incumbent as an international staff member of ILCA will work as a specialist in agricultural education. He/she is responsible for evaluating and improving the pertinence and quality of all group and individual training at ILCA. It is his/her particular responsibility to assess the content, current or intended, of courses, workshops, seminars and meetings, and provide technical advice and services on how to strengthen the content and presentation of the materials to be used. The pedagogical merit of the organization and content of programs of long and short term individual training is also to be examined and strengthened on a continuous basis.

The main duties of the incumbent will be to:

- Review training and meeting materials for appropriateness, clarity, quality and effectiveness.
- Supervise and help prepare training and educational materials of the highest possible quality.
- Instruct ILCA scientific staff about educational principles and on effective training methods.
- Recognize and identify African livestock research and development training needs and propose methods to meet those needs.

QUALIFICATIONS

- Advanced degree in agricultural education, preferable at the doctoral level.
- Experience in international training programs or projects, 3-5 years experience without a doctoral degree, substantially less with a doctoral degree.
- Excellent communication skills, preferably in both English and French, certainly in one with evident competence in the other.

Salary and related benefits are paid in US\$ and will be in line with comparable international organizations. Initial salary will be determined by qualifications and experience.

Applicants should send current curriculum vitae, recent salary history, names and addresses of three professional referees and photocopies of supporting documents (not returnable) in confidence to the **Personnel Manager, ILCA, P.O. Box 5689, Addis Ababa, Ethiopia** before **23 October 1987.**

NATIONAL INSTITUTES OF HEALTH

PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) invites nominations and applications for the position of Chief, Laboratory of Neuronal Growth and Regeneration (LNGR), Division of Intramural Research (DIR). This is a Civil Service position in the Senior Executive Service with a salary range of \$64,700-\$73,400 per annum. The person selected may be eligible for Physician's Comparability pay ranging from \$4,000 to \$10,000 per year. A one-year probationary period must be served by the individual selected if not currently in the Senior Executive Service.

The Chief, Laboratory of Neuronal Growth and Regeneration provides technical and administrative direction and leadership to the Institute's research program in neuronal growth, regeneration, and implantation of neural tissue and serves as the focal point within the Federal sector, scientific community and the public for these activities.

For more information on the position, contact Dr. Eugene Streicher on 301/496-5745. For information regarding qualifications requirements, contact Ms. Janet Clagett on 301/496-6334. The following forms are required: Application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography. These must be submitted to: Ms. Janet E. Clagett, National Institutes of Health, NINCDS Personnel Office, Building 31, Room 8A25, 9000 Rockville Pike, Bethesda, Maryland 20892.

Applications must be postmarked no later than November 30, 1987.

All qualified candidates will receive consideration without regard to race, religion, color, sex, age, national origin, lawful political affiliation, marital status, union membership, or any nondisqualifying physical or mental handicap.

**THE NATIONAL INSTITUTES OF HEALTH
IS AN EQUAL OPPORTUNITY EMPLOYER**



RESEARCH ASSOCIATED/ POSTDOCTORAL FELLOW

Positions are open for candidates (Ph.D. or M.S.) at the V.A.-SUNY-Health Science Centers, Brooklyn, to work in the field of folate metabolism. Projects involve purification of variant forms of dihydrofolate reductase and function and molecular genetics of folate binding proteins. Experience with techniques of protein purification, ligand-protein and enzyme kinetics and molecular genetics is essential. Send curriculum vitae to:

Dr. Sheldon Rothenberg
**Veterans Administration
Medical Center
800 POLY PLACE
BROOKLYN, NY 11209**

An Equal Opportunity Employer
U.S. Citizenship Required

RESEARCH NEWS REPORTER SCIENCE MAGAZINE

The Research News section of *Science* Magazine has an opening for a writer with a strong background in physical or engineering sciences. Coverage would include current topics in physics, including superconductivity, chemistry, materials science, and engineering. A demonstrated ability to write news and feature articles is required. An application for this full time position in Washington, D.C., should include a curriculum vitae, salary requirements, a letter describing your interest in Research News, and not more than five writing samples.

Please send information to Carolyn Bell, *SCIENCE* Magazine, 1333 H Street, N.W., Washington, D.C. 20005.

EOE

OPPORTUNITY IN INDIA FOR PRODUCT DEVELOPMENT MANAGER

The Procter & Gamble Company has an opening for a life scientist with a Ph.D. degree in biochemistry or pharmaceutical sciences at its Richardson Hindustan Laboratories at Kalwe, India (near Bombay). This is equivalent to a Section Head position, requiring the management of 12 people and reporting directly to the Vice President of Product Development. *At least 12 years of technology and product development experience and 7 years of technical management experience are required.*

Technical skills must include familiarity with the physiology and biochemistry of the upper respiratory tract, gastrointestinal tract, skin, and hair; and knowledge of the physio-chemical characteristics of the biological actives used in these areas.

Responsibilities will include management of the technical program, manpower and resource allocation, and definition of the program to achieve strategic product objectives. Maintaining effective communications with the parent Company through appropriate information exchange and visitations requires good interpersonal and communication skills. The successful candidate will be part of a highly skilled and multi-disciplinary group working in a stimulating technical environment.

Candidates must be Indian citizens. Send resume to:

Dr. T.J. Logan, Manager
Ph.D. Recruiting
India Product Development Position
THE PROCTER & GAMBLE COMPANY
Miami Valley Laboratories
P.O. Box 398707
Cincinnati, Ohio 45239-8707

Allow 6-8 weeks for response.

POSITIONS OPEN

DIABETES RESEARCH

A growing, private nonprofit research institute and a progressive group of scientists are actively recruiting personnel to pursue molecular approaches to the study of tissue transplantation, regeneration and the complications of diabetes (retinopathies, neuropathies, and nephropathies). A minimum of 2 years of postdoctoral experience is required, preferably in embryology, vascular biology, histology, and/or areas related to the mechanism of growth factor action. Initial salary, equipment, and supplies will be provided with the understanding that the selected individuals will develop an independent research plan and participate in institutional program projects. Send curriculum vitae, statement of research interest, and the names of three references to: **Andrew Baird, Ph.D., Whittier Institute for Diabetes and Endocrinology, 9894 Genesee Avenue, La Jolla, CA 92037.**

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY UNIVERSITY OF ARIZONA

ECOLOGY AND BEHAVIOR: Applications are invited for **TWO TENURE-TRACK POSITIONS** in the general areas of behavior or ecology, including their evolutionary aspects. Applicants pursuing field or experimental studies are of particular interest. High originality in research and talent as a teacher will be important criteria used in selecting among applicants. These appointments will probably be made at the assistant professor rank. Applicants should mail curriculum vitae, statement of research plans, reprints or preprints, and the names and addresses of at least three referees to: **Conrad A. Istock, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721.** The period for applications closes 15 December 1987. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

DEPUTY DIRECTOR MEDICAL RESEARCH SERVICE

The Veterans Administration invites applications for the position of Deputy Director, Medical Research Service. The Medical Research Service currently has a budget of about \$180 million and supports biomedical and behavioral sciences research of over 2500 VA scientists, 75 percent of whom are physicians. It is strongly committed to support of patient-oriented research across the entire spectrum from basic science to clinical application of new knowledge. The Director and Deputy Director are responsible for policy development, peer review management of all investigator-initiated research studies and budget formulation and distribution. Candidates are expected to be nationally recognized scientists, and must have an established record of scholarly achievement. The position is only open to U.S. citizens with the M.D. degree. Salary is \$72,500 and additionally special pay up to \$24,818.

Qualified applicants are invited to send curriculum vitae, bibliography, and the names, addresses, and telephone numbers of three respondents by 30 November 1987 to: **Richard J. Greene, M.D., Ph.D., Assistant Chief Medical Director for Research and Development (15), Veterans Administration, 810 Vermont Avenue, NW, Washington, DC 20420.**

The Veterans Administration is an Equal Opportunity Employer.

DIRECTOR, MIT PLASMA FUSION CENTER.

The MIT Plasma Fusion Center has initiated a search for a Director who will have the responsibility of providing the Center with its intellectual and managerial leadership. This includes maintaining the Center's role as one of the leading university research laboratories in national and international magnetic fusion, engineering, and plasma physics research. Persons interested in this position must have a Ph.D. with a specialization in plasma physics or fusion-related research and a minimum of 10 years of internationally recognized experience in this field, including an outstanding publication record. Demonstrated qualifications for appointment to a senior faculty rank, and demonstrated leadership capabilities, including research and administrative management, are required. Confidential contact should be made to: **Dr. Richard S. Post, Chairman, Search Committee and Head, Mirror Confinement Experiments Division, MIT Plasma Fusion Center, 190 Albany Street NW21-111A, Cambridge, MA 02139. Telephone: 617-253-8660** no later than 6 November 1987. *MIT is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ECOLOGY-EVOLUTION

The Department of Biology at the University of Oregon is expanding its program in Ecology and Evolution and seeks a **DIRECTOR** to lead this expansion. The position will be filled and salaried at the associate professor or professor level (tenured) and is open in any area of ecology and evolution. The Director will have significant Departmental resources, including new positions to recruit in this area. The selected candidate will be expected to have a strong, funded current research program, and to fit in with and coordinate the existing and future group. Send curriculum vitae, description of research interests, recent publications, three letters of reference, and names, addresses, and telephone numbers of three additional references to: **Ecology and Evolution Search, Department of Biology, University of Oregon, Eugene, OR 97403.** More information may be obtained by calling: **Dr. R. A. Capaldi, Head, Department of Biology, 503-686-4526**, or by writing: **Chair, Search Committee.** Closing date: 15 November 1987. *The University of Oregon is an Equal Opportunity/Affirmative Action Employer.*

ENVIRONMENTAL SCIENTIST

Texasgulf Chemicals Company, Aurora, North Carolina, has an immediate opening for an environmental scientist.

The ideal candidate will have a M.S. degree in a biological science, and have an interest in dealing with wetlands mitigation projects, reclamation revegetation studies, and general environmental studies. Primary responsibilities will include obtaining appropriate regulatory permits both state and federal for all the company's wetlands and reclamation activities.

Excellent salary and benefit package. If interested, send résumé to:

**Mike Gwynn
Texasgulf
P.O. Box 48
Aurora, NC 27806
Equal Opportunity Employer M/F**

The Cognitive Sciences Department at the University of California, Irvine has two tenure-track openings at the Assistant Professor level: one for an **EXPERIMENTAL PSYCHOLOGIST**, the other for a **COGNITIVE NEUROPSYCHOLOGIST**. Applicants for the experimental position should be prepared to teach a three-quarter undergraduate experimental psychology course. Applicants for the neuropsychology position should be prepared to teach undergraduate courses in learning and memory. Both positions also entail research and graduate teaching. Preference will be given to candidates whose research interests complement those of existing faculty. Applicants should send letters of interest, curriculum vitae, selected publications, and names of three references to: **Experimental Search Committee, or Neuropsychology Search Committee, Cognitive Science Department, University of California, Irvine, CA 92717.** Applications should be submitted by 15 December 1987. *UCI is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION—The School of Medicine of East Carolina University invites applications for the position of Professor in the Department of Pharmacology. Applicants must have demonstrated excellence in alcohol research, particularly in neurotransmitter and electrophysiologic and/or electropharmacologic involvement. Successful applicants must have current grant support and be a nationally recognized leader in the field. Please send curriculum vitae, a brief description of research plans, and three letters of recommendation by 15 December 1987 to: **Dr. Wallace R. Wooles, Chairman, Department of Pharmacology, School of Medicine, East Carolina University, Greenville, NC 27858.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN IMMUNOLOGY-MICROBIOLOGY. University of Hawaii has a tenure-track 9-month position at the assistant or associate professor level beginning August 1988. Ph.D. or equivalent required. Application deadline: 31 December 1987. Submit curriculum vitae, names of at least three professional references, and representative publications, if available, to: **Dr. Philip C. Loh, Chairman, Department of Microbiology, University of Hawaii, Honolulu, HI 96822; Telephone: 808-948-8603.** *An Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION—GENETICS. Tenure-track assistant professor, starting fall 1988. Teaching includes a general genetics course; participation in introductory biology course; two alternate-year courses, at least one of which should be microbiology, development, or immunology. Research involving undergraduates is encouraged. Ph.D. required; teaching experience desirable. Submit résumé and three letters of reference by 1 December 1987 to: **Dr. Margaret Simpson, Chairman, Department of Biology, Sweet Briar College, Sweet Briar, VA 24595.** *Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION DEPARTMENT OF MICROBIOLOGY UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)

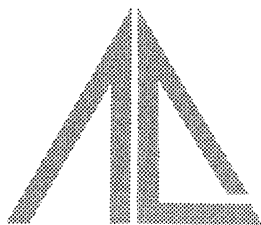
The Department of Microbiology, College of Letters and Science, University of California, Los Angeles invites applications for a tenure-track faculty position. Applicants should have strong training and research experience in some area of microbial development, symbiosis, diversity, cell-cell interactions, or microbial behavior. Emphasis must be at the molecular level. Candidates must be motivated toward excellence in teaching and basic research. Applicants must have a Ph.D. or equivalent degree, and several years of postdoctoral experience. Please submit curriculum vitae, brief description of research goals, and the names of at least three references, by 30 October 1987, to: **Dr. Robert P. Gunsalus, Chairman of Search Committee, Department of Microbiology, University of California, Los Angeles, CA 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

PENN STATE FACULTY POSITIONS BIOMOLECULAR STRUCTURE AND FUNCTION

Applications are invited for two tenure-track positions at any level as part of an expanded research concentration in the area of biomolecular structure and function. Candidates are being sought in each of the following areas: (1) protein crystal structure determination and (2) theoretical/computational studies of biological macromolecules. The University has made a major commitment in this area including laboratory space and equipment necessary for the individual research programs such as X-ray diffractometer including area detector and computer graphics system. The positions will be available in either the Department of Chemistry, the Department of Molecular and Cell Biology, or as joint appointments in these departments. Joint affiliation with the newly formed Penn State Biotechnology Institute is also a possibility. Applicants should have the background, motivation, and ability to develop vigorous, productive research programs and to be excellent teachers. Reply to: **Search Committee for Biomolecular Structure and Function, Department of Chemistry, 152 Davey Laboratory, Box 12, University Park, PA 16802.** Please indicate the area for which you are applying. Include a detailed curriculum vitae, statement of research interests, and up to three recent representative reprints. In addition, the applicant should ask three individuals to send letters of reference directly to us. Review of applications will commence in November 1987. Deadline for receipt of applications is 15 January 1988 or until suitable candidates are identified. *Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN CELLULAR AND MOLECULAR BIOLOGY

Applications are invited for a tenure-track position in the Department of Cell Biology and Anatomy at Northwestern University Medical School. This position is at the assistant/or associate professor level. Applicants must have a Ph.D., M.D. or equivalent degree, with research experience in cellular and/or molecular biology. Applicants will be screened with respect to their ability to carry on vigorous research programs, and to participate in the teaching of graduate and medical students. Send complete curriculum vitae, brief description of research interests, and at least three letters of recommendation by 1 December 1987, to: **Dr. Robert D. Goldman, Department of Cell Biology and Anatomy, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.** *Northwestern University is an Equal Opportunity/Affirmative Action Employer, and invites applications from all qualified individuals.*



Management Consultants In Medical Products

Arthur D. Little, Inc., is a multinational professional services company whose primary business is technology and management consulting. We have unique opportunities in our Health Industries Management section to work with high level professionals who manage industry research and development. Our clients are primarily manufacturers of medical products, including pharmaceuticals, diagnostics, biotechnology-based products, and medical devices.

