

area, the nonlinear Schrödinger equation and the Korteweg-de Vries equation, which have wide applicability. Chapter 7 presents a discussion of higher-order interactions, quartets in particular, with applications in Taylor-Couette flow between rotating cylinders and Rayleigh-Bénard convection. Finally, in chapter 8, the author indicates some open questions on shear-flow instability and transition to turbulence, together with some of his own thoughts on how these problems should be approached.

This research monograph summarizes and reviews the large body of work on wave interactions that has accumulated over 25 years of intensive study. No effort is made to present the material in a pedagogical way. Accordingly, this is definitely not an elementary textbook; it could serve as a reference for researchers working in the field of wave interactions or in an advanced graduate course. I enjoyed reading this book; the discussion of the topics that I am familiar with served as a refreshing, integrated review; the rest of the discussion outlines the important developments and gives enough references to get someone started who is seriously interested in exploring the subject in more detail.

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Productivity in Plants

On the Economy of Plant Form and Function.

THOMAS J. GIVNISH, Ed. Cambridge University Press, New York, 1986. xviii, 717 pp., illus. \$84.50. From a symposium, Harvard Forest, Aug. 1983.

This volume is the proceedings of a symposium on "Evolutionary Constraints on Primary Productivity: Adaptive Patterns of Energy Capture in Plants." The 27 contributors have produced 20 chapters that consider how a wide range of plant traits influence whole-plant productivity and usually, by inference, competitive ability. The biological coverage is very broad, ranging from photosynthetic cyanobacteria to angiosperms and, occasionally, herbivores. Though the majority of the text is allocated to terrestrial vascular plants, three chapters consider aquatic photosynthetic organisms.

Most of the chapters utilize some form of model to conduct a cost-benefit analysis of the traits considered. As might be expected, these analyses vary greatly in form, ranging from anecdotal to formal mathematical models. Several papers include nitrogen as a currency in the cost-benefit analyses (Field

and Mooney, Cowan, and Pate). These analyses suggest that in the future leaf nitrogen content should be more routinely quantified during gas exchange studies, particularly in the plants' native habitats. It is clear that in most plants that have been studied nitrogen is an important determinant of the biochemical contribution to photosynthetic capacity. In a chapter that should be required reading for enthusiasts of biotechnology, Pate lists the potential benefits of symbiotic nitrogen fixation. He then proceeds to show in how many ways the costs of the symbiosis can be disadvantageous to the host plant except under relatively special ecological circumstances.

For the past 30 years the energy balance approach has been used to integrate the various energy transfer processes to explain the relationships between leaf morphology and other properties, environment, leaf temperature, transpiration rate, and metabolism. This quantitative approach to analyzing the adaptive significance of habitat-related changes in leaf structural, diffusional, and optical properties provides excellent agreement (Ehleringer and Werk; Nobel) with direct observations of the characteristics of arid zone plants in their native habitats. However, adaptation to existence in the profound shade of humid tropical forests (Lee) provides many future research opportunities. Models are now being used to extend our understanding of the relationship of variations in anatomy (Parkhurst) to metabolism, as well as the relationship of leaf gas exchange properties to whole-plant patterns of energy allocation (Givnish).

Quantitative understanding of the functional significance of whole-plant root systems remains a challenge although new methods of study (Caldwell and Richards; Fiscus) are providing hypotheses. The present level of understanding suggests that the timing and spatial distribution of root growth are important determinants of nutrient and water uptake.

In an appropriately cautious chapter, Baas points out the difficulty of testing hypotheses of the adaptive significance of various characteristics of xylem. He calls for a great increase in experimental approaches to xylem studies.

Analyses of canopy architectural properties and biomechanical properties continue to provide useful quantitative insights into the costs and benefits of particular canopy designs over a range of different environments (Raven, Fisher, and Givnish). These analyses have been extended to marine seaweeds (Koehl, Hay) and have illustrated how sometimes apparently subtle variations in morphology can have potentially large effects on productivity and susceptibility to

damage. As is the case with terrestrial plants, the available field observations for seaweeds show that the distributions of types of morphology do appear to be correlated with habitat differences as predicted by theory.

In a thoughtful essay Schulze, Küppers, and Matyssek point out in several ways how misleading it can be to attempt to construct an adaptive argument that is based on optimizing carbon gain alone. They point out that many plants with low photosynthetic rates can be successful competitors. Their chapter clearly points the way for a new level of integration of energy balance, carbon balance, nutrient balance, and water balance in physiological studies.

The direct and indirect costs of chemical defenses suggest that in short-lived plants only small amounts of carbon can be allocated to defense compounds, otherwise the loss of productivity could be disadvantageous (Gulmon and Mooney). This offers another view of the differences in defense chemistry between short- and long-lived plants.

In many of the chapters the (usually limited) available field observations agree with the predictions of theory. However, the authors repeatedly emphasize the need for experimental studies in the plants' native habitats to extend our understanding and to test the hypotheses more rigorously. In this regard this volume is a rich source of ideas and opportunities for future work. Most potential readers will already be familiar with some of its content. It is a good synthesis, and many of the chapters are good points of departure for new research or for graduate seminar discussions.

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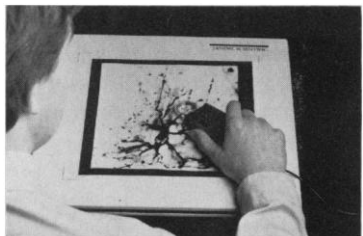


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The Department of Veterinary Anatomy and Fine Structure has an open, tenure-track assistant professor position. Salary and starting date are negotiable. The D.V.M. degree is desired. The Ph.D. degree in anatomy or related discipline is required. Two years of postdoctoral training is desired. Research in cell and molecular biology related to veterinary species directly or to them as models of human disease is preferred. Ample time provided to implement and conduct a competitive research program. Participation in integrated professional anatomy and graduate courses is required. Applicants should send curriculum vitae and names of three references to: **Dr. W. J. Banks, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803.** Final filing date is 10 April 1987 or until a suitable person is identified. *Louisiana State University is an Affirmative Action/Equal Opportunity Employer.*

SOCIOLOGY AND ANTHROPOLOGY DEPARTMENT SIMON FRASER UNIVERSITY BURNABY, BRITISH COLUMBIA, CANADA VACANCY IN ANTHROPOLOGY

The department invites applications from qualified anthropologists for a tenure-track position at the assistant professor level effective 1 September 1987. Preferred substantive fields are medical anthropology/economic anthropology/the anthropology of tourism, with an Asia-Pacific/Pacific Rim regional focus. Remuneration commensurate with qualifications. Letter of application, curriculum vitae, and names and addresses of three referees should be sent to: **The Chairperson of the Appointments Committee, Sociology and Anthropology Department, Simon Fraser University, Burnaby, British Columbia, V5A 1S6** by 1 May 1987. This position is subject to final budgetary approval. *Preference will be given to candidates eligible for employment in Canada at the time of application.*

POSITIONS OPEN

ANALYTICAL CHEMISTS

HUNTINGDON ANALYTICAL SERVICES, INC., Middleport, NY (western New York State), is a new facility providing analytical services to the pharmaceutical, agricultural, and environmental industries. Several positions are open. **PHARMACEUTICAL GROUP LEADER—Ph.D.** in analytical chemistry or pharmacokinetics with broad experience in analysis of drugs in biofluids by HPLC and/or GC. Pharmacokinetic modeling and supervisory experience desirable. **AGRICHEMICAL GROUP LEADER—Minimum:** B.S. degree with experience in extraction and quantitation of pesticides and herbicides. Supervisory experience. **ENVIRONMENTAL LAB MANAGER—**Establish and manage a new state-of-the-art commercial environmental analytical lab. Management experience in environmental testing required. **TECHNICAL SALES—**Sell analytical services to industrial and government clients. Market research. Salary commensurate with experience. Ground floor opportunities. All positions require good writing and communication skills. Company-paid medical, dental, life and disability insurance. Send résumé and salary requirements to: **Personnel Manager, Huntingdon Analytical Services, Inc., P.O. Box 250, Middleport, NY 14105.**

UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY (UMDNJ) SCHOOL OF OSTEOPATHIC MEDICINE

ANATOMIST: School of Osteopathic Medicine (SOM) has recently received approval for a unified 4-year campus in Stratford, NJ (approx. 15 miles from Philadelphia), and is seeking an individual qualified to direct the gross anatomy course for osteopathic students.

Applicants for assistant professor should have postdoctoral training and be capable of developing an independent research program. Applicants for associate or full professor should have a strong record of research productivity. All research areas will be considered, but preference will be given to candidates working in neurobiology.

Submit application by 30 June 1987, accompanied by curriculum vitae, selected reprints, and names of three or more references, to: **Dr. Robert Rhoades, Chair of the Search Committee, University of Medicine and Dentistry of New Jersey—SOM, Department of Anatomy, 675 Hoes Lane, Piscataway, NJ 08854-5635; telephone: 201-463-4334.** *UMDNJ is an Affirmative Action/Equal Opportunity Employer, M/F/H/V.*

ANATOMY UNIVERSITY OF SASKATCHEWAN DEPARTMENT OF ANATOMY

The Department of Anatomy, University of Saskatchewan, College of Medicine, invites applications for tenure-track position at the assistant professor level. Applicants should have experience in teaching gross anatomy to medical and dental students as well as neuroanatomy and embryology. Applicants should have proven research background and a strong research program. Application, including curriculum vitae, names of three referees, and an outline of proposed research should be submitted to: **Dr. S. Federoff, Head, Department of Anatomy, College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0.**

Department of Physiological Chemistry—University of Wisconsin, Madison. An **ASSISTANT PROFESSOR** position will be available 1 September 1987 for a person with strong biochemical research and teaching interests. The abilities of the applicant are more important than the particular area of research interest. Department faculty have active basic and applied research programs in molecular biology, developmental biology, hormones, protein chemistry, membranes, lipids, and metabolism, as well as teaching responsibilities for graduates, medical and health science students. Applicants should have at least 2 years of biochemical postdoctoral research experience. They should submit curriculum vitae, bibliography, letters of reference from three persons knowledgeable of the candidate's research or teaching abilities, and a one- or two-page statement of future research interests to: **Dr. James Dahlberg, Chairman, Faculty Search Committee, 587 Medical Science Building, 1300 University Avenue, Madison, WI 53706** by 1 June 1987. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

AREA EXTENSION AGENT, Water Resources, Minnesota Extension Service, University of Minnesota (UM). A multicounty water resources agent in Lake and Cook counties. Responsible for developing educational programs dealing with the broad range of water resource issues.

Required qualifications: bachelor's degree with emphasis in hydrology, geology, environmental engineering or a related water resources area and 5 years of experience in the water resources area or a master's degree with the same emphasis.

Application deadline: 10 April 1987. Contact: **Extension Personnel, 260 Coffey Hall, U of M, St. Paul, MN 55108. Telephone: 612-624-3717.**

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

ASSISTANT INVESTIGATOR'S position available for candidate with Ph.D. degree in either molecular biology or biochemistry to join an established laboratory involved in studies on plasma protein secretion. Candidate should also have computer literacy and experience in recombinant DNA technology. Competitive salary and excellent benefits. Please submit curriculum vitae, bibliography, and the names of three references to: **D. Banerjee, Ph.D., Membrane Biochemistry Lab, New York Blood Center, 310 East 67 Street, New York, NY 10021.**

Equal Opportunity Employer

ASSISTANT PROFESSOR, INTERNAL MEDICINE, THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT DALLAS; 1 July 1987, full-time permanent, \$35,000 per year minimum salary, 3 to 4 years of experience in lipoprotein research (laboratory and clinical). Applicant should have a thorough knowledge of clinical presentations and current therapy of hyperlipidemia. Experience in preparing and submitting grant proposals. Authorship or co-authorship of reviewed journal publications in the lipoprotein field. Duties include laboratory work to be carried out in the Molecular Genetics Laboratory. Clinical activities include studies with lipoprotein disorders independently and in collaboration with other investigators. *Equal Opportunity Employer.* Send curriculum vitae and cover letter (no telephone calls) to: **Scott M. Grundy, M.D., Ph.D., Center for Human Nutrition Y3-206, University of Texas Health Science Center Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235.**

MOLECULAR AND CELLULAR ASPECTS OF REGULATORY BIOLOGY

The Banting and Best Department of Medical Research, University of Toronto, is seeking candidates for the position of **ASSISTANT PROFESSOR** (tenure stream). The position is available 1 July 1987 and will carry an initial appointment of 5 years at a competitive salary. Candidates should have a strong research background and be prepared to develop a research program in molecular and cellular aspects of regulatory biology (for example—molecular endocrinology, mechanisms of signal transduction, regulation of gene expression). The successful candidate will be expected to attract independent research grants, to spend at least 75% of his/her time in research and to participate in graduate and undergraduate training.

Applicants should forward curriculum vitae, an outline of research interests and three letters of reference to: **Dr. David H. MacLennan, Professor and Chairman, Banting and Best Department of Medical Research, University of Toronto, 112 College Street, Toronto, Ontario, Canada M5G 1L6.**

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada, but foreign applications are encouraged.

