

herbivore birth rate one may use submodels that assume that fecundity is governed by any one of three commonly recognized types of functional response or one that assumes that it is not linearly related to food input. One simply decides which of these submodels best describes the birth and death processes of a system, plugs it into the basic difference or differential equations that constitute the model, and determines the equilibria and their stability by standard mathematical techniques.

This approach preserves a high amount of generality because all models are constructed from a small number of basic submodels; yet, because the submodels can be combined in many ways, it permits description of the many kinds of dynamical patterns exhibited by diverse plant-herbivore systems. Moreover, it allows one to explore how plant-herbivore dynamics might be affected by differences in the conditions assumed in alternative submodels. For example, the effects of plant compensation—the ability of a plant to minimize or eliminate adverse effects of low levels of herbivory—can be described by assuming that the relationship between mortality and death rate is nonlinear rather than linear. By substituting a submodel of plant death rate that assumes a nonlinear relationship for one that assumes a linear relationship, one can demonstrate that equilibrium herbivore populations are expected to increase and become more stable. It is doubtful whether this type of insight about the effects of a general process like plant compensation could be as easily derived from a unique model developed for a specific plant-herbivore system.

Of course, no approach to modeling is without pitfalls. Crawley himself cautions that the models he develops are descriptive and not explanatory, that “the fact that a model shows the same pattern as the data is no indication that the structure of the model matches the structure of the real plant-herbivore system.” These models do, however, help investigators explore the ramifications of assumptions about population dynamics that they are forced to make. As the author states, “Unless we know the consequences of simple assumptions about plant-animal interactions, we are in no position to interpret the complex data we obtain from the field, where interaction effects are compounded by genetic, climatic, and spatial variability.”

This volume belongs on the shelf of any biologist seriously interested in the population dynamics of plants or herbivores. As a compendium of information

on the ecological interactions between these two groups of organisms it is unsurpassed. Students entering the field and experienced researchers looking for new approaches to plant-herbivore interactions will find the book highly stimulating. One cautionary note should be sounded, however. One could be stimulated by this book to rush out and attempt to find an appropriate plant-herbivore system for testing some of the hypotheses and generalizations put forward by Crawley in his last chapter. In doing so, one would be assuming implicitly that the interaction between the two species is the dominant effect on the population dynamics of each. If one found this not to be the case, as must often be true, one would be left with very little positive to say about what regulates the dynamics of either the plant or the herbivore. In my opinion, a more productive approach is to begin by concentrating on a single species and examining all factors (including food resources, competitors, predators, and genetic constraints) that could be controlling its numbers. Only if one is then led to the conclusion that herbivores (for a plant) or food availability (for a herbivore) is indeed the dominant influence on numbers should one adopt Crawley's or some similar framework as a guide to further experimentation. If one is not led to this conclusion, however, one is in a much better position to know to which other paradigm to turn for further guidance.

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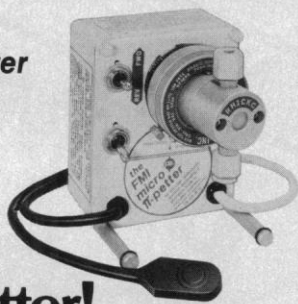
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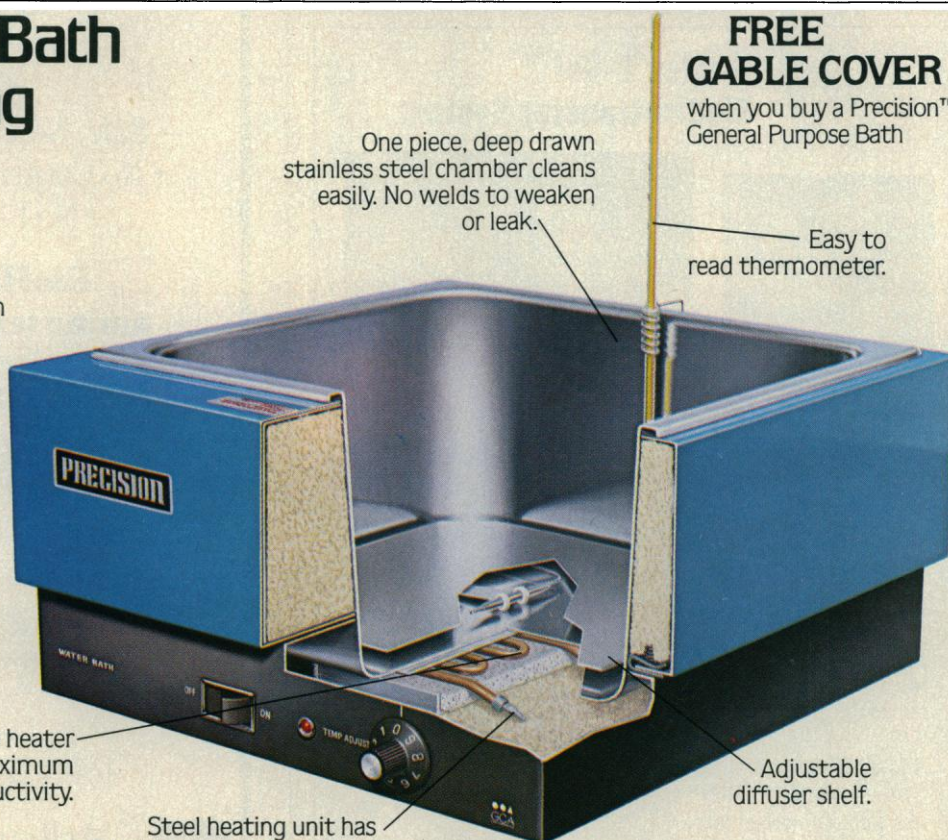
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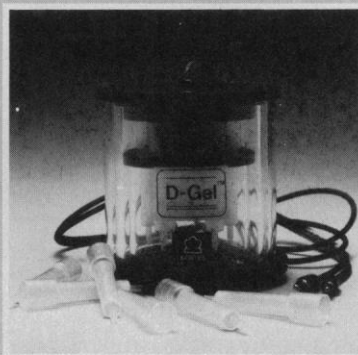
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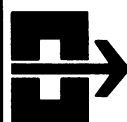
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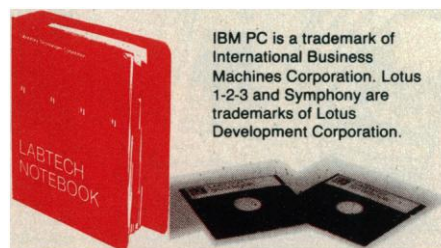
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Treatment or Diagnosis. A Study of Repeat Prescriptions in General Practice. Michael Balint *et al.* Tavistock, London, 1984 (U.S. distributor, Methuen, New York). xxvi, 180 pp., illus. Paper, \$15.95. Reprint, 1970 edition, with new introduction.

Trees of Central Texas. Robert A. Vines. University of Texas Press, Austin, 1984. xviii, 405 pp., illus. Paper, \$10.95.

Personnel Placement

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

LINE CLASSIFIED ADVERTISING DEADLINES:
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14 December issue (mailed 7 December): **23 November**
21 December issue (mailed 14 December): **30 November**
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POSITIONS WANTED

Biochemist/Marine Bioadhesion. Ph.D. 1976. Experienced in isolation, characterization, and polymerization of marine invertebrate adhesive proteins. Excellent publications and references. Committed grant and contract support of a million dollars. Seeking an improved research environment. Box 270, SCIENCE. 11/16, 23, 30

Cardio-Thoracic Surgeon. Inactive for 13 years. Wishes academic position. Box 269, SCIENCE. X

Cell Physiologist. Ph.D., postdoctoral research. Experienced in cell culture, pharmacology, electrophysiology, hybridoma production. Seeks permanent position as technician or teacher. Box 261, SCIENCE. X

Collagen/Connective Tissue Biochemist. Ph.D. Extensive research experience in soft and hard tissue collagen types, glycoproteins, phosphoproteins, and proteoglycans. Preparative, analytical, and HPLC methods development. Publications, Box 271, SCIENCE. X

Consultant. based in Paris; 20 years of experience, biochemistry, biophysics, microbiology, food industry, pollution, pharmacy, biotechnology, marketing, feasibility; seeks opportunities, technical evaluation, innovation, technology transfer, academic link. Box 268, SCIENCE. X

Technical Writing/Editing. Doctorate with writing and editing experience in engineering and physical sciences. Will author or edit articles, manuals, or books. RMA, Box 17512, Raleigh, N.C. 27619. 11/16, 23

POSITIONS OPEN

ANIMAL PHYSIOLOGIST

Tenure-track position at starting assistant professor level beginning September 1985. Responsibilities include participation in introductory courses and one or more courses in animal physiology. Development of a research program involving undergraduates expected. Send curriculum vitae and three letters of reference to: **Professor R. M. Chute, Department of Biology, Bates College, Lewiston, Maine 04240**, by 7 January 1985. *Bates is an Equal Opportunity Employer.*

APPLIED BIOLOGY/BIOTECHNOLOGY

The School of Applied Biology, Georgia Institute of Technology, invites applications for two tenure-track faculty positions at the assistant/associate professor rank. Applicants should have research experience and teaching interest in one or more of the following areas: molecular biology and gene expression in eukaryotes or prokaryotes, industrial microbiology, genetic engineering, natural products, and related biotechnology subjects. Candidates selected will participate in the Research Center for Biotechnology at Georgia Tech. Candidates will be selected based on teaching ability and strength of research programs which complement departmental research interests.

Send curriculum vitae, description of proposed research, and three letters of reference to: **T. G. Tornabene, Director, School of Applied Biology, Georgia Institute of Technology, Atlanta, Ga. 30332. Telephone: 404-894-3735.** Closing date is 28 February 1985. *The Georgia Institute of Technology is a unit of the University System of Georgia and is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT BIOLOGIST—Massachusetts General Hospital, a private, nonprofit medical and research institute in Boston, seeks an assistant biologist in renal cell physiology and pathophysiology. The position calls for independent research and laboratory management involving the mechanisms of vasopressin action and the structure and function of epithelial cell membranes. Minimum requirements include a Ph.D. degree in biology and at least 4 years of post-degree laboratory experience specifically involving the morphological study of cell membranes in the kidney and in related transporting epithelia utilizing both freeze-fracture and electron microscopic immunocytochemical techniques. Also required is experience utilizing organ or tissue culture techniques. Starting salary is \$38,000 per year for a 5-day, 40-hour work week and includes 3 weeks of paid vacation. Qualified applicants respond with detailed résumé to: **Job Order Number 5007, Commonwealth of Massachusetts, Division of Employment Security, C. F. Hurley Building, Government Center, Boston, Massachusetts 02114.** *An Equal Opportunity Employer.*

CORRECTED VERSION DEPARTMENT OF BIOLOGY UNIVERSITY OF CALIFORNIA LOS ANGELES

Applications are invited for a position as a tenure-track **ASSISTANT PROFESSOR** beginning 1 July 1985. We are seeking a person who studies the behavioral biology of vertebrates. Preference will be given to a candidate who emphasizes physiological or evolutionary mechanisms.

Candidates should submit curriculum vitae (including a list of publications and a summary of research and teaching objectives) and names and addresses of at least three references. Send materials to:

Chair, Behavioral Search Committee
Department of Biology
University of California, Los Angeles
Los Angeles, California 90024

Deadline for receipt of applications is 1 February 1985.

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

PLANT ECOLOGIST

Tenure-track position at starting assistant professor level beginning September 1985. Responsibilities include participation in introductory course in ecology and botany as well as advanced undergraduate courses in area of applicants' specialty. Development of a research program involving undergraduates expected. Send curriculum vitae and three letters of reference to: **Professor R. J. Thomas, Department of Biology, Bates College, Lewiston, Maine 04240**, by 7 January 1985. *Bates is an Equal Opportunity Employer.*

POSITIONS OPEN

EMORY UNIVERSITY

The Department of Biology seeks applicants with postdoctoral experience for three tenure-track **ASSISTANT PROFESSOR** positions to begin 1 September 1985. Candidates should have demonstrated their potential for initiating and sustaining an excellent research program and should have a commitment to quality teaching.

POPULATION BIOLOGIST. Candidates must have a research program which integrates the ecological and genetic components of population biology. Preference will be given to candidates who have demonstrated research experience in using molecular biological methods.

NEUROBIOLOGIST. The Biology Department is developing strengths in systems neurobiology as well as cell and molecular biology; candidates who show promise of interaction with these groups will receive primary consideration.

EUKARYOTIC MOLECULAR GENETICIST. Emory University is developing strengths in molecular genetics, and a concurrent search for a molecular geneticist is being conducted by the Microbiology Department.

Applicants should submit curriculum vitae, a statement of research interests, and the names and addresses of four references by 31 December 1984, to: **Dr. William H. Murdy, Chairman, Department of Biology, Emory University, Atlanta, Ga. 30322.** *Emory University is an Affirmative Action/Equal Opportunity Employer.*

Mental Retardation Research Center, University of California, Los Angeles (UCLA). Applications are invited for a university funded **ASSISTANT PROFESSORSHIP**. Candidates should have research interests in developmental neurobiology of the central nervous system with emphasis on molecular biology, pharmacology, or immunohistochemistry. Submit curriculum vitae and three references by 1 December 1984 to: **Developmental Biology Committee, c/o Director, MRRC, 760 Westwood Plaza, Los Angeles, Calif. 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR, OHIO UNIVERSITY. The Program in Anatomy, Development, and Neurobiology seeks to fill a tenure-track position with an individual who has a strong research orientation. Research area is open but individuals will be preferred whose research program complements the existing strengths of the section in functional morphology, muscle biology, neurobiology, and development. Teaching duties will include participation in the gross anatomy course for medical and/or physical therapy students and in one course in the Department of Zoological and Biomedical Sciences. A Ph.D. degree and postdoctoral experience are required; prior teaching experience in gross anatomy or vertebrate morphology is required. Salary and start-up funds are competitive; campus location is attractive. This will be a joint appointment in the Department of Zoological and Biomedical Sciences, College of Arts and Sciences, and in the Department of Basic Sciences, College of Osteopathic Medicine. Starting date is 1 July 1985. Send curriculum vitae, a statement of research and teaching interests, and the names of three references before 31 January 1985 to: **Dr. E. H. Peterson, Chairperson, Anatomist Search Committee, Departments of Zoology and Basic Sciences, Ohio University, Irving Hall, Athens, Ohio 45701.** *Ohio University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR who will be the attending physician on the Leukemia Service. Primary patient care responsibility for the inpatient service of approximately 30 patients and continued outpatient service of patients with all forms of diagnosis of leukemia. In charge of a productive laboratory supervising doctoral/predoctoral and technical personnel. Must be fully conversant with all the modern aspects of cell culture, development of cell lines in vitro in intracellular pharmacology requiring specific knowledge of cell photocytometry. Extensive knowledge of in vitro culture techniques for human hemopoietic stem cells, flow cytometry and chromatographic procedures. M.D., Ph.D. (or equivalent), medicine, natural sciences with 5 years of medicine/oncology training and 3 years of experience in research. Texas state license required; 60 hours per week; \$52,000 annual salary. Contact: **Texas Employment Commission, Houston, Texas**, or send résumé to: **Texas Employment Commission, Alien Labor Certification Unit, Austin, Texas 78778, Job Order Number 3650983.** *An ad paid by an Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR (tenure-track)—The College of Marine Studies, University of Delaware, announces a 12-month, tenure-track marine biology/biochemistry faculty position in one of the following areas (one position approved and several pending approval): (i) marine microbiologist/microbial biochemistry, physiology and/or ecology, (ii) genetics of marine organisms, and (iii) marine systems ecology (modeling). Responsibilities will include development of a vigorous research program, teaching and student advisement in the area of expertise. Applicants should send curriculum vitae, list of publications, summary of research goals, and names of three references by 1 January 1985 to: **Dr. Kent Price, Chairman, Search Committee, College of Marine Studies, UNIVERSITY OF DELAWARE, 700 Pilottown Road, Lewes, Del. 19958. The University of Delaware is an Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR, tenure-track. Must have a doctoral degree in biomedical engineering, computing, or M.D. with an undergraduate engineering degree or equivalent experience. Principal responsibilities involve the engineering management of a computer facility, medical instrumentation, and teaching special courses to medical students. Appointee is expected to develop a productive research program in an area of study applicable to medical care. Salary: upper \$20,000's. Applicants should send curriculum vitae, list of publications, and three references to: **Dr. W. S. Yamamoto, Department of Computer Medicine, George Washington University, 2300 K Street, NW, Washington, D.C. 20037. The George Washington University is an Equal Opportunity/Affirmative Action Employer.**

DEPARTMENT OF BIOLOGY UNIVERSITY OF CALIFORNIA LOS ANGELES

Applications are invited for a tenure-track position, preferably at the **ASSISTANT PROFESSOR** level, beginning 1 July 1985. We are seeking someone with research interests in the area of paleobiology, broadly defined. Teaching ability in vertebrate morphology is necessary.

Candidates should submit curriculum vitae (including a list of publications and a summary of research and teaching objectives) and names and addresses of at least three references. Send materials to:

**Chair, Paleobiology Search Committee
Department of Biology
University of California
Los Angeles, California 90024**

Deadline for receipt of applications is 1 February 1985.

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

ASSISTANT PROFESSOR. Applications are invited for a tenure-track position from persons with a Ph.D. in chemistry or biochemistry, and a strong commitment to teaching. Primary teaching responsibilities will be biochemistry and introductory chemistry. Position will start fall 1985. Letter of application, curriculum vitae, and three letters of recommendation should be sent by 13 December 1984 to: **Professor John J. Vollmer, Chair, Department of Physical Science, Mills College, Oakland, California 94613.**

ASSISTANT PROFESSOR. The Department of Biology of Vassar College seeks candidates for a 1-year position in cell biology and electron microscopy. Courses to be taught include these two areas plus biochemistry and introductory biology. Ph.D. and teaching experience are required. Send curriculum vitae plus three letters of recommendation by 15 December 1984 to: **Chairman, Biology Department, Vassar College, Poughkeepsie, New York 12601. Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR—BIOCHEMISTRY. Rapidly developing department is seeking an individual for a fully funded position. Preference for molecular biologist either studying regulation of gene transcription or using site-directed mutagenesis. Ability to teach biochemistry or cell biology to medical and graduate students is required. The Chicago Medical School is located 38 miles north of downtown Chicago in new, well-equipped facilities. Submit curriculum vitae, three references, and a statement of research plans and experience to: **Robert G. Kemp, Ph.D., Department of Biological Chemistry and Structure, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, Ill. 60064.**

POSITIONS OPEN

University of California, San Francisco (UCSF) School of Dentistry Division of Periodontology

CALIFORNIA—University of California, San Francisco, School of Dentistry, seeks applicants for a tenure-track position in the Division of Periodontology at the **ASSISTANT PROFESSOR** level commencing on or about 1 July 1985. Applicants must have a dental degree (D.D.S., D.M.D., or equivalent) and a certificate of advanced training in periodontology. A Ph.D. in a basic science (for example, biochemistry, oral biology, microbiology, cell biology) is highly desirable, but not required. Individuals who can effectively work with an active and progressive research team are encouraged to apply. Responsibilities include teaching oral biology and periodontology at the undergraduate and graduate levels (30 percent) and research (50 to 70 percent). Intramural practice (20 percent) opportunities are available. Salary commensurate with experience. Deadline for applications is 31 March 1985. *UCSF is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to: **Dr. Gary C. Armitage, Professor and Chairman, Division of Periodontology, Room D-4014, University of California, San Francisco, School of Dentistry, San Francisco, Calif. 94143.**

TUSKEGEE INSTITUTE Tuskegee Institute, Alabama 36088 ASSISTANT PROFESSOR

The Department of Biology of Tuskegee Institute is announcing a 2-year, nontenure-track appointment beginning 1 November 1984. Ph.D. with thorough knowledge of recombinant DNA methodology and teaching experience desirable. Duties include teaching biotechnology course, supervising graduate students, and collaboration in ongoing research projects.