Qualifications include -

- M.D. and/or Ph.D. degree in biologic science.
- Clinical and/or laboratory experience with technologies relevant to the medical industry; such as, cloning, monoclonals, transgenic mice, etc.
- Understanding of health care delivery system, regulation, FDA, health policy, etc., through industry or government experience either in a laboratory or administrative position.
- Strong interpersonal and communication skills.

Based in Cambridge, Massachusetts, these high-visibility positions offer opportunities for direct client contact, participation in high level planning and technology assessment in a challenging multidiscipline environment. We provide relocation assistance and an attractive compensation/benefits package.

Please send resume or C.V. to Jeanne Crowley, Personnel Manager, Arthur D. Little, Inc., Acorn Park, Cambridge, MA 02140. An equal opportunity employer, M/F.

 **Arthur D. Little, Inc.**

Research Enzymologist

Fritzsche Dodge & Olcott, a leading manufacturer of aroma chemicals, flavors and fragrances, has a challenging position available for a knowledgeable Research Enzymologist who can work independently.

Major responsibilities will be to isolate plant and microbial enzymes and investigate enzymatic processes for the generation of flavor and fragrance materials. Specifically, you will design and carry out experiments, evaluate new sources of enzymes, generate specialized flavor bases and report on progress.

To qualify, you must possess a PhD in Enzymology, Protein Biochemistry or a related field as well as a familiarity with techniques for the isolation, characterization and assay of enzymes from plant and microbial sources. Some knowledge of enzyme immobilization procedures and industrial research experience would be a plus.

We offer a competitive salary, comprehensive benefits and outstanding opportunities for career advancement. For immediate consideration, forward your resume in confidence to: **Human Resources—Dept. RE-S, Fritzsche Dodge & Olcott, a Unit of BASF K&F Corporation, 76 Ninth Avenue, New York, NY 10011.** An Equal Opportunity Employer M/F/H.

BASF Group



Head of Pharmacology

As leaders in the research and development of ethical pharmaceuticals, Smith Kline & French have a reputation for excellence, innovation and responsibility within the industry.

We are currently looking for an outstanding individual to direct the Pharmacology Department in our UK drug discovery group. Our current major goals are novel therapies for cardiac failure and peripheral vascular disease, hyperlipidaemia, allergy and inflammation, and gastro-intestinal disorders. They are aimed at defined cellular and molecular targets such as rate-limiting enzymes, membrane transporters and key elements in cell signalling systems.

Pharmaceutical industry experience, or a medical or veterinary training, are desirable but not essential. The crucial qualities needed are: an excellent record of scientific achievement; experience of whole animal pharmacology; demonstrable qualities of personal and scientific leadership; a commitment to drug discovery through innovative science; and an eclectic appreciation of modern biomedical science, appropriate for the holder of a key position in the coordinated, Worldwide R&D effort of a leading international health-care corporation.

We are situated in a beautiful 38 acre estate in Welwyn, Hertfordshire, a location that is both pleasant and convenient to all destinations.

The substantial salary package, reflecting the demands this position poses, includes a car, performance-related bonus, stock options, BUPA and relocation.

Please write in confidence, enclosing a detailed cv and quoting ref S/136/TEF to Dr T E Forster, Personnel Director, Smith Kline & French Research Limited, The Frythe, Welwyn, Hertfordshire AL6 9AR, England.

SK&F

POSITIONS OPEN

FACULTY POSITIONS IN MOLECULAR BIOLOGY

The Department of Biology at the University of Virginia invites applications from molecular biologists who use structural and/or molecular genetic approaches to study fundamental problems in biology. Positions at the assistant professor or more senior levels are available immediately as part of an expanding program in molecular biology. Our search will consider candidates in all areas of molecular biology research including macromolecular structure and function, nuclear or cytoplasmic function, and developmental and neuronal regulation. Send résumé, description of research program, summary of teaching interests, and three letters of reference by 15 November 1987 to: **Molecular Biology Search Committee, Department of Biology, University of Virginia, Charlottesville, VA 22901. Equal Opportunity/Affirmative Action Employer.**

The Department of Ecology and Evolutionary Biology, University of California, Irvine (UCI), announces **FOUR FACULTY POSITIONS**: three tenure-track (assistant professor) and one tenured (associate professor). Rather than specify the areas of search, primary emphasis will be on the quality of individual applicants. However, special attention will be paid to underrepresented areas within the department; these include plant physiological ecology, behavioral ecology, population and quantitative genetic theory, and macroevolution. Departmental strengths include animal physiological ecology and ecological energetics, population and community ecology, mathematical and quantitative ecology, and experimental evolutionary genetics. We are interested in both empirical and theoretical approaches to ecological and evolutionary problems, and we strive to achieve a balance between these. We are looking for candidates of exceptional merit, and postdoctoral experience is usually required. *UCI is an Equal Opportunity/Affirmative Action Employer.*

Please send letter of application, curriculum vitae, key publications, statement of research interests and goals, and the names, addresses, and telephone numbers of four references to:

**Search Committee
Department of Ecology and Evolutionary Biology
University of California
Irvine, CA 92717**

Candidates should arrange for references to submit letters of evaluation directly to the search committee at the time of their application.

Deadline for receipt of applications and supporting letters is 1 December 1987.

HUMAN GENETICS

Bruce L. Evatt, M.D., Director, the Division of Host Factors, Center for Infectious Diseases, Centers for Disease Control (CDC), invites applications for a **RESEARCH SCIENTIST** in molecular genetics. Individuals with research interests in hematopoiesis or stem cell differentiation are particularly encouraged to apply. Responsibilities include the development and execution of program plans in coordination with the Division Director. A fully equipped laboratory and technical staff are provided. Prefer candidates with a Ph.D. and/or M.D. and a minimum of 2 years of postdoctoral experience in molecular genetics. Salary ranges from \$38,000 to \$72,000 depending on qualifications and personnel systems. Applications including curriculum vitae, a statement of future research interests, and the names with addresses of three references should be sent to: **Sharlyn L. Wilkinson, Personnel Management Specialist, CDC, Building 1, Room 1058, Atlanta, GA 30333. CDC is an Equal Opportunity Employer and has a smokefree work environment.**

Applications must be received by 15 December 1987 to receive consideration.

MOLECULAR RETROVIROLOGIST. The Department of Microbiology invites applications for an assistant professor tenure-track position in the area of molecular virology. The qualified candidate, with strong background in virology and molecular biology, will be expected to develop independent competitive programs in AIDS research. Send curriculum vitae, with a brief description of research interest to: **Dr. A. E. Friedman-Kien, Department of Microbiology, New York University School of Medicine, 550 First Avenue, New York, NY 10016. An Equal Opportunity Employer M/F.**

POSITIONS OPEN

FULL PROFESSORSHIP

Harvard University: The Department of Psychology seeks to fill a new professorial opening devoted to the study of criminal behavior. Candidates should be active in criminological research, with special emphasis on psychological or psychophysiological variables. Candidates should also be prepared to teach at the graduate and undergraduate level. Although the primary appointment is in the Department of Psychology, joint appointment with other Departments or Faculties may be arranged if appropriate. Applications, including the names and addresses of three referees should be sent to: **Brendan Maher, Chairman, Department of Psychology, Harvard University, Cambridge, MA 02138. Applications from women and minority groups are especially welcome. The closing date for applying is 15 November 1987.**

GENETICIST

The Department of Biological Sciences of the University of Nevada, Las Vegas (UNLV) invites applications for a tenure-track academic position at the rank of assistant professor. Responsibilities include the development of a vigorous research program and a commitment to undergraduate and graduate teaching. The area of genetic research is open but preference will be given to applicants with expertise in developmental genetics and whose research interests complement those of a faculty with strength in environmental biology. A Ph.D. in biological science is required; postdoctoral experience is preferred. *Women and minorities are especially encouraged to apply.* Submit applications including a statement of research and teaching interests, curriculum vitae, representative reprints, and three letters of recommendation by 13 November 1987, to: **Dr. R. Keith Dupre, Geneticist Search Committee, Department of Biological Sciences, University of Nevada-Las Vegas, Las Vegas, NV 89154. UNLV is an Affirmative Action/Equal Opportunity Employer.**

GENETICIST—Applications are invited from highly qualified individuals with interests in Developmental Genetics or in Evolutionary Genetics. Preferential consideration will be given to candidates who use molecular or biochemical techniques. Postdoctoral experience is strongly preferred. Successful candidates will be expected to maintain vigorous research programs and to participate in the teaching of introductory and advanced course in genetics. The position is most likely to be filled at the level of assistant professor, but appointment at any rank is possible. Applications will be received until the position is filled.

Please send curriculum vitae, including description of future research plans and of teaching interests, and have three letters of recommendation sent to:

**Genetics Search Committee
Department of Biology
University of Iowa
Iowa City, IA 52242**

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

MACROMOLECULAR CRYSTALLOGRAPHY UNIVERSITY OF CALIFORNIA, BERKELEY

The Department of Chemistry and the Department of Biophysics invite applications for **TWO FACULTY POSITIONS** (pending final budgetary approval), one at the associate professor or professor level and the other at the assistant professor level. The appointments are to be effective within the next 2 years. Applicants should have a Ph.D. degree or equivalent and relevant prior experience in x-ray crystallography of biological macromolecules. Faculty duties will include research in structural molecular biology, supervision of graduate student and postdoctoral research, and teaching at the undergraduate or graduate levels. The successful candidate will be part of an expanding, interdisciplinary structural biology group at Berkeley that also includes members of the departments of molecular biology and biochemistry. Applications should include: a letter specifying qualifications and current research interests, curriculum vitae, a list of publications, representative reprints, and the names and addresses of persons whom we may contact for letters of recommendation. Applications will be processed as soon as they are received, but should arrive no later than 15 February 1988. They should be addressed to: **Professor Robert Glaeser, Biophysics Department, Donner Laboratory, University of California, Berkeley, CA 94720.**

The University of California is an EO/AAE

POSITIONS OPEN

MAGNETOENCEPHALOGRAPHY ENGINEER/PHYSICIST

Albuquerque Veterans Administration Medical Center, University of New Mexico and Los Alamos National Laboratories is seeking an engineer or physicist to become Technical Project Leader of the new Veterans Administration/Los Alamos National Laboratories/University of New Mexico Clinical MEG Program. A magnetically shielded room with seven sensor SQUID will be at both the VAMC and LANL. Applicant must have M.S. or Ph.D., with 3 years of experience and research productivity in medical engineering, bioengineering, or medical physics. Applicant should have background in medical imaging, signal processing and data acquisition systems; must also be interested in working with a team to study the medical possibilities of the MEG. Salary dependent upon applicant's experience. University of New Mexico faculty appointment possible. Send résumé and name of three references to: **Larry E. Davis, M.D., Chief, Neurology Service, Veterans Administration Medical Center, 2100 Ridgecrest Drive SE, Albuquerque, NM 87108. An Affirmative Action/Equal Opportunity Employer.**

MARINE MICROBIOLOGIST UNIVERSITY OF CALIFORNIA, SANTA CRUZ (UCSC)

The Marine Sciences Committee invites applications for a tenure-track position in marine microbiology at the assistant professor level, effective 1 July 1988. Santa Cruz plans to expand its research efforts in the area of global ocean processes, and applicants are sought with interests in the role of pelagic microbes in the energy and nutrient cycles in the sea. Candidates must establish a strong and interactive research program and participate in graduate and undergraduate teaching. Applicants must have a Ph.D. by the time of appointment. A résumé, brief summary of research goals, and names of three references should be sent to: **The Search Committee, Marine Sciences, UCSC, Santa Cruz, CA 95064 by 16 November 1987. The University of California is an Affirmative Action/Equal Employment Opportunity/Immigration Reform and Control Act Employer.**

MOLECULAR BIOLOGIST/ MICROBIOLOGIST

**Bacterial Genetics Group
Advanced Genetic Sciences, Inc.
6701 San Pablo Avenue
Oakland, CA 94608**

Research on genetic basis of antibiotic biosynthesis in fluorescent pseudomonads and bacterial degradation of xenobiotics. [For partial background, see *J. Bact.* **165**, 696 (1986), and *AEM* **52**, 1183 (1986).] Applicants should hold a Ph.D. in molecular biology, microbiology, or a related field. Experience with protein purification is desirable. Salary and level of appointment commensurate with experience. Send curriculum vitae and names, addresses, and telephone numbers of three referees to: **Dr. Neal Gutterson** at the above address.