ASSISTANT PROFESSOR OF PLANT ECOLOGY. A position is available beginning with the 1987-1988 academic year. Responsibilities include: undergraduate instruction in general botany and biology survey; development of coursework, research, and graduate program in plant ecology; and maintenance of regional herbarium. The applicant should have a Ph.D. in plant ecology, and should send curriculum vitae, official graduate and undergraduate transcripts, and three letters of recommendation to: **Dr. Terry Maxwell, Department of Biology, Angelo State University, San Angelo, TX 76909.** *An Equal Opportunity/Affirmative Action Employer.*

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Biotechnologist

In this position, you must possess a Ph.D with emphasis in plant biotechnology; familiarity with micro-computers; a background in molecular biology and plant-related biotechnology research (especially agricultural related); the ability to assimilate, synthesize and oversee biotech research directed at agricultural

problems. You must also have knowledge of immunological techniques — antibody production, purification and utilization; excellent communication and presentation skills; and practical experience in clonal propagation, callus regeneration, protoplast regeneration, soma-clonal variation and selection genetics, cytology, and any of the following genetic engineering techniques — cloning, hybridization and restriction mapping.

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ANHEUSER-BUSCH COMPANIES

Metabolism and Pharmacokinetics

The Bristol-Myers Pharmaceutical Research and Development Division has career opportunities in its Metabolism/Pharmacokinetics Group located in Syracuse, New York. This Group plays a major role in drug development and worldwide drug registration by developing pharmacokinetic, metabolic and biopharmaceutic information from pre-clinical and clinical trials of candidate drugs targeted for treatment of cancer, infectious diseases, cardiovascular diseases, and central nervous system disorders.

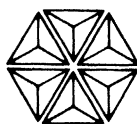
RESEARCH SCIENTISTS/PhDs

To design and implement studies to determine the pharmacokinetic/metabolic behavior of candidate drugs in animals and humans. Must have ability to lead and motivate a professional staff. Qualifications include 0-3 years post doctoral experience in drug metabolism and pharmacokinetics, plus state-of-the-art knowledge of methodologies for identifying/quantifying drugs and their metabolites in biological fluids. PhD in Pharmaceutical Sciences, Pharmacology, Biochemistry or related field required. Computer literacy important.

ASSISTANT/ASSOCIATE SCIENTISTS/ BS or MS

To develop analytical methods for drugs in biological fluids, and participate in drug disposition studies in animals and humans. Degree in Chemistry, Biochemistry, Pharmacology or related field essential with 0-5 years applicable experience in drug metabolism and pharmacokinetics. Excellent report writing skills essential. Experience using computers to handle and report analytical data helpful.

We offer a competitive compensation package and a comprehensive benefit program which includes relocation assistance to a superb upstate NY living area. Interested candidates should submit a resume indicating area of interest, salary history and requirement, to:
EMPLOYMENT MANAGER



BRISTOL-MYERS COMPANY RESEARCH AND DEVELOPMENT DIVISION

P.O. Box 4755, Syracuse, New York 13221

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Immediate opening for PhD Chemist with demonstrated skills and experienced in synthesis of nucleotide and/or amino acid derivatives. The successful applicant will be expected to conduct a synthetic chemistry R&D program in connection with established and future products, in the general areas of nucleotides, oligonucleotides, and peptides. As well as strong laboratory skills, the successful applicant will possess the initiative and judgement required to identify important R&D projects, and the drive and determination needed to see them through.

Pharmacia P-L Biochemicals is a growing subsidiary of Pharmacia Inc., a world leader in the biotechnology market. We offer a competitive salary and a complete benefits program. Please send your resume and cover letter to: S. HOIST, ADMINISTRATIVE ASSISTANT, PHARMACIA P-L BIOCHEMICAL, 2202 NORTH BARTLETT AVENUE, MILWAUKEE, WISCONSIN 53202. We are an equal opportunity employer M/F/H/V.



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SR. SCIENTIST

ANIMAL SCIENCE RESEARCH

Hoffmann-La Roche is a company known world-wide for their strong commitment to research in animal agriculture, as we investigate and discover new methods of altering and improving animal growth performance.

We currently have an opportunity in our Animal Science Research Department for an individual to conduct research to characterize the interrelationships of vitamins, hormones, nutrients, animal physiology and biochemistry to animal growth. This will involve both laboratory and animal models pertinent to field conditions for field animals.

You must have a Ph.D. in Biochemistry or Physiology; a thorough understanding of food animal growth; and 1-3+ years' experience in analytical methods development, including HPLC and automated assay procedures, establishing bioassays, receptor binding models and radioimmunoassays.

You'll enjoy the professional environment and challenges Roche offers, while receiving a highly competitive compensation package including bonus. For confidential consideration, please send your resume, indicating salary history and requirements, to: TM, c/o Eleanor Malone, Professional Employment & Staffing Specialist, Hoffmann-La Roche Inc., Nutley, New Jersey 07110. We are an equal opportunity employer.



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Coagulation Chemist

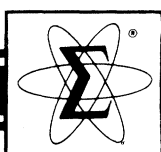
Sigma Chemical Company, a world renowned manufacturer of biochemicals and diagnostic reagents, is seeking a PhD Biochemist or Clinical Chemist to add to its coagulation staff. The successful candidate will have at least two years' experience in clinical coagulation. Industrial experience in the development of diagnostic reagents preferred. Excellent opportunity for a Chemist with a desire to grow into a supervisory position. Full company paid benefits. Send resume to:

**Personnel Department
Sigma Chemical Co.**

3500 Dekalb

St. Louis, Missouri 63118

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SIGMA
CHEMICAL COMPANY

Protein Purification (BS/MS)

The Viral Diseases Research Group of The Upjohn Company has an Associate position available for a candidate with a BS or MS in biochemistry, virology or closely related field. Candidates should have at least one year of relevant laboratory experience in purification of monoclonal antibodies and affinity chromatography.

This position will become part of an ongoing effort to investigate structure-function relationships between virus proteins and human host responses.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary commensurate with experience, a comprehensive benefits program and relocation assistance.

For confidential consideration, please call from outside of Michigan 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 immediately. Please refer to ad number 20674-A when calling

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**SCIENCE MAGAZINE
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1515 BROADWAY
NEW YORK, N.Y. 10036**

Manager, Regulatory Affairs

SmithKline & French Laboratories, a recognized leader in the pharmaceutical industry, has a challenging opportunity for a Regulatory Affairs Specialist for its Philadelphia-based operations.

The successful candidate, who will report to the Director, Regulatory Affairs, will be responsible for supervising Regulatory Associates in preparation of INDs and NDAs as well as periodic updates of such documents, and for supervising review of clinical and preclinical reports and clinical protocols. Additionally, this person will represent Regulatory Affairs on R&D Project Teams.

Requirements include a PhD in a biomedical science (or equivalent), at least two years experience in the pharmaceutical industry (drug regulatory affairs experience preferred), knowledge of FDA regulations pertaining to investigational and marketed drugs, experience in evaluating adequacy of documents for regulatory submissions and excellent verbal and written communication skills. Experience with cardiovascular drugs is preferred.

Interested candidates should send resume with salary history to Bill Groves, SmithKline Beckman Corporation, 1502 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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POSITIONS OPEN

ASSISTANT PROFESSOR—LEVEL IN PHYSIOLOGY. New York College of Osteopathic Medicine invites applications from qualified Ph.D.'s for a full-time assistant professor position in the Department of Physiology (yearly renewable contract/multiple year contracts available, salary commensurate with experience). The position chiefly involves research (80% time allocation) with minimal teaching duties (no more than 20%). The research interest of applicants should be in the area of cardiac cellular electrophysiology. Modern laboratory space and start-up funds will be provided to the successful candidate. Applications, including curriculum vitae, statement of research plan and track record, and the names and addresses of three references should be mailed to: **Dr. Kenneth L. Rossner, Acting Chairman, Department of Physiology, New York College of Osteopathic Medicine, Old Westbury, NY 11568.**

ASSISTANT RESEARCH SCIENTIST—Postdoctoral research associate position available for studies on oxygen cytotoxicity. Salary commensurate with experience. Please send curriculum vitae and references to: **Dr. Arnold Stern, Department of Pharmacology, New York University School of Medicine, 550 First Avenue, New York, NY 10016. An Affirmative Action/Equal Opportunity Employer M/F.**

CANCER RESEARCH

The AMC Cancer Research Center, an independent, nonprofit research institute, seeks to expand its scientific programs with new appointments at the assistant/associate professor (equivalent) level. Applicants will be expected to vigorously develop independent research in an area that complements existing, active programs of laboratory, clinical, and community cancer control research. Applicants with interests bridging laboratory and clinical cancer research are particularly sought. Outstanding opportunity for growth, collaboration, and advancement. Excellent facilities and resources, including an on-campus, 32-bed clinical cancer research unit. Appointments to senior faculty position will also be considered for applicants with nationally prominent and well-funded research programs. Send curriculum vitae, brief statement of research plans, and other pertinent information to:

**Dr. Philip Furmanski
Scientific Director
AMC Cancer Research Center
1600 Pierce Street
Denver, CO 80214**

AMC is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF IMMUNOLOGY. Applications are invited from individuals with demonstrated excellence in immunology research for a tenure-track position with responsibilities to develop an independent research program, teach medical students, and instruct graduate students. Send résumé, summary of proposed research, and names of references to: **Immunology Search Committee, Department of Microbiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.**

ASSISTANT/ASSOCIATE PROFESSORSHIP (12-month, tenure-track) in Wildlife and Fisheries Sciences, Texas A&M University, available to Ph.D. in animal ecology, natural resources management, or wildlife biology. Applicants should demonstrate research ability in a specialty area and willingness to engage in collaborative interdisciplinary research pertaining to integrated resource management and conservation. Teaching duties will include undergraduate and graduate courses in the general area of wildlife ecology/management/conservation. Qualification as a certified wildlife biologist; past employment with a resource agency, environmental consulting service, or extension program; or postdoctoral experience will be desirable. Send curriculum vitae, statement of professional goals, and names of three references by 15 May 1987 to: **Dr. W. E. Grant, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258. Texas A&M University System is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR COMMUNITY NUTRITION

The Department of Nutrition, University of California, Davis, seeks applicants for an 11-month tenure-track position starting 1 September 1987. Teaching and advising in community nutrition and nutritional epidemiology; research in applied human nutrition. Doctorate required in nutrition or closely related field. Send curriculum vitae, statement of research and teaching interests, and names of three references by 1 May 1987, to: **Dr. Kathryn Dewey, Department of Nutrition, University of California, Davis, CA 95616.**

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

ASTRONOMER

The American Museum—Hayden Planetarium is seeking a highly qualified professional with in-depth knowledge of astronomy and space science for a tenure-track position. Responsibilities will include program development; presentation of live shows; teaching of astronomical and space science courses; fostering contacts between the Planetarium and the astronomical academic and research communities; serving as a spokesperson on astronomical matters to the media, and participation in planetarium administration.

Qualifications include a Ph.D. in astronomy or related field and experience in some combination of astronomy and space science along with one or more of the following: science education; planetarium operations/productions/exhibitions or program writing. Demonstrated ability to communicate space science subjects to a broad age spectrum preferred.

Starting date for the position is spring 1987 or soon thereafter. Salary and rank will be determined by the candidate's qualifications. Salary requirement should be submitted along with curriculum vitae, samples of publications/writing/scripts or program tapes and the contact information for three individuals familiar with your work. Please submit 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***

BIOLOGIST

The Vassar College Biology department invites applications for a 1-year substitute faculty position. Individuals applying should be prepared to teach introductory biology, biochemistry, mammalian physiology, or any combination of the above. Ph.D. required and teaching experience in a liberal arts undergraduate institution is preferred. Consideration of applications begins on 6 April 1987, and will continue until a suitable applicant is found. Please send curriculum vitae and three letters of reference to: **Dr. M. R. C. Greenwood, Vassar College, Poughkeepsie, NY 12601. Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.**

CELLULAR NEUROBIOLOGIST/DEVELOPMENTAL BIOLOGIST. The Department of Biological Sciences, Stanford University, has several openings for tenure-track faculty positions in the areas of cellular neurobiology and developmental biology. Applicants at the assistant professor level are preferred, but the department will also consider appropriate candidates at a more senior level for one of these positions. Applicants should send curriculum vitae, a statement of research accomplishments and anticipated research directions, and the names of three appropriate references to: **Chairperson, Neurobiology Search Committee, Department of Biological Sciences, Stanford, CA 94305-5020. Applications from women and minority candidates are especially welcome. Stanford University is an Equal Opportunity Employer.**

ECOLOGIST/PHYSIOLOGIST. Conduct research in tree and stand responses to nutrient limitations and water and other environmental stresses in conjunction with programs in forest genetics, nutrition, biotechnology, and hardwood management. Associate or experienced assistant professor. Send résumé, transcripts, and three letters of recommendation by 1 May 1987 to: **A. W. Cooper, Head, Department of Forestry, North Carolina State University, Raleigh, NC 27695-8002.**

POSITIONS OPEN

BIOMEDICAL RESEARCH INVESTIGATOR. The McLaughlin Research Institute. Ph.D. or M.D. with grant support to head self-funded research program. Position offers considerable independence, superb, separate research facility, affiliation with Columbus Hospital (Regional Oncology Center), and supportive community. Institute has 20-year tradition of NIH-funded support in immunology, immunogenetics, cancer research. It houses 8000 mouse colony, including many H-2 recombinant lines. No teaching required but faculty affiliation available. Fine quality of life, clean air, no traffic jams, excellent schools, affordable housing, ready access to camping, fishing, skiing. Please submit curriculum vitae, three references and summary of research interests to: **The McLaughlin Research Institute, 1625 3rd Avenue North, Great Falls, MT 59401. Telephone: 406-761-5833. Applications by 30 May 1987. Equal Opportunity/Affirmative Action Employer.**

CARDIOVASCULAR PHYSIOLOGISTS

RESEARCH POSITION—Ph.D., to develop and manage a fully funded laboratory—carrying out animal research in lung and cardiovascular physiology related to human trauma and septic shock conditions. **DESIRED QUALIFICATIONS:** Strong background in cardiovascular and membrane physiology and pharmacology. Send curriculum vitae to:

**Philip B. Kellett, M.D.
Chairman Research Committee
Department of Anesthesia
University of Tennessee
College of Medicine/Knoxville Unit
1924 Alcoa Highway
Drawer U-10
Knoxville, TN 37920**

An Affirmative Action/Title IX/Section 504 Employer.