Submit curriculum vitae (with telephone number), transcripts, statement of career objectives, and three letters of recommendation to: **Dr. Julian E. Thomas, Head, Department of Biology, Tuskegee Institute, Tuskegee Institute, Ala. 36088.**

Tuskegee Institute is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR OF GENETICS. Tenure-track position available July 1985. Preference will be given to individuals with demonstrated research ability in **BEHAVIORAL, BIOCHEMICAL, CELLULAR, or MOLECULAR GENETICS.** In addition to a strong research program, the candidate will be expected to participate in undergraduate and graduate teaching. Closing date: 1 February 1985. Send curriculum vitae, bibliography, a short statement of research goals, and a list of three references to: **Chairman, Department of Genetics, University of Hawaii, 1960 East West Road, Honolulu, Hawaii 96822. An Equal Opportunity/Affirmative Action Employer.**

The Department of Animal Science, Oregon State University, is seeking applicants for an **ASSISTANT PROFESSOR** in the area of **GROWTH AND DEVELOPMENTAL BIOLOGY.** Position will involve teaching (50 percent) and research (50 percent). The individual will teach an undergraduate course in growth and developmental biology and have opportunity to develop a course at the graduate and/or undergraduate level commensurate with his/her research program. The successful candidate will be expected to develop a productive research program in his/her area of interest and attract competitive research grant funds and high caliber graduate students. The department is particularly interested in fundamental research on factors that regulate muscle protein synthesis and/or degradation.

Qualifications include: Ph.D. in a discipline of animal science or closely related field with demonstrated ability to conduct research in muscle or developmental biology. The candidate should possess a strong background in biochemistry and postdoctoral experience is preferred. Position will be available 1 June 1985 or before. Application deadline is 28 February 1985. Appointment is for 12 months and is tenure-track. Salary is commensurate with qualifications and experience. Other benefits include state retirement, group health insurance, and 1 month of annual leave. Applicants should submit complete biographical data, transcripts, and arrange for three letters of recommendation to be sent directly to: **Dr. Steven L. Davis, Head, Department of Animal Science, Oregon State University, Corvallis, Oregon 97331-6702. Telephone: 503-754-3431. Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.**

POSITIONS OPEN

HARVARD SCHOOL OF PUBLIC HEALTH ASSISTANT PROFESSOR OF HEALTH ECONOMICS

The Harvard School of Public Health expects to appoint an assistant professor of health economics in the Department of Health Policy and Management teaching courses in environmental policy and the political economy of environmental regulation, and working in the Interdisciplinary Programs in Health (a multidisciplinary, postdoctoral fellowship program) conducting economic analyses of public policy problems related to regulation in environmental and occupational health. The appointee will advise students interested in environmental health policy and will supervise their applied research projects; she/he will also participate in the teaching of interdisciplinary courses with the Departments of Environmental Science and Physiology and Biostatistics. Applicants should hold a doctoral degree in economics or its equivalent, have demonstrated a capacity for research in environmental policy from an economic perspective, and have proven teaching ability. *Women and minority applicants are particularly encouraged.* Send curriculum vitae, bibliography, and the names of three references to:

**Professor Marc J. Roberts
Chairman, Search Committee
Department of Health Policy and Management
Harvard School of Public Health
677 Huntington Avenue
Boston, Mass. 02115**

ASSISTANT PROFESSOR—MOLECULAR BIOLOGY. Two positions, tenure-track for 1 September 1985 as part of a core molecular biology group with appointments in the Department of Biological Sciences or the Department of Chemistry. Interaction with members of a developing Plant Molecular Biology Research Center. Research interests in the area of recombinant DNA, vector construction, or related areas are preferred. The Ph.D. and postdoctoral experience are required. The successful candidate will be expected to maintain a productive research program, direct Ph.D. students, and teach in his/her area of interest. Send curriculum vitae, statement of research goals, and names of three references by 1 February 1985 or until filled to: **Dr. Arnold Hampel, Department of Biological Sciences, Northern Illinois University, DeKalb, Ill. 60115. Telephone: 815-753-1459. The University is an Affirmative Action/Equal Opportunity Employer.**

The Department of Biochemistry, University of Wisconsin-Madison, invites applications for a position of **ASSISTANT PROFESSOR** in the area of **PLANT MOLECULAR BIOLOGY.** Candidates should have a strong background in molecular biology, biochemistry and plant sciences and will be expected to establish an independent research program. Other duties will include formal teaching and the supervision of graduate students. Salary will be on a 12-month basis at a level that is commensurate with qualifications and experience and compatible with the salary structure of the University of Wisconsin system. *Women and minority candidates are especially encouraged to apply.* Send detailed curriculum vitae and a two-page statement of research interests to: **H. F. DeLuca, Chairman, Department of Biochemistry, University of Wisconsin-Madison, Madison, Wis. 53706, before 31 December 1984.** Have three letters of recommendation sent to the same address. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

THE SMITHSONIAN INSTITUTION extends its search for **ASSISTANT SECRETARY FOR MUSEUM PROGRAMS**, Washington, D.C. The assistant secretary assists and advises the secretary of the Institution on all policy and program matters related to the museological and museographic aspects of the Institution's programs and operations; coordinates and provides direction to the Institution's central museum management and support activities; and maintains liaison with national and international museum organizations. Applicants must have a comprehensive knowledge of and experience in the fields of museology and museography, including museum administration, collections management, exhibition, conservation and preservation, museum training and related activities; scholarly attainment in a field of arts, humanities, or sciences; and demonstrated administrative and managerial ability. Salary: \$66,400 per annum. Send a Standard Form 171—Personal Qualifications Statement and curriculum vitae and bibliography by 30 November 1984 to: **Office of Personnel Administration, Smithsonian Institution, Washington, D.C. 20560, attention: MPA-EX-04-84. An Equal Opportunity Employer.**

Lectureships: MEDICAL MICROBIOLOGY Zimbabwe Based

The Institute of International Education is conducting a recruitment search on behalf of the University of Zimbabwe for qualified professionals to serve as visiting faculty members. An attractive salary and overseas benefits package are being offered for assignments of six months renewable to one year.

Instruction would involve one or more of the following areas: Virology, Bacteriology, Mycology, Parasitology, and Epidemiology in addition to general courses in Microbiology. Excellent research facilities.

Candidates should possess an advanced degree in their field of specialization. Both university-level teaching experience and previous overseas experience are desirable. The positions are available during the 1985 or 1986 university academic years (February to December). Resumes, which **MUST** include salary history and requirements should be sent to:

PERSONNEL OFFICE

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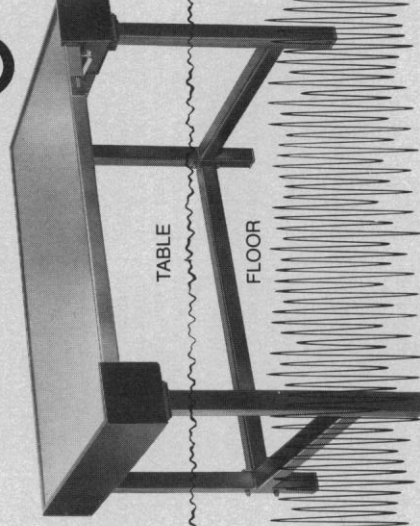
Energy and exceptional personal ability to communicate and interact with corporate, academic, professional society, and minority leaders are essential. Your credentials should include executive management experience with decision-making responsibility in industry, academic, non-profit, or government institutions; a technical background is desirable. Demonstrated ability to provide leadership in a complex environment is of key importance.

This position is based in New York City and involves travel throughout the country. You can expect excellent compensation and personal and professional satisfaction. Please send your resume or nominations giving full background of experience and three references to NACME Vice President Search Committee, 3 West 35th Street, New York, NY 10001. An equal opportunity employer.

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Cellular Immunology Psychoneuroimmunology Research Opportunity

The Department of Central Nervous System Research in the Medical Research Division of American Cyanamid Company in Pearl River, New York has an immediate opening for a Ph.D. in Immunology to contribute to interdisciplinary research on the reciprocal modulatory relationship between the central nervous and immune systems.

Candidates must have a Ph.D. in Immunology or Cell Biology and postdoctoral experience in cellular immunology and cell culture. Documented expertise in analyzing the expression and regulation of cell-mediated immune phenomena is absolutely essential. A working knowledge of humoral immunity and protein biochemistry is desirable. Prior industrial experience and/or a background in neuroscience are preferred.

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POSITIONS OPEN

ASSISTANT PROFESSOR OF MICROBIOLOGY. Search reopened for a tenure-track position in the Department of Microbiology, effective September 1985. Applications are invited from individuals with postdoctoral experience in immunology, virology, or infectious disease microbiology. Successful candidate required to teach undergraduate microbiology and a graduate course in professional specialty plus develop a strong, competitive research program. Submit curriculum vitae, a résumé of past and present research, and four letters of reference by 10 February 1985 to: **Search Committee, Department of Microbiology, University of Georgia, Athens, Ga. 30602.**

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

ASSISTANT/ASSOCIATE PROFESSOR OF PHYSIOLOGY. Applications are invited for tenure-track appointment in the following disciplines of specific interest: cardiovascular, respiratory, and/or renal. Applicants with Ph.D., postdoctoral experience, and a record of productivity in research should submit curriculum vitae, statement of research goals and support, a statement of teaching experience and abilities in the listed areas, and four letters of reference to: **Benjamin R. Walker, Ph.D., Search Committee, Department of Physiology, Tulane University School of Medicine, New Orleans, La. 70112,** by 15 December 1984. (Early application is encouraged.)

An Equal Opportunity/Affirmative Action Employer

ASSISTANT RESEARCH ENGINEER in experimental plasma research, Electronics Research Laboratory, University of California, Berkeley. Full-time position available as of 1 February 1985 with yearly extension contingent only upon satisfactory performance and continued funding. Salary: \$32,000 to \$35,500 per year, depending on qualifications. Perform experiments on a multiple-mirror plasma containment device to determine stability and containment properties. Design and operate the required diagnostics. Perform analytic and computer calculations as required for design and interpretation of results. Ph.D. and at least 1 year of postdoctoral experience required. Candidate must be familiar with ion and electron cyclotron plasma heating systems, basic plasma diagnostic techniques, fast pulse electronics, high voltage technology, and digital data acquisition systems. Experience in computational techniques on large scale computers and in data reduction techniques is also required. Send résumé by 1 January 1985 to: **Professor A. J. Lichtenberg, Department of Electrical Engineering and Computer Sciences, University of California, Berkeley, Calif. 94720.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

CARDIOVASCULAR PHARMACOLOGIST

Position available for postdoctoral fellowship in cardiovascular pharmacology to collaborate in research projects relating to role of nervous system in arrhythmias and coronary flow at New York City medical school. Replies: **Box 266, SCIENCE.**

CLINICAL NUTRITION, MEDICINE. Medical College of Georgia is seeking two physician faculty as assistant or associate professor, tenure-track or VA career development (research associate or clinical investigator). Candidates need post-residency medicine training in metabolism, gastroenterology, or nutrition and research experience. Submit curriculum vitae and names of three references to: **Dr. E. B. Feldman, Chief, Section of Nutrition, Medical College of Georgia, Augusta, Ga. 30912.** *Equal Opportunity/Affirmative Action Employer.* J2236.

CLINICAL PATHOLOGIST

The Department of Laboratory Medicine at the Yale University School of Medicine is seeking an M.D. at the assistant professor level, who will serve as assistant director of the Clinical Chemistry Laboratory at the Yale-New Haven Hospital. The appointee will be expected to participate in the clinical and administrative management of the Clinical Chemistry Laboratory, contribute to the department's teaching, and establish an independent research program. Board-eligibility or -certification in clinical pathology is desirable. Applicants should send curriculum vitae, and addresses of three references to: **Richard Donabedian, M.D., Chairman, Search Committee, Department of Laboratory Medicine, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510,** before 31 December 1984.

Yale University is an Equal Opportunity/Affirmative Action Employer, and applications from women and minority candidates are encouraged.

POSITIONS OPEN

ASSISTANT RESEARCH PHYSIOLOGIST (Department of Medicine). Ph.D. in physiology required. Experience required in pulmonary function testing; mathematical modeling in pulmonary physiology; computerization of pulmonary function testing and analysis of pulmonary function data; real-time computer use (RT-11 and OS-8); use and maintenance of respiratory mass spectrometers; and administration and conduct of NASA funded research. Salary related to established schedule of University of California, San Diego (UCSD), research series. Apply by 21 December 1984 to: **Dr. John B. West, Section of Physiology M-023A, Department of Medicine, School of Medicine, University of California, San Diego, La Jolla, Calif. 92093.** *UCSD is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE CHIEF OF STAFF FOR RESEARCH

The Long Beach Veterans Administration Center invites applications and nominations of a proven scholar and experienced administrator to fill this position. Applicants must be eligible for tenure-level faculty appointment at the University of California, Irvine, California College of Medicine, in an appropriate department. Applications and nominations should be submitted by 1 December 1984 to: **Thomas L. Nelson, M.D., Chair of the Search Committee, Associate Dean, California College of Medicine, University of California, Irvine, Irvine, Calif. 92717.** *The Veterans Administration is an Equal Opportunity/Affirmative Action Employer.*

Cornell University, Laboratory of Ornithology, is looking for an **ASSOCIATE DIRECTOR** for development. The job involves planning and implementing the Laboratory's public affairs and fund raising program in cooperation with the Laboratory's director and the University's public affairs department; developing proposals for public agencies, foundations, and corporations; arranging and assisting in public relations functions; and supervising the membership program. Qualifications: bachelor's degree or equivalent, advanced degree desirable. At least 3 years of successful experience in fund raising, public relations, or related field with managerial ability. Effective writing skills essential; an interest in birds and natural history a definite asset. Salary commensurate with qualifications. Send cover letter to: **Diane Johnson, Assistant Director for Operations, Cornell Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithaca, N.Y. 14850.**

CELLULAR IMMUNOLOGIST

The Department of Laboratory Medicine is recruiting an M.D. to fill a newly created, full-time position in cellular immunology. We seek an individual at the assistant professor level who will establish a research and teaching laboratory in the department. The candidate should expect to participate actively in department activities, but will have minimal service responsibilities. An independent investigator with a strong background in basic immunology is required; an orientation toward the interface with clinical testing is desirable.

Interested candidates should reply to: **Joseph R. Bove, M.D., Chairman, Search Committee, Department of Laboratory Medicine, Yale University School of Medicine, New Haven, Conn. 06510.** Please include recent curriculum vitae and the names of three individuals who can provide letters of reference.

Yale is an Affirmative Action/Equal Opportunity Employer and applications from women and minority candidates are encouraged.

Deadline for applications is 31 December 1984.

CHAIRPERSON—DEPARTMENT OF BIOCHEMISTRY

Wayne State University invites applications and nominations for the position of chairperson of the Department of Biochemistry. The School of Medicine seeks a scientist with an outstanding research program and demonstrated academic leadership abilities. The position offers the opportunity to build from an established core of 15 full-time faculty with diverse research interests. Wayne State University is a state supported institution committed to academic excellence.

Candidates should submit curriculum vitae by 1 January 1985 to:

**Harry Maisel, M.B., Ch.B.
Professor and Chairman
Department of Anatomy
Wayne State University
540 East Canfield
Detroit, Mich. 48201**

Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT RESEARCH PHARMACOLOGIST to participate in research in neuropharmacology. Candidate must have a doctoral degree in pharmacology or medicine with postdoctoral experience in neurochemistry and endocrinology. Program involves radioligand binding techniques, in vivo preparations, and radioimmunoassay of peptides and hormones in tissues. Experience in stereotaxic surgery in small animals and regional brain assays required. Salary range: \$29,600 to \$33,600. Send curriculum vitae and list of publications to: **Department of Pharmacology, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024; attention: Neuropharmacology Search.** *The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

The Department of Biological Chemistry at Wright State University is seeking a **BIOCHEMIST** with experience in NMR spectroscopy (in vitro and/or in vivo). The successful applicant will be appointed to the faculty of the School of Medicine and the College of Science and Engineering, and will have an opportunity to participate in a newly formed Magnetic Resonance Center. A whole body imager with a 1.5 T magnet, an animal imager/spectrometer with a 40 cm bore 2.3 T magnet, and a 360 MHz spectrometer with a 9 cm bore will be available. The department participates in the training of medical, graduate, and undergraduate students.

Applicants must have the following qualifications: a Ph.D. and postdoctoral training in biochemistry or an appropriately related field and expertise in NMR; evidence of research productivity and the ability to establish a vigorous independent research program; and the potential for participating in team-taught survey courses in biochemistry. Please send curriculum vitae, the names and addresses of three references, and a brief statement of research plans to:

**Dr. Robert A. Weisman, Chairman
Department of Biological Chemistry
Wright State University
Dayton, Ohio 45435**

To be considered, applications must be postmarked prior to 15 January 1985. *Wright State University is an Equal Opportunity/Affirmative Action Employer.*

CARDIAC MECHANICS/BIOENGINEERING—Postdoctoral laboratory position studying global left ventricular pump properties. Ph.D. in either physiology or bioengineering. Laboratory experience in cardiac measurement is required. Background in system identification techniques desirable. Annual salary: \$22,000 to \$25,000. Send résumé by 15 January 1985 to: **Dr. Kenneth Campbell, Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology, Washington State University, Pullman, Wash. 99164-6520.** *Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGY

The Department of Biology, **PRINCETON UNIVERSITY**, invites applications for faculty positions in cell biology at the tenured and nontenured levels. Applicants working with a wide range of plant and animal systems will be considered. Special attention will be given to applicants in the area of development and differentiation, including intracellular trafficking, membrane-cytoskeletal interactions, cell-cell interactions, and cellular recognition.

Interested candidates should send curriculum vitae, publication list, an outline of future research directions, and the names of three references to: **Edward C. Cox, Department of Biology, Princeton University, Princeton, New Jersey 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

DEVELOPMENTAL BIOLOGY

The Department of Biology, **PRINCETON UNIVERSITY**, invites applications for faculty positions in developmental biology. Applicants working with a wide range of animal and plant systems will be considered. Special attention will be given to applicants using cellular, molecular, or genetic approaches to problems of pattern formation.