MICROBIOLOGIST

The Department of Microbiology, Medical College of Ohio, seeks candidates for a tenure-track position. The successful applicant will be expected to develop an independent, competitively funded research program focusing on the genetics or molecular biology of prokaryotes, and to participate in the department's graduate/professional teaching programs. Applicants should have a doctoral degree, and at least 2 years of postdoctoral experience. Send curriculum vitae, research interests, and three references to:

**Dr. Earl H. Freimer, Chairman
Department of Microbiology
Medical College of Ohio
Toledo, OH 43699**

The Medical College of Ohio is an Equal Employment Opportunity/Affirmative Action M/F Employer and Educator.

PHARMACOLOGIST: Faculty/research position for appropriate Ph.D., Pharm.D. Qualifications and experience must include strong medical school teaching skills and research accomplishments. Faculty rank and salary commensurate with experience. Send curriculum vitae and names of three references to: **Robert E. Mancini, Ph.D., D.O., Chairman, Department of Pharmacology/Toxicology and Experimental Therapeutics, New York College of Osteopathic Medicine, Box 170, Old Westbury, NY 11568.**

POSTDOCTORAL FELLOWSHIPS at the University of Washington COLLEGE OF OCEAN AND FISHERY SCIENCES

Applications are requested from new or recent doctorates in science, engineering and from individuals with equivalent degree stature in related fields for fellowships to be awarded in the College.

The College consists of four units covering all aspects of marine science and marine policy. Fellowship holders will be appointed in one of the following departments:

The School of Oceanography carries out basic research in physical oceanography, marine chemistry, marine geology, and geophysics and biological oceanography.

The Institute for Marine Studies focuses multidisciplinary research on marine policy issues arising from man's use of the oceans; relevant disciplinary training may be in any of the social or natural sciences or in law.

The Applied Physics Laboratory carries out research in physical oceanography, polar science, underwater acoustics, and a wide range of engineering disciplines.

The School of Fisheries specializes in fish and shellfish systematics and ecology, aquaculture, quantitative fishery management, environmental toxicology and food science.

Fellowships are awarded for one year, renewable for a second year, with a stipend of \$24,000 and a modest research budget. Health insurance is also provided. A complete application consists of transcripts of the applicant's graduate record, a vita, addresses and telephone numbers of three referees, a synopsis of the doctoral dissertation, and statement outlining the research the applicant proposes to undertake at UW. Direct contact with faculty in the College is encouraged. All materials must be received by 1 December 1987. Awards will be announced in early January 1988. Fellowships must be taken up before 1 September 1988.

Applications and any questions should be addressed to: **Search Committee, COFS Postdoctoral Program, Office of the Dean HA-40, College of Ocean and Fishery Sciences, University of Washington, Seattle, WA 98195.**

Equal Opportunity/Affirmative Action Institution

CENTER FOR REPRODUCTION AND TRANSPLANTATION IMMUNOLOGY RESEARCH POSITION

Position available for MD or PhD to work on biochemical and immunogenetic aspects of trophoblast antigens. The Center is investigating the role trophoblast lymphocyte crossreactive (TLX) antigens play in human pregnancy, transplantation, and cancer. Experience with biochemical techniques for isolation of immunogens (carbohydrate, lipid, and proteins) is required. The successful applicant will work with a multidisciplinary team which includes reproductive and transplantation immunologists, endocrinologists, experimental pathologists, embryologists, and andrologists.

Up to three years of support are available. Starting salary plus benefits dependent upon experience. Send Curriculum Vitae to **Dr. John A. McIntyre, Director of Research, c/o Employment Office, Methodist Hospital of Indiana, Inc., P.O. Box 1367, Indianapolis, IN 46206.** An equal opportunity employer.

 **Methodist
Hospital**
OF INDIANA, INC.

TOXICOLOGY

Stauffer Environmental Health Center, a unit of ICI, has several exciting career opportunities available at its laboratory located in Farmington, CT.

Metabolism/ Pharmacokinetics Supervisor

You will supervise scientists working on metabolism/pharmacokinetic studies and work as part of a team of chemists and biochemists to separate and identify metabolites in biological systems. To qualify, you should possess a Ph.D. or equivalent in biochemistry, chemistry, or a related field and 5-7 years of experience in conducting metabolism/pharmacokinetic studies in animals and experience in laboratory supervision. You should also have experience in modern biochemical and analytical procedures including TLC, GLC, HPLC and radioisotope handling.

Staff Veterinarian

You will be responsible for providing animal care in support of product safety testing, including maintenance of animal colony health, training and staff development, and specialized examinations as required. Applicants should have a D.V.M., plus at least three years experience in laboratory animal health care or a residency/degree program in laboratory animal medicine. Board certification or board eligibility in the American College of Laboratory Animal Medicine is desirable.

Toxicologist

You will be responsible for conducting a variety of toxicology studies. Responsibilities include participation in the design of studies, preparation of protocols, implementation and overall supervision of studies, evaluation and interpretation of results, and preparation of written reports and summaries. The position offers an excellent opportunity for collaborative work in the pathogenesis of toxic effects with veterinary pathologists and other scientific staff. Applicants should have a Ph.D. in toxicology, pharmacology or related life science or a B.S. or M.S. in one of these fields with appropriate experience.

Stauffer Environmental Health Center provides an excellent salary and outstanding benefits. The Environmental Health Center is adjacent to the University of Connecticut Health Center, in one of the state's most attractive semi-rural towns. To apply, please send your resume, a brief description of your experience, and salary requirements to: Mrs. P. Frutchey, Stauffer Environmental Health Center, 400 Farmington Avenue, Farmington, CT 06032. We are an Equal Opportunity Employer M/F.

Stauffer

**Environmental
Health Center**

A Unit of ICI

Telios

Pharmaceuticals, Inc.

Telios is a newly established company in the La Jolla area dedicated to excellence in **Pharmaceutical development**. Currently there are two immediate openings in the company for **Ph.D. / M.D. level scientists at the entry level:**

Physiological Biochemist

with experience in the design and testing of pharmacologically active peptides.

Polymer Chemist

with 3-5 years postdoctoral experience.

Resumes should be sent to:

Personnel Director

Telios Pharmaceuticals, Inc.
10901 North Torrey Pines Rd.
La Jolla, California 92037
Equal Opportunity Employer

DESERT RESEARCH INSTITUTE

Vice President for Finance and Administration

The Desert Research Institute, an autonomous division of the University of Nevada System, is committed to full-time conduct of sophisticated programs of basic and applied research in the areas of water, air and energy resources, biology, and social sciences. Principal funding is from a variety of public and private sources.

The Vice President for Finance and Administration reports to the President and has responsibility for the following areas: finance and administration, program management, fostering research, and physical plant.

Qualifications include at least a bachelor's degree with preference for an advanced degree or experience in financial administration. Experience should include at least 5 years in financial and administrative management of research programs in a center or institute associated with an institution of higher learning, and prior experience with conduct of research investigations.

Salary is competitive, depending upon qualifications and experience. Complete application must be received by 23 October 1987. Additional information, including job description and selection criteria, may be obtained by contacting Ms. Peggy Smith at (702) 673-7317. To apply, send letter of application and current resume to:

Personnel Department
Desert Research Institute
P. O. Box 60220
Reno, Nevada 89506

An Affirmative Action/Equal Opportunity Employer

FLOATING POINT SYSTEMS PROFESSOR OF COMPUTATIONAL METHODS

LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE

LSU announces a newly endowed chair—The Floating Point Systems Professor of Computational Methods. The person appointed to this chair will be an individual with a distinguished and ongoing record of scholarship in scientific computing and parallel processing. Candidates should be prepared to exercise scholarly leadership in this major interdisciplinary activity.

LSU is a comprehensive research university with undergraduate and graduate degrees in computing and related disciplines. Scientific computing for research is being conducted in a number of academic units. LSU offers a full range of computing facilities, including a FPS Tesseract 20 hypercube.

The chairholder will be appointed with tenure; a joint appointment in more than one department is possible. Salary and support will be commensurate with the position. The appointment could be made for any time between January and August 1988.

Nominations of qualified candidates are solicited and should be made as soon as possible through submission of name, telephone number, and current address. Applications are requested by December 1, 1987, from interested individuals through submission of a letter of application; a current curriculum vita; and names, addresses, and telephone numbers of three referees. All correspondence should be addressed to:

Dean William Cooper
Graduate School
Louisiana State University
Baton Rouge, LA 70803
cooper%lsu@csnet-relay

LSU is an equal opportunity employer.

Research Scientist

Triton Biosciences Inc., an entrepreneurial subsidiary of Shell Oil Company, is an emerging force in the development of diagnostics and therapeutics for human health care. Our company is built upon a strong base of research expertise, solid support, and responsive management.

An excellent opportunity exists for an innovative researcher in our Biochemical Development department. The qualified candidate should have a Ph.D. in Chemistry/Biochemistry, or a related field, and at least 3-5 years of combined post-doctoral studies and/or industrial experience.

The successful candidate is expected to design and execute projects on the scale-up of protein purification processes. In addition to a strong background in biochemistry, you should have a good working knowledge of modern techniques in protein purification and analysis, including HPLC. Prior experiences with recombinant derived products and GMP's desirable.

Additional opportunities exist for BS/MS level Research Associates.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits, including relocation assistance. For prompt consideration, please forward your CV. along with salary requirements and the names of three references to: Triton Biosciences Inc., 1501 Harbor Bay Parkway, Alameda, CA 94501. All candidates must have U.S. citizenship or permanent resident visa status. Triton is an Equal Opportunity Employer.



Triton Biosciences Inc.

BIO/MOLECULAR ENGINEERING

Naval Research Laboratory

NRL, the Navy's corporate laboratory, is seeking highly motivated Ph.D.'s to fill permanent staff positions for expanding programs in Biosensor and Biomaterials Development. Current research areas include projects on the development of sensitive detection systems using immunological and receptor-based sensor technology, synthesis and characterization of novel lipids, research on the properties of lipid-derived tubules in various matrices, and the use of biomolecules in microlithography. Candidates should possess the following qualifications:

- **Biochemist/Immunochemist**-Experience in protein chemistry, fluorescence techniques, and antigen/antibody coupling to solid substrates.
- **Neurochemist/Pharmacologist**-Strong background in membrane protein biochemistry, receptor isolation, and diagnostic techniques.
- **Materials Scientist**-Experience in development and analysis of novel materials containing biological components.
- **Process Engineer**-Experience in colloids, coatings, and electrode processes with potential biophysical applications.
- **Lipid Physical Biochemist**-Experience in utilizing advanced physical probes to characterize lipids.
- **Genetic/Protein Engineer**-Experience in chemical and/or genetic modification of proteins.

Salary range GS-11 to 15 (\$27,172 to \$69,976) based on qualifications and experience. Postdoctoral and technical positions are also available. Send resume and references to:



Civilian Personnel Office
Code 1813.1 (S)
Naval Research Laboratory
4555 Overlook Avenue, S.W.
Washington, D.C. 20375-5000
ATTN: Ms. Kathy Weaver

An Equal Opportunity Employer • U.S. Citizenship Required

Senior Scientist Biochemical/Endocrine Toxicology

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for positions in the Department of Biochemical Toxicology.

Applicants must have a doctoral degree with a strong background in endocrinology and pharmacology.

The primary responsibilities involve establishing a research program to study the mechanisms of drug-induced alterations in endocrine function. In addition, the successful candidate will participate in research team activities directed toward the development of new therapeutic agents.

Qualified candidates should send their curriculum vitae to:



Ms. Carol Zapapas
Personnel Representative—JW992
Eli Lilly and Company
Greenfield Laboratories
P.O. Box 708
Greenfield, Indiana 46140

Equal Opportunity Employer

BS/MS Scientist Bioanalytical Methods

The Department of Drug Metabolism of Smith Kline and French Laboratories, located in suburban Philadelphia, PA, is seeking qualified applicants to join a collaborative and expanding bioanalytical section. The successful candidate will: develop novel analytical assays for drugs and their metabolites in biologic media; participate in the isolation and characterization of metabolites; participate in pharmacokinetic studies in animals; and participate in basic research programs in drug development.

Candidate qualifications will include:

- B.S. or M.S. in Analytical Chemistry, Chemistry, Biochemistry or related area plus 1-3 years experience in an analytical laboratory.
- Demonstrated experience in HPLC, GC and/or GC/MS and the application of these techniques in bioanalytical methods development for drugs in biologic media.
- Experience in the HPLC isolation of "trace" quantities of organic compounds.
- Knowledge of spectroscopic methods (MS, NMR) of analysis desirable.
- Proven research ability evidenced by scientific publications preferred.
- Excellent communication and interpersonal skills required.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Please forward your C.V. and the names of three references to: Mary Ann McCarry, Sr. Employment Consultant, R&D-C0049, Smith Kline & French Laboratories, Research & Development, 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

POST DOCTORAL POSITIONS

Post Doctoral positions are available for research on the bio-chemistry & molecular biology of the components of CONNECTIVE TISSUES. A background in collagen, proteoglycan or glycoprotein biochemistry with experience in cell or molecular biology is desirable. Applicants must have US citizenship or permanent residence status. Send resume to:

N.A. KEFALIDES, MD, PhD
Connective Tissue
Research Institute
University of
Pennsylvania
**UNIVERSITY CITY
SCIENCE CENTER**

3624 Market St., Phila., PA 19104
An Affirmative Action/Equal Opportunity
Employer

Opportunities in Molecular Genetics



An equal opportunity employer

As part of our expanding research activities, the Department of Molecular Genetics at Pfizer Central Research has several opportunities for PhD level scientists to make significant contributions in the area of eukaryotic gene expression. Strong scientific credentials and a documented record of productivity are essential. Candidates should have a PhD in Molecular Biology or related field, expertise in recombinant DNA techniques, and at least two years relevant postdoctoral experience.