CLINICAL IMMUNOLOGISTS CLINICAL MICROBIOLOGISTS

The University of Texas Health Science Center at San Antonio has openings for the following positions:

CLINICAL IMMUNOLOGIST—A Ph.D. level immunologist to direct the immunologic component of a combined microbiological, immunological, and clinical periodontal disease study on an aging human population. Cellular immunologic experience in HLA typing and/or EBV cell immortalization required.

CLINICAL MICROBIOLOGIST—A Ph.D. level clinical microbiologist to also participate in the study on an aging human population. The successful candidate must have experience in clinical microbiology, immunofluorescence as a tool of clinical research, and data management.

CLINICAL MICROBIOLOGIST—A master's level clinical microbiologist with experience in the use of microbiological techniques in the identification of anaerobes is sought for a developing clinical diagnostic laboratory of oral microbiology. The successful candidate should have experience in the growth and identification of anaerobes, as well as experience in the processing of clinical samples for anaerobic microbiology.

Send curriculum vitae and three letters of recommendation to: **The Human Resources Department, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7972.**

Equal Opportunity/Affirmative Action Employer

DEAN, SCHOOL OF SCIENCE

California State University, Hayward (CSUH) is seeking applications for the position of Dean of the School of Science, which includes the Department of Biological Sciences, Chemistry, Geological Sciences, Mathematics and Computer Science, Nursing, Physics, Psychology, Statistics, and the program in Health Sciences. The Dean has responsibility for the School's programs, budget, and personnel. Salary and fringe benefits are competitive. Nominations or applications accompanied by a résumé and the names of three references will begin to be considered 10 April 1987 and will be received until the position is filled. Please direct all correspondence to: **Dr. Russell Merris, Chair, Selection Committee for Dean of Science, c/o Office of Provost, CSU Hayward, Hayward, CA 94542. CSUH is an Equal Opportunity, Affirmative Action, Title IX Employer and adheres to Section 504, Handicapped Regulations.**

Molecular Genetics/ Protein Engineering

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional senior scientific staff to expand its current research programs employing recombinant DNA technology and other genetic approaches to develop novel therapeutic agents.

Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

The Department of Molecular Genetics is seeking an outstanding Scientist with a Ph.D. in Microbiology, Biochemistry, Molecular Biology or equivalent and 2 to 3 years of postdoctoral experience in the area of protein engineering.

The candidate that we are seeking should have a strong research background in studying structure-function relationships in proteins. The research that the candidate would initially be involved in is the development of novel thrombolytic compounds. Our labs are well developed in expression of heterologous proteins in several different host cell systems.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please send your C.V. and names of three references to: Robert F. Obst, R&D Senior Employment Consultant, SmithKline Beckman Corporation, 1592 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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POSTGRADUATE RESEARCH BIOLOGIST or ASSISTANT RESEARCH BIOLOGIST.

Applications are invited for three positions in a multidisciplinary cellular neuroscience group in the Department of Biology at UCSD, supervised by Varon and Manthorpe. Major research interest is the characterization of substances that promote survival, growth and regeneration of nervous tissue.

BIOCHEMIST/MOLECULAR BIOLOGIST:

To characterize and clone genes for proteins supporting in vitro survival and growth of PNS and CNS neurons. Applicant should have Ph.D. and documented expertise in at least one of the following: Protein purification or characterization, gene cloning.

CELLULAR NEUROBIOLOGIST:

To characterize biological activities of neural cell growth-promoting substances (i.e. trophic and neurite-promoting factors, gangliosides, drugs). Applicant should have Ph.D. and documented expertise in at least one of the following: Neural cell culture, quantitative in vitro techniques, antibody generation.

NEUROANATOMIST: To use histological techniques to examine abilities of in vitro-characterized neural cell growth promoting substances to promote in vivo the survival and regeneration of experimentally damaged rat CNS neurons. Applicant should have Ph.D. and documented experience in at least one of the following: Modern tracing methods, stereotaxic neurosurgery, neural tissue or cell transplantation, neurohistology, morphometry.

Position(s) will be commensurate with experience, at the level of Postgraduate Research Biologist (postdoctoral position) (\$21,948-\$32,914) or Assistant Research Biologist (professional research) (\$34,600-\$43,200). Send curriculum vitae and names of three references by June 1, 1987 to Dr. Marston Manthorpe, Dept., of Biology, M-001, University of California, San Diego, La Jolla, CA 92093 (619) 534-3738.

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

National Institute of Mental Health Alcohol, Drug Abuse, and Mental Health Administration Public Health Service

NEUROSCIENCES RESEARCH BRANCH Centers for Neuroscience and Schizophrenia Program

Position Title: Coordinator, Centers for Neuroscience and Schizophrenia Program.

Grade and Salary: GM 13-14; \$38,727-59,000. Candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

Location: National Institute of Mental Health, 5600 Fishers Lane, Rockville, MD.

Qualifications: Ph.D. in a neuroscience discipline plus direct experience in the conduct of neuroscience research, and/or M.D. degree with clinical experience in psychiatric disorders and direct experience in the conduct of neuroscience research.

Responsibilities: The NIMH Centers for Neuroscience and Schizophrenia (CNS) program will provide for development and support of research centers which combine basic neuroscience research with clinical studies of schizophrenia. The program will fund major research efforts, either at single institutions or multiple, geographically separate institutions. The coordinator will be responsible for planning, developing and administering the program.

Further Information on Program or Position: Dr. Ronald Schoenfeld
NIMH, Room 11-105
5600 Fishers Lane
Rockville, MD 20857
(301) 443-1504

Further Information on Application Procedures/ or Submit SF-171 to: J. Harris, Personnel Specialist
5600 Fishers Lane, Room 15C-18
Rockville, MD 20857
(301) 443-4826

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Ph.D. Level

Recent developments have generated an opening in the cancer chemotherapy program at the Warner-Lambert/Parke-Davis Pharmaceutical Research Division. This position is located in Ann Arbor, Michigan at our modern facilities, which are located adjacent to the University of Michigan campus. We are devoted exclusively to new drug discovery and development.

The successful candidate will be responsible for the evaluation of the in vivo activity and toxicity of novel anticancer agents and radiosensitizers against transplantable murin tumors and human tumor xenografts, experimental support of lead compounds in clinical trials, and the development of new models for the prediction of clinical activity.

Candidates should have a Ph.D. in pharmacology, 1-5 years of postdoctoral training in experimental chemotherapy with emphasis on in vivo aspects, and training in biochemistry and cell biology. Experience in the areas of radiobiology, flow cytometry, and supervision of technical staff would be favorable.

Qualified candidates should send curriculum vitae in confidence to: Ms. R. Chapman, Supervisor, Human Resources, Warner-Lambert/Parke-Davis, 2800 Plymouth Road, Ann Arbor, MI 48105.

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POSITIONS OPEN

CLINICAL PATHOLOGIST IN CLINICAL CHEMISTRY

The Department of Laboratory Medicine in the University of Washington School of Medicine is recruiting a Board-certified clinical pathologist for appointment as an **ASSISTANT PROFESSOR**. Candidates should be prepared to direct areas in clinical chemistry and biochemical genetics as assigned by the heads of these divisions. In addition, responsibilities will include teaching residents, postdoctoral fellows, and medical, graduate and undergraduate students, as well as developing an academic research program. Please submit curriculum vitae to: **Dr. Robert Labbe, Department of Laboratory Medicine, SB-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

DEAN OF THE COLLEGE OF SCIENCE AND MATHEMATICS Southwest Missouri State University (SMSU)

SMSU invites applications and nominations for Dean of the College of Science and Mathematics. The College has a total of 104 faculty in the Departments of Biology, Biomedical Sciences, Chemistry, Computer Science, Geosciences, Mathematics, and Physics and Astronomy. SMSU's enrollment now exceeds 16,000. The Dean reports to the Vice President for Academic Affairs and offers leadership to faculty to promote excellence in teaching, research, and service; is sensitive to student concerns; and confers regularly with departments concerning curricula, budgets, and personnel. The Dean must have an earned doctorate and a sufficiently strong record of excellence in teaching, research, and service to qualify for appointment to senior faculty rank. Candidates must have demonstrated administrative and leadership experience in higher education. Success in attracting extramural funding and experience in graduate education are highly desired. A letter of application, curriculum vitae, and names, addresses, and phone numbers of at least five references must be postmarked by 6 April 1987. Send to: **Office of Academic Affairs, Dr. Bruno Schmidt, Southwest Missouri State University, Springfield, MO 65804.** *Affirmative Action/Equal Opportunity Employer.*

DIRECTOR OF RESEARCH

Nominations and applications are invited for the new position of Director of Research at **The University of Michigan (UM)-Flint** (6000 commuter students, primarily undergraduates). The Flint campus is one of three in the University of Michigan system. The Director will be appointed as a tenured faculty member (Ph.D. or equivalent required), teach one course/term, report to the Provost, and work with a faculty board. The Manager of the Project for Urban and Regional Affairs (PURA), the existing UM-Flint applied research organization, will report to the Director. The Director's responsibilities include fostering and coordinating all UM-Flint research efforts (basic and applied, for example, PURA); interactions between UM-Flint and community-based organizations and external agencies; and the writing of grant proposals and contracts. Candidates must have a significant record of and commitment to research (basic and/or applied) and other professional activities; demonstrated leadership ability and communications skills; the ability to work with community and government organizations plus UM-Flint faculty and staff; and experience in grants and contract work. A letter of application, a curriculum vitae, and the names of at least three references should be sent to: **Dr. David O'Keeffe, Chair, Director of Research Search Committee, Office of the Provost, University of Michigan-Flint, Flint, MI 48502-2186.** The position is available 1 September 1987. Applications will be accepted until the position is filled. *The University of Michigan-Flint is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION. A tenure-track position is available beginning September 1987. Ph.D. is required. Duties include teaching microbiology and biochemistry. Send curriculum vitae, transcripts, three reference letters, and a statement of research interests to: **Gary L. Bintz, Department of Biology, Eastern Montana College, 1500 North 24th Street, Billings, MT 59101.** Deadline: 1 May 1987. *Eastern Montana College is an Equal Employment Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

DEAN OF THE COLLEGE OF PHARMACY THE OHIO STATE UNIVERSITY

Applications and nominations are invited for the position of Dean of the College of Pharmacy.

Candidates should have an earned doctorate in a pharmaceutical discipline or in a discipline closely allied to pharmacy, a record of scholarly achievement that warrants a rank of full professor in the College, administrative experience or clear evidence of administrative ability, the ability to work productively with various constituencies within the academic community as well as with alumni and extramural professional and scientific organizations, and demonstrated leadership ability. The deanship is a 12-month position.

The position is available 1 August 1987. Salary is negotiable and commensurate with background and experience. Nominations or letters of application, curriculum vitae, and names, addresses, and telephone numbers of four references are required.

The Search Committee will begin screening dossiers on 1 May 1987 and will continue to receive nominations and applications until the Dean is selected. Applications and nominations should be addressed to: **Dean Carole A. Anderson, Chairperson, Search Committee for a Dean, College of Pharmacy, Office of Academic Affairs, The Ohio State University, 203 Bricker Hall, 190 North Oval Mall, Columbus, OH 43210.** Telephone: 614-292-5881

DIRECTOR CENTER FOR NEW INDUSTRIAL MATERIALS

Iowa State University seeks to fill the position of Director for its new Center for New Industrial Materials. The Center is a new initiative by the University and the State of Iowa with objectives that include: (i) the development of selected materials sciences discoveries and inventions to the prototype stage so that subsequent transfers of this knowledge to the commercial sector can be effected, and (ii) the development of knowledge capital which on a regular basis stimulates new commercial activity and enhances industrial competitiveness in new materials. Base funding for the Center will be \$3.5 to 4.0 million per year.

Candidates should have: (i) a Ph.D. in a discipline closely related to the materials field, such as chemistry, physics, materials sciences, or engineering; (ii) an outstanding record of research in the materials field, suitable to qualify the applicant for a full professorship in a materials-related academic department; (iii) demonstrated ability to work effectively with university, government, and industrial organizations; (iv) knowledge of intellectual property development; (v) 5 to 10 years of research management experience.