Interested candidates should send curriculum vitae, publication list, an outline of future research plans, and the names of three references to: **Edward C. Cox, Department of Biology, Princeton University, Princeton, New Jersey 08544**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

Department Of
Chemical Engineering
**THE PENNSYLVANIA
STATE UNIVERSITY**

FACULTY POSITION, tenure track, level open. A PhD and outstanding promise for a successful career in teaching and research are required. Research field is open but preference will be given to the fields of Biotechnology, Tribology/Lubrication and Catalysis/Surface Science.

Applicants should submit a resume, copies of publications, a statement of research plans and the names of three references to: Prof. J.L. Duda, Head, Department of Chemical Engineering, 160 Fenske Laboratory, **THE PENNSYLVANIA STATE UNIVERSITY**, University Park, PA 16802. Applications will be received until February 15, 1985 or until the position is filled.

An Equal Opportunity/
Affirmative Action Employer

COMPUTATIONAL CHEMISTRY RESEARCH

The Upjohn Company, a worldwide leader in pharmaceutical research, has challenging positions available in its newly formed Computational Chemistry Support Unit. This unit is charged with aiding laboratory scientists in the design and optimization of novel drug leads.

QSAR CHEMISTRY (PhD) — (Opening #16947-G) The Computational Chemistry unit consists of scientists with expertise in quantitative structure-activity relations (QSARs), molecular modeling and quantum mechanics. We currently have an opening in the QSAR area. This position is responsible for implementation of relevant computer-based QSAR tools and development of new QSAR methods and theoretical techniques. Additional responsibilities include collaboration with Company scientists in the application of these techniques to research problems. A PhD in chemistry and a strong background in computer programming and statistical methods are required. We are seeking a highly motivated and creative problem solver with strong planning, communication and interpersonal skills.

CHEMISTRY ASSISTANTS (BS/MS) — (Opening #16950-B) These positions are responsible for developing and maintaining software for computer graphics support of molecular modeling and structure-activity techniques; assisting scientists in the use of these techniques and in chemical information management; and documenting programs and relevant data files. A BS or MS in chemistry or related field and a strong background in computer applications to chemistry, computer graphics, mathematics and Fortran programming are required.

Kalamazoo is a medium-sized southwestern Michigan community with immediate access to an excellent mix of cultural, educational and recreational activities. Upjohn offers competitive salary and benefits and relocation assistance.

PhDs — For confidential consideration, send a resume (include bibliography if appropriate), the names and addresses of three references, and transcripts to: **PhD Recruitment Coordinator, The Upjohn Company, 7000 Portage Rd., Kalamazoo, MI 49009**. Please refer to opening #16947-G in your correspondence.

BS/MS — For confidential consideration, please call 1-800/253-8600 extension 3-6767 from outside Michigan; or 616/323-6767 collect from within Michigan to request an application. Please refer to opening #16950-B when calling.

Upjohn

A century of caring

An Equal Opportunity Employer M/F/H/V

MARINE BIOLOGIST/ ECOLOGIST

Five Colleges, Inc. an educational consortium comprised of Amherst, Hampshire, Mount Holyoke and Smith Colleges and the University of Massachusetts, seeks a broadly trained, experienced marine biologist with emphasis in marine biology/ecology, for a full-time administrative and teaching position. Administrative duties include serving as chairperson of the Five Colleges Coastal and Marine Sciences Committee and as coordinator of the various coastal and marine sciences programs of this consortium. Teaching duties include offering an introductory level marine biology or ecology course and more advanced specialty courses on a rotating basis among the 5 institutions. Teaching load will be 2 or 3 courses per year; research facilities are available. The in-residence institution will be Smith College with a 3-year initial appointment at the Assistant or Associate Professor rank. Applicants should send a curriculum vitae with list of publications, brief statement of administrative, teaching, and research experience and interests, and names of 4 potential references to: **Dr. C. John Burk, Dept. of Biological Sciences, Smith College, Northampton, MA 01063**. An Equal Opportunity Employer.

BIOMEDICAL ENGINEER/ LIFE SUPPORT PHYSIOLOGIST

If you're a professional whose background attests to your skill at integrating physiology and bio-engineering, you'll find outstanding challenges at McDonnell Douglas Astronautics Company.

Here at our St. Louis, Missouri headquarters we're seeking an individual to support aviation-oriented project activities. You will apply your knowledge and skills toward providing highly specific aircrew and groundcrew data for use in a broad scope of design projects. Particular environmental/physical factors requiring your involvement are acceleration forces, acoustics, vibration, physical anthropometry and physiological workload.

This position requires an MS or PhD, proven skills at integration of bio-engineering and physiology, and a desire to apply those skills in an exciting aviation environment. As a division of a major corporation, McDonnell Douglas Astronautics Company offers you a highly competitive income and benefits program as well as a satisfying lifestyle in St. Louis, a city of cosmopolitan interests and affordable costs. For confidential consideration, please direct your resume to:

**Manager, Professional Staffing
MCDONNELL DOUGLAS CORPORATION
P.O. Box 516
Dept. 62-266-53
St. Louis, MO 63166**

MCDONNELL DOUGLAS 
CORPORATION

An Equal Opportunity Employer

U.S. Citizenship Required.

Research Manager

Beckman, a recognized leader in the molecular biology and biotechnology industry, is seeking a highly qualified professional to manage the research efforts of our Molecular Structure Products Group. This challenging and exciting opportunity requires an entrepreneurial individual possessing a Ph.D. degree, a broad scientific background, well-established scientific credentials, and demonstrated ability to initiate research. This is an excellent opportunity to help assemble a dynamic and creative research staff.

The ideal candidate will be a recognized leader in molecular biology with a thorough knowledge of the biotechnology market, its customers and technology.

Responsibilities will include guiding and coordinating internal and external research efforts, coordinating scientific consulting needs, and leading a scientific advisory board and our internal technical seminars. Additionally, you will represent our molecular structure product research programs to various levels of management and represent our product technology to the public via technical meetings and seminars.

We are located in Palo Alto, thirty miles south of San Francisco, and offer an excellent salary, benefits, and relocation policy. Please send your resume, in confidence, to J. Harbaugh, Beckman Instruments, a SMITHKLINE BECKMAN Company, 1050 Page Mill Road, Palo Alto, CA 94304. We are an equal opportunity employer, m/f/h/v.

**SmithKline
Beckman**
CORPORATION

POSITIONS OPEN

The Douglas Hospital Research Centre is looking for a candidate to fill the position of **ASSOCIATE DIRECTOR** for its Brain Bank. The candidate will plan and supervise all the neurochemical measurements performed on autopsied brain material. He/she will share the responsibilities of brain bank management with our consultant neuropathologist, and will answer to the director of the Research Centre. The successful candidate is a neurochemist or CNS pharmacologist with at least 5 years of postgraduate experience with neurochemical measurements in human autopsied brains, is familiar with the usual HPLC methods of measurements of neurotransmitters, and will show a strong drive to learn the GC-MS available in the centre. A candidate with a strong background in neuroanatomy would be preferred. The candidate is expected to develop his/her own research program within 1 year and is hoped to obtain a tenure-track position in the Department of Psychiatry or Pharmacology within 3 years following arrival. Salary and benefits are negotiable. Please send curriculum vitae and three letters of reference to: **N. P. V. Nair, M.D., Director, Douglas Hospital Research Centre, 6875 LaSalle Boulevard, Verdun, Quebec, Canada H4H 1R3.**

Louisiana State University (LSU) announces an anticipated **CHAired PROFESSORSHIP IN BIOCHEMISTRY** sponsored by the LSU Alumni Foundation. Candidates are sought in the specialty of physical biochemistry of proteins, including but not limited to the following: (i) Protein conformation studies with computerized graphics. Applications to protein folding, "active sites," and "docking." (ii) Protein-DNA or protein-RNA interactions with regard to gene regulation and chromatin structure. (iii) Protein-ligand or protein-substrate interactions. (iv) Protein-protein interactions. Application deadline: 30 November 1984. Successful applicants must have an ongoing nationally funded vigorous research program. Applications and nominations should be sent to: **Search Committee, Department of Biochemistry, 322 Choppin Hall, Baton Rouge, La. 70803, Louisiana State University is an Equal Opportunity/Affirmative Action Employer.**

HUGHES ENDOWED CHAIR IN MANUFACTURING ENGINEERING University of California at Los Angeles

The University of California at Los Angeles (UCLA) is pleased to announce the establishment of a professorship in manufacturing engineering recently endowed by the Hughes Aircraft Corporation. The holder of this chair will be expected to lead in the growth of this field, already well-established in the Engineering School at UCLA, by teaching, research, and interaction with the many interested industrial firms in the Los Angeles area.

Candidates should have an outstanding reputation in the general field or in sub-specialties such as robotics, computer-aided design and manufacturing, and manufacturing processes. Experience in both academic and industrial environments is desirable. The appointment, which will be at a senior level of the full professorship with tenure, can begin 1 July 1985 or before.

Please send résumés, with three references, to the chairman of the Search Committee: **Professor Fred G. Allen, 7732 Boelter Hall, School of Engineering and Applied Science, University of California, Los Angeles, California 90024.**

UCLA is an Equal Opportunity Employer, and women and members of minority groups are encouraged to apply.

CHAIRMAN DEPARTMENT OF INTERNAL MEDICINE HENRY FORD HOSPITAL DETROIT, MICHIGAN (Affiliated with the University of Michigan)

Qualified candidates are invited to apply for the position as chairman of the Department of Internal Medicine at Henry Ford Hospital.

Applicants should submit curriculum vitae, bibliography, and the names of three references to:

**Fred W. Whitehouse, M.D., Chairman
Search Committee for
Department of Internal Medicine Chairman
c/o Janet L. Arntfield, Administration
Henry Ford Hospital, CFP-239
2799 West Grand Boulevard
Detroit, Michigan 48202**

Henry Ford Hospital is an Affirmative Action/Equal Opportunity Employer. Women and minorities are urged to apply. Applications should be received by 15 December 1984.

POSITIONS OPEN

MACQUARIE UNIVERSITY SYDNEY, AUSTRALIA SCHOOL OF BIOLOGICAL SCIENCES CHAIR OF BIOLOGY in the field of PLANT BIOLOGY

Equality of Employment Opportunity is University Policy

Applications are invited from persons with distinguished records in any area of **PLANT BIOLOGY** for appointment to a **CHAIR OF BIOLOGY**. The position is one of three chairs within the School of Biological Sciences, which is an integrated School without formal subdivision into separate disciplines. The successful applicant will be expected to assume a general leadership role in the School as well as to promote plant biology.

Further information about the School and the framework within which the appointment is to be made is included in the additional information available to applicants.

The University reserves the right to fill any position by invitation.

The salary for the chair will be A\$52,026 per annum.

Further information about the University and advice regarding the method of application should be obtained from: **The Secretary-General, Association of Commonwealth Universities, 36 Gordon Square, London, WC1H 0PF, England, or from: The Registrar, Macquarie University, North Ryde, New South Wales 2113, Australia.**

Applications close on 22 December 1984.

COORDINATOR, OFFICE OF RESEARCH

The Louisiana State University (LSU) School of Medicine is now accepting applications for a coordinator for the Office of Research. Applicants should have qualifications for a faculty appointment in one of the medical school departments. Full knowledge of the grant process at the national level is mandatory and the applicant should have competed successfully in obtaining this type of grant.

Duties of the position include the administration of the Office of Research. The coordinator secures and distributes to the faculty current information concerning sponsor agencies and puts faculty in touch with potential sponsors at the national, state, and local level. The office provides advice on grant proposals during various stages of preparation and evaluates the format/content before submission. This office fosters research collaboration among faculty and sponsors research forums. Send curriculum vitae and three names and addresses of references by 1 January 1985 to: **Dr. John R. Ruby, Associate Dean for Faculty Affairs, LSU School of Medicine, 1542 Tulane Avenue, New Orleans, La. 70112.**

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

DEVELOPMENTAL BIOLOGIST Position Reopened

Tenure-track faculty position in a Ph.D.-granting department beginning August 1985. The appointee is expected to establish or already have a vigorous externally funded research program in areas such as basic developmental biology or developmental gene expression, direct graduate research, and teach developmental biology. Postdoctoral experience is preferred. Send current résumé, reprints, research plan, and three letters of recommendation to: **Chair, Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403, by 10 December 1984. An Equal Opportunity/Affirmative Action Employer.**

The Comprehensive Cancer Center Department of Oncology of Howard University has a vacancy for a **DIRECTOR**. A successful applicant shall have a M.D. or Ph.D. degree and be qualified for appointment as professor. The applicant must also be knowledgeable of the methods of care of cancer patients, experienced in cancer related research, and have documented administrative skills. The deadline for receipt of applications is 15 December 1984. Please send applications and the names and addresses of three references.

**The Search Committee for Oncology
c/o Dr. Thomas E. Smith, Chairman
Department of Biochemistry
Howard University College of Medicine
520 W Street, NW
Washington, D.C. 20059**

Howard University is an Equal Opportunity Employer.

THE U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND IS ACCEPTING PROPOSALS FOR RESEARCH IN SUPPORT OF MEDICAL DEFENSE AGAINST CHEMICAL WARFARE AGENTS (NEURAL MECHANISMS)

DAMD17-85-R-0006

The US Army Medical Research and Development Command is soliciting proposals for basic and exploratory development research pursuant to the development of a more effective medical defense against chemical warfare agents. The objective of this particular solicitation is to increase the diversity and quality of neurophysiologic, neuropharmacologic and neuropathologic research projects, **specifically those using electrophysiological and neuroanatomical approaches.** These proposals should be designed to contribute to a scientific/technical base which can be exploited for the development of efficacious prophylactic and treatment drug regimens.

Specific areas of interest include studies designed to examine the effects and interactions of the anticholinesterase threat agents, and current or potential prophylaxis and treatment compounds on:

1. *Cholinergic Sites*—Biophysical, molecular, and morphological analyses; emphasis on muscarinic and central nicotinic sites.
2. *Noncholinergic Sites*—Biophysical, molecular and morphological analyses; with special interest in central nervous system sites.
3. *Sensorineural Processing*—Vestibular and somatosensory information processing; pain mechanisms.
4. *Respiratory and Cardiovascular Control*—Central neural mechanisms.
5. *Motor Systems*—Pyramidal and extrapyramidal systems; cerebellar and spinal mechanisms.
6. *Seizure Activity*—Production and antagonism of CW agent-induced seizures in cortical and subcortical sites, relationship to alterations in cerebral blood flow and ionic balance, particularly acid-base balance.
7. *Neuropathies/Myopathies*—Development, treatment and prevention in acute and chronic exposures; role of axonal transport; functional assessment.
8. *Presynaptic Sites*—Peripheral, central and autonomic effects.
9. *Tolerance/Supersensitivity*—Development during subacute or chronic exposure to anticholinesterases; cross tolerance/supersensitivity of carbamates and nerve agents.

Basic research proposals should address neuronal sites and mechanisms of action of the organophosphorus chemical warfare agents (i.e., soman, sarin, tabun and VX), and/or putative prophylactic and treatment compounds (e.g., cholinolytics, oximes, carbamates, anticonvulsants or novel compounds of sound logical origin). Exploratory development research proposals would additionally investigate interactions among these classes of compounds in well characterized *in vitro* or *in vivo* test systems. Particular attention should be paid to the dose-response characteristics of the selected test agents. In accordance with the Federal Acquisition Regulation (FAR) any contract awarded under this solicitation may be of any type or combination of types which will promote the best interests of the Government. It is anticipated that multiple-year, incrementally-funded, level-of-effort type cost reimbursement contracts will be awarded. Duration of the contract should be commensurate with the proposed scope of work but in no case shall exceed five years.

PROPOSAL PREPARATION INSTRUCTIONS AND REQUIREMENTS

Proposals shall include a table of contents and should cover the points cited below, insofar as they are applicable.

- a. *Name and Address of Organization.* At least one copy must carry the original signature of an official authorized to legally bind the organization.
- b. *Title of Proposed Research.*
- c. *Description of Proposed Research.* Detailed description of the research objectives, hypothesis, approach, methods, relationship to the state of knowledge in the field, military significance, bibliography and pertinent literature citations.
- d. *Research Involving Human Subjects.* USAMRDC policies governing the use of human subjects parallel those contained in 45 CFR 46, 21 CFR 312 and DoD Instruction 5030.29. Submit a completed Form HHS 596 with the proposal.
- e. *Research Involving Animals.* Acknowledgement that conduct and reporting of the studies shall adhere to the "Guide for the Care and Use of Laboratory Animals" ((NIH) 78-23, 1978) must be included.
- f. *Personnel.* Qualifications of the principal investigator and other senior professional personnel and the time each will devote to the research. This information, to the extent that it is information about an individual, is subject to the requirements of the Privacy Act of 1974 (5 USC 552 (a)). The principal purpose and routine use of the information are for the evaluation of the qualifications of those persons who will perform the research. Disclosure of the information is voluntary, but failure to provide such will prevent evaluation of the proposal.
- g. *Facilities and Equipment Available.*
- h. *Cost Estimate.* An estimate of the total research project cost with a breakdown of funds by cost category (including direct and indirect costs) and by year must accompany each proposal and should be submitted on Standard Form 1411 with complete supporting information. **Technical and cost proposals shall be separate documents. The technical proposal shall not contain cost data.**

Every effort will be made to protect the confidentiality of the proposal and any evaluations. The submitter may mark the proposal with a legend such as that provided in FAR 52.215-12. Proposals containing a more restrictive legend shall not be considered.

Unnecessarily elaborate brochures or presentations beyond that sufficient to present a complete and effective proposal are not desired.

CONSIDERATIONS

Reports. Quarterly, annual and final progress reports shall be required in accordance with the schedule of any resultant contract. Reprints of any publications resulting from sponsored research shall also be provided to the USAMRDC.

Contract Provisions. Contracts awarded shall contain, where appropriate, detailed special provisions concerning patent rights, rights in technical data and computer software, reporting requirements, equal employment opportunity, care of laboratory animals, use of human subjects, good laboratory practices requirements, acquisition and disposition of equipment, and other requirements. Contracts shall also incorporate all general provisions required by the FAR, DoD FAR Supplement and Army FAR Supplement.

METHOD OF SELECTION AND EVALUATION CRITERIA

Proposals will be evaluated on a competitive basis by review committees composed of scientists knowledgeable in the topic area. Evaluations will be based on the following criteria:

- a. *Research Objective.* Is it clearly stated, logical, valid? Do objectives address the stated needs of the solicitation?
- b. *Methodology.* Is the test system adequate for the proposed studies? Is the proposed methodology adequately supported by references in the open literature or by pilot studies? Is the proposed methodology representative of the state-of-the-art? Is the research plan feasible? Can results be validly applied to meet the stated objectives?
- c. *Personnel Qualifications.* Do the credentials and experience of the scientific and administrative staff indicate they are capable of completing the proposed study?
- d. *Military Relevance.* Are the objectives of the proposed research clearly relevant to military requirements? Does the proposer indicate an understanding of medical requirements in a chemical warfare environment? Are the test compounds selected of direct relevance to the medical defense program (e.g., soman, sarin, tabun, VX, atropine, 2-PAMCl, pyridostigmine, phystostigmine, mecamylamine, diazepam)?
- e. *Priority.* Do the results from this study have the potential to make an immediate or significant impact on medical defense against chemical warfare agents? Are the results critical to resolving issues of immediate importance to the USAMRDC?
- f. *Facilities.* Does the proposer have adequate facilities for conducting the research project? Are the animal care facilities and support staff adequate?