We seek creative, motivated individuals with a background applicable to the following areas:

- Heterologous gene expression—experience with yeast desirable.
- Tissue specific regulation of mammalian gene expression—extensive experience with mammalian cell culture required.
- Factors controlling expression of mammalian gene cDNA cloning experience required.

Each position offers an excellent opportunity for professional recognition. In addition to a stimulating scientific environment, we offer a competitive compensation/benefit package and relocation assistance to an attractive southeastern Connecticut shore community. Qualified applicants should submit their resume and the names of three references in confidence, to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

POSITIONS OPEN

MOLECULAR BIOLOGIST LABORATORY FOR CELL, MOLECULAR AND DEVELOPMENTAL BIOLOGY (LCMDB) UNIVERSITY OF ILLINOIS AT CHICAGO

The Department of Biological Sciences of the University of Illinois at Chicago seeks a senior molecular biologist to join the Laboratory for Cell, Molecular and Developmental Biology. The appointment will be at the rank of full professor with tenure. The appointee will coordinate current programs and ongoing development of the Laboratory.

The Laboratory for Cell, Molecular, and Developmental Biology was established to consolidate research and training programs in modern cellular, molecular, and developmental biology, and represents one facet of a campus-wide commitment to foster excellence in the areas of molecular biology and biotechnology. Permanent funding exists for LCMDB support staff, graduate fellowships, postdoctoral fellowships, new equipment, and facilities. Salary lines for the recruitment of junior faculty are also available.

The candidate should have a Ph.D. degree, currently hold the rank of associate or full professor (or equivalent), have an exceptional and ongoing record of research accomplishment, and be recognized as a leader in his or her field. Specific research specialty is open, but should be in an area central to molecular biology and/or molecular genetics.

The position will be available 1 July 1988. Salary is competitive. Applicants should submit curriculum vitae and the names of three references. Applications will be accepted until 1 January 1988. Applications, nominations, or inquiries should be directed to: **Dr. Brian Nichols, Senior Molecular Biologist Search Committee, Department of Biological Sciences m/c 067, University of Illinois at Chicago, P.O. Box 4348, Chicago, IL 60680 (Telephone: 312-996-5064).**

The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR/CELLULAR IMMUNOLOGIST

The Department of Molecular and Cell Biology at the University of Connecticut in Storrs, Connecticut invites applications for a tenure-track position as a molecular/cellular immunologist at the level of assistant or associate professor, beginning in September 1988.

The successful candidate will be a highly motivated individual with at least 2 years of productive postdoctoral experience, who will be expected to establish a vigorous, independent research program in molecular or cellular immunology. Candidates at the associate professor level will have a well-established record of research, commensurate with the rank, and an actively supported research program. Teaching will involve both graduate training and instructing an undergraduate course in contemporary molecular and cellular immunology.

Applicants should submit: curriculum vitae, list of publications and reprints, a statement of current and projected research and teaching interests, and arrange to have three letters of recommendation forwarded to: **Dr. Philip I. Marcus, Immunology Search Committee, Department of Molecular and Cell Biology, U-44, 75 North Eagleville Road, The University of Connecticut, Storrs, CT 06268.** Applications received after 1 December 1987 cannot be assured of full consideration. *The University of Connecticut is an Equal Opportunity/Affirmative Action Employer, and encourages applications from qualified minority groups and women.* (Search #8A134)

THE UNIVERSITY OF CONNECTICUT

MOLECULAR GENETICIST: The Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, is seeking an M.D., Ph.D. molecular geneticist with clinical interest, or an M.D. with strong molecular background for a tenure-track position. Academic rank and salary commensurate with experience and qualifications. Individual will participate in the development of a molecular diagnostic laboratory in the Center for Human Genetics. Research is major component of the position, but clinical commitments can be maintained. Contact: **Bruce A. Bucher, M.D., Director, Meyer Children's Rehabilitation Institute, University of Nebraska Medical Center, 444 South 44th Street, Omaha, NE 68131-3795, telephone: 402-559-5233.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

NEUROPHARMACOLOGIST (Ph.D.) with broad expertise in neurochemical, neuroanatomical, and neuropathological techniques. Position available to work within an interdisciplinary research group focused on psychotropic drug action and the biological basis of neuropsychiatric syndromes. The successful candidate would be expected to organize and institute a laboratory-based research program with a primary emphasis on immunohistochemistry and in situ hybridization histochemistry. Other duties include interdisciplinary collaboration in ongoing research programs and teaching of undergraduate and graduate students in the psychiatry and pharmacology departments. Address initial inquiries to: **B. S. Bunney, M.D., Vice Chairman, Department of Psychiatry, 25 Park Street, New Haven, CT 06508.** Applications should be received by 30 October 1987 to be considered.

Yale University is an Affirmative Action/Equal Employment Opportunity Employer.

PLANT BIOLOGIST

Assistant professor, tenure-track position in the evolutionary ecology or physiology of plants, beginning in July 1988. The candidate is expected to establish an active research program, supervise senior research projects, and to teach approximately one and one half courses per semester, which includes co-teaching in Introduction to Biology and Ecology. Ph.D. required and postdoctoral experience preferable. Send curriculum vitae, statement of research and teaching interests and three letters of evaluation to: **William F. Zimmerman, Chairman, Webster Center for Biological Sciences, Amherst College, Amherst, MA 01002.** *Affirmative Action/Equal Opportunity Employer.*

PLANT CELL BIOLOGIST UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Developmental and Cell Biology, University of California, Irvine, invites applications for a tenure-track position in plant cell biology at the assistant professor level. Appropriate research areas are those involving the use of molecular or biochemical approaches to basic questions in the cell biology of plants. The successful candidate will be expected to direct a vigorous, independent, extramurally funded research program, to participate in the cell biology graduate training program, and to teach at the undergraduate level. Preference will be given to applicants with postdoctoral experience and an outstanding record of research accomplishments. Applicants for this position should submit their curriculum vitae, reprints of representative papers, descriptions of current and anticipated future research, and arrange to have three letters of reference sent to: **Chair, Plant Cell Biologist Search Committee, Department of Developmental and Cell Biology, University of California, Irvine, CA 92717.** Applications should be received by 1 December 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW IN METEORITICS

The Department of Mineral Sciences of the American Museum of Natural History is accepting applications for a Postdoctoral Fellowship in Petrology and Geochemistry of Meteorites. Research will involve the use of analytical techniques to determine the petrogenesis of chondritic and achondritic meteorites in order to elucidate early solar system and planetary history.

Qualifications include a Ph.D. in petrology and/or geochemistry. Experience working with meteorites helpful.

Salary \$25,000 per annum for a 1-year term position which may be renewed. Applications will be accepted until 15 November 1987. Submit curriculum vitae, bibliography, statement of research interests, and contact information for at least three persons familiar with your work to:

**Mr. Lee Vilensky
Personnel Department (S)
American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024
*An Equal Opportunity Employer***

POSITIONS OPEN

PLANT SCIENCES INDIANA UNIVERSITY, BLOOMINGTON

The Department of Biology anticipates appointing a new **FACULTY MEMBER** who has a primary interest in plants and is carrying out innovative research using molecular and genetic tools. We are willing to consider excellent candidates in a wide range of fields; for example, systematics, evolution, developmental biology, cell biology, plant-microbe interactions. The successful candidate will be expected to conduct a vigorous, independent research program, and contribute to teaching. Applicants should have postdoctoral research experience and demonstrated ability as creative scientists. While we expect to make the appointment at the assistant professor level, candidates at higher levels will also be considered. Send curriculum vitae, a brief description of research interests and arrange to have three letters of reference from individuals familiar with your work sent to: **Dr. Tom Blumenthal, Chairman, Department of Biology, Indiana University, Bloomington, IN 47405.**

Applications received before 15 January 1988 will be assured of consideration.

Indiana University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE

Postdoctoral position available to study gene expression in early embryos (sea urchin and mouse). Background in molecular and/or developmental biology preferred. Send curriculum vitae and names of three references to: **Dr. William Crain, Cell Biology Group, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW POSITION

Research on regulation of dynein and flagellar motility by cAMP, Ca²⁺-calmodulin and protein phosphorylation/dephosphorylation. Availability immediately; for up to 3 years. Salary depending on experience. Send curriculum vitae and three letters of reference to: **Dr. Joe Tash, Department of Cell Biology, Baylor College of Medicine, Houston, TX 77030.**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW—DEPARTMENT OF MEDICINE/ENDOCRINOLOGY To study: (1) thyroid antigen reactive T cell clones, and (2) MHC gene expression in thyroid cells. Active endocrine immunology group. Background in immunology and/or molecular biology helpful. Send curriculum vitae to: **Lois Tarallo, Personnel Department, Mount Sinai Medical Center, 19 East 98th Street, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW PLANT BIOCHEMISTRY

The Plant Biochemistry Department of Zoecon Research Institute, a division of Sandoz Crop Protection Corporation, is seeking a postdoctoral scientist to participate in an interdisciplinary research team studying plant enzymology specifically associated with carotenoid biosynthesis.

The position is available for up to 2 years. Applicants should have experience in kinetic and biochemical characterization of membrane-bound enzymes. Previous experience with higher plants is not essential but a strong background in the carotenoid biosynthesis pathway will be considered favorably.

Zoecon Research Institute has been a leader in innovative agricultural research for more than 15 years. The institute has established research programs in herbicide design, plant biotechnology, insect physiology/biochemistry and chemistry.

Our research laboratories are located in Palo Alto, California, in close proximity to Stanford University. We conduct our research in an open, academic-like environment which encourages publication and interaction with other scientists throughout the world.

To apply for this position, please send curriculum vitae and three references to:

**Sandoz Crop Protection Corporation
Zoecon Research Institute
Human Resources Department
975 California Avenue
Palo Alto, CA 94304**

Affirmative Action/Equal Opportunity Employer

RESEARCH OPPORTUNITIES IN PHARMACOLOGICAL SCIENCES

Merrell Dow Research Institute Cincinnati, Ohio

The Merrell Dow Research Institute has challenging opportunities for three scientists to join our expanding cardiovascular research group.

BIOCHEMIST/MOLECULAR PHARMACOLOGIST to study second messenger systems and their role in cardiovascular disorders. Candidate should have a Ph.D. and 2 years post-doctoral experience in studying receptor-effector coupling, second messenger systems and functional regulation by protein kinases or ionic movements.

CARDIOVASCULAR/BIOCHEMICAL PHARMACOLOGIST to study mechanisms of ischemic-reperfusion injury. Candidate should have a Ph.D. and 2 years post-doctoral experience studying some aspect of ischemic-reperfusion injury such

as the role of neutrophils, oxygen-derived radicals or lipid peroxidation.

CELL BIOLOGIST (POST-DOCTORAL POSITION) to study receptor-effector mechanism of trophic growth factors and their role in cardiovascular disorders. Applicant should have a Ph.D. and experience with cell culture models.

Successful candidates will join a multidisciplinary team of pharmacologists, electrophysiologists, molecular biologists, biochemists and chemists conducting basic research aimed at discovering new therapeutic approaches to cardiovascular disease. If you are interested in working in a dynamic research environment, send your curriculum vitae and the names of three references to:

Personnel Services Manager
(Refer To Job Code-RCD)

Merrell Dow

MERRELL DOW RESEARCH INSTITUTE

2110 East Galbraith Road Cincinnati, OH 45215

U.S. Citizenship Or
Permanent Visa Required
Equal Opportunity Employer M/F/H/V

The Procter & Gamble Company has two immediate entry-level openings in Cincinnati, Ohio, in the recently established Biotechnology Department. Ph.D.'s with or without postdoctoral training are encouraged to apply.

CELL BIOLOGIST

Experience in the use of cell culture, molecular biology, or monoclonal antibody and other immunochemical techniques in the study of cellular differentiation is required. In addition, familiarity with the techniques for genetic manipulation of mammalian cells is desired.

PROTEIN CHEMIST/ENZYMOLOGIST

Research experience in enzymology, protein separation and purification, or the physical characterization of proteins is highly desirable. A thorough background in the physical characterization of proteins and experience in the kinetic and thermodynamic study of enzymes is essential. Additionally, experience with site-directed mutagenesis or computational chemistry and molecular graphics could be helpful.

Procter & Gamble is a world leader in the research, development, and manufacture of consumer products. We offer a competitive salary, a fringe benefit package in the top 5% of U.S. firms, and excellent opportunity for personal and career growth.