Interested persons should send a résumé and the names of three references to: **Dr. Robert S. Hansen, Director, Energy and Mineral Resource Research Institute, Iowa State University, Ames, IA 50011.** Application deadline: 1 May 1987 or until position is filled. *An Equal Opportunity/Affirmative Action Employer M/F/H/V.*

EDUCATION—CHAIRPERSON—DEPARTMENT OF FOOD SCIENCE, COLLEGE OF HUMAN RESOURCES—The University of Delaware is seeking a dynamic scholar who will provide leadership in building research and academic strength in its Department of Food Science. The department is young, multidisciplinary, and with the infusion of additional human and financial resources, has the potential for national prominence. The department's ideal geographic location has resulted in collaborative arrangements with the many food and chemical companies and research agencies in the region; there is strong potential for further expansion. Qualifications: earned doctorate in food science or closely related field, demonstrated achievement in basic and applied research, research grant administration and teaching, and demonstrated effective management and communication skills. Search will continue until a suitable candidate is found. Application and/or nominations including the names of three references should be forwarded to: **Dr. Carolyn A. Thoroughgood, Chairperson, Search Committee, 101 Alison Hall, College of Human Resources, University of Delaware, Newark, DE 19716.** *The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.*

POSITIONS OPEN

ELECTRICAL ENGINEER/BIOMEDICAL ENGINEER. The Cardiology Department at the University of Utah is accepting applications for an electrical engineer. Successful candidate must have a professional degree in electrical engineering, computer science, biomedical engineering or related area or equivalency. Advanced degree and experience in processing electrophysiologic signals and digital signal processing preferred. Familiarity with DEC including VAX-VMS and cardiac anatomy and physiology preferred. Works with cardiologists in recording and analyzing cardiac electrical signals. Faculty appointment contingent on qualifications. Send two copies of résumé with names, addresses, and telephone numbers of three references to: **Dr. Roger A. Freedman, c/o Patricia Baucum, Personnel Administration, 101 Annex Building, PB-3280, Salt Lake City, UT 84112.** *Equal Opportunity Employer.*

THE BOYCE SCHULZE DOWNEY SCIENTIST IN MOLECULAR BIOLOGY

The Boyce Thompson Institute for Plant Research has established this new **ENDOWED CHAIR IN MOLECULAR BIOLOGY**. The Scientist will be Program Director for Plant Molecular Biology in the Institute. Applicants must have made major contributions to molecular biology, have international recognition, and have experience and desire to establish a major plant molecular biology program. Position offers opportunity for interacting with senior scientists in all Institute research programs as well as adjunct appointment and graduate students from Cornell University and interaction with Cornell faculty. Boyce Thompson Institute is a private, independent, nonprofit plant research laboratory located on the campus of Cornell University. Applicants should submit curriculum vitae, a statement of research achievements, and names of three references to: **Dr. A. Carl Leopold, Chair, Selection Committee, Boyce Thompson Institute, Tower Road, Ithaca, NY 14853.** *An Equal Opportunity/Affirmative Action Employer.*

Tufts University School of Veterinary Medicine is seeking applicants for a junior or senior **FACULTY POSITION** in large animal surgery, available on or after 1 May 1987. Applicants must have the D.V.M. or equivalent degree and, preferably, interest and experience in orthopedic surgery. Depending on the qualifications and experience of the candidate, an administrative role also may be possible. Diplomates of the American College of Veterinary Surgeons or individuals who are Board-eligible will be given preference. Experience and interest in research is desirable. The successful applicant will participate in teaching and clinical service in the Hospital for Large Animals on the Grafton campus and also will be expected to conduct research by working cooperatively with other investigators and/or by developing his/her own program. Qualified applicants should submit a letter of interest, curriculum vitae, and names of three references to: **Dr. Anthony Schwartz, Chairman, Department of Surgery, Tufts University School of Veterinary Medicine, Tufts New England Veterinary Medical Center, 200 Westboro Road, North Grafton, MA 01536.** Telephone: 617-839-9826, extension 4600, for further information.

Applications will be accepted until a suitable candidate has been identified. Salary and rank will be commensurate with qualifications and experience.

Tufts University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN BIOCHEMISTRY. Applications are invited for a tenure-track position in biochemistry in the Chemistry Department at **City College, City University of New York (CUNY)** to begin September 1987. Candidates, who should have a Ph.D. degree and at least 2 years of postdoctoral experience, will be expected to develop a vigorous, externally funded research program in immunochemistry, membrane biochemistry, or molecular biology. The successful applicant's responsibilities will include the supervision of doctoral students. Applicants should send a résumé, a list of publications, an outline of research plans and arrange to have three confidential letters of recommendation sent to: **Professor Samuel H. Wilen, Chairman, Department of Chemistry, City College of CUNY, Convent Avenue at 138th Street, New York, NY 10031,** by 13 April 1987. *Applications from minority group members and women are particularly welcome. An Affirmative Action/Equal Opportunity Employer M/F.*

POSITIONS OPEN

EUKARYOTIC MOLECULAR BIOLOGIST ASSISTANT/ASSOCIATE PROFESSOR LOYOLA UNIVERSITY OF CHICAGO STRITCH SCHOOL OF MEDICINE

The Department of Biochemistry of the Stritch School of Medicine is seeking to fill a faculty position at the assistant/associate professor level in the area of eukaryotic molecular biology. The applicant will be expected to initiate a vigorous and innovative research program, participate in Medical School and Graduate School teaching, and interact collaboratively with other molecular/cellular biologists within the Medical Center. Preference will be given to applicants interested in the molecular biology of differentiation and cancer, or in the molecular biology of the nervous system. However, excellent applicants in other areas of eukaryotic molecular biology are invited. Start-up funds are available. Send curriculum vitae, research interests and goals, recent reprints, and the names of three references to: **Dr. Richard Schultz, Chairman, Department of Biochemistry, Loyola University, Stritch School of Medicine, 2160 South First Avenue, Maywood, IL 60153.** *Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION, BIOCHEMISTRY/CANCER BIOLOGY, DEPARTMENTS OF BIOCHEMISTRY AND THE ARIZONA CANCER CENTER, THE UNIVERSITY OF ARIZONA. Applications are invited for a tenure-track faculty position in the field of biochemistry as broadly related to cancer, to augment our existing faculty group. Research in the areas of regulation of proliferation and differentiation, lymphokines, growth and regulatory factors, cell-cell interactions, biochemical pharmacology, and the biology of tumor cells is of special interest. However, outstanding scientists in other areas will also be considered. Candidates for this position should have at least 2 years of pertinent postdoctoral experience. The successful candidate will be expected to develop a nationally recognized independent research program. A wide variety of interactions with our present faculty members is possible in many areas of biochemistry, immunology, pharmacology, and molecular and cellular biology. We provide excellent physical facilities, a stimulating research environment, and competitive salary and benefits. The newly completed Arizona Cancer Center facility and a newly formed Biotechnology Division add to the many scientific resources available at the University of Arizona. Applicants should provide curriculum vitae, two copies of recent representative publications, and a detailed description of research goals. The applicant should also arrange for three letters of recommendation to be sent directly to us. The search committee will begin reviewing applications 15 April 1987 but will continue to accept applications until the position is filled. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer and applications from female and minority group members are strongly encouraged.* Submit applications to: **Jeffrey M. Trent, Ph.D., Head Biochemistry/Cancer Center Search Committee, Arizona Cancer Center, Room 3945, The University of Arizona, Tucson, AZ 85724.**

FACULTY POSITION (nontenure accruing) DEPARTMENTS OF OBSTETRICS AND GYNECOLOGY AND BIOCHEMISTRY

A nontenure-accruing position as **RESEARCH INSTRUCTOR** to teach and supervise graduate students and research technicians in the department of **OBSTETRICS AND GYNECOLOGY** is available. The appointee would be required to design and conduct experiments to investigate the molecular mechanisms involved in the developmental and hormonal regulation of surfactant synthesis in fetal lung tissue. A Ph.D. in Biochemistry or a related field is required and 4 years of postdoctoral experience in molecular biology, hormone action, preparation of cDNA libraries, the isolation of cloned cDNAs and genes, DNA sequencing, in vitro transcription assays, and protein purification. Submit curriculum vitae and brief summaries of past research experience with names of three references to:

**Associate Director
Cecil H. and Ida Green Center for
Reproductive Biology Sciences**

**University of Texas Health Science Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75235-9051.**

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We have challenging opportunities in our growing baker's yeast research program in the St. Louis Corporate Research and Development Department. To join our top-flight team, consider your background for the following positions:

Biochemical Engineer

A bachelor's or master's degree in chemical or biochemical engineering and 5 to 7 years of industrial experience will enable you to receive initial consideration. You will need expert, hands-on experience in fermentation process development and product recovery, including a solid understanding of centrifugation and filtration. Experience with large-scale or pilot plant aerobic fermentation equipment

and knowledge of computer process control systems is desirable. You must also demonstrate effective communication skills to interact with research and production staffs.

Fermentation Technologist

The successful candidate for this position will have 3 to 5 years' hands-on industrial experience with bench-scale and pilot plant fermentation equipment, and an understanding of computer process control equipment. A graduate or undergraduate degree in microbiology, biochemistry, or other related area is essential.

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COMPANIES**

POSITIONS OPEN

FACULTY POSITION—ASSISTANT OR ASSOCIATE PROFESSOR, ORAL BIOLOGY: The University of Florida, Department of Oral Biology, invites applications for a tenure-track position. Ph.D. and at least 2 years of postdoctoral research experience and training in the molecular and genetic aspects of microbial pathogenesis required. Candidate is expected to develop an independent research program, collaborate with other researchers, and participate in team-teaching. Submit curriculum vitae by 1 May 1987 to: **Dr. William B. Clark, Chairman, Search Committee, Box J-424, JHMHC, University of Florida, Gainesville, FL 32610.** *Equal Opportunity/Affirmative Action Employer, the selection process will be conducted under the provisions of Florida's "Government in the Sunshine" and Public Records Laws.*

CENTER FOR ENVIRONMENTAL HEALTH UNIVERSITY OF CONNECTICUT

A Center has been established to serve as a focal point for diverse activities concerned with environmental health in Connecticut. Two tenure-track positions will be added this year. Requirements include an earned doctorate in an appropriate field, demonstrated research production, and willingness to play an active role in development of Center programs. Appointment and space will be in the Department of Animal Science of the College of Agriculture.

MOLECULAR BIOLOGY/TOXICOLOGY/GENETICS—Full/associate professor interested in applying methods of modern biology to monitor human populations for toxic exposures. Areas of interest could include somatic cell mutagenesis, detection of DNA adducts and induce alterations in gene expression.

BIOSTATISTICS/EPIDEMIOLOGY—Associate/assistant professor interested in collaborating with existing faculty and in initiating new studies with Connecticut populations. Areas of interest could include toxicology, carcinogenesis, and teratogenesis.

Send curriculum vitae and the names of three persons for recommendations by 15 April 1987 to: **Dr. Norman Klein, Center for Environmental Health, U-39, University of Connecticut, Storrs, CT 06268.** *Affirmative Action/Equal Opportunity Employer. (Search #s 7A197 and 7A198)*

THE UNIVERSITY OF CONNECTICUT

FACULTY POSITION IN MOLECULAR GENETICS UNIVERSITY OF SOUTHERN CALIFORNIA (USC) SCHOOL OF MEDICINE

The Department of Biochemistry and the Comprehensive Cancer Center, University of Southern California School of Medicine invite applications for tenure-track faculty positions at the assistant or associate professor level. Individuals in the area of eukaryotic molecular genetics are particularly encouraged to apply, but qualified investigators in related disciplines will also be considered.

Submit applications, including curriculum vitae, a statement of research interests, and the names of three references to: **Dr. Amy Lee, Chairperson, Molecular Genetics Search Committee, USC Comprehensive Cancer Center, NOR 743, 1441 Eastlake Avenue, Los Angeles, CA 90033.** *Affirmative Action/Equal Opportunity Employer.*

IMMUNOLOGIST

The Department of Oral Biology, State University of New York at Buffalo is seeking applicants for a **RESEARCH ASSISTANT/ASSOCIATE PROFESSOR IN IMMUNOLOGY.** Applicants should have a doctorate in immunology, biochemistry, or other related area. Postdoctoral or equivalent laboratory research experience is desirable. We are particularly seeking an individual with experience or interest in clinical immunochimistry to be involved in the application of modern molecular technologies to the study of infectious disease. The position will be available in the spring 1987. Applicants should send a résumé and the name/address of five references to: **Dr. Robert Genco, Chairperson, Department of Oral Biology, State University of New York at Buffalo, 135 Foster Hall, 3435 Main Street, Buffalo, NY 14214.** *The State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN VETERINARY BIOSCIENCES ANATOMY

The Department of Veterinary Biosciences, Virginia-Maryland Regional College of Veterinary Medicine, invites application for a tenure-track faculty position in veterinary anatomy. The appointee will join a multidisciplinary department comprising the disciplines of morphology, physiology, biochemistry, and pharmacology/toxicology. The appointee will be expected to participate in instruction in gross anatomy to veterinary medical students, develop a productive research program in his/her area of expertise, coupled with the teaching of graduate students. Preference will be given to candidates holding the D.V.M. (or equivalent) degree and Ph.D. degree. Experience in teaching domestic animal anatomy is required. Expertise in neurobiology or developmental anatomy/teratology desirable.

Applications should include a current curriculum vitae, statement of teaching and research experience and career goals, and the names and addresses of three references. Academic rank and salary are commensurate with qualification. Closing date for the application is 30 April 1987 or until the position is filled thereafter. Starting date is as soon as possible. Apply to: **Dr. Hara Misra, Head, Department of Veterinary Biosciences, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 24061.**

Virginia Tech is an Affirmative Action/Equal Opportunity Employer.