Although cost will be a factor in the evaluation of proposals, technical merit in the above listed areas will be more significant in the selection process. Further, to be selected for an award, the proposed cost must be realistic, reasonable, and fully justified in all categories.

Negotiations will be conducted with those contractors in the competitive range, i.e., those who satisfactorily meet the above criteria. Final decisions for funding will be based upon these negotiations and program priorities. The Government may elect to fund several or none of the proposed approaches to the same topic. There is no commitment by the Government to make any awards on any topic, to make a specific number of awards or to be responsible for any monies expended by the proposer before award of a contract. It should be noted that only a duly appointed Contracting Officer has the authority to enter into a contract on behalf of the US Government.

SUBMISSION OF PROPOSALS

Fifteen (15) copies of the complete technical and cost proposals are required for review and evaluation. Proposals must be submitted to arrive not later than 4:00 p.m. on January 15, 1985 to:

Director
US Army Medical Research Acquisition Agency
ATTN: SGRD-RMA-RC
DAMD17-85-R-0006 (D. Shackelford)
Fort Detrick, Frederick, Maryland 21701-5014

POSITIONS OPEN

DIRECTOR OF PEDIATRIC RESEARCH INSTITUTE

Cardinal Glennon Memorial Hospital for Children and Saint Louis University School of Medicine invite nominations and applications for the position of director of the Pediatric Research Institute. The Institute is supported by a substantial commitment of private funds and is housed in a 24,000-square-foot modern building which is well furnished with basic major laboratory equipment. The director is the chief administrative officer of the Institute with responsibilities both to the Hospital and the School of Medicine. Candidates should have an M.D. or Ph.D. degree, a strong record of achievement in research, a commitment to continue an active research program, administrative experience, and qualifications for a full professorship in the School of Medicine with a primary or secondary appointment in the Department of Pediatrics/Adolescent Medicine. Nominations and applications should be received prior to 1 March 1985 by: **The Search Committee for the Director of the Pediatric Research Institute, Office of the Dean, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, Mo. 63104. St. Louis University is an Equal Opportunity Employer.**

DIRECTOR OF FERMENTATION GENETICS—Development of fermentation and genetics research in our Seattle laboratory, including staff recruitment, supervision of our Taiwan laboratory, and liaison with industrial clients for whom strain improvement work is carried out to convey results to them and solicit further contracts. Practical experience in industry of fungal, actinomycete and bacterial strain improvement techniques, including a working knowledge of recombinant DNA methods applied to these organisms (minimum of 7 years, four of which must be in management of scientific and technical staff); a continuing record of publications; and Ph.D. in microbial genetics, followed by 2 years of post-doctoral research in microbial genetics are required. Forty hours per week; 8 a.m. to 5 p.m.; \$961.54 per week. Send résumé to: **Employment Security Department, Employment Service Division, attention: AEC Number 888693, Olympia, Wash. 98504.**

NUTRITION

MAKE HISTORY AT ALPO

MANAGER OF NUTRITION & TESTING

ALPO Petfoods, Inc., a leading national manufacturer of pet foods located in Allentown, PA, has an immediate opening for a Manager of Nutrition and Testing. This individual will plan and supervise testing programs, monitor nutritional adequacy of company products and assist in the areas of regulatory affairs and public relations. The preferred candidate will possess a Master's Degree in Nutrition with knowledge and understanding of experimental design. Must be able to operate a personal computer and have 3-5 years pet food industry experience in canine and feline nutrition. We offer excellent salary and company paid benefits. Please send resume with salary history to: Ann Kern.

**ALPO Petfoods, Inc.
Corporate Personnel Department
P.O. Box 2187
Allentown, PA 18001**



POSITIONS OPEN

Search Reopened The University of Houston—Clear Lake DEAN SCHOOL OF SCIENCES AND TECHNOLOGIES

The University of Houston—Clear Lake invites applications and nominations for the position of dean of its School of Sciences and Technologies. The University is a state-supported, upper-level and graduate institution located adjacent to the LBJ/NASA Space Center, 25 miles south of Houston, Texas. Its Sciences and Technologies Programs enroll approximately 1500 students in 1984-1985. The dean will assume administrative and curricular leadership of the school, maintain liaison with local industry, and be responsible for faculty evaluation and development. Opportunity for teaching one course each semester will be provided.

Candidates will be expected to provide evidence of qualifications for senior rank including appropriate scholarly achievement, relevant administrative experience, and skills in budgeting and resource procurement.

Placement credentials and transcripts should not be sent until requested. A current résumé and the names, addresses, and telephone numbers of three references should be forwarded before 15 January 1985.

**Charles S. Hardwick
Office of the Provost
University of Houston—Clear Lake
Houston, Texas 77058-1052**

An Equal Opportunity/Affirmative Action Employer

DIRECTOR, VETERINARY MEDICAL TEACHING HOSPITAL New York State College of Veterinary Medicine at Cornell University

An extraordinary opportunity at an Ivy League university in beautiful upstate New York. Faculty position with excellent fringe benefits for a veterinarian with proven leadership and management skills gained through experience in a complex clinical setting. Must have demonstrated ability in balancing needs of a teaching hospital, maintaining a setting capable of providing effective teaching, service and applied/basic research programs; ability to communicate effectively with faculty and administrators, implement sound fiscal management procedures, and participate in long- and short-term planning.

Address inquiries to: **Robert M. Lewis, D.V.M., Chairman, Search Committee, New York State College of Veterinary Medicine, Cornell University, Ithaca, N.Y. 14853. Cornell University is an Equal Opportunity/Affirmative Action Employer/Educator.**

DIRECTOR School of Forestry, Fisheries and Wildlife University of Missouri

Applications and nominations are invited for the position of director of the School of Forestry, Fisheries and Wildlife. Qualifications include an earned doctorate in an appropriate discipline, distinction in academic instruction, and research or extension and a firm commitment to the mission of a land-grant university. Demonstrated administrative leadership is desired. Applications, including a statement of administrative philosophy, professional curriculum vitae, and three letters of reference, will be accepted until 15 December 1984, or until a suitable candidate is found. Nominations and applications should be addressed to: **Gene S. Cox, School of Forestry, Fisheries and Wildlife, University of Missouri, Columbia, Mo. 65211.**

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

DIRECTOR AND ASSOCIATE DEAN

The director and associate dean is responsible for coordinating the mission of the New Mexico Agricultural Experiment Station and accepts other appropriately delegated responsibilities assigned by the dean of the College of Agriculture and Home Economics. Applicants should have an earned doctorate and administrative experience is desirable. Candidates should have substantial experience in research plus knowledge of the teaching, research, and extension organization unique to land-grant universities. Application deadline is 1 January 1985. Send résumé plus names, addresses, and telephone numbers of five references to: **G. M. Southward, Experimental Statistics, Box 3130, New Mexico State University, Las Cruces, N.M. 88003. Telephone: 505-646-2936. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

THE UNIVERSITY OF WESTERN ONTARIO Director Occupational Health and Safety Resource Centre

Applications are invited for the position of director of the Occupational Health and Safety Resource Centre. This Centre is one of five Centres in Ontario supported in part by the Ontario Ministry of Labour. Applicants should hold an M.D. or Ph.D. in a relevant basic health science and/or an engineering degree and have research experience in occupation health and safety.

The position is open effective 1 July 1985. Salary is commensurate with qualifications and experience.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Applications should be submitted with curriculum vitae and names of three references, prior to 1 January 1985, to:

**Dr. D. Bocking
Vice-Provost Health Sciences
Health Sciences Addition
The University of Western Ontario
London, Ontario, Canada, N6A 5C1**

Tenure-track **FACULTY POSITION** available January 1985 in Department of Physical Therapy. Teaching responsibilities include courses in biomechanics, long-term rehabilitation, and administration. Research interests to complement those of existing faculty (neuroscience, orthopaedics, sports medicine, pediatrics) are desirable. Ph.D. in field related to physical therapy preferred; physical therapy license required with eligibility for licensure in Wisconsin. Applications due: 1 January 1985; effective date: 14 January 1985. Send curriculum vitae, description of research interests, and three references to: **Dr. Mark J. Rowinski, Chairman, Department of Physical Therapy, University of Wisconsin-La Crosse, La Crosse, Wis. 54601. Telephone: 608-785-8470. An Affirmative Action/Equal Opportunity Employer.**

Full-time, tenure-track **FACULTY POSITION IN BIOLOGY** available beginning early January 1985. Ph.D. biologist to teach molecular biology and microbiology in hospital nursing program, as well as other courses in Biology Department programs. College teaching experience is required. Entry at the instructor or assistant professor rank; salary is negotiable. Send résumé, three letters of reference, and official transcripts to: **Professor Albert F. Answini, Chairperson of Search Committee, Biology Department, Kutztown University of Pennsylvania, Kutztown, Pa. 19530. Kutztown University is an Affirmative Action/Equal Opportunity Employer and actively solicits applications from qualified minority applicants. Last date for receiving complete applications is 30 November 1984.**



GENERAL PHARMACOLOGIST/ PHYSIOLOGIST

Nova Pharmaceutical Corporation, a newly formed company dedicated to the discovery of novel therapeutic entities using the most current techniques, has an immediate opening for a general pharmacologist/physiologist with at least 2 years of postdoctoral training. The ideal candidate would be familiar with organ bath and in vivo techniques. The ability to initiate and conduct, or to direct, goal-oriented research within a team framework, and a proven publication record, are essential. Pharmaceutical industry experience is preferred.

Nova occupies new facilities at the Francis Scott Key Medical Center in Baltimore, and has strong intracampus links with The Johns Hopkins University, NIDA, and NIA. Nova has a full complement of chemical, biochemical, and pharmacological support personnel.

Nova offers competitive salaries and an excellent benefits package. For further information, please submit a current résumé with salary requirements to:

**Lydia Cumor
Administrative Assistant
Nova Pharmaceutical Corporation
5210 Eastern Avenue
Baltimore, Md. 21224-2788**

An Equal Opportunity/Affirmative Action Employer



CALGENE, INC., a leading plant biotechnology company located in Davis, CA is recruiting scientists at the Ph.D., M.S. and B.S. level. Opportunities exist at all levels for researchers who have experience in:

- Lipid Metabolism
- Protein Purification
- Plant Organellar Physiology

Candidates with a background in Biochemistry, Cell Biology, Plant Physiology, Chemistry or a related discipline are encouraged to apply.

Please forward a detailed resume/CV to:

CALGENE, INC.
c/o Frances R. Anderson
Personnel Administrator
File 685
1920 Fifth Street
Davis, CA 95616

ASIAN DEVELOPMENT BANK

The ASIAN DEVELOPMENT BANK is an international finance institution based in Manila, Philippines and established for the purpose of lending funds, promoting investments and providing technical assistance to developing countries and generally, for fostering economic growth in the Asian region. Its membership comprises forty-five countries, thirty-one of which are from the Asian region and fourteen from Western Europe and North America.

The following position is currently vacant and has to be filled urgently:

ENVIRONMENTAL SPECIALIST

A person with specific training in economics and in one of the core disciplines of the environmental sciences to undertake economic valuation in all phases of the Bank's loan and technical assistance projects; development of cost-benefit analyses for inclusion in project processing methodologies; and, conduct seminars and undertake information exchanges with environmental/developmental agencies in the Bank's DMCs. With direct experience in the formal evaluation of environmental impacts of industrial, infrastructural and rural development projects in Asian countries. Candidates should have a Masters Degree or a Doctoral Degree or equivalent and a minimum of 5 years of professional experience in environmental science.

Fluency in written and spoken English is essential. Staff and their families will be based in Manila, Philippines.

The position offers competitive salaries paid in US dollars normally free of tax, and an excellent benefits package.

Interested persons are invited to send their curriculum vitae immediately to:

REF. NO.: US35
Head, Employment and Staff Relations
Personnel Division
Asian Development Bank
P.O. Box 789
Manila, Philippines

BIOTECHNICAL/RESEARCH OPPORTUNITIES

Interferon Sciences, Inc. is a growing biotechnology company located at the heart of the pharmaceutical industry in central New Jersey. Applications are invited at all degree levels for research positions in the following areas:

Immunochemistry

- Immunochemists with experience in production and purification of monoclonal and polyclonal antibodies (IC101)
- Immunochemists with experience in immunoassay development and antibody conjugation (IC102)

Cellular Immunology

- Protein chemists with expertise in isolation, purification and characterization of membrane proteins and/or lymphokines. Hands-on experience with HPLC, column chromatography, and gel electrophoresis necessary. Immunochemistry and tissue culture helpful (CI101).

Molecular Genetics

- Molecular biologists with experience in regulation of gene expression in bacteria and/or yeast. Experience in cDNA synthesis and cloning required (MG101).

Please refer to position numbers. Send resumes to:

L. Zuckerman, Personnel Department



INTERFERON
SCIENCES, INC.

783 Jersey Avenue, New Brunswick, NJ 08901

An Equal Opportunity Employer M/F

Analytical Biochemistry

- Analytical biochemists experienced with automated peptide and nucleic acid sequencing and synthesis techniques, HPLC, column chromatography, and gel electrophoresis (AB101).
- Molecular biologists/biochemists with expertise in the synthesis and construction of gene sequences (AB102).

Pharmaceutical Formulations

- Pharmaceutical chemists experienced in the development of parenteral and topical dosage forms. Experience with biologically active molecules necessary. Knowledge of stability testing procedures helpful (PF101).

Process Development & Improvement

- Biochemists experienced in the development and scale-up of protein collection and purification schemes (PD101).
- Biochemists with experience in development of analytical test methods including affinity chromatography and gel electrophoresis (PAGE, IEF, and Western blotting) (PD102).
- Process engineering positions also available in the biotechnology area (PD103).

POSITIONS OPEN

ELECTRONIC TECHNICIAN SCIENTIFIC RESEARCH

The qualified candidate for this opening at a New York City-based scientific research institution will have a B.A. or B.S. degree along with expertise in electronic engineering technology and its applications, as well as operational experience in minicomputers and programming, preferably in a research environment.

In this unique position, you will be trained to operate, maintain, and upgrade a highly automated technical instrument. You will also function in a supportive capacity in the operation of x-ray diffraction and other departmental equipment.

Competitive salary and excellent benefits which include 4 weeks' vacation, company-paid major medical/dental coverage, tuition reimbursement, and more. Send résumé with current salary information and requirements to: **Box SM 1244, 810 Seventh Avenue, New York, N.Y. 10019. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

University of North Carolina at Chapel Hill (UNC-CH). The Department of Chemistry invites applications for **THREE TENURE-TRACK FACULTY POSITIONS**, one of senior, one of junior, and one of open rank. One appointment will be in polymer or polymer-related chemistry. For the remaining two appointments, we seek outstanding individuals in any areas of chemistry but with particular emphasis on bioanalytical, bioinorganic, bioorganic and biophysical chemistry, catalysis, electrochemistry, intelligent instrumentation, NMR spectroscopy, organic synthesis, picosecond spectroscopy, and solid-state chemistry. Established scientists should submit a letter of application and appropriate supporting material (no deadlines, senior applications will be continuously reviewed). Applicants for the junior position(s) should send curriculum vitae and a statement of research plans and arrange for submission of three letters of recommendation; review of such applications will begin 15 December 1985. Address correspondence to: **M. Brookhart, Chairman of the Search Committee, Department of Chemistry, University of North Carolina, Chapel Hill, N.C. 27514. We welcome applications from qualified women and minority candidates. UNC-CH is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITIONS IN CELLULAR AND MOLECULAR BIOLOGY

As part of a continuing program of growth and development, the Boston College Biology Department plans to fill two additional tenure-track positions for September 1985. We seek candidates with active research interests in the molecular aspects of cellular and developmental biology. We hope to fill one position with a neurobiologist and, in addition, invite applications from individuals whose research involves the application of recombinant DNA technology to biological questions. However, strong applicants in all areas are encouraged to apply.

We offer a competitive salary and start-up funds. The department has an active M.S. and Ph.D. program and candidates are expected to have a commitment to teaching at both the graduate and undergraduate levels.