Applicants must be U.S. citizens or permanent residents and should send resume and publication list to:

CELL BIOLOGIST POSITION or PROTEIN CHEMIST/ENZYMOLOGIST POSITION

c/o Dr. T. J. Logan, Manager
Ph.D. Recruiting, Dept. A
THE PROCTER & GAMBLE COMPANY
Miami Valley Laboratories
P.O. Box 398707
Cincinnati, Ohio 45239-8707

POSITIONS OPEN

POSTDOCTORAL FELLOW

A postdoctoral position is available to study the pharmacodynamics of novel brain-enhanced delivery systems for estradiol. Experience with neuroendocrine systems, radioimmunoassay, and estrogen-induced behaviors is desirable. The successful applicant will become part of an interdisciplinary team studying the chemistry, pharmacokinetics and pharmacodynamics of these novel brain delivery systems. The appointment is for up to 3 years of support through an NIH grant. Salary is negotiable. Submit current curriculum vitae and names of three references to:

James W. Simpkins, Professor and Chairman
Department of Pharmacodynamics
College of Pharmacy
Box J-487, J. Hillis Miller Health Center
University of Florida, Gainesville, FL 32610

We are an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOW. Research position available for M.D. or Ph.D. to study respiratory diseases in one of two areas: control of breathing, or connective tissue of the lung and pulmonary circulation. Respiratory control studies involve interaction of control of breathing with the cerebral circulation brain tissue hypoxia, neurotransmitters, and sleep. Connective tissue studies involves biochemical and molecular biology studies of the regulation of connective tissue metabolism in hypertensive pulmonary arteries and vascular cells. Applicant should have background in either clinical pulmonary medicine, physiology, or biochemistry. Send curriculum vitae, state of research interests and career goals, and three letters of reference to: **David J. Riley, M.D., or Norman H. Edelman, M.D., Pulmonary and Critical Care Division, Department of Medicine, UMDNJ-Robert Wood Johnson Medical School (formerly Rutgers Medical School), CN-19, New Brunswick, NJ 08903-0019** by 1 January 1988. Telephone: 201-937-7841. *Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

POSTDOCTORAL POSITION—Available immediately. EM, immunofluorescence and biochemistry of developing dental follicle. Part-time teaching in anatomy labs. Excellent research facilities and ample research time. Starting salary \$20,800. Send curriculum vitae and names of three references by 1 November 1987 to: **Gary E. Wise, Ph.D., Chairman, Department of Anatomy, Texas College of Osteopathic Medicine, 3516 Camp Bowie, Fort Worth, TX 76107-2690.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available for 2 years in basic aging research. Research involves biochemical and nutritional aspects of aging in mouse and *Drosophila* colonies as part of an innovative 27-year-old research effort. Please send curriculum vitae and references to: **Dr. Harold R. Massie, Masonic Medical Research Laboratory, Utica, NY 13501.**

POSTDOCTORAL POSITION

The Dana Farber Cancer Institute is seeking to fill a research position at the postdoctoral level in the Division of Cancer Pharmacology. Candidate will study the biochemistry and hormonal regulation of mammalian liver P-450 enzymes active in the metabolism of cholesterol, steroid hormones, and xenobiotics using biochemical, immunochemical, and molecular biological approaches. Joint appointment will be held in the Department of Biochemistry and Molecular Pharmacology at Harvard Medical School. Send curriculum vitae, copies of representative publications, and names of three references to: **Dr. David J. Waxman, Dana Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION open immediately to study the role of plant epicuticular lipids in host plant recognition by aphids and host plant resistance. Studies involve analysis of plant surface lipids and behavioral assays using electronic insect feeding monitors. Ph.D. in biochemistry, entomology, or related field required. Send curriculum vitae and names of three references to: **Dr. Jack Dillwith, Department of Entomology, 501 Life Sciences West, Oklahoma State University, Stillwater, OK 74078.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study hormone action on liver glucose metabolism, insulin resistance [*Diabetes* 36, 310 (1987)] and diabetes. Postdoctoral experience (1 to 2 years) in receptor structure and function, transmembrane signaling, and metabolic regulation required. Send curriculum vitae, three references and reprints to: **Dr. G. van de Werve, University of Montréal, Department of Nutrition, CP 6128, SUCC. A, Montréal PQ, H3C 3J7, Canada.** Telephone: 514-343-7546.

POSTDOCTORAL OR SENIOR RESEARCH ASSOCIATE: Two positions are available immediately to study the structure, signal transduction, and turnover mechanisms of receptors for ANF and other cardiovascular factors. Background in protein biochemistry, receptor biochemistry, immunochemistry, molecular endocrinology, and/or cell biology is desired. The laboratory is equipped with all modern protein chemistry instruments, including micro-bore HPLC and ABI sequencer. Send curriculum vitae and names of three references to: **Kunio Misono, Ph.D., Research Institute, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44106.**

POSTDOCTORAL POSITION IN DEVELOPMENTAL NEUROBIOLOGY available immediately to participate in studies of cell surface molecules of the developing nervous system. Areas of research include the analysis of neuronal and glial lineages, regulation of the biosynthesis of cell surface glycoconjugates and the functional and biochemical properties of cell surface carbohydrates. Send curriculum vitae and the names of three references to: **Dr. J. Levine, Department of Neurobiology and Behavior, SUNY Stony Brook, Stony Brook, NY 11794.** *SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.*

POSTDOCTORAL POSITION IN CELL BIOLOGY

Available 1 July 1988 to study the structure, function, and regulation of integral membrane actin-binding proteins involved in motility, adhesion, and endocytosis. Experience in protein biochemistry, recombinant DNA techniques, or immunomicroscopy is required. Send curriculum vitae and names of three references to: **Dr. E. J. Luna, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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POSTDOCTORAL POSITION—available for Ph.D. biochemist/cell biologist interested in studying structural, functional, or regulatory aspects of unique intracellular lipid modified proteins in relation to cell cycling and cell differentiation. Experience with protein purification, immunochemical, or molecular techniques helpful. Salary based on experience. Position is located in new research facility in attractive semirural setting. Send curriculum vitae and three references to: **Dr. William Maltese, Weis Center for Research, Geisinger Clinic, Danville, PA 17822.**

Equal Opportunity Employer M/F/H.

POSTDOCTORAL POSITION

Postdoctoral position available for a recent Ph.D. with physical chemistry background. Study of peptides and protein conformation using NMR, fluorescence, CD and other spectroscopic methods. Position available immediately. *Equal Opportunity/Affirmative Action Employer.* Send résumé to: **Dr. G. M. Anantharamaiah, Atherosclerosis Research Unit, University of Alabama at Birmingham, Volker Hall G035, University Station, Birmingham, AL 35294.**

POSTDOCTORAL POSITIONS

Postdoctoral fellowships available in neurophysiology/neuropharmacology to study consequences of acute and subacute spinal cord injury in mammalian models. The study utilizes intracellular and extracellular recording techniques from spinal neurons to evaluate the roles of neural modulators in regulating neuronal response patterns. The research program is based in a physiology department active in many areas of neuroscience, providing an excellent training environment. Salary commensurate with experience.

Please send curriculum vitae and names of three references to: **Dr. W. Z. Rymer, Department of Physiology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to produce monoclonal antibodies to cytoskeletal proteins and biological growth factors that regulate hematopoietic differentiation. Background in immunology, immunochemistry, and monoclonal antibody technology is desired. Projects include identification and purification of differentiation-associated regulators and cytoskeletal components.

Send curriculum vitae and names of two references to: **Dr. Nicholas Dainiak, Chief, Division of Clinical Research, St. Elizabeth's Hospital, Boston, MA 02135.** Telephone: 617-789-2733. *Equal Opportunity Employer.*

POSTDOCTORAL POSITION

The Dana Farber Cancer Institute is seeking to fill a research position at the postdoctoral level for an individual interested in studying the role of defined growth factors on neural differentiation and development using molecular genetic, biochemical, and tissue culture techniques. The successful applicant will be appointed as a postdoctoral fellow in the Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School. Experience in neural cell culture, molecular biology, or protein chemistry desirable. Send curriculum vitae including the names of three references to: **Dr. John Wagner, Dana Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS available immediately and in early 1988 for study on targeting drugs and biologic response modifiers at cellular, sub-cellular and in vivo levels using liposomes and peptides. Ph.D. in chemistry, biochemistry, biological science or pharmacological science required. Experience in cell culture or macrophage activation is helpful. Send résumé and three letters of references to: **Dr. Karl J. Hwang, John Satuffer, Pharmaceutical Sciences Center, University of Southern California, 1985 Zonal Avenue, Los Angeles, CA 90033.** *Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES: Two positions for research on the mechanisms of regulation of cytochrome P-450 and carcinogenesis. Recent Ph.D. with research experience in molecular or cellular biology are preferred. The positions are available immediately at New Jersey Medical School and will be relocated to Rutgers University (Piscataway, New Jersey) in spring 1988. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. Chung S. Yang, Department of Biochemistry, UMD-New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2757.** *An Equal Opportunity/Affirmative Action Employer M/F/H/V.*

POSTDOCTORAL RESEARCH IN CLINICAL NEUROBIOLOGY

Several postdoctoral positions (Ph.D., M.D., or M.D./Ph.D.) have become available through a PEW Foundation grant established to develop a program in clinical psychobiology at the University of California, Irvine. The goal of this program is to provide opportunities for young investigators to develop careers in research that bridge the basic and clinical aspects of neurobiology. Research will focus on the neurobiology of cognition and its restoration after injury in animal models and man, particularly as relating to development, aging, and associated disorders. The program is multidisciplinary, emphasizing the use of olfactory stimuli to study developmental vs. age-related plasticity mechanisms in associated cortical and hippocampal circuitries. Projects include NMDA receptors and synaptic plasticity, electrophysiological studies on cortical and hippocampal circuits, computer simulations of these networks and synaptic mechanisms, behavioral experiments and neuropsychological and clinical studies in man. The clinical psychobiology program is under the direction of **Drs. Carl Cotman, Ira Lott, and Gary Lynch.** The positions are available immediately. Interested applicants should submit their curriculum vitae and the names of three references to:

Dr. Carl Cotman
Program in Clinical Psychobiology
Department of Neurology
California College of Medicine
144 Med Surge I
University of California
Irvine, CA 92717

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POSITION ANNOUNCEMENT CELL AND MOLECULAR BIOLOGISTS

The School of Life Sciences at the University of Illinois, Urbana-Champaign, announces the further development of its graduate and undergraduate programs and an expansion of its faculty in an emerging department of eukaryotic cell and molecular biology. Several new tenure-track faculty will be recruited over the next several years at the Assistant and/or Associate Professor levels. Up to two of these positions will be filled for the 1988-89 academic year, with a starting date of August 21, 1988. Applicants should hold the Ph.D. degree or equivalent, and show exceptional promise in research, which preferably should address molecular issues in developmental, neural, or cell biology. Salary will be commensurate with rank and experience. Duties will include participating in the teaching of courses in the broad areas of eukaryotic cell and molecular biology.

Substantial start-up funds and laboratory facilities will be available to initiate new faculty research programs for which the UIUC offers exceptional and broad-based supporting resources. These resources include the Center for Electron Microscopy, with state of the art instrumentation; the Center for Biotechnology, which includes facilities for molecular cloning and DNA and protein synthesis and sequencing; the Cell Science Center, which houses and staffs a hybridoma facility and flow cytometry unit; School of Life Sciences-subsidized shops; and a superb university library system, the third largest in the nation. The UIUC is a National Center for Supercomputing Applications, and construction of the Beckman Institute for Advanced Science and Technology, which will combine research in the physical and biological sciences, is well underway. Many other units within the Schools of Life Sciences and Chemical Sciences and the Colleges of Medicine and Engineering offer opportunities for interactions in the cellular and molecular sciences.

Urbana-Champaign combines the residential advantages of a medium-sized city (population 120,000) with outstanding cultural amenities within the University, and its location in east-central Illinois gives easy access to the cities of Chicago and St. Louis.

Applicants are requested to send a curriculum vitae, a summary of research interests, and three letters of reference to:

David L. Stocum, Search Committee Chairman
School of Life Sciences
University of Illinois
393 Morrill Hall
505 S. Goodwin Ave.
Urbana, IL 61801
Telephone: (217) 333-6118

In order to ensure full consideration, applications should be received by February 15, 1988.

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

Visiting Scientist In Immunopharmacology

A postdoctoral Visiting Scientist position is available within the Medical Products Department at Du Pont's Experimental Station in Wilmington, Delaware. The successful candidate will conduct basic research on the biochemistry of the phospholipases C and A2 involved in cellular activation processes. Candidates should have a strong background in biochemistry with interests in cell biology and inflammation research. The appointment will be for one year, renewable for a second year upon mutual agreement.

At the world renowned Du Pont Company, you'll find a highly stimulating multidisciplinary research environment in addition to an excellent salary. To be considered, please send your resume, bibliography, and references to: Dr. W.M. Mackin, Medical Products Department, Experimental Station, Du Pont Company, Wilmington, DE 19898.



U.S. Citizenship or Permanent VISA Required.
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PH.D. SCIENTIST Neurodiagnostics

The worldwide leader in medical diagnostics, a \$4 billion corporation, a consistent innovator in diverse segments of the healthcare marketplace—Abbott Laboratories stands apart. We now offer a stimulating opportunity to work within our exceptional scientific community, focusing on the development of tests for the diagnosis, prognosis and successful treatment of neurological and psychiatric disorders.

Selected candidate will also be involved in optimizing drug therapy through monitoring plasma levels of drugs. We require a Ph.D. in neuroscience, biochemistry or a related discipline, with knowledge or experience in neuroscience, neurology or psychiatry. Additional experience is also required in at least one of the following areas: biochemistry, immunochemistry, assay development, protein chemistry, analytical techniques and receptor binding/characterization. At least 2-5 years experience is desired, though recent graduates with strong records are encouraged to apply. Scientific recognition and productivity in these areas a must.

Backed by award-winning management, Abbott offers an exceptional opportunity for career growth, as well as an excellent salary and benefits including profit sharing and a stock retirement plan. We are headquartered in an attractive suburban community near Lake Michigan, just 30 miles north of Chicago. For confidential consideration, please send your resume with salary history to: **Peggy Taylor/Corporate Placement, Dept. SM/10-9**. Abbott is an Affirmative Action Employer.

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GROUP LEADER IMMUNOLOGY

We are Land O'Lakes—a leader in the food processing industry. We have an immediate opening for a Group Leader in our Exploratory Research Department. The Group Leader's primary responsibility will be to provide technical leadership to the Immunology Group in support of Land O'Lakes expanding research program in this area.

The qualified applicants should have a PhD in Immunology or Microbiology and 2-5 years of industrial experience. Experience with immunochemical procedures and antibody purification with protein separations and analysis is required. In addition, demonstrated familiarity with the study of humoral immune response to protein antigens is needed. Preference will be given to candidates with a background in experimental veterinary immunology. Demonstrated supervisory experience would be an advantage.