HEAD, DEPARTMENT OF BOTANY AND PLANT PATHOLOGY, Purdue University, West Lafayette, Indiana. Nominations or applications are invited for the position of head and professor. The interests of the faculty are diverse and represent research, teaching, and extension missions. Research includes basic and applied programs in plant pathology, weed science, plant physiology, genetics, molecular biology, and interdisciplinary programs in integrated pest management. The department offers M.S. and Ph.D. degrees. The head will have administrative and fiscal responsibilities; provide academic leadership for professional development; maintain a liaison with other administrators; help strengthen interdisciplinary activities; and actively seek funding for departmental programs. Candidates must have a Ph.D. and experience in an area related to departmental missions, have leadership and administrative ability, and appreciation for the diverse interests of the department. Direct applications to: **R. L. Thompson, Dean of Agriculture, Agricultural Administration Building, Purdue University, West Lafayette, IN 47907.** Applications, including curriculum vitae, publications list, and names of five persons who may be contacted for references, will be accepted until 30 April 1987, or until a suitable candidate is identified. *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

IMMUNOPARASITOLOGY POSTDOCTORAL POSITION immediately available to apply monoclonal and antiidiotype antibody techniques to study host immune responses and antigens of *Trypanosoma cruzi*. Applicants should have a strong background in immunology and/or protein chemistry. Send curriculum vitae and three letters of reference by 15 April 1987 to: **Dr. Donald G. Dusanic, Department of Life Sciences, Indiana State University, Terre Haute, IN 47809.** *Indiana State University is an Equal Opportunity/Affirmative Action Employer.*

Applications are invited for **JUNIOR FACULTY POSITIONS** in the Department of Earth and Planetary Sciences. The Department of Earth and Planetary Sciences, Harvard University conducts research and teaching in the following general fields:

Atmospheric physics and chemistry;
Physical, chemical and biological oceanography
Geophysics and geochemistry
Paleobiology
Structural geology, tectonics and petrology.

Applications are solicited particularly from women and minorities.

Curriculum vitae including names of references and a list of publications should be sent to:

**Professor Michael B. McElroy, Chairman
Department of Earth and Planetary Sciences
Geological Museum, 103B
20 Oxford Street
Cambridge, MA 02138**

Harvard University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

INVERTEBRATE BIOLOGIST, Wabash College: Applications are invited for a 2-year position in the Department of Biology. Duties include teaching invertebrate biology, introductory biology, and area of special interest. Ph.D. is required. Expected salary range is \$22,000 to \$24,000. Research laboratory and limited research funds can be expected. Wabash College is a small, liberal arts college for men. Applications, including curriculum vitae, statement of teaching and research interests, and three letters of reference should be sent by 20 April 1987 to: **Dr. Margaret A. Palmer, Department of Biology, Wabash College, Crawfordsville, IN 47933.** *Women and minorities are encouraged to apply.*

NATIONAL CANCER INSTITUTE FREDERICK CANCER RESEARCH FACILITY BIONETICS RESEARCH, INC. BASIC RESEARCH PROGRAM MACROMOLECULAR CRYSTALLOGRAPHERS

The Basic Research Program is presently recruiting scientific staff for a new crystallography laboratory headed by Dr. Alexander Wlodawer. The laboratory will study the structure and function of proteins and nucleic acids and is equipped with state-of-the-art data collection and processing tools, including an x-ray area detector and molecular graphics. The Computing Laboratory at the Frederick Cancer Research Facility is equipped with a Cray X-MP supercomputer and two large VAX computers. Applications for the following positions are now being accepted:

SECTION HEAD OR GROUP LEADER—scientist of recognized merit with leadership ability and at least 5 years of relevant postdoctoral experience, include a research plan with application.

SCIENTIST ASSOCIATES—scientists with demonstrated ability for independent work with at least 2 years of postdoctoral experience.

SCIENTIFIC PROGRAMMER—knowledge of Fortran and experience operating a VAX/VMS system. Experience with the Cray computer also useful.

RESEARCH TECHNICIAN—experience in protein purification and characterization desirable but not required.

POSTDOCTORAL FELLOW(S)—recent Ph.D.'s in protein crystallography or other aspects of structural biology.

To apply, send curriculum vitae and the names of three references to: **Dr. Maurice Guss, Executive Officer, BRI-Basic Research Program, NCI-FCRF, P.O. Box B, Frederick, MD 21701.** *An Equal Opportunity/Affirmative Action Employer M/F/H/V.*

MEDICAL ONCOLOGIST/ CLINICAL PHARMACOLOGIST

An academic medical oncologist with research interest in clinical pharmacology of anticancer drugs is being sought for an expanding program in the clinical testing of new anticancer drugs and the laboratory study of new and established agents, both conventional and biological. Position is in the clinical pharmacology department of a comprehensive cancer center at assistant/associate professor level. Responsibilities include involvement in conduct of Phase I-II studies of new anticancer agents. A laboratory research program is strongly encouraged. Candidate should be qualified for an academic appointment with the State University of New York at Buffalo. Excellent State benefit package. *Equal Opportunity Employer.* Send curriculum vitae to:

**Patrick J. Creaven, M.D., Ph.D.
Roswell Park Memorial Institute
Chief, Department of Clinical Pharmacology
and Therapeutics
666 Elm Street
Buffalo, NY 14263**

MOLECULAR BIOLOGY POSTDOCTORAL

NEEDED: Ph.D. researcher who can combine kinetic studies on translation with recombinant DNA route to RNA substrates. Read: *JMB* 192, 235 (1986) and *JBC* 261, 4868 (1986). Write: **Mike Yarus, Dept MCD Biology, Box 347, University of Colorado, Boulder, CO 80309.** Send: inquiries, curriculum vitae, references. *The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities and disabled individuals.*

CELL BIOLOGY

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As the acknowledged leader in supplying high quality cell culture media to the research/industrial communities for three decades, GIBCO Laboratories is now expanding its Cell Biology Research & Development Department to maintain its technical leadership.

There are immediate positions available at the B.S., M.S. and Ph.D levels investigating nutritional factors associated with the regulation of cellular proliferation and biological production.

Our multi-disciplinary team assumes project management responsibility, with ample opportunity for diversified experience and career advancement. This includes a blend of bench level research, technical supervision, interaction with other GIBCO departments and active collaboration with investigators in academia and the private sector.

Training and laboratory competence in the following areas is highly desirable:

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- Development of immuno-diagnostic assays
- Isolation and characterization of functionally active factors from biological fluids
- Analytical separation by HPLC or ion chromatography

GIBCO offers an attractive and competitive benefits and compensation package along with an informal life style that affords candidates the opportunity to enjoy the outdoor and cultural environment of the Great Lakes, Niagara and Ontario-Toronto areas.

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Personnel Manager
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Grand Island, NY 14072
(Seven miles from Niagara Falls)

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FACULTY POSITIONS IN MOLECULAR GENETICS CENTER FOR MOLECULAR AND CELLULAR MEDICINE

DARTMOUTH MEDICAL SCHOOL

Dartmouth Medical School is planning a new medical center campus, to be completed in 1991. As part of this process, a Center for Molecular and Cellular Medicine is being established. Several tenure-track faculty positions are available now in **Molecular Genetics** and may be filled at any level (Assistant, Associate or Full Professor). These appointments will strengthen existing activities in molecular genetics and complement those in immunology, endocrinology, neuroscience, oncology, virology and cell biology. We are particularly interested in individuals whose research interests in molecular genetics relate to these other areas.

Applicants in all areas of molecular genetics are encouraged to apply. Candidates should hold the Ph.D. or M.D. degree and have a minimum of two years of postdoctoral experience. Successful candidates will become members of the Program in Molecular Genetics and will hold an academic appointment in an appropriate basic science or clinical department of Dartmouth Medical School. All faculty will be expected to maintain a strong research program and participate in the teaching of medical and graduate students.

Please send a curriculum vitae, statement of research plans, and the names of at least three references to:

**MOLECULAR GENETICS SEARCH COMMITTEE
CENTER FOR MOLECULAR AND CELLULAR MEDICINE
DARTMOUTH MEDICAL SCHOOL
HB 7200
HANOVER, NH 03756**

Dartmouth Medical School is an equal opportunity employer. Women and members of minority groups are encouraged to apply.

FACULTY POSITIONS IN NEUROSCIENCE CENTER FOR MOLECULAR AND CELLULAR MEDICINE

DARTMOUTH MEDICAL SCHOOL

Dartmouth Medical School is planning a new medical center campus, to be completed in 1991. As part of that process, a Center for Molecular and Cellular Medicine is being established. Several tenure-track faculty positions are available now in **Neuroscience** and may be filled at any level (Assistant, Associate or Full Professor). These appointments will strengthen existing activities in neuroscience, and complement those in molecular genetics, immunology, endocrinology and cell biology. We are particularly interested in individuals whose research interests in neuroscience relate to these other areas.

Applicants in all areas of cellular and molecular neuroscience are encouraged to apply. Candidates should hold the Ph.D. or M.D. degree and have a minimum of two years of postdoctoral experience. Successful candidates will participate in the development of the Program in Neuroscience and will hold an academic appointment in an appropriate basic science or clinical department of Dartmouth Medical School. All faculty will be expected to maintain a strong research program and participate in the teaching of medical and graduate students.

Please send a curriculum vitae, statement of research plans, and the names of at least three references to:

**NEUROSCIENCE SEARCH COMMITTEE
CENTER FOR MOLECULAR AND CELLULAR MEDICINE
DARTMOUTH MEDICAL SCHOOL
HB 7200
HANOVER, NH 03756**

Dartmouth Medical School is an equal opportunity employer. Women and members of minority groups are encouraged to apply.

Virogenetics Corporation

Albany, NY

Continuing Recruitment

The Virogenetics Corporation has been formed as a joint venture between the Institut Merieux and Health Research Incorporated (the non-profit research subsidiary of the NYS Department of Health). Virogenetics is involved in the development of therapeutic and diagnostic products for the human health care and veterinary markets.

Product development is currently under way within the context of strong basic research initiatives in cell biology, virology, immunology, and protein chemistry. Immediate openings are available at the PhD level in all of these disciplines. A major focus is research and

development of human animal vaccines utilizing viral vectors, with an emphasis on genetically engineered pox virus.

Compensation will be commensurate with qualifications. A comprehensive benefit package is included.

Due to expansion, resumes are accepted on a continual basis. Please send a resume and references, along with salary history to:

**Director of Research
Virogenetics Corporation
Room 1315, Corning Tower,
Empire State Plaza
Albany, NY 12237**

An affirmative action/equal opportunity employer.

POSITIONS OPEN

MOLECULAR/DEVELOPMENTAL BIOLOGIST: The Department of Pediatric Dentistry of the University of Texas Health Science Center at San Antonio invites applications for a tenure-track, assistant professor position. Preference will be given to developmental biologists working on craniofacial development using state-of-the-art molecular and biochemical approaches. Applicants will be judged on potential for independent research and securing extramural funding as well as ability to interact with current strengths at the health science center in extracellular matrix and molecular biology. Candidates should have a Ph.D. and a strong background in research coupled with a keen interest in graduate education. This position offers the opportunity to join a rapidly expanding research group at the dental school of the University of Texas Health Science Center, which is aggressively developing its potential as a national center for basic and applied research. Curriculum vitae, a brief statement of present and future research interests, and three letters of recommendation should be sent to: **Dr. Frank A. Catalanotto, D.M.D., Chairman, Department of Pediatric Dentistry, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7888.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL ASSOCIATE

A postdoctoral appointment of up to 3 years' duration is available for research on the biosynthesis of steroids and steroid hormones. Please send curriculum vitae and the names of three references to: **Dr. Eliahu Caspi, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

An Equal Opportunity/Affirmative Action Employer M/F/H.

POSTDOCTORAL CIRCADIAN BIOLOGIST NEUROPHYSIOLOGIST/NEUROPHARMACOLOGIST to study the neural mechanisms underlying mammalian biological rhythms. Candidates should be experienced with neurophysiological techniques in vivo and/or in brain slice preparations. Send curriculum vitae and three letters of reference to: **Dr. Benjamin Rusak, Department of Psychology, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4J1.**

POSTDOCTORAL POSITION

Postdoctoral position available immediately in molecular genetics. This position involves the study of gene expression in yeast. Experience in the characterization and manipulation of cloned genes is desirable. Interested candidates should send a description of their research interests, curriculum vitae, and arrange for three letters of recommendation to be sent to:

Dr. Julius Marmor
Department of Biochemistry
Albert Einstein College of Medicine
1300 Morris Park Avenue
Bronx, NY 10461
An Equal Opportunity Employer.

POSTDOCTORAL POSITION available for cell biologist-molecular biologist to integrate with research team involved in cloning and regulating expression of antiproliferative-antiviral genes. Virology, recombinant DNA, and transfection experience desirable. Send curriculum vitae and names of three references to: **Dr. Robert H. Silverman, Department of Pathology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.**

POSTDOCTORAL POSITION

Position available to work on a novel approach for generating murine monoclonal antibodies with desired effector functions for use in cancer immunotherapy and diagnosis. Applicants should possess a Ph.D. or M.D. in immunology/biochemistry; experience in hybridoma and molecular biology techniques is desirable but not required. St. Jude Children's Research Hospital, currently undergoing a major phase of expansion, is a nonprofit research institute with over 100 faculty members involved in various basic and clinical studies. Annual salary begins at \$20,000 plus fringe benefits. Send curriculum vitae and names of three references to: **Dennis W. Metzger, Ph.D., Department of Immunology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.**

POSITIONS OPEN

MOLECULAR GENETICIST AUBURN UNIVERSITY

Applications are invited for an **ASSISTANT PROFESSOR**, tenure-track position to begin in September, 1987. Ph.D. in biological science, emphasis in animal-based molecular genetics, evidence of potential for teaching excellence, ability to develop competitive research program required. Postdoctoral experience preferred. Responsibilities: teaching courses in general and molecular genetics; developing interactive personal and graduate research program. Send curriculum vitae, all transcripts, reprints, names of five references, and description of research plans to: **Dr. J. F. Pritchett, Head, Department of Zoology and Wildlife Science, 331 Funchess Hall, Auburn University, AL 36849-4201.** Closing date 1 May or until suitable candidate applies. *Women and minorities are encouraged to apply. An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR AND CELL BIOLOGY/ BIOCHEMISTRY/BIPHYSICS Postdoctoral Opportunities

Broad range of membrane research projects: (i) nature of lipid-protein interaction in membranes; membrane dynamics; (ii) membrane reconstitution; (iii) enzyme and protein chemistry; (iv) cloning and site-specific mutagenesis of membrane proteins; and (v) muscle physiology— Ca^{2+} release mechanism in excitation-contraction coupling.