Applications, including three letters of reference solicited by the candidate, should be submitted by 1 January 1985 to:

**Chairman, Biology Search Committee
Biology Department
Higgins Hall
Boston College
Chestnut Hill, Mass. 02167**

An Equal Opportunity/Affirmative Action Employer

GENETIC TOXICOLOGIST—Microbiological Associates Inc., a leader in the field of genetic toxicology, is offering an excellent opportunity for a Ph.D. to join its Division of Genetic Toxicology. The candidate must have demonstrated expertise in mammalian in vitro test systems for genetic toxicity. Candidates with experience in cytogenetics will receive strongest consideration. Administrative leadership capabilities and strong communication skills are required. This position offers an excellent opportunity for career growth and recognition in this growing, dynamic field. We offer an excellent company-paid benefits package including medical, dental, and disability insurance and salary commensurate with experience. Send curriculum vitae and names of three references to: **MICROBIOLOGICAL ASSOCIATES, Personnel Department, 5221 River Road, Bethesda, Md. 20816. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

FACULTY POSITION, HARVARD MEDICAL SCHOOL, to begin in 1985, for biochemist-microbiologist with background in bacterial pathogenesis and interest in exploring major problem in protein secretion. Write to: **N. Stein, Administrator, Channing Laboratory, 180 Longwood Avenue, Boston, Mass. 02115.**

FACULTY POSITIONS

Tenure and tenure-track positions are available in nuclear engineering for fall 1985 or sooner. Highly qualified applicants in all specialties of fusion and fission will be considered. Present faculty fields of research include: fission reactor physics; thermal hydraulics; environmental analysis; magnetic and laser fusion experiments, theory, technology, and computational methods; radiation protection and shielding; nuclear materials; plasma-surface interactions. Duties include teaching at the graduate and undergraduate levels, supervising M.S. and Ph.D. theses, and conducting research. Applicants must have demonstrated or shown the potential for establishing a leading research program. Salary is open, consistent with background. In order to ensure full consideration, applications must be received by 15 January 1985 by: **George H. Miley, Chairperson, Nuclear Engineering Program, 207 Nuclear Engineering Laboratory, 103 South Goodwin Avenue, Urbana, Ill. 61801; telephone: 217-333-2294. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.**

FACULTY POSITIONS IN BIOCHEMISTRY

POST- AND PREDOCTORAL FELLOWSHIPS IN REPRODUCTION. Applications are solicited for training and research experience in areas of mechanisms of steroid hormone and receptor action, implantation, testicular cell functions, and pituitary gonadotropin secretion. Nine investigators from the Departments of Anatomy and Biochemistry participate in this interdisciplinary NRSA-supported program. Only U.S. citizens and permanent residents are eligible for appointment. Application deadline: 1 April 1985. Apply or inquire to: **Dr. Kenneth L. Barker, Biochemistry, or Dr. Harry Weitlauf, Anatomy, Texas Tech University Health Sciences Center, Lubbock, Texas 79430. An Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION—MEDICINE AND PHARMACOLOGY. The Department of Medicine, Vanderbilt School of Medicine, is seeking an investigator at instructor level in the area of the clinical pharmacology of prostaglandins in cardiovascular disease. The applicant should have a M.D. or equivalent degree and should have completed a 3-year residency in internal medicine and have had some training in cardiology or cardiovascular pharmacology. Previous experience in the biochemical analysis of arachidonic acid metabolism, including a background in gas chromatography/mass spectrometry, is required. The candidate should also have experience in the development of animal models of thrombosis. *Sex, race, religion or national origin will not be factors in the selection process.* For further details, contact: **Dr. Garret FitzGerald, telephone: 615-322-3304, or apply by sending curriculum vitae to: Fran Johnston, Division of Clinical Pharmacology, Vanderbilt University, Nashville, Tenn. 37232.**

FLOW CYTOMETER OPERATOR. Coulter EPICS 741 with Dye Laser and EASY 88 Computer. Operator will play a major role in establishing flow cytometry service and research laboratory. Salary commensurate with abilities. *Equal Opportunity/Affirmative Action Employer.* J2237. Contact:

**W. C. Allsbrook, Jr., M.D.
Department of Pathology
School of Medicine
Medical College of Georgia
Augusta, Georgia 30912**

GENETICIST. Cleveland State University, anticipated assistant professor position (tenure track) for fall 1985 for broadly trained geneticist whose research is concerned with basic problems in genetics. Candidates must have at least 1 year of postdoctoral experience and must show evidence of continued research productivity. Principle teaching duties will include introductory genetics courses and a graduate course in genetics. Send current curriculum vitae, reprints of recent publications, and a statement of research goals, and arrange to have three letters of recommendation forwarded by 15 December 1984 directly to: **Dr. Ronald Clise, Chairman, Genetics Search Committee, Department of Biology, 1983 East 24 Street, Cleveland, Ohio 44115. Equal Opportunity Employer, M/F/H.**

POSITIONS OPEN

University of Arizona FACULTY POSITION Groundwater Hydrologist

The University of Arizona, College of Engineering, Department of Hydrology and Water Resources, invites applications for a tenure-track faculty position at the assistant or associate professor level in groundwater hydrology. Applicants should have a strong background in hydrogeology, groundwater hydraulics, contaminant transport, and groundwater modeling. The position will involve teaching graduate and undergraduate classes and developing a strong research program in one or more of the above areas. Interested persons should send an up-to-date résumé and the names of at least three references to:

**Dr. Shlomo P. Neuman
Department of Hydrology and Water Resources
University of Arizona
Tucson, Arizona 85721**

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

INDUSTRIAL SABBATICAL OR POSTDOCTORAL COMPUTATIONAL CHEMIST—Procter & Gamble Company. One-year sabbatical or postdoctoral appointment for applications-oriented computational chemist in dynamic industrial research environment. Strong background in quantum chemistry and molecular mechanics essential. Assignment will focus on application of state-of-the-art equipment to assist in designing drugs, polymers, flavorants, and surfactants. *U.S. citizens or permanent resident visa only.* Send résumé and publication list to: **Dr. T. J. Logan, Manager, Ph.D. Recruiting, Computational Chemist Position, The Procter & Gamble Company, P.O. Box 39175, Cincinnati, Ohio 45247. An Equal Opportunity Employer.**

INVERTEBRATE ZOOLOGIST. Ph.D., preferably with postdoctoral experience. A tenure-track opening at Swarthmore College beginning September 1985. We seek a candidate with broad experience in invertebrate biology, including field work. Teaching duties include an invertebrate biology course, participation in our team-taught introductory biology course and other courses in fields related to the candidate's interests. Rank: assistant professor. Send curriculum vitae, statement of teaching and research interests, three letters of reference, and transcripts by 31 December 1984 to: **Dr. John B. Jenkins, Professor and Chairman, Department of Biology, Swarthmore College, Swarthmore, Pa. 19081.**

Women and minorities are encouraged to apply.

MINERALIZED TISSUE RESEARCH. Laboratory for Study of Skeletal Disorders, Department of Orthopedic Surgery, Harvard Medical School and Children's Hospital, Boston. Immediate opening for biophysicist or biochemist interested in mineralized tissue research. The current well-funded research program is aimed at determining the nature of the initial solid mineral phase formed during the deposition of mineral in bone and other mineralized tissues, and the changes in the mineral phase during maturation and aging. Primary techniques used are x-ray diffraction, neutron diffraction, and NMR spectroscopy. Applicants should be familiar with x-ray diffraction techniques, NMR spectroscopy, and analytical chemistry, and have demonstrated capacity for independent research. Position at level of postdoctoral fellowship for period of 1 to 3 years or faculty appointment, depending on qualifications and experience.

Apply in writing, enclosing the names of three references, to: **Melvin J. Glimcher, M.D., Director, Laboratory for the Study of Skeletal Disorders, Children's Hospital, 300 Longwood Avenue, Boston, Mass. 02115.**

MOLECULAR BIOLOGY RESEARCH ASSOCIATE with the Mineral Metabolism Research Unit, National Animal Disease Center, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Ames, Iowa. Temporary federal appointment—1 year, may be extended. Candidate will work on cloning of cDNA's corresponding to 1,25-dihydroxyvitamin D-regulated messenger RNA's. Position requires experience in molecular biology/recombinant DNA techniques and skill in preparation and characterization of cDNA. Salary: GS-11, \$25,489. For applications: **Diana Gamble, USDA-ARS-B88, Personnel Operations Branch, Building 003, Room 318H, BARC-West, Beltsville, Maryland 20705. Telephone: 301-344-4567. Candidates must be U.S. citizens. An Equal Opportunity Employer.**

SENIOR SCIENTIFIC RESEARCH POSITIONS: CHAIRMAN AND RESEARCH STAFF MEMBER (SENIOR SCIENTIST) CENTER FOR NONLINEAR STUDIES at the Los Alamos National Laboratory

The Center for Nonlinear Studies seeks to fill two positions: Chairman of the Center and Research Staff Member (Senior Scientist). Applications for these senior positions are invited from distinguished research scientists with a significant record of achievement.

The CNLS conducts and supports interdisciplinary scientific research in nonlinear problems, including but not restricted to those of importance to applied research programs; it coordinates these studies into structured research themes; it provides a strong link for effective collaboration with academic centers of excellence in nonlinear research; it introduces scientists from academic backgrounds to important problems derived from applied research.

- **Chairman** responsibilities will include the leadership, scientific direction and financial management of the Center; and coordinating an extensive program of visitor exchange and collaboration with academic centers. Substantial inter-personal and administrative skills are desired.
- **Research Staff Member** (Senior Scientist) will perform research of the highest caliber in nonlinear problems; guide students visiting from academic centers; advise on a broad spectrum of nonlinear research themes; and encourage nonlinear research at Los Alamos. For this position, a joint appointment with another technical division is possible.

Candidates for both positions should have a demonstrated expertise in nonlinear science, with a background from among applied mathematics, theoretical physics, life sciences, and engineering. Nominations for candidates are also welcome.

Candidates should submit vita and names of references to:

University of California
CNLS Chairman Selection Advisory Committee
(Prof. Martin Kruskal, Head) DIV 85-V
Center for Nonlinear Studies, MS B-258
Los Alamos National Laboratory
Los Alamos, NM 87545



An Affirmative Action/Equal Opportunity Employer

Palmer College of Chiropractic



CHALLENGING OPPORTUNITY TO DIRECT EXPANDING PROGRAM IN RESEARCH AT PALMER COLLEGE OF CHIROPRACTIC

Palmer College of Chiropractic, the world's first and largest institution for chiropractic education, is seeking a Director of Research and Graduate Study who has exceptional ability to establish and develop a substantial new research program. The program should place the College in the forefront of research that is directly or indirectly relevant to chiropractic practice, including neurobiology, spinal biomechanics, reflex neurophysiology as well as relevant biomedical disciplines.

Responsibilities of the Director will include the development and implementation of plans for research growth, recruitment and direction of new research faculty and staff, development of a Ph.D. graduate study program with cooperating universities, overall management of the College budget for research and research training, supervision of current research and design and establishment of new laboratory facilities in existing space. The Director should also maintain support for personal research from extramural grants and assist faculty in obtaining such grants for their research.

Substantial intramural financing of the program is available for facility improvement, project initiation, grant sharing, and graduate fellowships. An administrative assistant or executive secretary, and laboratory research associate will be provided to assist the Director.

The Directorship is supported with a direct salary of approximately \$70,000. A generous fringe benefit package is also offered.

Applicants should currently be conducting research with substantial funding by a national agency such as NIH, and have a strong record of publication. (Experience and/or expertise with clinical research is preferred.)

An application should include a statement of personal qualifications for the position, curriculum vitae (including list of publications and research grants), reprints of representative publications and references. **Send applications, nominations or make inquiries to: Mr. Laurie Tassell, Chairman of Search Committee for Director of Research, Palmer College of Chiropractic, 1000 Brady Street, Davenport, Iowa 52803. 800-553-8058. Applications close January 1, 1985.** Equal Opportunity Employer.

CHAIRPERSON OF THE DEPARTMENT OF IMMUNOLOGY

Showa University Research Institute for Biomedicine in Florida announces the establishment of a Department of Immunology. The investigator will be Chairman of the Department and as such will control about 8,000 square feet of laboratory space. He/she will be expected to recruit and be responsible for four (4) additional immunologists. While the focus should be on cancer, applications from scientists in most subspecialties of immunology will be considered including molecular immunology and immunogenetics, immune regulation and cellular immunology.

Showa is unique in its affiliation with a major Japanese University and in the freedom allowed its investigators. There are no formal teaching requirements although course participation in the teaching at University of South Florida is encouraged. The Institute plans to create a program of post doctoral training and with some graduate student research. There are no clinical or other service responsibilities.

The Institute, which is non-profit, is housed in a lovely single story building in its own landscaped grounds and close to the gulf beaches. The Institute has considerable financial support from Showa University and from private donors but the Chairperson of Immunology will be expected to compete for supplementary research funding from other agencies. In addition to the planned Department of Immunology, the Department of Virology and Molecular Genetics is currently in operation and the Department of Cellular Biochemistry will be established in the near future.

Individuals interested in this position should send their curriculum vitae and a list of publications to the Chairman of Search Committee, Showa University Research Institute, 10900 Roosevelt Blvd., St. Petersburg, Florida 33702.

SHOWA UNIVERSITY RESEARCH INSTITUTE FOR BIOMEDICINE IN FLORIDA

A not-for-profit organization/EOE

Senior Environmental Scientist

EG&G Idaho, Inc., prime operating contractor for the Department of Energy's Idaho National Engineering Laboratory (INEL), has an immediate opening for a Senior Scientist, responsible for the technical direction of NEPA and similar complex documents for nuclear and non-nuclear facilities.

The successful candidate will have an advanced degree in Environmental Science or Engineering with at least three (3) years experience, including NEPA documentation preparation and knowledge of such diverse fields as ecology, health physics, and DOE environmental regulations.

A career with EG&G Idaho, Inc., is a commitment to the future, at a work location in the heart of the Western recreation areas.

If interested and qualified, send resume, with salary history in confidence to: **Staffing and Development (IID-2), EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, Idaho 83415.**

We are an equal opportunity employer
U.S. Citizenship Required.



IMMUNOLOGY RESEARCH

The Du Pont Company has openings in the Central Research and Development Department for Scientists wanting to participate in interactive research efforts and to establish an independent program in their own area of expertise.

PRINCIPAL INVESTIGATORS/ RESEARCH LEADER

Permanent research positions are available at the Junior and Senior levels with a minimum requirement of two years postdoctoral experience. Candidates for basic research positions (Research Division) should have proven creativity and productivity in areas of B Cell or Monocyte Differentiation, Cell Surface Receptors, Lymphokines, T Cell Effector Function, or Gene Regulation and Expression in the Immune System. Candidates for applied research positions (Development Division) should have expertise in T Cell Cloning or Autoimmunity.

VISITING SCIENTISTS

Postdoctoral and sabbatical opportunities are available as 1-2 year appointments in the Research Division. Candidates should have expertise in such areas as Protein Purification, Cell and Molecular Biology consequent to Receptor-Ligand Interactions, or Mammalian Expression Vectors. Prior experience in Immunology is preferred but not required.

Du Pont provides excellent compensation plus outstanding research facilities at the Glenolden Laboratory south of Philadelphia. Qualified candidates should send their curriculum vitae, names of three references, and a short statement of research interests to: Dr. S.T. Toy, Room X40546, Employee Relations Department, Du Pont Company, Wilmington, Delaware 19898.



An Equal Opportunity Employer M/F

IMMUNOLOGIST

HUMORAL & CELL-MEDIATED IMMUNITY

The Biomedical Science Department of the General Motors Research Laboratories is looking for a postdoctoral fellow with a PhD in Immunology who is familiar with assays of humoral and cell-mediated immunity, and who has an interest or, preferably, experience in the area of lipid biochemistry.

The successful candidate will participate in ongoing research into the response of immune cells to environmental pollutants such as ozone and nitrogen dioxide. Emphasis is placed on correlating lung responses with changes in immune reactivity. The position is nominally open for one year, with possible extension for two. Interested professionals with U.S. Citizenship or Visa status that permits legal acceptance of employment under U.S. Immigration laws, should send their curriculum vitae and a statement of research interest to:



Dr. Harold J. White, Acting Head
Biomedical Science Department
General Motors Research Laboratories
Warren, Michigan 48090-9058

An Equal Opportunity Employer

POSITIONS OPEN

The Institute of Molecular Biology and the Chemistry Department at the University of Oregon seek a new **FACULTY MEMBER IN BIOCHEMISTRY**. Possible research interests include but are not restricted to enzymology, transport mechanisms, receptor biochemistry, immunology, and membrane assembly. We anticipate filling this position at the assistant professor level although more senior candidates will be considered. Interested persons should forward curriculum vitae, statement of research interests, and three letters of recommendation to:

**Biochemistry Search
Department of Chemistry
University of Oregon
Eugene, Ore. 97403**

Closing date is 15 January 1985. *The University of Oregon is an Equal Opportunity Employer.*

INSECT ECOLOGY (preferably aquatic) or **BIOLOGICAL LIMNOLOGY**. The Department of Biology, University of Minnesota-Duluth, invites applications for a tenure-track assistant professor position; appointment beginning 1 September 1985. The position will be filled by a candidate with expertise in one of the above areas, depending on departmental needs. Applicants must have the Ph.D., a commitment to undergraduate and graduate education, and the ability to develop an active, independent research program. Responsibilities include teaching introductory biology and upper-level courses in area of specialization (including a course in either general entomology or limnology), conducting research, and directing graduate student research. Applicants should submit curriculum vitae, a statement of research interests and professional goals, undergraduate and graduate transcripts, and three letters of recommendation by 7 January 1985; only completed applications will be considered. Applications and inquiries should be directed to: **D. P. Christian, Chair, Faculty Search Committee, Department of Biology, University of Minnesota-Duluth, Duluth, Minnesota 55812. Telephone: 218-726-7566.**

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

MEDICAL DIRECTOR—LABORATORY OF CYTOGENETICS

This is a tenure-accruing position at a rank and salary commensurate with experience in the Department of Pathology, University of Florida, College of Medicine, to begin 1 April 1985. The candidate must hold an M.D. degree and be licensed or be eligible to apply for a license in the state of Florida. The candidate will be responsible for the medical direction of the Laboratory of Cytogenetics in the Department of Pathology. This will involve hospital service activities as well as the development of independent research and teaching programs. Preference will be given to a candidate with interest in molecular genetics or related areas.

Deadline for recruiting is 1 March 1983 and interested candidates should contact: **Raul C. Braylan, M.D., Department of Pathology, Box J-275, University of Florida, College of Medicine, Gainesville, Florida 32610.**

An Equal Opportunity/Affirmative Action Employer

MOLECULAR GENETICIST

The Department of Laboratory Medicine is recruiting a Ph.D. to fill a newly created, full-time position in molecular genetics. We seek an individual at the assistant professor level who will establish a research and teaching laboratory in the department. An independent investigator with a strong background in basic molecular genetics and an orientation toward the interface of recombinant DNA technology and clinical testing is desirable.

Interested candidates should reply to: **Stephen Edberg, Ph.D., Chairman, Search Committee, Department of Laboratory Medicine, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.** Please include a recent curriculum vitae and the names of three individuals who can provide letters of reference.

Yale is an Affirmative Action/Equal Opportunity Employer and applications from women and minority candidates are encouraged.

Deadline for applications is 15 January 1985.

TERATOLOGIST

The Toxicology Research and Testing Program of the National Institute of Environmental Health Sciences, Research Triangle Park, NC, has a permanent position for a Teratologist with a salary range of \$36,327 to \$47,226.

The successful candidate will be expected to:

1. Serve as Project Officer for a large extramural contract(s) for teratological testing.
2. Conduct applied research in developmental or reproductive toxicology.
3. Provide expert consultation to the Program in matters involving developmental and reproductive toxicology.

Candidates are required to have the following:

1. Ph.D. degree or its equivalent in toxicology, pharmacology, anatomy, physiology or other allied subject where training was focused on teratology.
2. Six or more years of postdoctoral research experience in teratology/toxicology.
3. Broad knowledge of teratology with emphasis on testing systems and interpretation of testing data.
4. Ability to communicate effectively both orally and in writing.
5. Relevant publications in scientific journals.

U.S. citizenship required. Applications must be found to be eligible on a Civil Service Register.

A curriculum vitae and names of three persons we can contact for references should be sent to NIEHS Personnel Office, P.O. Box 12233, Research Triangle Park, NC 27709 ATTN: N. Lou Rozier (1-01). Further information can be obtained from Ms. Rozier by calling 919 541-7513. Applicants must be received no later than *December 15, 1984*.

THE NIEHS IS AN EQUAL OPPORTUNITY EMPLOYER.

National Institute of Environmental Health Sciences
National Institutes of Health
Public Health Service
Department of Health and Human Services

CHIEF

Laboratory of Behavioral and Neurological Toxicology

The National Institute of Environmental Health Sciences has an opening for Chief, Laboratory of Behavioral and Neurological Toxicology. Current research areas in the laboratory include: the biophysical and molecular properties of excitable cells; afferent and feedback mechanisms which influence neuronal plasticity; neurobehavioral mechanisms involved in plasticity and adaptive responses to environmental agents; peptides and their effects on biological systems; identification of vulnerable neuronal circuits by study of neurotransmitter translocations and enzyme analysis; and the functional roles of neurotransmitters and neuromodulators in CNS adaptation following chemical or physical insult. Duties of the Lab Chief include the scientific and administrative supervision of the laboratory research program and development of a research effort in the basic neurosciences.