Our research facilities are located at I-694 and Lexington Avenue in Arden Hills. We offer attractive salaries, excellent benefits and exceptional opportunities for personal and professional growth. Send your resume with salary requirements to: **Corporate Staffing Department, LAND O'LAKES INC., P.O. Box 116, Minneapolis, MN 55440**.

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No Agencies Please

Land O'Lakes, Inc.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE—Position available for an electrophysiologist to characterize the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord physiology and/or tract-tracing, and histological techniques. Please send curriculum vitae with names of three references to: **Dr. Julia K. Terzis, Microsurgical Research Center, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23507.**

POSTDOCTORAL RESEARCH ASSOCIATE. To isolate and study the structure/function of blue-green algae (cyanobacteria) toxins. Ph.D. in organic chemistry, biochemistry or pharmacology required. Research experience in separation, isolation, and purification of peptides and alkaloids is desirable along with a working knowledge of mass spectrometry and nuclear magnetic resonance. Excellent opportunity to develop individual's own research program. Salary range \$20,000 to \$23,000. Send curriculum vitae and names/addresses for three references by 15 November 1987 to: **Dr. Wayne Carmichael, Department of Biological Sciences, Wright State University, Dayton, OH 45435. The University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION available winter/spring of 1988 to study neuropeptide precursor processing enzymes. Investigations will include enzyme characterization/regulation and determination of their role in the control of peptide neurotransmitter biosynthesis. Protein/peptide chemistry, cell culture, immunochemical, and molecular biological methodology will be used. Ph.D. in biochemistry or neuroscience desired. Send curriculum vitae and names of three references to: **Dr. Vivian Y. H. Hook, Department of Biochemistry, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814.**

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

Postdoctoral research position is available immediately to participate in ongoing studies on the biochemistry and molecular biology of neuroendocrine systems in *Drosophila*, gypsy moths, and mosquitoes. Experience with peptide isolation and micro-analysis preferred. Send résumé and three letters of support to: **Drs. E. P. Masler/T. J. Kelly, Insect Reproduction Laboratory, USDA/ARS, B-306, Beltsville, MD 20705. Telephone: 301-344-2136. Salary is \$22,458. Applications must be marked 7E035. An Equal Opportunity Employer.**

POSTDOCTORAL TRAINING IN CARDIOVASCULAR PHARMACOLOGY—MOLECULAR BIOLOGY. A position is open to study the cell and molecular biology of prostaglandins and other arachidonic metabolites and their role in physiological and pathophysiological processes. Candidates (Ph.D. or M.D.) should have a strong background in biochemistry and/or pharmacology. Send curriculum vitae to: **Dr. Philip Needleman or Dr. John Merlie, Department of Pharmacology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110. Washington University is an Equal Opportunity/Affirmative Action Employer.**

QUATERNARY PALEOBOTANY. The New York State Museum seeks applications for an entry-level position as a **RESEARCH SCIENTIST** in palynology. Preference will be given to candidates with special strengths in modern pollen analysis and the ecology of terrestrial plants. Applicants should have a Ph.D. Postdoctoral experience is desirable, as is a high potential for attracting outside support. The duties include development of a productive research program, serving as Curator of a Quaternary Paleobotanical Collection, and collaboration with other Museum scientists involved in Quaternary studies. Use of computers for the management and analysis of large data files is expected. The incumbent will participate in various other Museum activities including exhibit planning and public programs.

Curriculum vitae, a narrative statement of research interests and plans, and the names only of at least three references should be sent to: **Dr. Norton G. Miller, Biological Survey, New York State Museum, Albany, NY 12230; telephone: 518-486-2010; closing date 15 November 1987. The position will be filled upon budgetary approval, probably within the next 5 months.**

POSITIONS OPEN

A Brain Science Research Center is being developed at the New Minneapolis VA Medical Center in conjunction with the University of Minnesota. Opening in early 1988, this \$260-million facility is equipped for state of the art brain imaging including PET Scan, MRI, etc.

We are recruiting for the VA Psychiatry Service and the Brain Sciences Center with full University faculty appointments. **PSYCHIATRISTS** with an academic orientation and track record who can contribute to the clinical and research momentum of this center will find this an extraordinary opportunity. We are particularly interested in those who can build or bring a team to enhance this development.

Send curriculum vitae or contact: **Richard Magraw, M.D., Chief of Psychiatry, VAMC Minneapolis, MN 55417; Telephone: 612-725-6569—or Paula Clayton, M.D., Head of Psychiatry, Box 393 Mayo Building, University of Minnesota, MN 55455. Telephone: 612-626-3532.**

RESEARCH ASSISTANT—IMMUNOLOGY

M.S. or comparable. St. Vincent Medical Center and the Los Angeles Oncologic Institute are nonprofit institutions involved in clinical trials of tumor vaccines, IL-2, monoclonal antibodies, and AIDS studies. Applicant to do immunodiagnostics, tissue culture, sterile procedures. Send curriculum vitae to: **Dr. Charles Wiseman, Director, Immunotherapy Laboratory, c/o Personnel, St. Vincent Medical Center, 2131 West Third Street, Los Angeles, CA 90057. Equal Opportunity Employer, M/F/H.**

The Department of Microbiology has a faculty position available at the **RESEARCH ASSOCIATE** level starting 1 November 1987. Individuals interested in applying molecular and immunological approaches to studies of immunogenetics are encouraged to apply. Candidates should have a Ph.D. and experience in T lymphocyte cloning and molecular biology is desirable. Send curriculum vitae and the names of three references by 23 October 1987.

Dr. C. K. Hurley
Department of Microbiology
Georgetown University
3900 Reservoir Road, N.W.
Washington, DC 20007

An Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE. Develop methods to selectively deliver therapeutic amounts of boron-10 isotope to tumor via tumor-specific antibodies. Record boron-11, carbon-13, and proton NMR spectra for the research group. Offer scientific and technical guidance to graduate students and postdoctoral fellows. Requirements: Ph.D. in organic chemistry and 2 years of postdoctoral experience in synthetic chemistry. Research expertise in the following areas: peptide synthesis using automated equipment; synthesis of carboranyl derivatives such as carboranyl amino acids and peptides; radiolabeling of carboranes, organic compounds and chelates with iodine-125, tritium, and radiometals, and their conjugation to antibodies; demonstrated ability to use separation methods including HPLC; experience in recording and interpretation of boron-11, carbon-13 and proton NMR spectra; providing guidance to a research group. \$2,550 per month. Job site: Los Angeles, California. Send this ad and résumé to: **Job CP9878, P.O. Box 9560, Sacramento, CA 95823-05060, no later than 24 October 1987.**

RESEARCH GENETICIST (PLANTS). United States Department of Agriculture (USDA), Agricultural Research Service (ARS), Vegetable Crops Research Unit at the Department of Horticulture, University of Wisconsin, Madison, WI. Position to improve disease resistance and other horticulturally important traits in cucumber, onion, and carrot using classical and genetic engineering techniques. Research is in conjunction with consumer quality and stress tolerance programs. Candidates must have knowledge of classical plant improvement approaches and newer techniques (i.e., molecular, biochemical). Ph.D. desirable. Salary is commensurate with experience (\$27,172 to \$42,341 per annum). Must be U.S. citizen. For information on the research program contact: **P. W. Simon, telephone: 608-262-1248.** For information on application procedures/forms contact: **Janie Carr, USDA/ARS, PD, POB, Building 419, BARC-West, Beltsville, MD 20705; telephone: 301-344-2756. Applications must be marked 7N024, and be postmarked no later than 2 November 1987. An Equal Opportunity Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW: Opportunity to join laboratory investigating catecholamine neuronal plasticity and catecholamine receptors in vivo using biochemical and anatomical approaches. Preference will be given to applicants with some experience in EM, immunocytochemistry, and/or radioimmunoassay. M.D. or Ph.D. in anatomy, biochemistry, or pharmacology. Position and salary based on experience. Please send curriculum vitae to: **Dr. James N. Davis, Box 2900, Duke University Medical Center, Durham, NC 27710. Affirmative Action/Equal Opportunity Employer.**

BIOHYBRID TECHNOLOGIES, INC.

BioHybrid Technologies is a Massachusetts-based corporation developing artificial internal organs which incorporate living cells. Current emphasis is on diabetes research with pancreatic islets and beta cells.

RESEARCH SCIENTIST

A senior scientist position is available for a highly motivated individual with a background in cell biology. Requires Ph.D. or M.D. with a minimum of 2 years of postdoctoral research experience involving mammalian cell culture. Familiarity with islet/endocrine research desirable.

BioHybrid Technologies, Inc.
910 Turnpike Road
Shrewsbury, MA 01545

RESEARCH SCIENTIST. \$30,000 per year. Conducts research on the physiology and biochemistry of mouse placental lactogens. Must have experience in performing radioimmunoassays for placental lactogen, prolactin, growth hormone and alpha-lactalbumin of the mouse or related animal. Experience with culturing trophoblast cells on collagen gel systems and with biochemical techniques used in purification of placental lactogens. Strong background in the endocrinology of pregnancy of the mouse or related animal. Job site and interview: **Santa Cruz, California.** Send this ad and résumé to: **Job AW 9719, P.O. Box 9560, Sacramento, CA 95823-0560 not later than 24 October 1987. Ph.D. in endocrinology, physiology or related field required.**

RESEARCH SCIENTISTS

Synergen, a leading biotechnology company in Boulder, Colorado, seeks recent Ph.D.s with postdoctoral experience, technicians, and more senior people interested in becoming part of a rapidly expanding company. There are currently openings for the following persons:

Molecular Biologists to study the expression of eukaryotic genes encoding growth factors, neurotrophic factors, and proteins that modulate inflammatory processes. We also seek molecular biologists interested in developing high level expression systems in eukaryotes. **Protein Chemists** to participate in the isolation and characterization of proteins involved in tissue breakdown and repair, or in isolating and characterizing specific cell receptors. **Cell Biologists** to develop cell-based models of pathophysiological processes, to aid in the development of in vitro assays for bioactive proteins, and to study endothelial cell biology. **Biochemists** to define the mechanism of action of proteins interacting with membrane receptors and involved in signal transduction. Synergen offers competitive salaries, generous benefits, and the financial stability required for future development. Please send curriculum vitae, bibliography, and references to: **Synergen, Recruitment Director, 1885 33rd Street, Boulder, CO 80301.**

RESEARCH TECHNICIAN: Sloan-Kettering Institute is actively engaged in a series of projects related to the study of diagnostic and treatment approaches for immunocompromised patients. An opportunity is available to join a biomedical research team, and participate in the implementation of experiments which focus on the HIV-1, HIV-2, and HTLV retrovirus strains. You will plan and perform experiments utilizing molecular and immuno techniques, to evaluate efficacy of related drug therapeutic approaches. B.S./B.A. in immunochemistry, microbiology or biochemistry required. Hands-on experience with Western blotting, the ELISA assay, and cell culture techniques a must. Become a contributor to a highly relevant research effort. Send résumé to: **E. L. Kleinert, Personnel Department 271, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. An Equal Opportunity Employer, M/F/H/V. Where the exceptional is the rule.**

MICROBIAL GENETICIST

The **GIBCO/BRL Division** of Life Technologies, Inc., the world leader in providing bacterial competent cells to the research community, is seeking a candidate for a senior scientist position in microbial genetics.

Applicants must have a doctoral degree and postdoctoral experience is essential.

Primary responsibilities will be to lead a research and development program in understanding the mechanisms of bacterial cell competence, developing new highly competent bacterial cell strains, and establishing methods for conveniently packaging competent cells.

Qualified applicants send resume or C.V. to:

Mr. Richard L. Hotaling, Jr.
Personnel Manager
 Department GG 10/9
GIBCO/BRL
 a division of Life Technologies, Inc.
 8717 Grovemont Circle
 Gaithersburg, MD 20877

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MicroGeneSys, Inc.

is strongly committed to developing recombinant vaccines for AIDS and other infectious diseases. Recent achievements in MicroGeneSys' vaccine programs have established a platform for dynamic growth. We invite qualified scientists to consider a career with MicroGeneSys. Senior Scientist (Ph.D.), Research Associate (M.S.), and Research Technician (B.S.) level positions are now available in the following areas:

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At **MicroGeneSys**, we offer a stimulating and challenging scientific environment, competitive salaries and an excellent benefit package. The Company's south central Connecticut location, near New Haven is convenient to New York City and New England locations.

For immediate consideration, please submit a *curriculum vitae* along with a statement of research interests and salary history, in confidence, to the **Personnel Director**, MicroGeneSys, Inc.



MicroGeneSys, Inc.
 BIOPHARMACEUTICALS

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 TELEPHONE: (203) 932-3203

Opportunities in Biotechnology

Repligen is a leader in the application of biotechnology to the health care and personal care markets. We are currently developing an AIDS vaccine, products for the treatment of infectious diseases, cancer therapies, and novel biocompatible personal care products. We take pride in the high caliber of our scientific staff and our collaborations with major research institutions and corporate partners in Europe and the United States. The expansion of several of our R&D efforts has created the following opportunities:

Molecular Biology

Research Scientists—400-2/4S Ph.D. with 2+ yrs' experience.
 Research Associates—200-1/9S MS/BS with 2+ yrs' experience.

Applicants should have skills in one or more of the following: prokaryotic or mammalian cell expression systems, cDNA or genomic cloning, *in vitro* mutagenesis, DNA sequencing, etc.

Immunology

Manager of Cell Culture Services—300-6X BS/MS or Ph.D. with 5 yrs' experience in tissue culture, lab organization and supervisory skills.

We are seeking a manager of Cell Culture Services to be responsible for coordinating mammalian cell culture, monoclonal antibody production and insect cell culture.

Protein Chemistry

Research Scientist—300-17S Ph.D. with 2+ yrs' experience.
 Research Associate—200-15/25S BS/MS with 2+ yrs' experience.