Send curriculum vitae, bibliography, three letters of recommendation, and short statement regarding career goals, interest, and experience to: **Professor S. Fleischer, Department of Molecular Biology, Vanderbilt University, Nashville, TN 37235.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW position available immediately. Funding for 3 years. Laboratory emphasis is on control of folate homeostasis. Membrane receptors, folate-requiring and -metabolizing enzymes are being analyzed at biochemical and molecular level. Apply with curriculum vitae and three letters of reference to: **B. A. Kamen, M.D., Ph.D., Departments of Pediatrics and Pharmacology, Southwestern Medical School, University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9063.** An Equal Opportunity University.

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE VISUAL PHYSIOLOGY

Available September 1987, to study neuron activity in extra-striate visual cortex. Recent Ph.D. and experience in extracellular neuron recording, electronics, and programming laboratory computers. Résumé, reprints, and names of three references should be sent by 15 April 1987, to: **Dr. C. G. Gross, Department of Psychology, Princeton University, Princeton, NJ 08544.** Princeton University is an Equal Opportunity/Affirmative Action Employer/MF.

POSTDOCTORAL POSITION available beginning immediately with new assured support for 3 years to study mechanisms of pulmonary injury (adult respiratory distress syndrome) and strategies for prevention. In vitro endothelial permeability studies along with rodent models will be used to evaluate antitumor necrosis factor and anti-C5a antibodies along with newer reagents. Send curriculum vitae and three letters to: **Thomas A. Raffin, M.D., Division of Respiratory Medicine, Stanford University School of Medicine, Stanford, CA 94305.** Telephone: 415-723-6381.

POSTDOCTORAL POSITION is available immediately for junior-level, newly graduated Ph.D.'s with research experience in retroviruses. The project involves characterization of molecular and cellular events in reactivation of latent human immunodeficiency virus (HIV) by viral cofactors. The study also involves testing natural, nontoxic substances as antiviral agents for controlling HIV replication and reactivation. Interested candidates should send curriculum vitae and names of three references to: **Raxit Jariwalla, Ph.D., Head, Viral Carcinogenesis Program, Linus Pauling Institute of Science and Medicine, 440 Page Mill Road, Palo Alto, CA 94306.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL

Two postdoctoral positions to study regulation gene expression during limb development and chondrogenesis. Studies include the use of recombinant DNA techniques to analyze molecular mechanisms by which extracellular matrix, cytoskeleton, and cyclic nucleotides regulate specific gene activity during chondrogenesis. Experience in recombinant DNA techniques and/or cell-matrix interactions desirable. Send curriculum vitae and names of references to: **Dr. Robert A. Koshier, Department of Anatomy, or Dr. William B. Upholt, Department of BioStructure and Function, University of Connecticut Health Center, Farmington, CT 06032.** An Affirmative Action/Equal Opportunity Employer M/W/H.

POSTDOCTORAL POSITIONS AVAILABLE

Postdoctoral positions are available immediately to study cardiac membrane physiology and pharmacology. Applicants can choose among related projects led by six faculty. Up to 3 years of support will be provided by NIH Training Grant. Must be a U.S. citizen or permanent resident. To apply please send curriculum vitae and names of three references to:

Dr. Arnold M. Katz
Department of Medicine
University of Connecticut Health Center
Farmington, CT 06032
An Affirmative Action/Equal Opportunity Employer M/W/H

POSTDOCTORAL POSITIONS: Molecular mechanisms of cell interaction. Two positions are available immediately in a group studying the biochemical/molecular basis of cell-extracellular matrix interactions in mammalian cell systems. Experience in protein chemistry and/or molecular biology techniques desirable. Please send curriculum vitae, and two letters of reference to:

R. L. Juliano
Department of Pharmacology
University of North Carolina—Chapel Hill
(UNC-CH) School of Medicine
Chapel Hill, NC 27514

POSTDOCTORAL POSITIONS (three) available immediately to engage in projects on G-protein-mediated transmembrane signaling (**Dr. Ifeanyi J. Arinze**), roles or glycoconjugates in hormone-receptor and cell-substratum interactions (**Dr. Diane A. Blake**), and application of fluorescence spectroscopy and/or high pressure biochemistry to receptor-mediated signal transduction (**Dr. Parkinson Chong**). Salary up to \$18,000. Our laboratories are contiguous and successful applicants will be expected to interact in related projects from these laboratories. Applicants should send curriculum vitae, statement of research experience, and names of three persons who may be contacted for reference to: **Dr. Ifeanyi J. Arinze, Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208.**

POSTDOCTORAL/RESEARCH ASSOCIATE to work on the immunogenetics of the acute leukemias in rapidly expanding Medical Center. Project involves some knowledge of Clg and Raji cell assays, agarose block electrophoresis, SDS-polyacrylamide gel electrophoresis, and electroblotting (Western blot). Experience with monoclonal antibodies desired. Work would involve close collaboration with molecular biologist and hematologist. Send curriculum vitae, and three letters of reference to: **Dr. Harold R. Schumacher, Department of Pathology, 2160 South First Avenue, Loyola University Medical Center, Maywood, IL 60153.** Loyola University is an Equal Opportunity Employer.

LABORATORY/HEMATOLOGY FELLOW-SHIP. Loyola University Medical Center of Chicago is establishing a new program in laboratory hematology for pathologists board certified in AP and CP. Internists and pediatricians with comparable boards interested in more in-depth training in hematology will be considered. The program will be broad based and directed toward subspecialty board certification with training in coagulation, peripheral blood analysis, and bone marrow pathology during the first year. The second year will be devoted primarily to research. Interested candidates should send a curriculum vitae and names of references to: **Dr. Harold Schumacher, Professor and Chief of Hematology, Department of Pathology, Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153.** Loyola University is an Equal Opportunity Employer.

MOLECULAR BIOLOGIST

We are seeking a senior level investigator with a vigorous, well-funded research program to expand into a new research building under construction at the Medical College of Wisconsin. Approximately 6500 square feet of laboratory space has been allocated in the new facility for the research programs of this investigator and selected faculty. Preferred areas of research include, but are not limited to, eucaryotic gene expression, human genetics, oncogenesis, and microbial pathogenesis. In addition to conducting his or her own research project, the successful candidate will assume a leadership role in the establishment of an Interdepartmental Research Unit (IRU) in Molecular Biology at MCW.

The IRU will be composed of faculty with similar research interests drawn from both existing and newly recruited faculty. The Director will participate in the selection of additional faculty and will promote the growth of a strong, coordinated program in Molecular Biology. Faculty associated with the IRU will have tenure-track appointments in the appropriate department and will participate in graduate training programs at MCW. The new research building will also house IRUs in areas such as neurosciences and immunology that, as a network, will foster the development of interdisciplinary research projects involving both basic and clinical science faculty.

Qualified applicants should send a complete resume not later than May 1, 1987 to:



The Cancer Center of the
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, WI 53226

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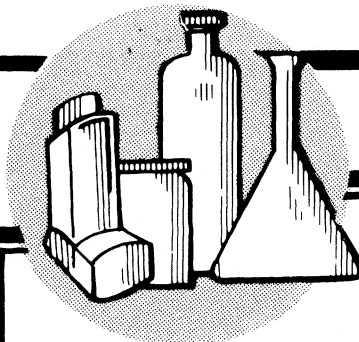
Senior Investigator Protocol Management

Smith Kline & French Laboratories, a leader in pharmaceutical research and development located near Valley Forge, PA, is seeking a clinical scientist to develop clinical trial protocols and case report forms for worldwide clinical trials. The successful candidate will maintain an awareness of current thinking and new discoveries in his/her therapeutic area through attendance at meetings and seminars; participate in study design decisions and development of clinical plans through participation on international clinical committees; validate new designs through field testing; supervise junior scientific staff; and assist in preparing departmental strategic plans, budgets and other resource forecasts.

We require a PhD in Pharmacology or other biomedical science or equivalent experience; a biomedical background in gastrointestinal, respiratory, immunology or anti-infectives is preferred. Knowledge of clinical trials protocol design equal to five years experience in new drug development and knowledge of multinational regulatory requirements are necessary. Previous supervisory experience is also required.

We offer an excellent compensation/benefits and relocation package and the opportunity for personal and professional growth. Please send c.v. and salary history to: T. Welford, Manager, Personnel Relations, SmithKline Beckman Corporation, 1554 Spring Garden Street, Philadelphia, PA 19101. No phone calls please. We are an equal opportunity employer, M/F/H/V.

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The fastest growing research-oriented pharmaceutical company in the U.S. is now recruiting B.S./M.S. level pharmacologists with extensive experience in the cardiovascular area to include: conscious instrumented dogs, rats, measurement of cardiac output, total peripheral resistance, regional blood flow and related techniques. The successful candidates will join an emerging cardiovascular section dedicated to innovative drug discovery.

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Qualified candidates will be responsible for:

- Solving methodological problems related to the experimental testing of drugs.
- Working with physiological mechanisms involved in the control of the cardiovascular system and the effects of drugs on these controls.

Background should include a B.S. in the Life Sciences with 2-4 years industrial and/or academic experience for the Research Scientists and 0-2 years industrial and/or academic experience for the Research Assistant, with in vivo pharmacological and physiological experiments to include hemodynamic measurements in large animals. Candidates must possess the organizational skills required to keep written records of experiments and meet the administrative requirements of an operational laboratory dedicated to drug development.

Your abilities and potential will be recognized with a competitive starting salary and benefits package. Our location offers a mild climate year round, access to some of the finest universities in the country, numerous cultural activities and nearby recreational facilities. For prompt consideration, please forward your resume, including salary history, to:

Dept. 86-291E-SC

(No Phone Calls, Please)
No Private Agency Referrals, Please

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MANAGER SCIENTIFIC PUBLICATIONS

Head, Department of Scientific Publications of The Cleveland Clinic Foundation, Cleveland, Ohio. This individual functions as the Managing Editor, **Cleveland Clinic Journal of Medicine** (circulation 100,000), as well as supervising the staff editing of books and articles written by 400 CCF Physicians and Scientists for peer review journals. Preferred experience in all aspects of journal publishing, a background in science and English, and demonstrated management skills.

The Cleveland Clinic Foundation is a private, non-profit organization with a 1000-bed hospital, clinic, educational division and a research institute. The Foundation has made a large commitment to residency, medical students, allied health and nursing education as well as sponsoring many continuing education courses for health care practitioners.

The Cleveland Clinic Foundation offers a competitive salary and fringe benefit package. Send resume to:

**Chairman, Division of Education
Room TT 3-308**

THE CLEVELAND CLINIC FOUNDATION

9500 Euclid Avenue • Cleveland, OH 44106

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DIRECTOR

National Optical Astronomy Observatories

Expressions of interest are solicited in the position of Director of the National Optical Astronomy Observatories (NOAO), managed by the Association of Universities for Research in Astronomy, Inc. (AURA). Headquartered in Tucson, Arizona, NOAO comprises the Cerro Tololo Inter-American Observatory in La Serena, Chile, the National Solar Observatory in Sunspot, New Mexico, and Tucson, Arizona, and the Kitt Peak National Observatory and the Advanced Development Program, both located in Tucson.

The Director has responsibility for assuring accomplishment of the mission of the observatories and for deciding and allocating resources among the observatories within the constraints of an approved program plan and budget. The Director has primary responsibility for formulating long-range objectives of the observatories in consultation with the astronomy community, and for advocating programs and projects to accomplish these objectives.

The Director reports through the AURA President to the AURA Board of Directors and maintains close communication with the funding agencies and with the university astronomical community.

The Director must have an earned doctorate in astronomy, or in a closely related physical science, and a thorough understanding of the nature and purpose of the major user-oriented world centers of astronomy. The successful candidate will be a recognized scientist as demonstrated by a record of significant publications and will have been effective in liaison with the national and international scientific communities. Experience in the management and supervision of major scientific research programs is required, and familiarity with development of state-of-the-art experimental techniques is highly desirable.