This is a Civil Service career-conditional appointment under the Merit Pay System at the GS-15 level with a salary range from \$50,495 to \$65,642 per annum, depending on qualifications. Minimum educational requirements are a four year course of study in an accredited college or university leading to a bachelor's degree with major study in chemistry, psychology, biochemistry, or a related discipline and a doctorate in the speciality area. Applicants must have a demonstrable record of research achievement in molecular neurobiology or a related area. Some experience in research program planning and implementation is desirable. U.S. citizenship is required. (Candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) This is a supervisory position and may require the incumbent to serve a one year probationary period.

Applications consisting of a Personal Qualifications Statement, SF-171 (available in all Federal Job Information Centers and Federal Personnel Offices); a curriculum vitae and names of three references should be submitted to the following address and postmarked not later than November 30, 1984:

Mr. Bruce Wiggins, Code: HN-V2K
National Institute of Environmental Health Sciences
P.O. Box 12233 (MD 1-01), Research Triangle Park, NC 27709
(919) 541-3317

An Equal Opportunity Employer

Staff Fellow (Ph.D.)

Salary range—\$17,000 to \$35,639
(Having less than 3 years professional research experience)

Senior Staff Fellow (Ph.D.)

Salary Range—\$20,688 to \$39,960
(3-7 years Research Experience)

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES LABORATORY OF BEHAVIORAL AND NEUROLOGICAL TOXICOLOGY

The Membrane Physiology Section is seeking a neurophysiologist/neurotoxicologist to work in the area of *in vivo* and *in vitro* analysis of electrophysiological events. The successful candidate will be experienced in carrying out voltage clamp, single-channel current recording and electrical noise analyses, iontophoresis procedures, brain slide techniques and field potential analysis. The candidate must have a record of demonstrated research productivity and ability to carry out independent as well as collaborative research. The initial appointment is for two years, with additional extension possible. Salary commensurate with candidate's qualifications and experience. Send Curriculum Vitae, bibliography and three recommendation letters to:

Mr. Bruce Wiggins, Code: HN-V27
NIEHS Personnel Office
P.O. Box 12233 (MD 1-01),
Research Triangle Park, NC 27709
(919) 541-3317

An Equal Opportunity Employer



NIGERIAN UNIVERSITIES

Several academic vacancies exist in Nigerian universities in the following basic sciences:

- | | |
|------------------------------------|--------------------|
| 1. BIOLOGY | 8. MICROBIOLOGY |
| 2. BOTANY | 9. MINERAL SCIENCE |
| 3. BIOCHEMISTRY | & TECHNOLOGY |
| 4. CHEMISTRY | 10. PHYSICS |
| 5. GEOLOGY | 11. STATISTICS |
| 6. GEOPHYSICS, APPLIED | 12. ZOOLOGY |
| 7. MATHEMATICS
(PURE & APPLIED) | |

Appointments will be made at Professorial, Associate Professorial and Lecturer levels.

QUALIFICATIONS

All applicants are expected to hold Ph.D. or other research degrees and to have considerable number of years of teaching and research experience.

*Interested applicants should send six copies of their detailed resume to:

THE DIRECTOR
NIGERIAN UNIVERSITIES OFFICE
2010 MASSACHUSETTS AVENUE, N.W.
4TH FLOOR
WASHINGTON, D.C. 20036

*Applications are also welcome from university personnel who would like to spend their sabbatical leave/s in Nigerian universities.

POSITIONS OPEN

MOLECULAR BIOLOGIST

Tenure-track, assistant/associate professor position. Candidate will be expected to develop a research program capable of attracting external funding in molecular biology and to develop graduate course(s) in his/her area of expertise. Opportunities for involvement in the teaching of veterinary students are available. D.V.M. and/or Ph.D. degree required. Closing date is 15 January 1985, or until position is filled. Submit curriculum vitae and names of three references to: **Gerhardt G. Schurig, Chairman, Division of Veterinary Biology and Clinical Studies, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, Va. 24061.**

Virginia Tech is an Equal Opportunity/Affirmative Action Institution.

MOLECULAR BOTANIST. Tenure-track position for an assistant or associate professor. Ph.D. and postdoctoral experience required. Candidates must have a research interest in molecular biology with a botanical orientation. Development or continuation of a research program with external funding is expected. Teaching will include general biology, molecular biology, and botanical physiology. Submit curriculum vitae, three letters of recommendation, current reprints, and a statement of research interests to: **Dr. Jean Wooten, Box 5018, Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, Miss. 39406-5018.** Closing date: 1 January 1985. *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICIST. Tenure-track assistant professor position effective 1 September 1985. Appointee expected to contribute to a newly organized and expanding cell and microbial biology program via vigorous independent research, supervision of master's and doctoral students, and instruction at undergraduate and graduate levels. Send curriculum vitae and description of research goals by 15 January to: **Dr. Jack Spiegel, Biology Department, Catholic University of America, Washington, D.C. 20064.** *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICISTS/MOLECULAR BIOLOGISTS

The Department of Biological Sciences at Dartmouth College is seeking to fill two positions in **MOLECULAR GENETICS/MOLECULAR BIOLOGY**, one at the senior level (associate or full professor) and one at the junior level (tenure-track). The successful candidates will be expected to establish productive research programs, to teach undergraduate and graduate courses, and to participate in the development of a university-wide program in molecular genetics. To complement the department's interests and expertise, we seek individuals working on gene structure, function, and/or regulation as applied to (i) cellular or developmental processes, (ii) neurobiology, or (iii) molecular evolution. Applicants should submit curriculum vitae, copies of their most recent publications, and names and addresses of four references by 15 January 1985 to: **Secretary, Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, New Hampshire 03755.** *Affirmative Action/Equal Opportunity Employer.*

M.S./Ph.D. experienced in protein chemistry research as hands-on laboratory leader in collagen/collagenase projects. Our research-oriented company produces enzymes for research and therapeutic use. These are immediate openings. *We are an Equal Opportunity Employer in a suburban location close to New York City.* Send résumé to: **Box 267, SCIENCE.**

PHYSIOLOGIST. Rank of assistant professor (tenure-track). Qualifications: D.V.M. (or equivalent) and/or Ph.D. with evidence of teaching and research experience. Responsibilities: Teaching duties include presentation of neurophysiology, endocrinology, and reproductive physiology to veterinary students as well as participation in graduate degree and other educational programs of the School of Veterinary Medicine. The successful candidate will be expected to initiate and conduct a high quality research program. Application closing date: 1 February 1985 or until filled. Submit curriculum vitae and names of three references to: **Dr. Robert A. Argenzio, Chairman, Search Committee, Department of Anatomy, Physiological Sciences and Radiology, School of Veterinary Medicine, North Carolina State University, Raleigh, N.C. 27606.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

NATIONAL SALES MANAGER

Manufacturer of high quality analytical instruments seeks national sales manager. Proven sales ability required. Degree in a laboratory science helpful. Sales management experience a plus. Earnings commensurate with experience and performance. Send résumé in complete confidence to: **SLM Instruments, Inc., 810 West Anthony Drive, Urbana, Ill. 61801.** *Equal Opportunity Employer.*

PHARMACOLOGIST. A senior position for a neuropharmacologist with experience in epileptology is available in the Department of Basic Science, University of Illinois College of Medicine at Peoria. Responsibilities: provide leadership in teaching of medical students, residents, and medical practitioners; conduct original investigations into the neurochemistry of genetically determined epilepsy; establish collaborative research programs within the College of Medicine. Requirements: Ph.D. in neuropharmacology; publication record in the neurochemistry of genetic epilepsy and in evaluating antiepileptic drugs in genetic epilepsy models; record of extramural funding for research; record of excellence in teaching medical students; experience in teaching senior medical students and residents; minimum of 8 years of experience in academic medical setting since receiving Ph.D. degree; record of publications in a complementary area of research outside epileptology. Position available 1 January 1985. Salary and rank commensurate with qualifications and responsibility. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and names of three references to: **Phillip C. Jobe, Ph.D., Professor and Chair (Designee), Department of Basic Science, University of Illinois College of Medicine at Peoria, Box 1649, Peoria, Ill. 61656.** Applications must be received by 1 December 1984.

PHARMACOLOGIST. A position at the assistant professor level for a neuropharmacologist with experience in epileptology is available in the Department of Basic Science, University of Illinois College of Medicine at Peoria. Responsibilities: teaching of medical students, residents, and medical practitioners; investigating the neurochemistry of genetically determined epilepsy; investigating the behavioral consequences of genetically determined seizure predisposition; participating in collaborative research programs. Requirements: Ph.D. in neuropharmacology; publication record in the area of seizure pharmacology and the neurochemistry of genetic epilepsy; experience in the evaluation of convulsant drugs in genetically determined epilepsy; minimum of 1 year of postdoctoral experience in academic medical setting; record of publications in a complementary area of research outside epileptology; experience with laboratory animal husbandry; educational background in behavioral psychology. Position available 1 January 1985. Salary commensurate with qualifications and responsibility. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and names of three references to: **Phillip C. Jobe, Ph.D., Professor and Chair (Designee), Department of Basic Science, University of Illinois College of Medicine at Peoria, Box 1649, Peoria, Ill. 61656.** Applications must be received by 1 December 1984.

PHYSIOLOGY—Assistant professor. Tenure-track; starting 15 September 1985. Ph.D. or Ph.D. candidate. Teach general biology, introductory physiology, anatomy-physiology, and participate in master's degree program. Send application, résumé, three letters of recommendation, and transcripts to: **Dr. James R. Töpfer, Department of Biological Sciences, Youngstown State University, Youngstown, Ohio 44555.** Closing date: 15 January 1985. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION in vaccinia virus molecular biology. Applications are invited from qualified candidates to join an established group studying the genetics and molecular biology of vaccinia virus. Send résumé and the names of three referees to: **Dr. Edward Niles, Dr. Richard Condit, Department of Biochemistry, School of Medicine, State University of New York at Buffalo, 102 Cary Hall, Buffalo, New York 14214.**

POSTDOCTORAL POSITION available immediately. Biochemist for physical/chemical investigation of cell membranes (RBC, platelets, synaptic vesicles, and so forth) in psychiatric disorders. Send curriculum vitae and two references to: **Dr. J. D. Chanley, Department of Biochemistry, Annenberg 19-14, THE MOUNT SINAI MEDICAL CENTER, One Gustave L. Levy Place, New York, N.Y. 10029.** *An Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL FELLOW—An opening exists with a group focusing on protein-chemistry and protein-lipid interactions. Structure-function relationships will be investigated from the perspective of biological relevance. Applicants should have a Ph.D. or equivalent training and be familiar with methods for protein separation, isolation, and characterization. Some experience with standard immunology techniques would be preferred. Submit complete résumé and names of three references to: **Dr. R. T. Holzbach, G.I. Research Unit, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW to synthesize and label organo-medicinal compounds with radioisotopes; will work with nuclear medicine research team. Must be citizen, or permanent or soon-to-be resident. Salary: \$20,000. Send résumé to: **D. M. Wieland, 3047 Phoenix Laboratory, University of Michigan, Ann Arbor, Mich. 48109.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS to study **LYSOPHOSPHOLIPID- AND CHOLESTEROL-MEDIATED MECHANISMS IN MEMBRANES AND CELLS.** Experience relevant to the projects may be in the areas of phospholipid and sterol metabolism, demyelination, lipoproteins, or platelets. Annual stipend (\$17,384 minimum) and position (Hormel fellow, research associate) dependent upon previous experience. Submit, before 15 December 1984, curriculum vitae, names of three references, and a brief summary of previous research to: **Dr. Wolfgang J. Bauermann, The Hormel Institute, University of Minnesota, Austin, Minn. 55912.** Telephone: 507-433-8804. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.*

POSTDOCTORAL POSITION available to study the enzymatic control of oxygen activation by phagocytes and endothelial cells, mechanisms of oxygen radical-induced cytotoxicity, and tissue injury. Background in enzymology and/or cellular biochemistry desirable. Contact:

Theodore Gabig, M.D.
Department of Medicine
Indiana University School of Medicine
Room 379—541 Clinical Drive
Indianapolis, Ind. 46223
Telephone: 317-264-3580

Indiana University is an Equal Opportunity/Affirmative Action Educator, Employer, and Contractor, M/F.

POSTDOCTORAL POSITIONS MOLECULAR BIOLOGY

Immediate and future opening, \$15,000 to \$20,000 per annum depending on experience, to study gene structure and expression in human lens, studies involve cloning in expression vectors. Experience in gene cloning, cDNA library construction and sequencing desired. Send curriculum vitae, names of three references, and list of publications to:

Dr. Isaac Bekhor
Laboratory for Molecular Genetics
University of Southern California
Los Angeles, California 90089-0191

POSTDOCTORAL POSITION, R2, Cancer Research Center of Hawaii, full-time, federal funds, to begin approximately 1 December 1984 for 1 year, continuation dependent upon availability of funds. **Duties:** To study the biochemistry of carcinogen-induced neoplastic transformation in vitro. Ph.D. in biological sciences with strong background in biochemistry and experience in protein separation, protein phosphorylation, and/or antibody production. Send résumé and names of three references to: **Dr. John Bertram, Cancer Research Center of Hawaii, 1236 Lauhala Street, Honolulu, Hawaii 96813.** Closing date: 30 November 1984. *An Equal Opportunity/Affirmative Action Employer.*

SCIENCE ASSOCIATE. California patent attorney with a patent practice limited to biotechnology requires a science associate at the postdoctoral level. Applicant should have good communication skills and a broad technical background in immunology, microbiology, biochemistry, molecular biology, and so forth. Legal training is also desirable but not required. Compensation is excellent but will depend upon applicant's qualifications. Please send application and curriculum vitae to: **Donald G. Lewis, J.D., Ph.D., 10920 Wilshire Boulevard, Suite 1000, Los Angeles, California 90024;** telephone: 213-208-2750, extension 204.



SYNTRO
CORPORATION

SYNTRO is a rapidly growing biotechnology company specializing in the development of products through genetic engineering for the agricultural, animal health, and specialty chemical markets. Syntro is currently expanding research activities and is seeking **MOLECULAR BIOLOGISTS** at all levels to complement our existing scientific staff. Preference will be given to those scientists with experience in:

- prokaryotic and eukaryotic expression systems
- DNA and cDNA cloning
- nucleic acid sequencing and synthesis
- animal virus manipulation
- microbial physiology

SYNTRO, located in the heart of the San Diego scientific community, offers a competitive compensation package in an outstanding research environment, as well as excellent opportunities for professional growth. If you would like to contribute to our growth and development as a successful biotechnology company, please send resume and references to:

Director of Human Resources

SYNTRO CORPORATION

10655 Sorrento Valley Road

San Diego, CA 92121

AN EQUAL OPPORTUNITY EMPLOYER

CHIEF ENGINEER MICROWAVE RESEARCH

WALTER REED ARMY INSTITUTE OF RESEARCH

SALARY: GM-15, \$50,495-\$65,462

u-Wave and/or mm-wave engineering experience in radar, signal processing, communications, imagery, transmitters, network analysis and antennas.

Responsibilities include engineering aspects of u-wave technology as applied to medicine in an interdisciplinary research environment.

Requires postgraduate degree or equivalent experience. Research and development history is especially pertinent.

Interested applicants should send a Personal Qualifications Statement, SF-171 to:

Walter Reed Army Medical Center

Civilian Personnel Office

ATTN: Kathryn E. Lewis

Bldg. 11, Room 2-88

Washington, DC 20307

DIRECTOR CARCINOGEN ASSESSMENT GROUP

Senior Executive Service

The U.S. Environmental Protection Agency (EPA) is seeking a director, Carcinogen Assessment Group. The director plans and coordinates comprehensive technical programs related to the development of carcinogenic risk assessment guidelines; advises Agency operating programs on the risks associated with chemicals that are suspected or known to cause cancer in human or animal tissues; directs the programs and staff of the group. Serves as an advocate for proper use of cancer data analysis and risk assessments information in Agency decisions on standards, guidelines, and regulations.

Applicants must meet Federal Office of Personnel Management X-118 Qualification Requirements in either the general biological sciences, general health sciences, or general physical sciences and must possess substantial professional experience demonstrating the ability to perform in a senior executive position. Additionally, to be rated qualified for the position, applicants must have the following **MANDATORY FACTORS**: (i) technical experience in the field of carcinogenicity; (ii) management experience (planning, organization, direction, coordination and control) of projects in the environmental health field involving the accomplishment of tasks through the efforts of in-house staff and/or contracts; (iii) experience working in health-related environmental programs whose outputs have public policy implications; and (iv) demonstrated ability to communicate effectively, both orally and in writing, regarding complex issues and problems. The following **DESIRABLE FACTORS** will be used to rate successful applicants: (i) postgraduate degree in one of the following disciplines: life or health sciences, or physical sciences; (ii) experience or training in bioassay or epidemiological aspects of carcinogenicity—general research in carcinogenesis or epidemiology is equivalent; and (iii) demonstrated recognition in the environmental or health field as evidenced by membership in professional organizations, serving on environmental concern committees and/or authorship of papers dealing with these concerns.

Location: Washington, D.C.

Salary range: \$59,223 to \$64,008 plus civil service benefits.

Telephone inquiries: **Edna Morse at 202-382-3328.**

Application submissions: please submit a completed SF-171, available at Federal Job Information Centers and Federal agency personnel offices, *postmarked by 7 December 1984*, to: **Edna Morse (PM-224), Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460.** A summary describing specifically how your background and experience relate to all factors will be appreciated.

An Equal Opportunity Employer

STATE UNIVERSITY OF NEW YORK AT BUFFALO BIOLOGICAL SCIENCES — FACULTY POSITIONS

THREE FACULTY POSITIONS—Our goal is to hire three persons whose research programs are in the forefront of their field and who can interact with each other as well as other members of our faculty. Effective September 1985 two tenure track Assistant Professorships and one tenured Associate Professorship will become available. Serious candidates will be expected to be utilizing modern genetic and molecular approaches to the study of one of the following areas: (a) the **immune system** at the cellular level, (b) the development of an organism which provides a model system for studies in **development**, (c) regulation in an organism to provide a model for studies of regulation at the level of **gene transcription**, or (d) behavior in simple organism which can also provide a model for studies in **neural biology**.

Successful candidates for the Assistant Professorships will be expected to have completed at least two to three years of post-doctoral experience, demonstrate experience in a productive research program, be able to describe in detail plans for future research activities, and show promise for establishing a fundable independent research program.

Successful candidates for the Associate Professorship will be expected to be working in the forefront of their field with a strong well funded research program.

All successful candidates will be expected to demonstrate above average ability for both undergraduate and graduate teaching. **Salaries will be nationally competitive, excellent laboratory space and equipment are available.**

To apply, candidates must submit a curriculum vitae, including a statement of research background, and teaching experience, and at least three letters of reference to: **Dr. Darrell Doyle, Chairman, Department of Biological Sciences, 109 Cooke Hall, State University at Buffalo, Buffalo, NY 14260.** Application deadline is January 15, 1985.