Applicants must have skills in one or more of the following: enzymology, peptide characterization, protein purification, HPLC, process development.

Repligen Corporation offers a competitive salary, excellent benefits and equity participation. Submit cover letter, resume and references to the **Human Resources Director, Repligen Corporation, One Kendall Square, Building 700, Cambridge, MA 02139**. (Please refer to job code number when applying.) An Equal Opportunity Employer.

RepliGen

Molecular Geneticists & Entomologists

A growing agricultural biotechnology company in suburban Baltimore/Washington is seeking energetic, innovative individuals to join its microbial agrochemical team. The successful candidates will be part of a multi-disciplinary team which is developing novel microbial technologies for "in planta" production of agricultural biochemicals.

Research Assistants Molecular Genetics

Requirements are a B.S. or M.S. and research experience in recombinant DNA technology.

To apply forward a curriculum vitae in confidence and the names of three professional references to Dept. MG.

Research Assistants Entomology

Requirements are a B.S. or M.S. in entomology or a related field and laboratory experience.

To apply forward a curriculum vitae in confidence and the names of three professional references to Dept. E.



Crop Genetics International

7170 Standard Drive
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MUSEUM DIRECTOR

The Milwaukee Public Museum, the largest museum in Wisconsin and one of the largest natural and human history museums in the country, founded in 1882, and accredited by the AAM since 1972, seeks candidates for the position of MUSEUM DIRECTOR. We are searching for an individual who can coordinate and increase public and private community support and funding while maintaining the quality and integrity of the museum's extensive and diversified collections, its permanent world renowned innovative exhibits and a large education program. The museum is a facility of Milwaukee County. As a county department head, the Director is appointed the County Executive and responsible to the elected county government. In addition, the Director is expected to work actively with the Museum Board of Trustees to achieve the Museum's stated goals and objectives. Currently, the museum is primarily funded by the county but is seeking from the private sector increased supplemental support. Areas of responsibility include the preparation and presentation of a \$7+ million annual budget to the governing bodies; personnel management involving professional full time staff of approximately 150 with 75 additional contract employees and a large volunteer organization; supervision of all museum programs and its support systems; long range planning and development; oversight of financial and building operations; coordination of curatorial functions with educational programming; and, liaison with a 28-member board of the Friends of the Museum, Inc., a private support group. Desired qualifications: Ph.D. or equivalent, 10 years in the museum field, including management and curatorial experience involving programming and exhibit organization; and, demonstrated skills in museum educational programming, fund-raising, development and planning. Personal qualities: excellent leadership and communication skills; firm commitment to personal and institutional ethical, legal and professional integrity; ability to present the museum to the community in an exciting and challenging light. Salary commensurate with responsibility and experience. Excellent benefits. Send resume and cover letter to:

Museum Director Search Committee
c/o Director, Department of Human Resources
Courthouse Room 210
901 N. 9th Street
Milwaukee, WI 53233

Equal Opportunity Employer

Postdoctoral Scientist Molecular Pharmacology

The Molecular Pharmacology Department, directed by Dr. Stanley T. Crooke, at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist to participate in isolation and characterization of receptors involved phospholipid metabolism and characterization of pharmacological and/or biochemical agents in signal transduction.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and full interaction with the scientific community. Our postdoctoral appointments are normally for two years duration.

The successful candidate is required to have:

- Ph.D. with 0-2 years of postdoctoral experience required.
- training in protein chemistry, receptor biology, biochemical pharmacology or equivalent molecular biological experience.
- experience and/or practical knowledge in phospholipid/Ca²⁺ metabolism and signal transduction mechanisms.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and the names of three references to Robert F. Obst, R&D Senior Employment Consultant, SmithKline Beckman Corporation, 1554 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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Research Scientists

Praxis Biologics, a research-driven, results-oriented company recognized as a pioneer in the development of pediatric vaccines, is currently seeking dedicated professionals to join our staff as Research Scientists.

Purification Development

This position requires a Ph.D. in Biochemistry or Biochemical Engineering and at least three years' post doctoral or related experience in large scale protein or carbohydrate purification.

Cell Culture Development

This position requires a Ph.D. in Cell Biology, Virology or Biochemical Engineering and at least five years' related experience in the planning and performing of cell culture studies.

Our Sanford, North Carolina location offers a mild climate with access to Raleigh, Durham and the Research Triangle Park. The area contains some of the Southeast's most attractive educational, cultural and recreational resources.

For prompt confidential consideration, please forward your resume including salary history to:

PRAXIS BIOLOGICS, Human Resources Department, 4300 Oak Park, Sanford, NC 27330

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NATIONAL UNIVERSITY OF SINGAPORE INSTITUTE OF MOLECULAR & CELL BIOLOGY

Applications are invited for appointment as Postdoctoral Fellows in the Institute of Molecular and Cell Biology.

The Institute was recently established to undertake basic biomedical and biotechnological research. It will also provide training at pre- and post-doctoral levels. The Institute has three principal research areas related to Cell Regulation, Infectious and Genetic Diseases and Molecular and Cell Biology of Plants.

The Institute, which is adjacent to the University's biomedical complex and the National University Hospital, has 19 laboratory modules of 1,000 square feet each.

Successful candidates will be required to work in one of the following areas: Human Papilloma Virus, Molecular Immunology, Molecular Biology of Stress, Molecular Neurobiology (eg. Gene expression in brain), Plant Molecular Biology as well as Biochemical and Cellular Basis of Cell Regulation.

Salary will be commensurate with experience; leave, medical and other benefits will be provided. Applicants should send their curriculum vitae and names and addresses of 3 referees to the:

**Director
Personnel Department
National University of Singapore
10 Kent Ridge Crescent
Singapore 0511.**

Enquiries may also be sent through BITNET to:

PERSDEPT @ NUSVM.

SENIOR SCIENTIST- PHARMACOLOGIST

Inflammation/Immunology Specialist
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As a rapidly expanding \$400 million plus, multinational pharmaceutical manufacturer, Alcon Laboratories is presently building its overall capability to generate new technology. The primary thrust of this effort is the development of innovative new drugs to treat certain eye and skin diseases. As a part of this effort, we have an immediate need for an innovative Pharmacologist to assist in the development and implementation of pharmacologic and immunologic techniques to assess components of ocular disease. The selected professional must have a thorough understanding of general pharmacological principles and ability to integrate immunological, biochemical and physiological approaches.

Minimum requirements include:

- Ph.D. in Pharmacology, Immunology, Physiology or related science
- 1 or more years of industry or post-doctoral experience in inflammation research or closely related field, plus in-vitro and in-vivo model development experience is highly desirable
- Good oral/written communication skills

If our opportunity is what you have been thinking of -- please give us serious consideration. We are a high technology corporation building for the future. We need and appreciate talented individual contributors who can function effectively as team members. Naturally, our position includes a competitive starting salary, plus comprehensive benefits including profit sharing trust, group medical and dental. To indicate your interest in exploring this key position on a confidential basis, please send your detailed C.V. to: **Sherry H. Rightmer, Alcon Laboratories, Inc., P.O. Box 6600, Ft. Worth, TX 76115.**

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Southern Research Institute is seeking a Ph.D. biochemist with a background in cancer chemotherapy or virology. A familiarity with molecular biology is desirable. The position involves interacting with an interdepartmental team of scientists in the development of anticancer and antiviral drugs.

Responsibilities include serving as task leader on research grants and contracts, supervising junior staff, and collaborating with other scientists in the conception, development, and execution of new research programs. The opportunity is available to publish and present findings at scientific meetings.

Situated on a 20-acre complex with a staff of over 700, Southern Research Institute is a diversified contract research organization in its fifth decade of operation. The Birmingham area, with a population of one million, offers a mild four-season climate, lower-than-average cost of living, diverse recreational and cultural opportunities, and a variety of convenient housing alternatives. To apply, contact Denise Johnson, Personnel Administrator:



SOUTHERN RESEARCH INSTITUTE
Personnel Office, Dept. B-244
P.O. Box 55305
Birmingham, AL 35255-5305

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Post Doctoral Fellow In Immunology

Collagen Corporation, headquartered in Palo Alto, California, is dedicated to the research, development, production and marketing of differentiated biomedical products. Our state-of-the-art environment combined with the clinical relevance of our core technology presents a challenging opportunity for a Post Doctoral Fellow in Immunology to step into the future of biotechnology.

As an important member of our immunology team, you will study the role of lymphokines and cytokines in autoimmune diseases. This activity requires the addition of an individual with a Ph.D. and experience in cellular immunology and familiarity with animal models of autoimmunity.

Collagen Corporation strongly encourages and rewards professional contribution. To learn more about this position and our attractive compensation package, please send your C.V., bibliography, and the names of several references to: S. Hansen, Human Resources, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.



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POSITIONS OPEN

RESEARCH INSTRUCTOR Ph.D. in bioengineering or related field, strong background in laser light scattering, bio-rheological transport phenomenon, electro-optics in biomedicine research, and experience in lung physiology, membrane receptor pharmacology in the airway epithelium related to the mucociliary transport and animal models. Send curriculum vitae and bibliography to: **Donovan B. Yeates, Ph.D., Associate Chief of Environmental and Occupational Medicine, Department of Medicine (M/C 788), University of Illinois, Chicago, IL 60612.** *University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer.*

SENSORY NEUROPHYSIOLOGIST: Tenure-track possibility for position available at assistant professor level. Serious commitment to collaborative work within the Microsurgical Research Center. Expertise required to characterize electrophysiologically the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord neurophysiology and tract-tracing and histological techniques. Please send curriculum vitae with three letters of recommendation to: **Dr. Julia Terzis, Microsurgical Research Center, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.**

SENIOR RESEARCH ASSOCIATE IN BIOCHEMISTRY. Will conduct serum protein kinase research for cancer diagnosis. Master's in biochemistry, with 9 semester hours in graduate research work or 3 months of work experience in serum protein kinase research. Full-time/permanent position. \$18,000 per year. Must have legal right to work. Send résumé to: **Oregon Employment Division, Job Order Number 2120367, 875 Union Street, NE, Salem, OR 97311.**

SENIOR RESEARCH BIOCHEMIST—Seeking Senior Research Biochemist to conceive, design, and perform research experiments on cloning and expression of genes for clinical drug and vaccine development for the company in the areas of hepatitis, herpes simplex, varicella, and AIDS viruses; and cancer. Duties involve: chemical synthesis of genes; design of new vectors; cell culture; intact mRNA isolation; full-length cDNA library construction and expression of genes in bacteria, yeast and mammalian cells; site-specific mutagenesis; and protein purification in order to discover new therapeutic vaccines. Candidate must have a Ph.D. in biology, biochemistry or molecular biology, and at least 5 years of experience in similar position or in various biochemistry or molecular biology positions in postdoctoral capacity with appropriate experience and publications pertaining to molecular biology of gene expression. Salary \$3,750 per month. Company hours 8:30 a.m. to 5:00 p.m.; 40-hour week. Send résumé or curriculum vitae to: **Philadelphia Job Bank, 444 North 3rd Street, Philadelphia, PA 19123, Order No. 3962369.** *An Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK POSITION FOR PROTEIN CHEMIST

Tenure-track position for protein chemist with special interest in mechanisms of inflammation and host defense and experience in protein/peptide chemistry, molecular genetics, receptors, and/or glycoproteins. Ample space and equipment as well as initial funding for technical help have been committed. Rank and salary will be based upon individual qualifications. Interested individuals should submit letter of interest and curriculum vitae by 1 January 1988 to:

**Henry Gewurz, M.D.,
Chairman
Department of Immunology/Microbiology
Rush Medical College
1653 West Congress Parkway
Chicago, IL 60612**

Rush is an Equal Opportunity/Affirmative Action Employer.

TOXICOLOGISTS—The U.S. Environmental Protection Agency (EPA) is seeking experienced applicants (3 years minimum) for two vacancies in Atlanta relating to: (i) toxicology of contaminants in drinking water, and (ii) the pesticides and toxic substances programs. Salary range: \$32,567 to \$50,346. Submit Application for Federal Employment, SF-171, and copy of college transcript to: **U.S. EPA, Personnel Office, 345 Courtland Street, N.E., Atlanta, Georgia 30365.** U.S. citizenship required. *EPA is an Equal Opportunity Employer.*

POSITIONS OPEN

STAFF SCIENTIST: NATIONAL WILDLIFE FEDERATION BIOTECHNOLOGY PROGRAM. The National Wildlife Federation is seeking a scientist to assist in the development of a National Biotechnology Policy Center. The scientist will work as part of an interdisciplinary team of professionals whose goal is controlling the environmental impacts of genetic engineering. Responsibilities will include analyzing the environmental risks of proposed releases, evaluation of regulations, and preparation of reports and educational materials.

An advanced degree, preferably a doctorate, is required in ecology or a related discipline. Preference will be given to candidates with backgrounds that include policy research or governmental experience. The position is for 3 years. Salary is commensurate with experience.

To apply send a résumé to: **National Wildlife Federation, Employment/EEO Coordinator, PE-87, 1412 16th Street, NW, Washington, DC 20036.** *The National Wildlife Federation is an Equal Opportunity Employer.*

Baystate Medical Center, a 900-bed teaching hospital located in Springfield, Massachusetts, anticipates an opening for a **TISSUE CULTURE TECHNOLOGIST.** Baystate Medical Center is a regional referral and trauma center that is at the forefront of advanced health care practices. Responsibilities include all phases of projects such as specimen transport, maintaining cell lines, storage of anticancer drugs, and testing patient samples. We offer competitive salaries plus an excellent benefits package which includes paid life, medical, and dental insurances and family Day Care options. Interested candidates may apply to: **Kathleen Walbridge, Technical/Professional Recruiter, Baystate Medical Center, 12 Ingraham Terrace, Springfield, MA 01199.** Telephone: 413-787-3667.