Nominations or expressions of interest for this position should be sent by April 15, 1987, to:

**Dr. Robert W. Noyes, Chairman
Search Committee
AURA, Inc.
Suite 820
2100 Pennsylvania Avenue, NW
Washington, DC 20037**

AURA IS AN EEO/AA EMPLOYER

IMMUNOLOGY TRAINING PROGRAM POSTDOCTORAL FELLOWSHIPS

Postdoctoral positions are available within the Department of Microbiology and Immunology at Duke University Medical Center, supported by NIH Institutional Training Grants. Some of the research interests of the 38 faculty members are:

D. Bernard Amos: Immunologic recognition of human and murine histocompatibility antigens of tumors and allografts; HLA polymorphisms

Yair Argon: B cell differentiation and the control of antibody secretion

Andrew Balber: Regulation and function of African trypanosome surface glycoproteins

R. Randal Bollinger: Transplantation immunology, induction of immunological tolerance

Rebecca H. Buckley: Human T and B cell development and aberrations in their development and regulation

Mary Carrington: Regulation of HLA class II gene expression

Ronald B. Corley: Gene expression in differentiating B lymphocytes and B cell subsets; function(s) of class II molecules in B lymphocyte activation

Frances E. Ward: Human histocompatibility genes, polymorphism and regulation of expression

Peter Cresswell: Biosynthesis and genetic regulation of the glycoprotein HLA antigens

Jeffrey R. Dawson: Role of NK cells in regulating lymphocyte differentiation and function

Olja Finn: T-cell repertoire in human anti-allograft and anti-tumor responses

Barton F. Haynes: Human T cell biology, thymic microenvironment-thymocyte interactions and human T lymphotropic retroviruses

Donna Kostyu: Human MHC genes, definition and participation in immune responses

Elwood Linney: Gene expression in mouse teratocarcinoma

Richard Metzgar: Basic and clinical studies of membrane associated antigens of normal and malignant human and simian cells

Send curriculum vitae with a description of research interests and goals, names of references, and indicate faculty member(s) of interest to: **Dr. Frances E. Ward, Postdoctoral Coordinator, Box 3010, Duke University Medical Center, Durham, North Carolina 27710.**

*AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER
DUKE UNIVERSITY MEDICAL CENTER*

BIOTECHNOLOGY RESEARCH SCIENTISTS

CODON, a rapidly expanding biotechnology company in the San Francisco Bay Area, has immediate openings for outstanding scientists with proven records of research achievement and the motivation to take advantage of the growth opportunities the company affords. The company is dedicated to commercial applications of fermentation, tissue culture, and recombinant DNA technology to both the human and animal health care markets. Positions are available at both the Ph.D. and non-Ph.D. levels in the following areas:

**Protein Chemistry
Biochemistry
Microbiology**

**Molecular Biology
Immunology
Molecular Genetics**

Process Development

CODON offers an attractive compensation and benefits package, including equity participation. Please send a curriculum vitae with a description of research interests and accomplishments together with the names, addresses, and telephone numbers of three references to: **CODON, Human Resources Division, 430 Valley Drive, Brisbane, CA 94005.**

CODON

Scientists

Join Schering-Plough's Physical and Analytical Chemistry Research and Development Division in supporting protein and recombinant product development.

Senior Scientist (Ph.D.)—Evaluate purified drug substances and formulated products. Requires 1–3 years' experience including relevant post-doctoral study.

Associate Scientist (B.S./M.S.)—Conduct method development experiments and evaluate stability of drug substances and formulated products. Requires 2–3 years' experience.

Candidates for both positions must be proficient in classical wet chemistry and modern electrophoretic techniques.

We offer a competitive salary and benefits package. Please forward resume, indicating position of interest, to: B. Van Vliet, Schering-Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.



Schering-Plough

SCIENTIST/ENGINEER

The Applied Science Division of Lawrence Berkeley Laboratory seeks a Ph.D. level scientist or engineer to conduct experimental research in fluid mechanical aspects of premixed and non-premixed turbulent combustion flows. Plans and conducts experiments in collaboration with other senior researchers; prepares written results for journal publications.

Interested applicants should have a Ph.D. in mechanical engineering or thermal and chemical sciences (or equivalent in education and experience) plus demonstrated research accomplishments in turbulent combustion research, experimental measurements, computer controlled data acquisition and analysis. A strong theoretical background is also required in combustion dynamics and fluid mechanics, in particular, an in-depth knowledge of modern theories of turbulent flame structure. Preference will be given to candidates who are experienced in the use of laser optical diagnostics, RT-U and RSX computer operating systems.

Send 2 copies of resume and publications to: **J. Schilling, Lawrence Berkeley Laboratory, Employment Office, #1 Cyclotron Road, 90-1042, Berkeley, CA 94720. Refer to Job #B/4083.** An Affirmative Action, Equal Opportunity Employer, M/F/H.



LAWRENCE
BERKELEY
LABORATORY

TECHNICAL ANALYST (Washington, D.C.)

Put your technical and scientific skills to work by developing and coordinating national human risk research and policy recommendations on radiation, hazardous waste and/or toxic substances. Advanced degree in a scientific discipline, with 5 years technical experience and several years diverse project management experience required. An appreciation of the role of science in forming public policy necessary. Send resume and salary history to:



Employment Office
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, Tennessee 37831-0117

An Equal Opportunity Employer

POSTDOCTORAL RESEARCH ASSOCIATE

Sandoz Pharmaceuticals Corporation is responsible for products that improve the quality of life. Our developments are the result of research conducted by professionals who specialize in many different fields.

The Sandoz Research Institute is currently seeking a recent Ph.D. for a postdoctoral research position in the diabetes project. The position offers a unique opportunity for an innovative, self-motivated, independent scientist to pursue a basic research project in hormonal signal transduction while working closely with an interdisciplinary research team.

Position Requirements:

- **Ph.D. or equivalent in biochemistry or a related discipline with an emphasis in metabolic regulation or hormonal signal transduction.**
- **Experience with membrane receptors, GTP binding proteins, and enzyme kinetics.**
- **Good written communication skills**

Positions at Sandoz offer personal satisfaction, professional opportunity/challenge, competitive salaries and an excellent benefits package. Our campus-like facilities are conveniently located in northern New Jersey.

For prompt consideration, please forward your resume and salary requirements in confidence to:



Joseph P. Castellano
Director of Human Resources
SANDOZ RESEARCH INSTITUTE
SANDOZ PHARMACEUTICALS CORPORATION
East Hanover, New Jersey 07936

An Equal Opportunity Employer M/F/H/V

POSITIONS OPEN

POSTDOCTORAL

POSTDOCTORAL POSITION IN MOLECULAR VIROLOGY. A 2-year position is available to study murine retroviral pathogenesis or retroviral mediated gene transfer to human and murine hematopoietic cells. Experience in biochemistry or molecular biology required. Please send curriculum vitae and names of three references to: **Dr. Christie A. Holland, Department of Radiation Oncology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01605.**

POSTDOCTORAL POSITION IN NEUROPHARMACOLOGY. A position is available, anticipated duration 2 years, for a recent Ph.D. in pharmacology or related discipline to study calcium channels in neuronal systems by radioligand binding and functional techniques. U.S. citizenship or permanent resident status required. Experience in binding methodology helpful. Send résumé and three references to: **David J. Trigg, 126 Cooke Hall, School of Pharmacy, State University of New York, Buffalo, NY 14260. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE, University of California, San Francisco, in active, interdisciplinary group studying human placental cytotrophoblast cells. Immunochemical approaches are being used to: (i) identify cell surface molecules responsible for the adhesive and invasive behavior of cytotrophoblasts during implantation; (ii) determine the feasibility of detecting fetal cytotrophoblast cells in maternal blood as a means of obtaining fetal cells for the prenatal detection of genetic disorders. Prior experience in monoclonal antibody technology is required. Salary negotiable. Contact: **Dr. Susan Fisher or Dr. Caroline Damsky 415-476-5297, Box 0512, HSW 604, University of California at San Francisco, San Francisco, CA 94143.**

POSTDOCTORAL RESEARCH ASSOCIATE. Positions are now available to join a multidisciplinary group studying the structure and regulation of the genes for the catecholamine neurotransmitter biosynthetic enzymes. Applicants should have a strong background in either recombinant DNA technology or neurochemistry/neuropharmacology. Send curriculum vitae, statement of research interest, and the names of three references to: **Dr. Barry B. Kaplan, Molecular Neurobiology Program, Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Pittsburgh, PA 15213.**

PRE- AND POSTDOCTORAL POSITIONS are available in pharmacology for those students who are interested in training in the molecular characterization of muscle, pumps, and channels. In particular, our research efforts are directed towards regulation and development of muscle. This training offers a unique opportunity to combine contemporary pharmacology with molecular genetics. The future of pharmacology lies in an understanding of the molecular control of macromolecules. Employment opportunities are at a very high level and include both academic careers and scientific and managerial positions in the pharmaceutical industry. Interested parties should contact either: **Arnold Schwartz, Ph.D., or Jeffrey Robbins, Ph.D., at the University of Cincinnati College of Medicine, Department of Pharmacology, 231 Bethesda Avenue, Cincinnati, OH 45267-0575. Equal Opportunity/Affirmative Action Employer.**

PROFESSOR AND CENTER DIRECTOR. University of Florida, Fort Lauderdale Research and Education Center (REC). This full-time, tenure-accruing administrative position will provide leadership in the development of research and academic programs, maintain a close relationship with federal and state agencies, and serve as the spokesperson for the Center. The Center has an interdisciplinary faculty of 22 positions with research, extension, and limited teaching programs in ornamental horticulture, turfgrass science, aquatic weed management, plant pathology, and urban entomology. Ph.D. in agricultural or biological science, research experience, and evidence of administrative and leadership abilities required. Salary commensurate with qualifications and experience. Closing date for applications is 15 June 1987. Applicants should submit their résumé, college transcripts, publications list and four letters of recommendation to: **Dr. T. K. Broschat, Chairman Search Committee, Ft. Lauderdale REC, 3205 College Avenue, Ft. Lauderdale, FL 33314.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH BIOCHEMIST

Study chemical processes of living organisms. Examine effects of peptides on colon carcinoma cells. Investigate effects of drugs and hormones on cells. Write reports for scientific publications. Need Ph.D. degree in biochemistry. Must have published at least three research papers on gut peptides. Forty hours per week; \$21,000 per year. Apply at: **Texas Employment Commission, Houston, Texas,** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, TX 78778, J.O. #47 93 149. Ad paid by an Equal Employment Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION

A position is available immediately to study the regulation and expression of blood clotting factor genes IX and X. Salary \$17,000 to \$20,000 per year. Experience in molecular biology is preferred. Send résumé to: **Pudur Jagadeeswaran, Center for Genetics, University of Illinois College of Medicine, 808 South Wood Street, Chicago, IL 60612. Telephone: 312-996-0608. Equal Opportunity/Affirmative Action Employer.**

POULTRY SCIENTIST—Applications are invited for the position of **HEAD, DEPARTMENT OF POULTRY SCIENCE, Auburn University, Auburn, Alabama.** The department has responsibilities for undergraduate, graduate, extension, and professional education in poultry science and allied fields and has multifaceted research programs that relate poultry science, agriculture, and the life sciences. The department contributes to numerous fields through interdisciplinary programs. The successful candidate will be expected to provide leadership in all phases and to cooperate with progressive administrators and industry leaders to advance poultry science at Auburn University toward eminent status. Applications should include curriculum vitae and the names of three references. Nominations are encouraged. Also minorities and women are encouraged to apply. Closing date is 1 May 1987 or until a suitable candidate is found. Submit to: **Dr. Paul K. Turnquist, Chairman, Search Committee, Agricultural Engineering Department, Auburn University, Auburn, AL 36849, telephone: 205-826-4180. Auburn University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE: with Ph.D. in organic chemistry and postdoctoral experience. Position requires minimum of 2 years of postdoctoral experience in classical carbohydrate manipulation and in organic synthetic methodologies relating to complex molecules. Successful candidate should have experience using analytical procedures, such as FT-NMR, H-C-F, UV, IR, MS-FAB, GC, LC, and TLC, for structure determination of complex natural products and also proven ability to work independently. Salary: \$17,400. If not U.S. citizen, indicate visa status. Send résumé to: **Dr. B. Fraser-Reid, Department of Chemistry, Duke University, Durham, NC 27706. Equal Opportunity/Affirmative Action Employer.**

NEUROANATOMY

RESEARCH ASSOCIATE sought to participate in ongoing structural-functional studies of gustatory brainstem nuclei in hamsters and to develop an independent research program on the **Neuroanatomy of the Gustatory System** within the Connecticut Chemosensory Clinical Research Center. Competitive salary. Send résumé to: **M. E. Frank, Department of BioStructure and Function, University of Connecticut Health Center, Farmington, CT 06032. An Affirmative Action/Equal Opportunity Employer M/W/H.**

The Registry of AIDS Pathology, American Registry of Pathology, an Equal Opportunity Employer, invites immediate applications from **RESEARCH SCIENTISTS AND TECHNICIANS** for virology and molecular biology section. Candidates for scientist position must have a Ph.D. or M.D. and appropriate research experience. Preference will be given to applicants with experience in cell and virus culture, immunoassays, particle isolation and purification, and molecular cloning. Depending on previous experience, annual salary to \$34,000 for scientists and \$23,000 for technicians plus fringe benefits. Submit résumé by 15 April 1987 to: **Box 34, SCIENCE.**

POSITIONS OPEN

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW. A position is available to investigate the localization and expression of ion channels in skeletal muscle. We are studying the neural control of these processes during development and in adult muscle. The primary focus is upon sodium channels, acetylcholine receptors, and chloride channels. Techniques employed include conventional electrophysiological recordings, loose and tight patch voltage clamp, vibrating extracellular microelectrodes, immunocytochemistry, and in situ hybridization with RNA probes. Send curriculum vitae, statement of research interests, and the names of three references to: **Dr. John H. Caldwell, Department of Molecular and Cellular Biology, National Jewish Center, 1400 Jackson Street, Denver, CO 80206, or Department of Physiology, University of Colorado Medical School, Denver, CO 80262.**

RESEARCH ASSOCIATE OR RESEARCH ASSISTANT PROFESSOR OF PATHOLOGY POSITION available on or after 1 June 1987. Ph.D. or M.D. desired in a productive, multidisciplinary group studying the role of monoclonal antibodies and their fragments in the diagnosis and treatment of human brain tumors. The project will involve (i) radiolabeling of monoclonal antibodies, (ii) affinity assays and characterization of radiolabeled proteins using HPLC, (iii) data analysis of animal model studies, and (iv) participation in Phase I human trials with monoclonal antibodies. Applicants should have a strong background in immunology. Salary: negotiable depending on level of training and experience. Send curriculum vitae, statement of research interest, and names of three references to:

**Darell D. Bigner, M.D., Ph.D.
Professor of Pathology or
Dennis Bullard, M.D.
Assistant Professor
Division of Neurosurgery
Post Office Box 3156
Duke University Medical Center
Durham, NC 27710**

If not U.S. citizen, please indicate visa status.