State University of New York is an Affirmative Action/Equal Opportunity Employer.

CHAIR OF PHYSIOLOGY AND BIOPHYSICS

Position of Chair of Physiology effective July 1, 1985. • The candidate should have a PhD and/or MD degree and strong academic leadership for continued development of faculty and programs. *This University department serves the medical, allied health and graduate schools.* Interested applicants for the position should have demonstrated administrative experience and a reputation for nationally recognized programs in research and teaching.

Applicants should forward a complete curriculum vitae, statement of administrative experience and the names of three references by 1/2/85 to:

Gary J. Anderson, MD,
Physiology Search Committee,



**HAHNEMANN
UNIVERSITY**
MS 110, Broad & Vine
Phila., PA 19102-1192

We're an Affirmative Action Employer

Research Assistants

Biotechnology

Repligen Corp., a rapidly growing biotechnology company involved in the development of innovative peptide and protein products by recombinant DNA and conventional biochemical techniques, seeks qualified Research Assistants at the BS/MS level with a minimum of two years laboratory experience for the following positions:

Protein Chemists: with strong backgrounds in molecular biology and biochemistry. The candidates should have experience in protein purification and characterization.

Molecular Biologists: trained in recombinant DNA techniques. Experience in gene bank construction and screening is desirable.

Successful candidates will be highly motivated individuals who can take advantage of the outstanding growth opportunities at Repligen. Repligen offers a competitive salary, excellent benefits and equity participation. Submit resume and references to: Director of Personnel, Repligen Corporation, 101 Binney St., Cambridge, MA 02142. An equal opportunity employer.

RepliGen

POSITIONS OPEN

POSTDOCTORAL POSITIONS available. (i) Recent Ph.D. with strong background in instrumentation, especially electronics and cryogenics, and some knowledge of biochemical preparative techniques is sought for project involving EXAFS study of nitric oxide photolysis from myoglobin and hemoglobin. Work includes construction and testing of a low-temperature EPR/EXAFS sample chamber, as well as sample preparation, leading to experiments at a synchrotron radiation facility. Experience with photolysis/recombination kinetic measurements helpful. (ii) Postdoctoral appointment available for alcoholism research; the effect of ethanol upon liver oxidative metabolism in chronic and acute animals with possibilities for human subjects research as well utilizing the technique of phosphorus nuclear magnetic resonance spectroscopy. Send curriculum vitae for either of the above two positions to: **Dr. Britton Chance, Biochemistry/Biophysics, D501 Richards/G4, University of Pennsylvania, Philadelphia, Pa. 19104. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

The University of Georgia Marine Institute at Sapelo Island announces a postdoctoral position in marine science. Applications will be accepted in all disciplines of marine science with preference being given to estuarine/nearshore ecology, microbiology, botany, and chemistry. Salary: \$18,000 for 1 year with possible extension to a second year. Application closing date: 1 April 1985. Apply to: **Chairman, Postdoctoral Search Committee, Marine Institute, Sapelo Island, Ga. 31327. The University of Georgia is an Affirmative Action/Equal Opportunity Employer.**

TWO POSTDOCTORAL POSITIONS in structural biology available immediately to characterize biochemically, biophysically, and genetically: (i) DNA-binding proteins involved in DNA replication, recombination, and repair and (ii) membrane proteins involved in ion transport and neuronal transmission. Applicants should have broad background in biochemistry, molecular biology, and biophysics. Send résumé and three letters of reference to: **Dr. W. Chiu, Structural Biology Group, Department of Biochemistry, University of Arizona, Tucson, Ariz. 85721. An Affirmative Action/Equal Opportunity Employer.**

AGRIGENETICS CORPORATION POSTDOCTORAL RESEARCH APPOINTMENTS

The Advanced Research Division of Agrigenetics Corporation, at Madison, Wisconsin, has several positions available for 1 to 3 years in the areas of:

- 1) Transformation and regeneration of crop plants.
- 2) Molecular biology of viruses.
- 3) Protein chemistry.

A Ph.D. and relevant experience in one of these areas is required, and the successful candidate will work in one or more of the existing research programs utilizing molecular biological approaches to improve plant production. Agrigenetics Corporation is a broadly based plant science company contributing to America's agricultural productivity by supplying improved genetic material to plant breeders and producing and marketing seed from more than 50 crop species. The salary will be in the range of \$22,000 to \$25,000 annually.

Send résumé and names of three references by 15 December 1984 to: **Dr. John Ingle, Director, Agrigenetics Advanced Research Division, 5649 East Buckeye Road, Madison, Wis. 53716.**

Harvard Medical School is initiating a search for a **PROFESSOR OF IMMUNOPATHOLOGY** in the Department of Pathology. Applicants should have an active research program in basic immunology, preferably including cellular immunology and be interested in teaching immunology as part of the Graduate and Medical School curriculum. Applicants for the professorship should submit their curriculum vitae and record of publication to: **Baruj Benacerraf, M.D., Chairman, Department of Pathology, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115.**

Harvard Medical School is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study in vitro transformation by human cytomegalovirus. Experience in recombinant DNA technology, transfection, and virology would be helpful. Please send letter describing present research, curriculum vitae, and names of three references to: **Dr. Leonard Rosenthal, Department of Microbiology, Georgetown University Medical Center, Medical-Dental Building, 3900 Reservoir Road, NW, Washington, D.C. 20007. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION MOLECULAR GENETICS, INC.

Molecular Genetics, a major biotechnology company engaged in research, development, manufacturing, and marketing of farm agricultural and animal products, has an immediate postdoctoral position opening for a protein biochemist. The successful candidate must have a strong background in protein purification, high-pressure liquid chromatography of peptides and proteins, and protein structural and conformational analyses. Experience in amino- and/or carboxy-terminal protein sequencing and knowledge of immunochemistry and microbial physiology desirable. You must be able to work independently as well as collaboratively with other scientists in exploring and developing new technologies. This is a unique opportunity to work in a stimulating multidisciplinary research environment that encourages professional growth. Please submit résumé, curriculum vitae, and three references in confidence to: **Mary Barton, Manager of Human Resources and Administration, Molecular Genetics, Inc., 10320 Bren Road East, Minnetonka, Minnesota 55343.**

The Department of Psychology, Columbia University, announces a 2-year **POSTDOCTORAL POSITION IN VISUAL PSYCHOPHYSICS** beginning January 1985. We seek a candidate with an interest in simple mathematical models, preferably in the field of adaptation, to work with Professor Donald Hood. Candidates should send a copy of their curriculum vitae and the names of three individuals who are willing to write letters of recommendation to: **Personnel Search Committee (Postdoctoral Search), Department of Psychology, Box 29 Schermerhorn Hall, Columbia University, New York, N.Y. 10027. Columbia University is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available to study the mechanism of action of the tetrahydropyridine neurotoxin MPTP. Send curriculum vitae to: **Dr. Richard E. Heikkila, Department of Neurology, University of Medicine and Dentistry, New Jersey-Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854; telephone: 201-463-4065. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION for research on transgenic animals. Work includes microinjection of genes into eggs, embryo transfer, and development of transgenic mouse lines expressing new gene constructions. Apply with curriculum vitae to: **R. L. Brinster, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.**

POSTDOCTORAL POSITIONS AVAILABLE IMMEDIATELY: (i) Ph.D. in immunology to study the use of tumor-associated antigens as immunogens. Experience with monoclonal antibodies helpful. (ii) Ph.D. in biochemistry to purify glycosidases and glycosyltransferases. Experience with glycoproteins desired. HPLC background helpful. (iii) Ph.D. in organic chemistry to synthesize oligosaccharides. Background in carbohydrate chemistry desired. HPLC experience helpful. Send curriculum vitae and two references to: **Dr. Khushi L. Matta, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.**

PROFESSOR AND HEAD, DEPARTMENT OF NEUROLOGY. Responsibilities to be fulfilled: Direct the education, research, and service programs of a neurology department in the College of Medicine. Qualifications desired: M.D. degree, Board certification or equivalent, and demonstrated scholar and leader in neurology. Salary: Appropriate for qualifications and responsibilities for a professor and head of neurology. Excellent fringe benefits. Employer: *The University of Iowa, Iowa City, Iowa 52242, is an Equal Opportunity/Affirmative Action Employer.* Application: Interested persons are invited to direct inquiries and submit curriculum vitae to: **Phillip G. Schmid, M.D., Professor, Department of Internal Medicine, Room 10W 16A, Veterans Administration Medical Center, Iowa City, Iowa 52240.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study regulation of cytosolic Ca and pH, and neurotransmitter release in isolated nerve terminals (synaptosomes) from brain, using spectrofluorometric and radioisotope flux techniques. Send curriculum vitae and names of three references to: **Dr. Daniel Nachshen, Department of Physiology, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE IN IMMUNOLOGY

A postdoctoral position is immediately available to study lymphokines, which, in addition to IL-2, regulate human cytolytic T lymphocyte responses. This opening is at Hoffmann-La Roche Inc. in the Department of Immunopharmacology which, under the direction of Dr. John Farrar, has a very strong program of research on lymphokines. Publication of basic research results is encouraged. Initial appointment is for 1 year and is renewable for a second. We offer an attractive salary and benefits. Send curriculum vitae and names of three references to: **Dr. Maurice Gately, Department of Immunopharmacology, Hoffmann-La Roche Inc., Nutley, N.J. 07110. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE IN BIOMATHEMATICS

To participate in an extended project on the theoretical analysis and computer simulation of solute and water transport in the mammalian kidney. A Ph.D. degree, skills and experience in computer science and applied mathematics are required. Applicant must have experience in numerical solution of differential equations and numerical linear analysis. The salary range is a minimum of \$28,000 to a negotiable maximum. Send résumé and names of three references to: **Dr. John L. Stephenson, Department of Physiology, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN ECOLOGICAL MODELING

The position is for the ecological modeling of vegetation processes under man-made, environmental stress. Responsibilities of the position include the study and modification of existing vegetation models and the development of new computer simulation codes for estimating the response of individual plants, vegetation communities, and regional systems. The environmental stresses include the proposed changes in climate caused by nuclear war (nuclear winter), changes in atmospheric carbon dioxide levels, and air pollutants including ozone and sulfur dioxide. Recent Ph.D. or equivalent in either physical or biological science with experience in simulation in the plant sciences at either the organism or community level. Experienced in scientific application programming using FORTRAN or other high-level language. Qualified candidates are invited to forward curriculum vitae and three letters of recommendation to: **Earl G. Morrell, Professional Employment Division, LAWRENCE LIVERMORE NATIONAL LABORATORY, P.O. Box 5510, Department KSC-BG4, Livermore, Calif. 94550.**

U.S. citizenship required
An Equal Opportunity Employer, M/F/H/V

POSTDOCTORAL TRAINING AT MAYO MEDICAL SCHOOL, ROCHESTER, MINNESOTA. Join an active research group in the Department of Immunology at Mayo Medical School. Areas are immunogenetics (Chella David), molecular immunology (David McKean), neuroimmunology (Vanda Lennon), clinical immunology (Barry Handwerker), allergic immunology (Jerry Gleich), molecular biology (Larry Pease, Gayle Woloschak), cellular immunology (Christopher Krco), oncology (Jack Kovach), and cytogenetics (Gordon Dewald). Trainees would be supported by an NIH training grant; thus candidates are required to be U.S. citizens or permanent residents. Some alternate funds for nonresidents also available. Please write, with curriculum vitae and areas of interest, to: **Dr. Chella S. David, Director, Immunology Training Grant, Mayo Medical School, Rochester, Minn. 55905. An Equal Opportunity/Affirmative Action Institution.**

POSITIONS OPEN

POSTDOCTORAL POSITION. Two-year, recent Ph.D. in biochemistry with strong background in isolation and characterization of proteins and biomembranes to study the hormonally controlled storage of uric acid in insect fat body. Proposed salary: \$20,000 to \$22,000. Application deadline: 15 December 1984. Starting date about 1 January 1985. Applicants should submit curriculum vitae and have three letters of recommendation sent to: **H. J. Klosterman, Chairman, Biochemistry Department, North Dakota State University, Fargo, N.D. 58105. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION in neuroendocrinology now available to isolate and characterize neural peptides from CNS and other tissues of submammalian vertebrates in this NSF-sponsored research program. Experience in peptide separation techniques and comparative endocrinology will be advantageous.

Curriculum vitae and two references to: **Ivor M. D. Jackson, M.D., Director, Division of Endocrinology, Brown University, Rhode Island Hospital, 593 Eddy Street, Providence, R.I. 02902. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION in neuroendocrinology now available to study neural peptide receptor regulation and interaction. The successful candidate will work on development of monoclonal antibodies against neural peptides and their receptors. Experience in peptide chemistry, peptide receptors, or hybridoma technology would be advantageous.

Curriculum vitae and two references to: **Ivor M. D. Jackson, M.D., Director, Division of Endocrinology, Brown University, Rhode Island Hospital, 593 Eddy Street, Providence, R.I. 02902. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE—Available immediately for a Ph.D. with expertise in molecular biology (recombinant DNA technology) and interest in retroviral and cellular gene expression. Send curriculum vitae and names of three references to: **Dr. S. Rasheed, University of Southern California School of Medicine, 1840 North Soto Street, Los Angeles, Calif. 90032.**

Research Grants from the Erna and Victor Hasselblad Foundation

The Erna and Victor Hasselblad Foundation will award grants for the year 1985 in order to promote scientific research and education in the field of natural science and photography.

Applications for grants should reach the Foundation in duplicate not later than March 31, 1985 — application forms may be obtained from the Foundation.

For the year 1985 approx. SEK 3,000,000 (USD 340,000) is available for distribution. According to the statutes of the Foundation large projects will in the first place be considered for grants. In principle medical projects will not qualify for grants.

Grants awarded are expected to be paid out before the end of 1985.

Göteborg in October 1984

**The Erna and Victor Hasselblad Foundation
S-405 04 Göteborg, Sweden**

CELL BIOLOGIST

for Drug Delivery Systems Research

The Upjohn Company, a worldwide leader in pharmaceutical research, is seeking applicants for a research scientist position in a newly formed Drug Delivery Systems Research Unit within the Pharmaceutical Research and Development Division.

The applicant should have a Ph.D. in cell biology with two or more years of post-doctoral experience in membrane transport, cell surface recognition and/or targeting phenomena. The successful candidate should have expertise in the following areas: cell/tissue culture, receptor mediated transport processes, EM techniques, cell fractionation and reconstitution, hybridoma technology and use of antibodies for membrane characterization. Knowledge in immunology is desirable. A quality publication record and good communication skills are required. Responsibilities include the establishment of a concept-oriented basic research program in cellular transport as applied to the delivery and targeting drugs in biological tissues in a collaborative interdisciplinary program.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance. Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including beautiful lakes and a four-season climate.

For confidential consideration, please call outside Michigan toll-free 1-800-253-8600, Ext. 3-6767, or inside Michigan collect 616-323-6767 to request an employment application be sent to you immediately. Please refer to Ad Number 15818-J when calling.

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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

Position available to study actin gene expression during embryonic development in sea urchins and mice. Background in developmental biology and/or nucleic acid manipulations helpful, but not necessary. Send curriculum vitae and names of three references to: **Dr. William R. Crain, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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DISTINGUISHED PROFESSORSHIP IN BIOLOGY UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The Department of Biology, University of North Carolina at Chapel Hill, is pleased to announce the availability of a distinguished professorship to begin during 1985 to 1986. Although we welcome inquiries from representatives of all fields of biology, preference may be given to individuals in the areas of cellular and/or developmental invertebrate neurobiology, molecular evolutionary biology and cell biology. The salary is highly competitive nationally and the position includes a permanent half-time secretary. We would appreciate letters of inquiry from potential candidates as well as nominations. All communications will be held in the strictest possible confidence.

For further information, write to: **L. I. Gilbert, Chairman, Department of Biology, Wilson Hall 046A, University of North Carolina, Chapel Hill, N.C. 27514, or telephone: 919-966-2055. The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer.**

SENIOR-LEVEL POSITION IN NEUROMOTOR CONTROL

Professor of Neuroscience in Kinesiology

Applications are invited for a new tenured position at the level of full professor; effective July 1985; salary commensurate with experience. We seek applications from outstanding neuroscientists who focus on mechanisms of neural control of movement. Responsibilities include maintaining a vigorous and innovative research program, teaching undergraduate and graduate courses in candidate's specialty area, advising graduate students and directing their research, and participating in departmental and university committees. Applicants should have the Ph.D. or M.D. degree, a distinguished publication record, demonstrated ability to raise research support, and teaching experience. Send curriculum vitae, a description of future research plans, and reprints of key publications to: **Dr. Judith L. Smith, Chair, Department of Kinesiology, 2871 Slichter Hall, College of Letters and Science, University of California, Los Angeles, Los Angeles, Calif. 90024. Deadline for receipt of application is 1 December 1984. The University of California is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH

POSTDOCTORAL POSITION

Postdoctoral research position to study the roles of polypeptides in cell growth at biochemical and functional levels. Send résumé and three references to:

**SS, Personnel Department
Institute for Cancer Research
FOX CHASE
CANCER CENTER
Philadelphia, Pa. 19111
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The Environmental Defense Fund is seeking applicants for the position of **STAFF SCIENTIST** in its New York City office. The position carries a 1- or 2-year commitment and an annual salary of at least \$18,000. Applicants must have a graduate degree in the physical or biological sciences, research experience, and good writing skills. The position provides the opportunity to undertake scientific research and apply the results to public policy issues. Position available 1 January 1985.

Please send résumés to:

**Marion Rogers
Environmental Defense Fund, Inc.
444 Park Avenue South
New York, New York 10016**

POSITIONS OPEN

PROFESSOR AND SENIOR SCIENTIST PLANT MOLECULAR BIOLOGY RESEARCH CENTER.