COURSE

MOLECULAR ENDOCRINOLOGY AND TECHNIQUES FOR HORMONE ACTION 21 to 26 February 1988

This course will consist of lectures in methodology with comprehensive syllabus covering receptors, gene transcription, mRNA and protein synthesis, recombinant DNA, protein hormones, and cyclic nucleotides.

Co-directors: **W. T. Schrader and B. W. O'Malley**

Fee: \$365 (\$245: fellows and students)

For further information contact:

**Bonnie Cuthbert
Department of Cell Biology
Houston, Texas 77030
Telephone: 713-799-6200
Deadline—29 January 1988**

FELLOWSHIPS

THE ALEXANDER HOLLAENDER DISTINGUISHED POSTDOCTORAL FELLOWSHIP PROGRAM provides research opportunities in the life, biomedical, and environmental sciences. Fellowships are tenable at various U.S. Department of Energy laboratories and university laboratories with programs supportive of the Office of Health and Environmental Research. Stipend is \$35,000. A doctoral degree received after 1 April 1986, is required, as is U.S. citizenship or PRA status. Deadline is 19 January 1988. For application materials contact: **Hollaender Postdoctoral Fellowships, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117, Telephone: 615-576-3190.**

POSTDOCTORAL NUTRITION TRAINING at the University of Pennsylvania Medical Center. Nine 1-year appointments available 1 July 1988. NIH-sponsored research traineeships in Clinical Nutrition (**D. Kritchevsky, Ph.D., Program Director**) and Cancer and Nutrition and clinical fellowships in Nutrition/Metabolism (**J. Mullen, M.D., Program Director**) are awarded on an *Equal Opportunity Basis*. Research traineeships (for U.S. citizens, nationals or permanent residents) with core didactic and nutrition research components are available for M.D.'s with 2 years of residency training and for Ph.D.'s. M.D.'s with 3 years of residency training may apply for clinical fellowships with the Hospital of the University of Pennsylvania Nutrition Support Service. Deadline 1 February 1988. Contact: **Irene Feurer, M.S.Ed., Nutrition Support Service, 2 Piersol, HUP, 3400 Spruce Street, Philadelphia, PA 19104.** Telephone: 215-662-3223.

FELLOWSHIPS

IMMUNOLOGY POSTDOCTORAL FELLOWSHIPS MEMORIAL SLOAN-KETTERING CANCER CENTER (MSKCC)

Research training fellowships, supported by an NCI National Research Service Award, are available within the Immunology Program at MSKCC. The research areas of the 17 member faculty cover the biological, biochemical, and molecular aspects of immunogenetics, cellular immunology, and tumor immunology. The development of an independent research project under the guidance of a faculty member is the main training objective. Curriculum vitae, statement of research experience and future goals, and names of three references should be sent to:

**Osias Stutman, M.D., Chairman
Immunology Program
Memorial Sloan-Kettering Cancer Center
1275 York Avenue, New York, NY 10021**

Only U.S. citizens and permanent residents are eligible for consideration.

MSKCC is committed to Equal Opportunity through Affirmative Action and therefore, members of minority groups are encouraged to apply.

CONFERENCES

MAJOR FEDERAL CONFERENCES FOR HIGH TECH FIRMS

One hundred government and private sector experts from 19 federal agencies and 30 major prime contractors will describe funding opportunities and will be available for one-on-one meetings at **FEDERAL HIGH TECH '88** in Atlanta, Georgia on 21 to 22 October 1987 and Salt Lake City on 18 to 19 November 1987. Find out early about \$2 billion in federal R&D funding to be conducted at firms with 500 or fewer employees in FY 1988. Telephone: **Foresight Science and Technology 202-833-8844** (contractor for NSF/DOD). The registration fee is only \$65.

RESEARCH GRANTS

RESEARCH INQUIRIES INVITED

The Smokeless Tobacco Research Council, Inc. invites inquiries regarding grant applications.

The Council sponsors independent research into questions of smokeless tobacco and health. Research support is through a program of grants-in-aid.

Grant applications are evaluated by the Scientific Advisory Board to the Council and will be judged solely on the basis of scientific merit and relevance.

Deadlines for submission of grant applications are **31 December** for 1 July funding and **30 June** for 1 January funding. Address inquiries or requests for applications to:

**The Smokeless Tobacco Research Council, Inc.
420 Lexington Avenue, New York, NY 10170. Telephone: 212-697-3485.**

MARKETPLACE

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Research

R&D Opportunities

Boehringer Mannheim is a rapidly growing leader in the field of Medical Diagnostics and Medical Research. This leadership has been attained through emphasis on quality and team effort. Boehringer Mannheim employees are responsible for their continued growth and leadership. Due to our growth, we are currently seeking qualified individuals for the following opportunities in our INDIANAPOLIS corporate headquarters.

RESEARCH INVESTIGATOR

Background required includes a Ph.D in Chemistry or Biochemistry, along with 1-5 years of industrial experience. Post doctoral work may substitute for industrial experience. Supervisory experience is a plus. The selected individual will work in novel dry reagent test development and function as a project leader supervising 3 scientists. PLEASE RESPOND TO DEPARTMENT KD.

SCIENTIST

Required educational experience includes a MS degree in Chemistry or Biochemistry. Industrial experience preferred. Practical background will include solid phase chemistry development as well as experience with kinetic studies, reagent optimization and protein chemistry. The qualified candidate will have responsibility for screening indicators and the optimization of reagent formulation. PLEASE RESPOND TO DEPARTMENT RK.

MOLECULAR BIOLOGY RESEARCH INVESTIGATOR

The selected individual will possess a Ph.D in Biology, Chemistry or a related field, and 2 years post doctoral experience. The individual selected will have direct responsibility for the development of new molecular biology products for Biochemicals Division. This position also requires the supervision of 2-3 technical people. PLEASE RESPOND TO DEPARTMENT JH.

CELL BIOLOGISTS

These positions require a BS degree in Biology or Chemistry or a related area, along with 2 years experience with mammalian cell cultures, preferably hybridomas. The selected candidates will be responsible for the development of cell culture products and monoclonal antibodies. PLEASE RESPOND TO DEPARTMENT JH.

At Boehringer Mannheim, we offer an exciting and challenging work environment as well as an excellent compensation and benefit program. If you meet the above requirements and would like to join an organization that is a leader in its field, we invite you to send your resume with salary history for confidential consideration. PLEASE INCLUDE THE CORRESPONDING DEPARTMENT IDENTIFICATION ON YOUR RESUME, and address it to: **HUMAN RESOURCES, BOEHRINGER MANNHEIM, P.O. Box 50100, 9115 Hague Road, Indianapolis, IN 46250.** To inquire about other opportunities not listed above, please call our jobline at: (317) 845-7035.

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DENTAL RESEARCH INSTITUTE IN ORAL BIOLOGY

UNIVERSITY AT BUFFALO

Post-doctoral positions available immediately to carry out basic research on interdisciplinary studies in oral biology. These positions are part of a new NIH funded Dental Research Institute utilizing modern techniques of biochemistry, biophysics, molecular biology, microbiology, immunology, and cell biology to examine the modulation of natural response in oral disease in three integrated areas: Salivary Defense Factors, Bacterial Virulence Factors and Host Response Systems. Inquiries including resume should be directed to the scientists listed below at the Dept. of Oral Biology, SUNY/Buffalo, Foster Hall, Buffalo, N.Y. 14214.

Positions are available for:

Molecular Biologist with experience in molecular cloning in mammalian systems to work on the structural aspects of human salivary glycoproteins and phosphoproteins. (Write to Dr. Michael Levine, 109 Foster Hall; Tel: 716-831-2114).

Biophysicist with experience in high resolution NMR techniques, computer modeling, and X-ray diffractometry to examine peptide conformation of human salivary molecules. (Write to Dr. Ronald Loomis, 109 Foster Hall; Tel: 716-831-2114).

Biochemist or Microbiologist to study the interaction of Streptococcus surfaces with components of human saliva, cardiac muscle, and kidney; and to characterize mechanisms of coaggregation between Streptococcus and Bacteroides species. (Write to Dr. Murray Stinson, 230 Cary Hall; Tel: 716-831-2177).

Microbiologist with background in microbial physiology and/or microbial ecology to define and characterize virulence factors associated with infections due to black pigmented Bacteroides. Experience with the use of a chemostat for bacterial culture helpful. (Write to Dr. Joseph Zambon, 222 Foster Hall; Tel: 716-831-3940).

Biochemist or Microbiologist with experience in purification and characterization of carbohydrates and immunological techniques to examine the structure and pathogenic potential of bacterial polysaccharides. (Write to Dr. Rosemary Linzer, 211 Foster Hall; Tel: 716-831-3826).

Molecular Biologist preferably with experience in molecular cloning in bacterial systems to work on molecular analysis and evolution of fimbriae in black-pigmenting Bacteroides. (Write to Dr. Douglas Dickinson, 210 Foster Hall; Tel: 716-831-3127).

Immunochemist or Protein Chemist to work on epitope mapping and structure/function relationship of bacterial fimbriae. Experience with monoclonal antibodies and peptide synthesis desirable. (Write to Dr. Robert Genco, 115 Foster Hall; Tel: 716-831-2854).

Cell Biologist or Biochemist preferably with experience in cell culture, fluorescence spectroscopy and biochemical techniques to study the effects of biological response modifiers on bone cells with emphasis on cytosolic calcium and arachidonic acid metabolism. (Write to Dr. Rosemary Dziak, 318 Foster Hall; Tel: 716-831-3827).

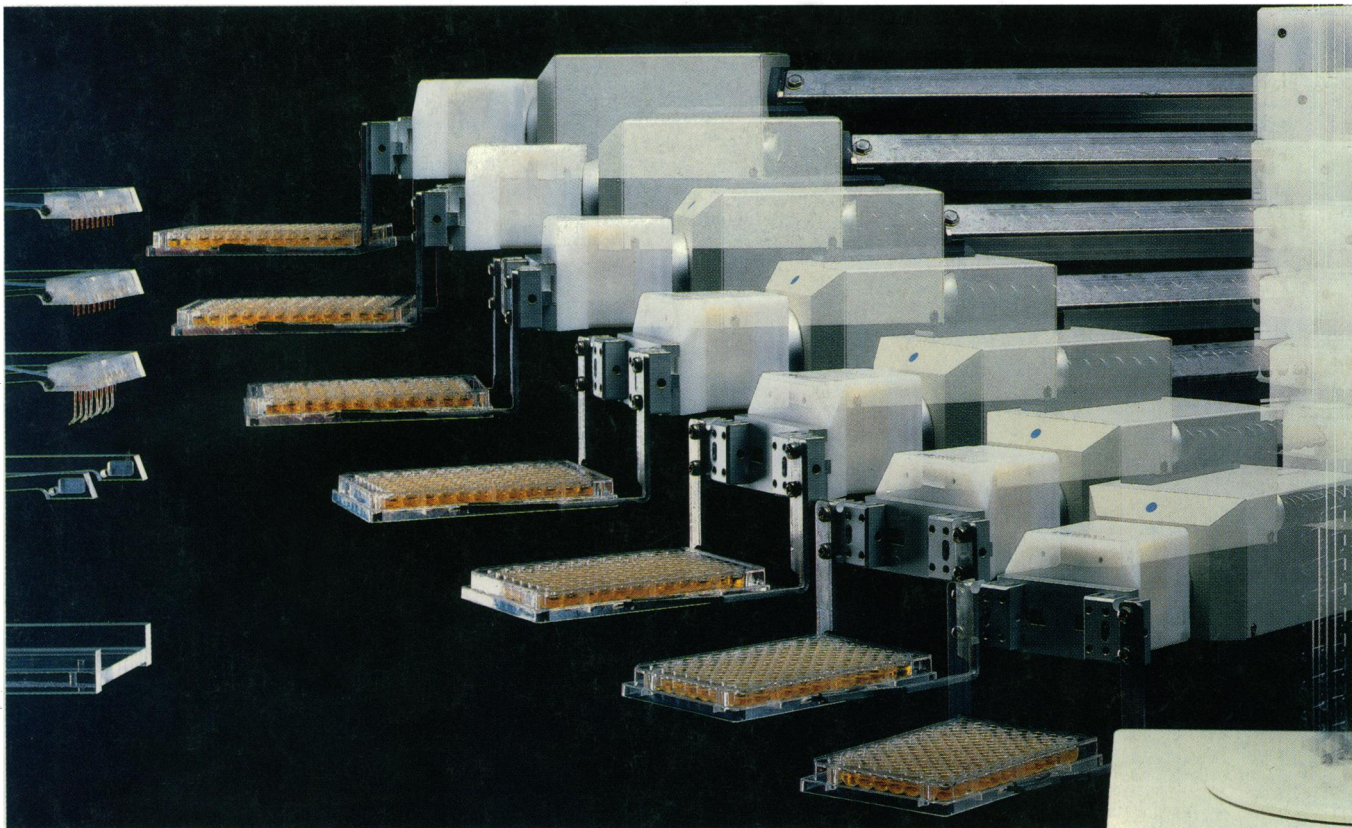
Cell Biologist or Biochemist to work on expression, isolation, and purification of a unique periodontal ligament cell autocrine motility and mitogenic factor. (Write to Dr. Victor Terranova, 320 Foster Hall; Tel: 716-831-2132).

Biochemist or Cell Biologist with experience in receptor purification, radioligand binding assays and/or flow cytometric techniques to study complement receptor expression on neutrophils. (Write to Dr. Mark Wilson, B36 Foster Hall; Tel: 716-831-2590).

Cellular Immunologist or Microbiologist with experience in infectious disease processes in animal models and/or bacterial membrane isolation to study host response mechanisms in gram-negative bacterial infections. (Write to Dr. Priscilla Chen, 111 Foster Hall; Tel: 716-831-2515.)

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