SENIOR POSITION IN VISION/NEUROSCIENCE

The Department of Anatomy and Cell Biology at Wayne State University invites applications for a tenure position at the rank of **ASSOCIATE PROFESSOR OR PROFESSOR.** The Department is seeking an individual whose research will complement the interests of the present faculty in developmental neurosciences and vision research. The successful candidate will be expected to participate in teaching and to maintain a funded, major research program. Excellent start-up funds and laboratory space are available. Intra- and interdepartmental collaboration is fostered by a Core Vision Grant, a Vision Sciences Training Grant, and a Neurosciences Program. Applicants should have a Ph.D. or an M.D. degree. Please submit a cover letter with curriculum vitae and the names of three references to: **Dr. Harry Maisel, Chairman, Department of Anatomy and Cell Biology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201. Affirmative Action/Equal Opportunity Employer**

SENIOR SCIENTIST PLANT TRANSFORMATION RESEARCH

Del Monte Corporation is seeking an effective **PLANT CELL BIOLOGIST** to fill a challenging position in its Corporate Biotechnology Research Center. This newly established facility is located at Del Monte Corporation's Agricultural Research Center in San Leandro, California.

The Ph.D.-level Senior Scientist will be responsible for developing an active plant transformation research program inclusive of developing regeneration protocol and analyzing transformants.

The open and progressive management style at Del Monte's Agricultural Research Center is people oriented. You will be encouraged to contribute your ideas and to take initiative and realize them. You will be encouraged toward individuality in a team environment.

Applications, inclusive of college transcripts and the name, address, and telephone number of four references, should be sent to: **Jack Yarbrough, Personnel Officer, Del Monte Corporation, Agricultural Research Center, P.O. Box 36, San Leandro, CA 94577.**

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SCIENTISTS

Genentech, Inc., a leader in the field of Biotechnology, seeks highly motivated Scientists with demonstrated records of accomplishment for the following positions:

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Working in tandem with an expert team of biochemists and biochemical engineers, you'll help develop and scale up methods for the purification/characterization of recombinant proteins and peptides to be used in human pharmaceuticals and animal health care products. Specific focus areas will include recovery processes and rapid protein isolation/characterization, therefore knowledge of HPLC, FPLC, affinity and other protein purification/analysis techniques is essential. Strong interest in immunochemistry, and the ability to think creatively are also required assets.

Successful candidate will have a PhD in Biochemistry/Biochemical Engineering and at least 2 years relevant postdoctoral experience in academia or industry. (#JG-2033)

Biological Chemistry

Your responsibility will be to investigate basic mechanisms of action of relaxin and other proteins at the molecular and cellular level, as well as develop cell-based assays which reflect these bioactivities. Cell biology and biochemistry background with experience in cell culture and receptor binding techniques required. Background experience with immunoassay development and protein receptor purification highly desirable.

Successful candidate will have PhD in Cell Biology or related field and at least 2 years related experience in academia or industry. (#JG-2006)

Medicinal & Analytical Chemistry

Position will supervise the testing and release of new products for clinical trials. The candidate we seek will have creative abilities in protein/peptide characterization, and the expertise to establish and implement final product specs. This position also involves writing scientific reports in support of IND submissions, so excellent communications skills are essential.

Successful candidate will have a PhD in Biochemistry or related field and at least 2 years related experience in academia or industry. Pharmaceutical experience highly desirable. (#JG-1351)

Postdoctoral Fellow Biochemical Endocrinology

A Postdoctoral Fellow in Biochemical Endocrinology is sought to participate in several projects including the elucidation of growth hormone, relaxin and inhibin mechanisms of action. A background in physiology or second messenger biochemistry would be helpful. (#1920SW)

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. Please send resume, indicating position title and number, to Human Resources Department, Genentech, Inc., 460 Point San Bruno Boulevard, South San Francisco, CA 94080. An equal opportunity employer.



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POSITIONS OPEN

SCIENCE EDUCATOR. The Chemistry Department, California State Polytechnic University, Pomona has a tenure-track opening for a science educator specializing in the physical sciences.

Qualifications: Doctorate in science education with a master's degree level expertise in a chemistry area or a doctorate from a chemistry area plus experience in science education; experience in teaching, teacher education; evidence of scholarly research in education. **Responsibilities:** Teach science education at the undergraduate level and develop graduate courses; develop active science education program within the School of Science; serve as a liaison between the Teacher Preparation Center and Center for Science and Mathematics Education; maintain active educational research/methodology development program. Salary and rank are dependent upon qualifications. Earliest starting date, September 1987. Send curriculum vitae; names and addresses of three references; statement of research, teaching experience, and goals; and a completed application by 24 April 1987 to: **Chair, Science Educator Recruitment Committee, Chemistry Department, California State Polytechnic University, Pomona; 3801 West Temple Avenue; Pomona, CA 91768. Affirmative Action/Equal Opportunity Employer.**

SCIENTIST

The University of Delaware College of Marine Studies has a vacancy for an individual to develop national and international computer networking systems to serve the needs of the World Ocean Circulation Experiment. The individual should have an advanced degree in an oceanographic discipline or equivalent, experience in oceanographic data analysis, in the use of mini- and microcomputers, and in computer networking. The job requires the capability to understand oceanographic scientific needs for data communications, and to plan, organize, and implement a computer and communications system to meet those needs.

Closing date for applications is 6 April 1987. Late applications and those from exceptional candidates with other expertise may be considered. Applicants should send a résumé including salary history, a statement of interests and experience, a list of publications, and the names and addresses of three references to:

**Ferris Webster
College of Marine Studies
University of Delaware
Lewes, DE 19958
Telephone 302-645-4266**

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

Department of Anatomy at the University of Nebraska Medical Center, Omaha, invites applications for a **TENURE-TRACK POSITION** in the broad areas of **DEVELOPMENTAL OR CELL BIOLOGY.** Applicants should have a Ph.D. or M.D., at least 2 years of postdoctoral training, and demonstrated potential for excellence in research. The position is at the assistant professor level. The successful applicant will be expected to establish an independent research program supported by extramural funds, and contribute to supervision of graduate students within the department. The initial teaching responsibilities will be minimal, but the appointee will eventually be expected to contribute to graduate level courses in his/her area of expertise. This position represents an excellent opportunity for a junior investigator to become established as a productive researcher. Applicants should submit curriculum vitae and representative publications and have at least three letters of recommendation sent directly to: **Dr. W. K. Metcalf, Chairman, Department of Anatomy, University of Nebraska Medical Center, Omaha, NE 68105.** Review of applications will begin 1 June 1987 and continue until the position is filled. *The University of Nebraska is an Equal Opportunity/Affirmative Action Employer.*

TWO GRADUATE RESEARCH ASSISTANTS. Two graduate research assistant positions available in the fall of 1987 in the Nursery Technology Cooperative leading to an M.S. in Forest Science. Research emphasis is in the areas of forest nursery management, physiological genetics, and/or forest regeneration. This is a marvelous opportunity for anyone wishing to pursue a career in forestry. Aggressive students who can work in a team effort are desired. If interested request application material from: **Mary Groh, Forest Science Department, Oregon State University, Corvallis, OR 97331.**

POSITIONS OPEN

STAFF OFFICER ENERGY ENGINEERING BOARD

The National Research Council/Energy Engineering Board seeks applicants for the position of Staff Officer. Duties will include assisting in the management of two or more studies, such as magnetic fusion research and development program directions, and mobile electric power systems. Applicants must be conversant in the current energy-related issues, with a broad knowledge of coal, oil, gas, magnetic fusion, and alternative energy development. Requires a Ph.D. or equivalent in engineering, physics, or economics. Send résumé to: **Position #311.0245, National Research Council, 2101 Constitution Avenue, NW, Washington, DC 20418. An Equal Opportunity Employer.**

TOXICOLOGIST

The Bay Area Air Quality Management District (BAAQMD) in San Francisco, California, is seeking a full-time toxicologist with experience in risk assessment of environmental toxics, evaluation of environmental data, and preparation of reports on toxic air emission health impacts. Ph.D. and 3 years of experience desired; \$3663 per month to start. Send résumé to: **BAAQMD, 939 Ellis Street, San Francisco, CA 94109. Equal Opportunity/Affirmative Action Employer.**

TWO FACULTY POSITIONS available, one standard faculty and one research track, in the **Department of Neurology at Wayne State University School of Medicine.** The candidate must have a major interest in neuroimmunology; duties to include research and some teaching. Academic rank appropriate to credentials and experience. Submit curriculum vitae to: **Robert P. Lisak, M.D., Professor and Chairman, Department of Neurology, 4201 St. Antoine-6E, Detroit, MI 48201. Equal Opportunity Employer/Affirmative Action.**

COURSES

TOXICOLOGY UPDATE '87 CURRENT CONCEPTS IN IMMUNOTOXICOLOGY 8 TO 10 JUNE 1987

This course will present lectures on the basic concepts describing how chemicals interact with the immune system. Directors: **M. A. Trush and T. W. Kensler.** For further information contact: **Dr. Jacqueline Corn, Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, MD 21205. Telephone: 301-955-2609.**

SYMPOSIUM

Iowa State University announces a **NATIONAL SYMPOSIUM ON AGRICULTURAL BIOETHICS** to be held in Ames, Iowa, 2 to 4 November 1987. Contributed papers are welcome on any aspect of the safety and socioeconomic implications of agricultural biotechnology. A selection of papers from the symposium will be published. Send one-page abstracts (due 1 July 1987) and requests for information to: **Michael Warren, Technology and Social Change Program, 318B Curtiss, Iowa State University, Ames, IA 50011.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS in Alcohol Studies. National Institute on Alcohol Abuse and Alcoholism (NIAAA)-funded interdisciplinary postdoctoral program for M.D.'s and Ph.D.'s in conjunction with a NIAAA Alcohol Research Center. Fields of study include: the neuropsychological, psychophysiological, and behavioral concomitants of alcohol drinking behavior; family studies and behavior genetics; treatment matching and clinical outcome; biochemical and neuroscience studies of alcohol use. National Research Service Award (NRSA) stipend. Positions available 1 July 1987. Send curriculum vitae and description of research interests to:

**Victor Hesselbrock, Ph.D.
Department of Psychiatry
University of Connecticut Health Center
Farmington, CT 06032
An Affirmative Action/Equal Opportunity Employer M/W/H.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP: NIH fellowship to study regulation in cultured mammalian endothelial and astroglial cells. Position will be supported at a reimbursement level determined by the applicant's experience and will commence 1 July 1987. Project will involve studies using radiolabeled probes, fluorescent and Coulter Counter techniques to measure cell volume and to relate volume changes to ion transport pathways. Contact: **Dr. H. K. Kimelberg, Division of Neurosurgery, Albany Medical College, Albany, NY 12208.**

POSTDOCTORAL RESEARCH FELLOWSHIP OTORHINOLARYNGOLOGY AND COMMUNICATIVE SCIENCES BAYLOR COLLEGE OF MEDICINE

Postdoctoral research position (2 years) available in the auditory-vestibular sciences. Fellow will work under the sponsorship of established investigators on a topic of their choice. Areas of research include: (i) behavioral, neural, and anatomical mechanisms underlying vestibular compensation investigated with psychophysical, physiological, cytomorphological, and histochemical techniques; (ii) morphological development of the chick inner ear; (iii) peripheral and central neural mechanisms underlying auditory fatigue using single-unit recording procedures; (iv) experimental studies of otoacoustic emissions in both normal-hearing and noise-damaged humans and animal models; (v) inner-ear mechanisms underlying surgically induced hydrops in a rabbit model; and, (vi) histochemical organization of lower auditory brainstem structures in the primate. Competitive stipend and research budget are available. Applicants should send curriculum vitae that includes names, addresses, and telephone numbers of three references, and a short description of research objectives to: **Dr. Herman A. Jenkins, Director of Research, Department of Otorhinolaryngology and Communicative Sciences, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030.**

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We are seeking an outstanding Ph.D. in Enzymology with a strong record of accomplishment beyond the doctoral level. The ideal applicant will have a strong background in enzyme reaction mechanisms, techniques of enzyme purification and *in vitro* assay, knowledge of computers, and the ability to work closely with synthetic Chemists in the design of new compounds. Individuals with a demonstrated commitment to excellence in research and with proven supervisory skills will be seriously considered.

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We invite applications from creative scientists interested in the design and assay of mechanism-based inhibitors, and who possess intensive training in enzymology. Our ideal candidate will have a good understanding of organic chemistry as well as expertise in enzyme kinetics, protein purification and modification, and be computer literate.

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Jo-Ellen Robertson, Human Resources Specialist, Syntex Inc., 2100 Syntex Court, Mississauga, Ontario, Canada L5N 3X4

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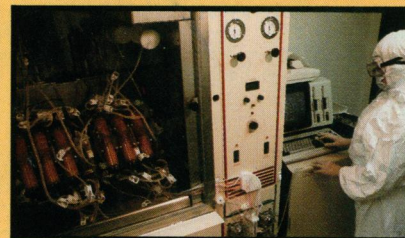
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