Nominations and applications are invited for a position as professor and senior scientist in a developing Plant Molecular Biology Research Center (appointment in the Department of Biological Sciences and possible in Department of Chemistry) at Northern Illinois University in DeKalb, Illinois, with a joint appointment at nearby Argonne National Laboratory. The senior scientist will serve as scientific director of the center and will be responsible for future staffing. Two people at the assistant professor level can be immediately recruited by the successful candidate; four more assistant/associate professor level positions will be filled over a 2-year period; and an administrative director who will carry out routine administration will be recruited by the senior scientist. The successful candidate will be expected to maintain a research program of excellence, secure external funding from government and industry, direct Ph.D. candidates, and conduct one seminar course once per year. The position is available after 1 July 1985. The salary is competitive. Qualifications are a Ph.D. with experience in a field related to plant biology, molecular biology/genetics, or biochemistry, and a proven record of superior research performance and capabilities. Applications accepted until 1 February 1985 or until position is filled. Interested candidates should submit curriculum vitae, complete bibliography, recent reprints, and names of three references to: **Dr. Arnold Hampel, Department of Biological Sciences, Northern Illinois University, DeKalb, Ill. 60115-2861. Telephone: 815-753-1459. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSISTANT in protein chemistry with an emphasis on protein purification and sequencing using HPLC and gas-phase sequencer. Qualified applicants should have a B.S. or M.S. in chemistry or biochemistry. Experience with HPLC, peptide synthesis or sequencing, and micropurification methodology is preferred. Salary will be commensurate with experience. Employment will also include liberal fringe benefits. Interested applicants should send résumé with letters of reference and transcripts to: **The Personnel Office, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946.**

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RESEARCH ASSISTANT PROFESSOR (nontenure-track)—Individual required to join projects on the active transport of cations across cell membranes. Experience required in at least three of the following areas: Isotopic fluxes in erythrocyte ghosts, cultured epithelial cells, or muscle, microelectrode measurements in muscle cells. Position available from fall 1984. Please send curriculum vitae and names of three references to: **Dr. Jack H. Caplan, Department of Physiology/G4, University of Pennsylvania, Philadelphia, Pa. 19104. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE

Ph.D. or equivalent with experience in the isolation and purification of proteins, to work on research related to experimental liver carcinogenesis. Familiarity with cell culture methodologies desirable. Salary commensurate with experience. Position available immediately. Send résumé to: **Administrative Office, 776 Scaife Hall, Department of Pathology, School of Medicine, University of Pittsburgh, Pittsburgh, Pa. 15261.**

An Equal Opportunity/Affirmative Action Employer

SCIENCE-TECHNOLOGY POLICY. Tenure-track position in developing policy studies area of a science, technology, and society program beginning 1 September 1985. Ph.D. required. Policy areas being considered include biomedical/bioengineering; computers/telecommunications; environmental; energy; development; hazards; innovation/industrial policy. Send letter of application, curriculum vitae, three references, and recent publication reprints by 15 January 1985 to: **Terry Reynolds, Department of Social Sciences, Michigan Technological University, Houghton, Mich. 49931. Telephone: 906-487-2722. Equal Opportunity Educational Institution/Equal Opportunity Employer.**

VISION RESEARCHERS: Department of Visual Sciences, School of Optometry, Indiana University, Bloomington, Ind. 47405, anticipates funding for a tenure-track **ASSISTANT PROFESSOR**, beginning fall 1985, who has research and teaching expertise in the psychophysics of spatial, form, or motion perception. *Indiana University is an Equal Opportunity Employer.* Send curriculum vitae and three letters of recommendation (by 31 January 1985) to: **Dr. S. Lee Guth, Chairman.**

POSITIONS OPEN

The Institute of Neuroscience and the Chemistry Department at the University of Oregon seek a new **FACULTY MEMBER WITH INTERESTS IN MOLECULAR NEUROSCIENCE.** Suitable research topics include but are not restricted to receptor biochemistry, neuropeptides, biochemistry of excitable membranes, molecular events in learning, and molecular events associated with neural development. The Institute provides extensive opportunities for interaction with biologists and psychologists. We anticipate filling this position at the assistant professor level although more senior candidates will be considered. Interested persons should forward curriculum vitae, statement of research interests, and three letters of recommendation to:

**Neuroscience Search
Institute of Neuroscience
University of Oregon
Eugene, Ore. 97403**

Closing date is 15 January 1984. *The University of Oregon is an Equal Opportunity Employer.*

RESEARCH ASSISTANT PROFESSOR. Applications requested for appointment to study developmental aspects of respiratory control physiology. Experience in vertebrate neurophysiology an asset. Applicants should possess Ph.D., have several years of relevant postdoctoral experience, and show creativity in research. Respond with curriculum vitae to: **Dr. Edward E. Lawson, Department of Pediatrics, University of North Carolina, Chapel Hill, N.C. 27514. Women and minorities are encouraged to apply. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE, Postdoctoral Fellow, or Visiting Assistant Professor available January 1985 in biochemical toxicology. A Ph.D. and experience in mechanisms of toxic action are required. Salary commensurate with experience, from \$18,000 to \$27,000, plus medical and dental benefits. Send curriculum vitae and three letters of recommendation to: **Dr. Garold S. Yost, College of Pharmacy, Washington State University, Pullman, Washington 99164-6510. An Equal Opportunity/Affirmative Action Employer.**

STAFF FELLOW position available immediately to Ph.D. graduates to investigate oncogene-linked cell surface antigens using immunochemical and biochemical techniques. Applicants should have a strong background in gene transfer and recombinant DNA technology. Send résumé and three references to: **Jack A. Roth, M.D., Surgery Branch, National Cancer Institute, Building 10, Room 2B07, Bethesda, Md. 20205.**

VETERINARY VIROLOGIST

The Department of Microbiology and Environmental Health, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, seeks candidates for a 12-month, tenure-track faculty position in animal virology at the assistant or associate professor level. Responsibilities include teaching in professional veterinary medicine and graduate programs. Candidate will be responsible for the development of an independent research program. Level of appointment and salary commensurate with training and experience. D.V.M. or equivalent professional degree and research training in virology (Ph.D. preferred and postdoctoral research experience desirable). Appointment date by 10 August 1985. Applications should consist of curriculum vitae, statement of personal goals and objectives, and three letters of reference. The closing date of 1 February 1985 may be extended. Application and inquiries should be directed to: **Dr. Leonard D. Pearson, Chairman of Search Committee, Department of Microbiology and Environmental Health, Colorado State University, Fort Collins, Colo. 80523. An Equal Opportunity/Affirmative Action Employer.**



Xytronyx, Inc.

Xytronyx, Inc., a young biotechnology company has an opening for a **VIROLOGIST**. We are looking for a Ph.D.-level scientist with at least 2 years of postdoctoral experience in the purification of viral glycoprotein antigens to participate in our vaccine development programs. Xytronyx offers a very competitive salary and benefit package, and other advantages associated with participation in a developing company. Please send résumés and the names of three references to: **Director of Personnel, Xytronyx Inc., 645 North Michigan Avenue, Suite 645, Chicago Illinois 60611.**

international scientific relations executive

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The successful candidate can expect a highly competitive salary package commensurate with his experience, relocation assistance and other social benefits.

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No defense decision has so strained the Western alliance and awakened the average citizen to the risks of nuclear destruction as the decision made by NATO in 1979 to install new nuclear missiles in Western Europe. Although the initial phase of the deployment has been successfully carried out, it has left in its wake an unforeseen series of painful and potentially lasting military and political consequences.

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RESEARCH CHEMIST

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES
NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE
DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institute of Environmental Health Sciences has an opening for a Research Chemist position in the Laboratory of Molecular Biophysics. The incumbent will be responsible for planning, organizing, and conducting collaborative support research toward the development and application of Nuclear Magnetic Resonance (NMR) Spectroscopy to biological problems. This includes both basic and applied research toward the development of relevant new and improved methods in NMR design and operation as well as new and improved methods in the application of NMR to biological problems.

This is a Civil Service career-conditional appointment at the GS-12 level with a salary range from \$30,549 to \$39,711 per annum. Minimum education requirements are a full 4-year course in an accredited college or university leading to a bachelor's (or higher) degree in one of the physical or life sciences, or engineering which included 30 semester hours in chemistry and one of the following completion of all requirements for a doctoral degree (Ph.D. or equivalent) or a minimum of three years professional experience in appropriate subject-matter field. U.S. citizenship is required.

Application consisting of a Chemist application package which includes an OPM 1282, OPM 1205, OPM 1203-K, Q1-1300 (available at all Federal Job Information Centers and Federal Personnel Offices) and names of three references should be submitted to the following address and postmarked not later than December 16, 1984.

Mr. Bruce Wiggins, Code: HN-V2K
National Institute of Environmental Health Sciences
P.O. Box 12233 (MD 1-01), Research Triangle Park,
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GRADUATE PROGRAM

PREDOCTORAL TRAINING IN PLANT BIOLOGY

Graduate programs in plant biology at the University of California, Berkeley, offer training in basic plant sciences (biochemistry, genetics, molecular biology, physiology, plant pathology). Student support is available through the McKnight Foundation Training Grant in Plant Biology and the USDA National Needs Graduate Fellowship Program. For further information, contact: Chair, Graduate Group in Molecular and Physiological Plant Biology, University of California, 313 Hilgard Hall, Berkeley, Calif. 94720. The University of California is an Equal Opportunity/Affirmative Action Employer.

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A 2-year master's program emphasizing molecular genetics, hybridoma technology, and recombinant DNA research techniques. This is a hands-on, laboratory-intensive program at University of Maryland, Baltimore County, for those with a bachelor's degree in an appropriate science.

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Fees: Standard tuition.

Information: Michael C. O'Neill
Director AMB Program
Department of Biological Sciences
University of Maryland, Baltimore
County
Catonsville, Maryland 21228
Telephone: 301-455-2261

ASSOCIATESHIPS

POSTDOCTORAL RESEARCH ASSOCIATESHIP IN IMMUNOPARASITOLOGY to study protective immunity to schistosome infection. Applications, including research proposals, are due in January 1985 for a position available in October 1985. The appointment is for 1 year with the possibility of renewal for a second year. Contact: Dr. David A. Dean, Schistosomiasis Branch, Naval Medical Research Institute, Bethesda, Maryland 20814. Telephone: 202-295-2014.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN REPRODUCTIVE BIOLOGY. Applications are invited from candidates with an M.D., Ph.D., or equivalent degree to study the molecular mechanism of oocyte maturation and meiosis. Applicants with interest and achievements in molecular or cellular biology preferred. Interested candidates should send curriculum vitae and three letters of recommendation to: Dr. S. S. Koide, Center for Biomedical Research, The Population Council, 1230 York Avenue, New York, N.Y. 10021.

POSTDOCTORAL FELLOWSHIP in mammary tumor biology. Experience with restriction endonuclease, DNA cloning and characterization preferred. Two years of salary support is available for this position renewable annually. Send curriculum vitae and letters of recommendation to: Dr. Robert D. Cardiff, Department of Pathology, School of Medicine, University of California, Davis, Davis, Calif. 95616, by 31 December 1984.

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

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS, TOXICOLOGY

Department of Environmental Health, University of Cincinnati Medical Center, offers postdoctoral fellowships in toxicology, available immediately. These are NIH-sponsored institutional fellowships. Preference given to applicants who obtained Ph.D. degrees in a basic biomedical discipline. For information, contact: Dr. E. C. Foulkes, Department of Environmental Health (Number 56), University of Cincinnati Medical Center, Cincinnati, Ohio 45267. An Equal Opportunity Employer.

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For information, write to: The Graduate Committee, University Department of Biochemistry, Biological Sciences West, University of Arizona, Tucson, Ariz. 85721.

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POSTDOCTORAL FELLOWSHIP position open immediately. NIH-supported. Ph.D. in cellular/molecular/developmental biology or biochemistry to investigate role of developmentally regulated cell surface peptides in myoblast fusion. Studies designed to define biological role, cell surface topology, and chemistry of purified peptides. Will include insertion of peptides into membranes of nonfusing variants. Background in membrane or cell surface receptor biochemistry or ultrastructure desirable. Send curriculum vitae, statement of research interest/goals, and names of three references to: Dr. J. D. David, Division of Biological Sciences, 110 Tucker Hall, University of Missouri, Columbia, Mo. 65211. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS IN CELLULAR AND MOLECULAR MECHANISMS OF CARCINOGENESIS AND MUTAGENESIS AT THE UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Fellowships are available in a multidisciplinary research training program focusing on the molecular, cellular, genetic, and developmental aspects of cells responding to perturbations of their milieu. The faculty include: M. J. Banda (angiogenesis, wound healing), J. Cleaver (DNA repair genes), R. B. Painter (DNA replication), R. Pedersen (early mammalian development), M. R. Wabl (molecular immunology), Z. Werb (phagocytes, extracellular matrix), and S. Wolff (cytogenetics).

Stipends are funded through a training program sponsored by the NIEHS. Appointments to begin immediately or after July 1985. The requirements are U.S. citizenship or permanent residency and a Ph.D. degree or equivalent. Send résumé, graduate transcript, statement of research interests, and three letters of recommendation to: Professor Z. Werb, Laboratory of Radiobiology and Environmental Health, University of California, San Francisco, Calif. 94143. An Equal Opportunity/Affirmative Action Employer.

LUCILLE P. MARKEY FELLOWSHIPS for graduate study in PHYSIOLOGY AND BIOPHYSICS at the University of Miami School of Medicine \$12,000 per year plus tuition and fees

Fellowships are available for Ph.D. studies in the following fields: Membrane biology and biophysics; neurophysiology; muscle biology; developmental neurobiology; and cell-to-cell communication. Applications are sought from highly qualified individuals with backgrounds in the physical, biological, or engineering sciences. For information and applications, write to: Dr. K. J. Muller, P.O. Box 016430, Miami, Fla. 33101. Telephone: 305-547-6821. The University of Miami is an Affirmative Action/Equal Opportunity Educator and Employer.

PREDOCTORAL FELLOWSHIPS IN MOLECULAR PHARMACOLOGY

Student fellowships are available for predoctoral study in the Pharmacology Graduate Program of the Grace Cancer Drug Center, Roswell Park Memorial Institute, a Graduate Division of the State University of New York at Buffalo. Stipends and tuition waivers are available for eligible students. The program offers diversified training related to the pharmacological and biochemical basis for drug action with emphasis on cancer therapeutics as related to: Inhibition or alteration of nucleic acid, protein and membrane components, cellular differentiation, cellular ultrastructure, oncogenes, drug resistance, pharmacokinetics and drug metabolism, medicinal chemistry, immunotherapy, mechanisms of carcinogenesis, toxicology, genetic basis for drug action, molecular pharmacology, endocrine pharmacology and metabolic regulators, hematology, preclinical and clinical pharmacology. U.S. citizens and permanent residents may send applications to:

E. Mihich, M.D., Chairman
Graduate Pharmacology Program
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666 Elm Street
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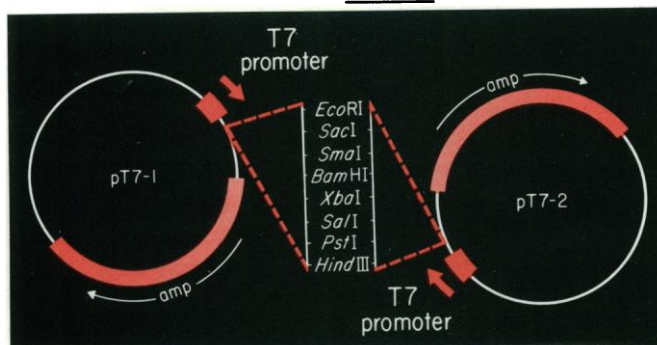
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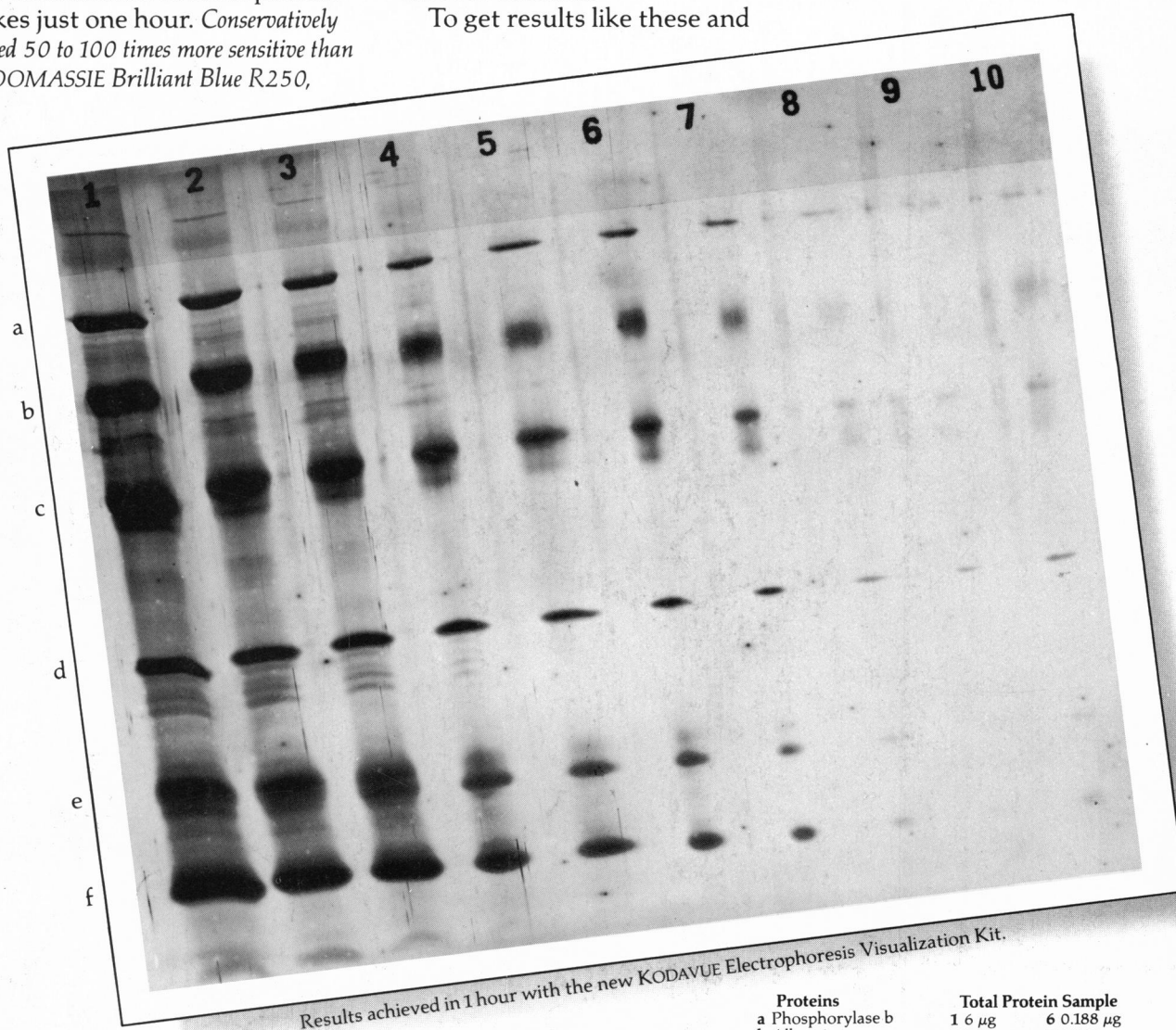
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e Trypsin inhibitor	5 0.375 µg 10 0.01 µg
f a-Lactalbumin	

KODAVUE Electrophoresis Visualization Kits are available through these dealers: American Scientific & Chemical; American Scientific Products; B.C. Chemicals Division; Bioclinical Laboratories NJ; Brand-Nu Laboratories, Inc.; Bryant Laboratory, Inc.; CAMX Scientific; Captree Chemical Corp.; Doe & Ingalls, Inc.; Fisher Scientific; Mays Chemical; Midland Scientific, Inc.; North-Strong Division; Preiser Scientific; Sargent-Welch Scientific; Scientific & Industrial Sales & Service, Inc.; Specialty Chemicals, Inc.; Spectrum Chemicals Mfg. Corp.; VWR Scientific Inc.; Ward's Natural Science Establishment, Inc.

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